



Brawford 1984

THE COLONIAL OFFICE JOURNAL.

VOL. I.

JUNE, 1907.

No. I.

EDITORIAL NOTES.

THE main purposes of this JOURNAL are to review recent books and reports relating to the Colonies and to discuss administrative questions. The Secretary of State for the Colonies has approved of its institution, but it is unofficial, and the editors and contributors are entirely responsible for whatever it may contain. The idea of an official publication has been mooted, but it is obvious that in such an organ there could be little expression of personal opinion. It is hoped that this JOURNAL will be supported by contributions and letters from colonial officers, and that questions in which they are concerned will be freely discussed. The name of the writer, in accordance with the practice of the Press, will not be given unless this appears to be desired.

The JOURNAL is not intended to be in any sense a newspaper, and our main purpose in referring to current political subjects will be to extract points of constitutional or administrative interest. Our business is with the methods and objects of ordinary executive work, and we propose to devote our pages largely to the systems of government offices, the products and trade requirements of the Colonies, and the regulations and practices by which colonial officers are governed. We shall have occasion to discuss technical and manufacturing points which perhaps have little interest to the ordinary reader, but are very important to all who are concerned with the industrial undertakings, the health, and comfort of the Colonies.

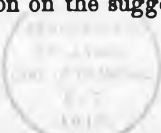
We hope by suggesting subjects and raising questions to initiate useful discussions. We cannot carry matters far by our own

observations, for the actual experience of results lies in the Colonies, and if the JOURNAL is to flourish it must rely largely on information and opinions supplied from the Colonies. As an organ for bringing together views from different quarters on similar subjects we believe that the JOURNAL will supply a want. We trust also that the Press of this country will make use, the more freely the better, of the materials which we collect.

The *Imperial Conference* which began its sittings on the 15th of April is the descendant of the Conference of 1887. Lord Knutsford, who presided with admirable tact and skill on the first occasion, will watch with interest the results of the last. Mr. Deakin, now the representative of the Australian Commonwealth, was then one of the delegates from Victoria. The institution of the first Conference was due to Mr. Stanhope, Secretary of State for the Colonies at the time of the invitations, though he had gone to the War Office at the time of the Conference, and some of our readers may remember the enthusiasm with which the mention of his name was received at the first meeting. The patriotic action of the Colonies in offering contingents of troops for the Egyptian campaign had much to do with Mr. Stanhope's idea.

The opening speech of the Secretary of State for the Colonies in 1887, when compared with present day discussion, illustrates the vitality of colonial questions. In South African matters he referred principally to the fact that "the grant of responsible government has gradually and steadily improved the material welfare and the domestic administration of the Cape Colony." The same congratulation will no doubt be paid on some not far distant occasion to the Transvaal. He referred to the Newfoundland fishery question and to the dissatisfaction caused by the position in the New Hebrides—two matters which have been prominent in recent Parliamentary debates. The principal subject was that of defence, and the discussion resulted in a substantial contribution by Australasia to the cost of the Navy.

The chief contribution of South Africa to the proceedings was Mr. Hofmeyr's speech advocating the imposition of a special 2 per cent. on all foreign imports entering the Empire, the proceeds to be devoted to the general defence. He calculated this would yield £7,000,000. He explained that he did not aim at protection, but "at something that shall supply a cohesive force to the Empire, and shall at the same time provide revenue for defensive purposes." There was, however, no discussion on the suggestion.



The Conference at Ottawa, which followed in 1894, was a very business-like affair. There were at the time two treaties in existence with Belgium and Germany, which prevented Great Britain from receiving better terms from any Colony than she received from those countries. The Imperial Government, as a result of a resolution passed by the Conference, took steps to determine those treaties; but for this, such preferences as those now given by the South African Customs Union, Australia and Canada could not have been accepted. Another resolution was passed in favour of a Customs arrangement between Great Britain and the Colonies by which trade within the Empire might be placed on a more favourable footing than that with foreign countries. But there was no general anticipation that England would consent to put a tax on foreign produce to favour colonial produce, and some of the colonial delegates were against any such idea, generally on the ground that it would be no advantage to the Colonies if the trade of England were hampered in any way.

The proposal for a Pacific cable was warmly taken up by the Ottawa Conference, and in the result the Canadian Government called for tenders. The tenders greatly encouraged the scheme, but it was not till 1899, after prolonged negotiations and fresh tenders, that the three parties—England, Canada and Australasia—agreed to carry it out. It may seem remarkable what little co-operation there has been between the Mother-country and the great Colonies for common purposes of this kind. The Pacific cable, as an enterprise, stands alone; and with the exception of certain mail subsidies, we can recall no other substantial example of co-operation.

The present Conference lost little time in arriving at the resolution which establishes the principle of a permanent Secretariat “charged under the direction of the Secretary of State for the Colonies with the duty of obtaining information for the use of the Conference, of attending to its resolutions, and of conducting correspondence on matters relating to its affairs.”

This resolution expresses the claim of the Governments of the self-governing Colonies to be associated directly and on a footing of equality with the Government of the United Kingdom for the discussion of common interests. In the intervals which separate the meetings, the Secretariat will maintain the permanency of this association and prepare material for the next discussion. Its first function will be to collect information, and for this purpose it must rely on the co-operation which we have no doubt will be readily given of the

home departments. As at present defined, it would apparently not displace or interfere with any existing machinery, but would watch and report on the progress of events. It would however be an easy transition for it to pass from this position to one of more active dealings with the general questions with which the Colonies are concerned.

The Colonial Office is divided into geographical and not subject divisions, and it occasionally happens that the same questions are under discussion simultaneously in two different places, or that a decision in the work of one department would be useful to another department. There is an opening for some more thorough method than at present exists of centralising subjects of more or less general application or of collating results from the different departments, and it seems possible that the Secretariat might find a useful field in this direction.

The arrangement, whatever it may work out to ultimately, is largely due to the feeling that colonial Governments have not been adequately informed of the progress of matters in which they are concerned. No doubt it is a weak point in the home departments that the colonial authorities are not always kept acquainted with the march of negotiations and the discussion of points. It is by no means an easy thing to do, and much apparent neglect would be forgiven if the care and pains actually spent on the work could be realised. At the same time the fact should be realised on this side that, however thoroughly a matter is being handled here, our partners overseas do not know it unless they are supplied with the necessary particulars. "Progress" reports are as opportune in administration as in engineering matters, and the new Secretariat would, we imagine, find plenty of material to handle.

There have been sitting lately two bodies which virtually represent Conferences with colonial representatives, one the Royal Commission which deals with shipping rebates, the other, the Committee (Australasian, Colonial Office, and Board of Trade) on Navigation and Shipping. The Royal Commission is no doubt confronted with a difficult problem, as many merchants side with the shipowners on the ground that settled rates are an advantage to them. Colonial Governments can hardly adopt this consideration so far as their own shipments are concerned, as their interest is simply to get the lowest possible rate in each case. On the other hand, they are greatly concerned with the maintenance of fast and regular services which the rebate system protects.

The general enquiry on which the Royal Commission is engaged is the result of the report of the South African Shipping Freights Conference (Jan. 1906), which itself followed a Conference held in Johannesburg in 1904. The complaint was that excessive rates of freight were charged, and the London Conference appeared willing to waive the question of rebates if substantial reductions were made in the rates. The Conference, however, failed to arrive at any agreement with the shipowners for this purpose, and accordingly drew attention to the Draft Bill which had been previously drawn up to prohibit rebates and discriminations. The Home Government could not accept the principle of this Bill without full consideration. Rebates have been prohibited in the United States, but as most of the overseas trade there is carried in foreign bottoms, the subject is far from being so difficult and delicate there as here.

In some cases it is not so much the rebate system that prevents competition as an organisation which includes the handling arrangements at the places of discharge, as well as the sea transit. A steamer's business is finished when the cargo is put over side, and if the lighter or branch boats are monopolised by one firm of owners, there is little chance for an outsider. Every improvement made by a Government in its ports and landing facilities tends to encourage competition. If the facilities are good, there may be a ring supported by a rebate system. But at any rate the ring will be a comparatively wide one, and always under the fear of competition.

Most of the coasting lines in this country belong to the Short Sea Traders' Association. When any competition arises it usually ends as it does in the case of ocean lines—it is either driven off the field or admitted into the Association. But, we believe, the rates are by no means unduly high. They are kept down by railway competition, and have, in fact, fallen as much as 50 per cent. in the last ten years. These lines do not to a great extent feed the ocean liners, as the latter will readily go considerable distances to pick up any substantial freight. The material factors in the export and import trade are the railway and the ocean rates.

Mr. Lloyd-George at the Imperial Conference made suggestions to encourage the consideration of "co-operative projects," and it appears probable that any scheme of the kind which would be supported by the Imperial Government would be one in aid of carrying services. The German plan is to help exports by conveying them to the coast at reduced railway rates, which is equivalent to

giving them a bonus. Similar reductions might conceivably be arranged on the English railways in favour of the Colonies, but the cost of them would have to be borne on the taxes and no new facilities would be created. A subsidy to a steamer is a bonus, and where there is competition it is open to the objection which may be raised to forms of preference; but such a subsidy may have the effect of creating a service which at present does not exist, or of instituting improvements which otherwise would not be made. In some cases, for instance, a steamer may be diverted from a foreign to a colonial port at a comparatively small cost. In the consideration of such schemes business details would have to be carefully weighed, but the bond of sympathy between the Mother-country and the Colonies would go far to help them through.

A scheme of this kind was much discussed at the Ottawa Conference. The proposal was that a service between England and Australasia, via Canada, should be subsidised. The time of transit was put at 28 days between London and Sydney. An annual subsidy of £300,000 was asked for four 20-knot steamers, giving a weekly service between Great Britain and Canada, and five 16-knot steamers, giving a fortnightly service from Canada to Australasia. It was suggested that of this subsidy Canada should pay £175,000, Great Britain £75,000, and Australasia £50,000. Canada was willing to pay £175,000, and Great Britain could have diverted to this purpose part of the amount (£104,000) paid to the New York lines. Her Majesty's Government did not support the scheme and it was abandoned.

The Report of the Australian Royal Commission on the Navigation Bill of the Commonwealth, on which the proceedings of the Navigation Committee are principally founded, begins by establishing the fact of the decline of British seamen. The proportion of foreigners (not including Lascars) was, in 1900, 21·14 per cent. The cause of the decline is traced to the various points in which the sailor's life lacks ordinary comforts and decencies. Detailed suggestions are made on these matters, and means are indicated of preventing "crimping" and other abuses. It is noteworthy that many of the suggestions made were anticipated in the Imperial Merchant Shipping Act of 1906.

The able Australian Report (No. 36, 1906) on the ocean shipping service, is a striking example of the extent to which proposals for state enterprise go. The Commissioners boldly advocate a National

Fleet, to consist of eight steamers costing £3,000,000, and put the annual cost at £1,207,000, and the earnings at £1,319,900. There are rebates on the trade from England, but not on that from Australia.

The riots which recently occurred at St. Lucia were of a type with which the West Indian Colonies are unhappily familiar. In a pamphlet published by the Institute of Jamaica last year, Mr. Frank Cundall enumerated twenty-two disturbances of this character which have occurred since the date of Emancipation, and the list is not exhaustive. The most serious riots of recent years were that which took place in Trinidad in March, 1903, when the public buildings were burned down and sixteen lives were lost, and the strike riot at Georgetown, British Guiana. It is easy to attach too much importance to these occurrences. They have been due, as a rule, to temporary and accidental causes, to misunderstandings operating on an excitable population, hardly at all to serious political discontent. In almost every instance the local force of police has been able to suppress the disorder, and the part played by Imperial military or naval forces has been limited to the restoration of confidence. But the inhabitants of St. Lucia will no doubt draw the moral that the withdrawal of the troops, and the abandonment of Castries as a defended coaling depot in 1905, has left them without adequate protection; and the announcement recently made that the Admiralty have decided to detail a second cruiser for special service in the West Indies will be welcomed.

The Imperial Government has decided to make a free grant of £150,000 and a loan of £800,000 to the Government of Jamaica, in order to assist in repairing the damage wrought by the earthquake which laid Kingston in ruins last January. In view of the great destruction of property, and of the scarcity of capital and credit in the island some such assistance was inevitable. Good precedent exists for it in the grants and advances made by the Imperial Government on the occasion of West Indian hurricanes in previous years, and it will be generally approved. But there is no need to fear that the economic prosperity of Jamaica will be permanently impaired by the disaster, terrible and overwhelming as it was. The resources of the island are purely agricultural, and the fruit and sugar plantations have, it is understood, suffered little from the earthquake. The West Indian Colonies have shown remarkable recuperative powers in the face of a succession of natural calamities, which have included hurricanes, volcanic eruptions and earthquakes, and the prospects of Jamaica before this recent misfortune overtook

her had seemed to be unusually bright. It is fortunate that the new Governor is thoroughly acquainted with the needs of the Colony, and is regarded by its inhabitants, as well as by Downing Street, as the right man to deal with the emergency.

The meeting convened by the Lord Mayor on the 23rd of April, to discuss the subject of Empire education received exceedingly strong support. We trust that the result will be that the educational authorities in this country will be able to admit into the curriculum of the primary schools a larger amount of study of the Empire. As Lord Milner observed, the object cannot be obtained unless Empire education becomes a recognised and normal part of the education of the children in all public schools. The subject is indeed, from an educational view, admirably adopted to foster the wide vision and large sympathies which, in other places, are the best results obtainable from a classical education, and the facts themselves would be congenial and interesting to the children.

We do not however think that the terms of the resolution which was passed are altogether happy. It runs as follows :—

“That in the opinion of this meeting of citizens of London and others, the education of the people of Great Britain on the subject of the Empire is deplorably backward, and that as an illustration of this fact it may be pointed out that no official map or text book in regard to the Empire is available for teachers and the public; that the teaching of Empire subjects with the aid of official maps and text book should be obligatory in all elementary and secondary schools in Great Britain; and that the Government be requested to lend official assistance in the preparation of such maps and text books and to sanction the permanent display of Empire maps in all schools post offices, and public buildings.”

Surely it is hardly necessary to press for the preparation of an official map of the Empire for the purpose of the extremely simple handbook which would be wanted. Are there not many suitable maps, both large and small, already in existence? We might instance the map given in the Colonial Office List. What would be thought of a Government office which, having to prepare a handbook for children, began by calling upon the Ordnance Survey at Southampton to construct a new map of the world? Some indignation has been shown at a statement made by the Education Department that it is not their business to make maps or school books. It certainly is not, and no reason has been shown why it

should be. The composition of elementary hand-books is a special art. There are many practised writers who would have no difficulty in producing what is required in a form adapted to children's requirements. This is their role, and neither officials nor professors could equal them at it.

As soon therefore as the authorised curriculum calls for the elementary hand-book it will be forthcoming. The market would be an excellent one, and there seems to us to be no need for any subscriptions to help authors. Of secondary hand-books there are already several.

At this period of the year a very large number of visitors from the Colonies are in this country. One of the domestic questions in which some of them are compelled to take more than a passing interest is the payment of income tax. If they reside here for six months in any one year they are liable. The point is of importance to Government officers particularly, owing to the special facilities which the Inland Revenue enjoy of ascertaining their income, and some remarks may be found interesting.

The archives of the departments concerned deal with many points which have been raised, but, as a rule (as might be expected from the formidable mass of legislation on the subject), the official assessor is too much for the complainant. Thus a visitor urged that at no time had he resided here for six months continuously; but this is immaterial if he has resided "at one time or several times for a period equal in the whole to six months in any one year." Nor does it matter that a person comes here for a temporary purpose, and without any intention of establishing a home here. In other words the question is not one of domicile, but simply of residence.

It will be observed, however, that the six months is to be "in any one year." This is a point worthy of the consideration of the far-seeing officer. "Any one year" means (to the Inland Revenue) any one financial year. Thus you may have completed five months, residence at the end of March. But you start fair again the next month (viz., on 6th April). The utility of apportioning a long holiday duly over two financial years is obvious. If you reach England in the course of October, you are exempt for the current financial year and you can reside five months in the next without liability.

A point which occasionally arises is whether an officer can be relieved from payment on the ground that his residence here for more than six months has been caused by official requirements. He may have been detained by instructions from the Secretary of State, and frequently (as it happens) the necessity for these detentions is, only discovered towards the end of the usual leave. In such cases the Inland Revenue have, on application from the Secretary of State, relieved the officer from liability.

Prior to 1905 income-tax was levied on the whole sum paid to an official, including salary which had accrued due before his arrival and any advance made to him in anticipation of salary payable after departure. This was no doubt in accordance with the strict interpretation of the Income Tax Acts, which lay hold of all payments of this kind without distinguishing the periods for which they are payable. But in the above year a correspondence took place between the Crown Agents and the Inland Revenue, the result of which was that salary accrued due before arrival and advances made before departure are exempted.

The case of gratuities is sometimes open to question. On a case which occurred in 1905 the Inland Revenue stated that "the general rule in such cases as laid down by the Treasury is that all gratuities or payments in the nature of gratuities made to officers in respect of the performance of their duties in the public service and in consideration of those duties, shall be charged to income tax; but when the gratuity is given by way of reward for special services outside the ordinary duties of that particular office liability does not arise. Moreover, no liability attaches to gratuities granted on retirement to officers who are not entitled to pension."

A gratuity given to an officer for proficiency in a foreign language was held to be exempt, "being in the nature of a return of out-of-pocket expenses incurred by the officer in the acquirement of the language." The reason given does not perhaps represent the usual facts, but as the decision is satisfactory there is no occasion to discuss it.

If the officer has come here for a temporary purpose, there is no liability until the six months' residence is completed, and the Crown Agents pay salaries in full till then. The deduction is made when the period is complete. But, if the officer has not come for a temporary purpose only, the proper deduction must be made from each payment.

It follows in the first case that an officer on leave may draw salary for say five months without paying income tax, and that if he draws no further salary in this country he will escape payment, however much longer he stays here. We do not suggest that advantage should be deliberately taken of this circumstance, but if it is no official notice will be taken.

The rule that six months' residence entails liability does not, unfortunately, imply that less than six months' residence always avoids it. If an officer does anything which shows an intention of establishing a residence here, such as taking a lease of a house, he is liable, because it is inferred that he has not come for a temporary purpose only. Thus it has been held that a master mariner, who had a house in the United Kingdom in which he lived occasionally, and in which his family lived regularly, was liable. It would seem fairly arguable that the case of the civil servant, who takes a house for his family here, is distinguishable, as he really resides in the colony himself. In a recent decision, however, the Inland Revenue wrote as follows to an officer of Southern Nigeria who had been assessed by the District Commissioner of Taxes: "As the Board understand the facts of your case, you have returned home from Nigeria on leave during some portions of each year since your appointment, while you also rent a house in this country in which Mrs.— lives from time to time, and on these facts the Board consider that for Income Tax purposes you are not a temporary resident in the United Kingdom for a period of less than six months, but a temporary absentee from the country, such as is specially directed to be charged by s. 39 of the Income Tax Act of 1842." Whether this decision would apply to officers who only come home at long intervals is possibly open to doubt, but the principle is that all officers who are "temporary absentees," for whatever periods, are liable if they take a house here.

It is useful in some cases to know that, when a change is made in the rate of income tax, the new tax is chargeable on the dividends or interest paid by foreign or colonial companies or governments, and sent to an agent here for payment on or after 6th April; but in the case of dividends of companies in this country and income derived from property or business, the tax charged is that in force at the time when the money was accruing.

If a pensioner agrees to devote a specified part of his pension to the payment of debts, or if part of it is assigned to the Official Receiver, income tax is still chargeable on the whole of the pension.

NOTES ON THE TRANSVAAL LETTERS PATENT.

IN view of the recent establishment of responsible government in the Transvaal it may be worth while to draw attention to certain points of constitutional interest arising out of the Royal Letters Patent of December 6th, 1906.

The Second Chamber.

The legislature of every self-governing Colony in the British Empire at present consists, like that of the United Kingdom, of two chambers. But in the relationship subsisting between the two chambers there is a wide diversity. The cases in which the Upper House is elective, and those in which it is nominated, are almost equal in number, and we find to-day an elective Senate in the Commonwealth of Australia side by side with a Senate whose members are nominated for life in the Dominion of Canada. Even in South Africa there is a diversity of practice: in Cape Colony the Legislative Council is elective; in Natal it is nominated. By the Transvaal Letters Patent, the choice between the two systems is practically left open to the people of the Colony. The Legislative Council is in the first instance to consist of fifteen members nominated by the governor. But the Legislature is empowered, at any time after four years from the date of the first meeting of the Council, to pass a law providing for an elective Council, and on such a law coming into operation the nominated Council is to be dissolved and to be replaced by the new elective body. Failing such a law, the Council will be dissolved at the end of five years, and a fresh Council will be summoned by the Governor-in-Council—i.e. by the Governor acting upon the advice of his Ministers.

The Speaker of the Assembly.

The Letters Patent contain an interesting and unusual provision with regard to the Speaker of the Legislative Assembly. The House, of course, elects its own Speaker, but on his election he ceases to be a member of the Assembly, his seat becomes vacant and a fresh election is held to fill the vacancy. The reason for this provision is to be found in the comparatively small size of the Assembly. In a

house of only 69 members, parties might be so evenly divided that the majority would be unwilling to elect one of themselves as Speaker at the cost of losing a vote for their party. Everyone will agree that the selection of a Speaker should not be influenced by considerations of this kind, and the provision made in the Letters Patent affords a convenient safeguard.

Language.

By Clause XXXI. of the Letters Patent, English is made the language for Parliamentary records, but English and Dutch are placed on an equality in debates, and copies of the votes and proceedings and of all proposed laws are to be printed in both languages.

The Prevention of Deadlocks.

The provision made in the Letters Patent to avoid the continuance of a deadlock brought about by a difference between the two Houses is of considerable interest. The text of the Clause is as follows :—

“XXXVII.—(1.) If the Legislative Assembly passes any proposed law and the Legislative Council rejects or fails to pass it, or passes it with amendments to which the Legislative Assembly will not agree, and if the Legislative Assembly, in the next Session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Legislative Council, and the Legislative Council rejects, or fails to pass it, or passes it with amendments to which the Legislative Assembly will not agree, the Governor may during that Session convene a joint sitting of the Members of the Legislative Council and Legislative Assembly in the manner hereinafter provided, or may dissolve the Legislative Assembly, and may simultaneously dissolve both the Legislative Council and Legislative Assembly if the Legislative Council shall then be an elected Council. But such dissolution shall not take place within six months before the date of the expiry of the Legislative Assembly by effluxion of time.

(2.) If after such dissolution the Legislative Assembly again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Legislative Council, and the Legislative Council rejects or fails to pass it, or passes it with amendments to which the Legislative Assembly will not agree, the Governor may convene a joint sitting of the Members of the Legislative Council and of the Legislative Assembly, at which the Speaker of the Legislative Assembly shall preside.

(3.) The Members present at any joint sitting convened under either of the preceding sub-sections, may deliberate and shall vote together upon the proposed law, as last proposed by the Legislative

Assembly, and upon amendments, if any, which have been made therein by the one House of the Legislature and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the Members of the Legislative Council and Legislative Assembly shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried, is affirmed by an absolute majority of the total number of the Members of the Legislative Council and Legislative Assembly, it shall be taken to have been duly passed by the Legislature."

As the Council only consists of fifteen members, while the Assembly has 69, it will be seen that the predominance of the Lower House is assured. The provision is borrowed from the Commonwealth of Australia, where, however, it has not yet been necessary to have recourse to a joint sitting.

The Reservations.

The Governor is required to reserve for the signification of the King's pleasure :—

(1). Any law whereby persons not of European birth or descent may be subjected or made liable to any disabilities or restrictions to which persons of European birth or descent are not also subjected or made liable ;

(2) Any law which may repeal or alter any of the provisions of the Letters Patent or of any Letters Patent or Orders in Council relating to the Colony ; and

(3) Any law providing for the introduction under contract, indenture or licence, of labourers into the Colony from places outside South Africa ;

unless he shall have previously obtained the King's instructions through a Secretary of State, or unless such law contains a suspending clause. The Royal Instructions also require the Governor not to assent to certain classes of laws ; but the effect of this provision is not the same as that of the Clause in the Letters Patent summarised above. For the validity of legislation depends on compliance with the requirements of the provisions of the Letters Patent, and if the Governor were to assent to a law which the Letters Patent required him to reserve, the law itself would be void and invalid. Failure to comply with the Royal Instructions, on the other hand, would not affect the validity of a law, which would remain operative unless and until disallowed by the Crown. It is interesting to note that the Transvaal Parliament has already, in its first brief session, amended the Letters Patent to which it owes its existence, by defining the nature of the "offices of profit," which disqualify for a seat in Parliament, and that the Governor, acting on instructions received through the Secretary of State, has signified his assent.

TRANSVAAL NATIVE AFFAIRS

SIR G. LAGDEN'S REPORT.

THE establishment of responsible government in the Transvaal gives special interest to the Report of the Transvaal Native Affairs Department for 1905-6. The retiring Commissioner, Sir Godfrey Lagden, has taken the opportunity to give a brief record, in the introduction to the Report, of the general conduct of native policy under Crown Colony Government. We append some extracts.

"My Report for the past year may be more lengthy than usual because, in view of the impending change of Government, it seems desirable to offer, in a preliminary chapter for public information, a brief retrospect of the conditions and policy of the last few years since the assumption over the Transvaal Colony of British rule in 1901.

The state of things in that year may be described as chaotic. The war was still raging, the natives were scattered and bewildered, and there was an entire absence of law and order. At the centres of industry great attempts were being made to put machinery in motion to admit of the employment of white skilled labour which was clamouring to return to the Colony. For that purpose native labour was required and had to be brought here in trains under military escort. It was necessary to frame or amend and bring into operation regulations for labour districts in respect of passes, labour recruiting, and compound management, so that imported labour could be more effectually controlled and supervised. It was necessary to further the efforts of those who were recruiting labour so that the supply might be augmented to meet the increasing demands, and to do this it was necessary to appoint officers in the labour districts whose special duty it should be to look after labour questions, and to employ Native Commissioners in the various districts of the Transvaal whose particular purpose then should be to re-establish order amongst the natives, to re-settle them where they had been disturbed, and to restore confidence in the native mind."

"The question of wages is particularly one of economics, with which I only propose to deal briefly. During the war an order was issued under Martial Law which had the effect of limiting the amount of wages to be paid to native employees. Until this order was rescinded it left employers, therefore, no option. Whilst contending that all

natives are entitled to a fair wage for their labour, I have never advocated an excessive rate. Natives as a rule set themselves the task of acquiring a certain amount of money to gratify certain wants, and, having acquired it, retire and rest. Were they to gain very high wages they would retire to rest at an earlier period, and thus spend a greater time in repose. I have always preached to them the religion of continuous work. But the exhortation falls on barren ground if the native has more money than he requires for his immediate wants. He is not like the European, who as a rule continues to work every day of his life in order that he may put something by for the future, and it will be a long time before he assimilates that idea. It is not, in my opinion, a friendly act towards the natives to advocate that they should be paid to an extent which will encourage them to idleness. Their best friends, should, I think, urge them to work continuously, and cultivate thrift as being one of the first steps towards civilisation. The cultivation of a higher standard of living, which induces to increased wants, is the best stimulant to regular and continuous labour.

This leads me to reply to questions which have been sometimes asked as to what Government has done for the natives in this Colony. It has been urged that we have disarmed them and that they have been treated more harshly than formerly. It is true that they were disarmed. It was done by the Native Commissioners without the aid of a single white policeman. The whole country was disarmed after the war, and no exception could be made. What has appeared harsh to them and to some people may be that officers under the British Government are bound to carry out effectively the laws of the land. And there is no doubt that they have done so. The police have been exceptionally keen and active in their duty. It is certain that the Pass Laws have been more rigorously administered than they were formerly, and that defaulters in the matter of taxation, or in any matter, have been more speedily and effectively brought to book. This kind of activity has, I know, given rise to native discontent and to unfair comparison, such as would come to the lips of those who apparently suffer on account of the zeal of officers of the law; but that is a thing which the natives have got to get used to. The same law which gives them unstinted justice and freedom from harm has to run its course severely in other respects.

It must be borne in mind that Government has done much on their behalf in protecting them not only against their enemies but against themselves. It is but a few years ago since they lived in a state of perpetual terror, arising from internecine strife, murder, and spoliation. Barbarism in its worst form had full play; witchcraft and smelling out did their deadly work. All that has been swept away, and the natives now live under a law which admits of their progress if they are willing to progress. In putting a stop to this

wild life Government has been truly paternal, and at the same time has not disturbed the continuance of those habits and customs which the natives cherish so much and which are not repugnant to civilised ideas. It has been the policy of the Government to place amongst the natives in all populated areas officers of experience and training, whose functions are to extend to them sympathetic treatment which is commonly described as kind but firm. These officers give their undivided attention to native matters and are in my opinion for that reason essential no less to the contentment of the natives than to the peace of the country."

"There is no occasion for despondency about the progress of the natives. The ordeal they are going through, i.e., the struggle between progress and barbarism, is most trying, and is intensified by eager clamour for signs of improvement which are and ought to be at this stage almost invisible. Meanwhile, tolerance should be displayed towards their errors in the same spirit in which it is shewn to growing children. It is necessary in native affairs to guard against the tendency of being hypnotised by present-day 'energy,' which demands immediate results and is impatient of slow development."

"Questions have at times arisen as to the interpretation of Law 4 of 1885 and the power of chiefs under it to maintain order in their tribes. It will, I believe, be necessary to amend the Law and to more clearly define the power which chiefs may usefully exercise in tribal matters. We look to the chiefs to maintain order, to assist in the collection of taxes and in the repression of crime, and we must support them in so doing. At the present time they perform many duties of great value to the Government. If they are deprived of their power and position, or are not supported in the reasonable exercise of power, it will become necessary for Government to employ costly and extensive machinery in their place.

The feeling of the natives towards their chiefs is one of traditional loyalty and respect. The people are willing and anxious to obey their chiefs in all lawful ways, and if we exact from them certain duties it is desirable that we should subsidise them for their labour. In so doing, Government ensures their loyalty and attachment. The policy has been not to interrupt a system which serves as a means of government and of contentment. No more fatal error could be committed than to pull down chieftainship until the people were prepared for the change and the Government was prepared to put something better in its place. The chiefs are amenable to advice and guidance, and, if supported, can control their people.

It is true that the natives are beginning to think. Increased contact with civilization, native newspapers, easy means of communication and correspondence have been factors in creating thought. But beyond these lie the sturdy effects of education and religious inspiration engendered by missionaries who have done a great work

for good but have not as yet had time to see the true results of their labours. In some parts of South Africa native thought has taken a distinct shape. In the Cape Colony for instance, where they have equal rights under the franchise they feel themselves to be almost a political power. In the new Colonies it is not so, but there is clearly a significant wave of thought which requires to be realised and recognised.

The South African Native Affairs Commission, constituted as it was of representatives from each of the Colonies and Territories of South Africa, in its Report of 1904 exhibits the true condition of native affairs in South Africa to-day, and offers recommendations upon nearly every subject which politicians may have to confront. With the spirit of those recommendations I wholly agree, and, although it may not be possible for years to come for the Colonies to adopt a common policy, I believe that most of the recommendations of that Commission may be found applicable to the Transvaal. The Report breathes the spirit of tolerance which is so essential in dealing with natives and, while advocating no heroic measures, offers certain suggestions commensurate with the natural evolution of the native. We may admire the zeal and lofty ideals entertained by many people on behalf of the natives. But Government cannot be idealistic; its policy must be liberal and sympathetic but sane. To disturb the natural order of evolution is to arrest the true course of progress. It must be remembered that, as regards native policy, we are daily face to face with extreme opinions. If the best interests of the natives are to be consulted, it will always be necessary to balance these extreme opinions and steer a course between them. The problem is admittedly a great one, concerning which public opinion has undergone a great change during the past few years, and it is emphasised in those Colonies where the government of Europeans and natives has to be combined."

"In a previous paragraph I alluded to a pervading wave of thought. That thought should in the absence of any direct representation of the natives in the Legislature under Responsible Government find some expression. In municipal locations it can be best found by admitting elders of repute to conference and vesting responsibility in them for village management. At the present time it is ventilated amongst the masses in the populated districts through the Native Commissioners who hold periodical meetings of chiefs and headmen at which grievances are expressed and representations made which reach the Commissioner for Native Affairs and the Supreme Chief, i.e., the Governor. But I think the time has come to consider the question of forming a Council entirely of natives who should be selected for their influence or ability, and should be summoned to meet annually under the presidency of an officer of the Native Affairs Department. The functions of such a council should be purely consultative, i.e.,

it should be permitted after conference to make representations for communication to the Government as regards its feelings in respect of existing laws, of laws requiring amendment, and of any matters which have a material bearing upon native welfare. That will, I believe, be the best outlet, and in that way the legislature of the country may learn the mental condition of the natives. I have not urged the establishment of such a council up to the present time, because I have not felt that the natives were sufficiently prepared for it. Moreover, in Crown Colony Government there are no sudden changes of personnel and policy. But under Responsible Government where the party system obtains there is the risk of sudden and repeated changes, and this, in my opinion, makes it more important that opportunities for the expression of native opinion should be afforded."

"As regards taxation, it has for generations been the policy of South Africa universally to impose a direct tax on natives. No sound reason has been advanced for reversing this policy. On the contrary, the South African Native Affairs Commission recommended continuance of the system. The personal tax fixed by the late Government under Law 24 of 1895 is higher than in other Colonies, the reason urged having always been that the Transvaal natives had near their homes a splendid labour market offering high wages.

The Amended Ordinance No. 20 of 1902 provides, with certain exceptions, for a common tax of £2 upon every male adult. It was found, however, that this pressed most hardly upon farm labourers who, though in the enjoyment of only small wages, were tied to farms, and were thus unable to get away and earn high wages as others could do, the result being that the farmers in many instances paid the tax themselves. The law has therefore been altered to the extent that the tax on *bona fide* farm labourers who have worked continuously for a certain period will be partially remitted. Similar relaxation has been afforded to natives residing by permission and working within Municipal areas, and who pay Municipal taxes. Furthermore, it was found that the cumulative tax of £2 upon each wife additional to the first was an intense burden upon men who acquired wives formerly, when they were easily obtained and easily kept in the days when land was plentiful and the wants of wives less exacting than they are to-day. This cumulative tax has been removed. It will not, in my opinion, affect polygamy in any appreciable degree, because the natives to-day are quick to realise that their lands will no longer support the number they used to, that new lands are now no longer available, and that the women themselves demand clothing and other luxuries which have come into modern use."

"The resolutions passed upon the subject by the South African Native Affairs Commission after critical enquiry in each colony put the case so well that I reproduce them and endorse them fully.

‘That in the opinion of this Commission, the Ethiopian Movement, now represented by the African Methodist Episcopal Church, the Ethiopian Order in the Church of England, and the numerous semi-organised schismatic fragments detached from every denomination operating to any considerable extent in this country, is the outcome of a desire on the part of the Natives for ecclesiastical self-support and self-control, first taking tangible form in the secession of discontented and restless spirits from religious bodies under the supervision of European Missionaries without any previous external incitation thereto. Further, that upon the affiliation of certain of these seceders and their followings to the African Methodist Episcopal Church lamentable want of discrimination was displayed by the first emissaries to South Africa in the ordination to the ministry of unsuitable men.’

‘That the Commission is not disposed to condemn the aspiration after religious independence, unassociated with mischievous political propaganda, but at the same time does not fail to recognise that in the case of a subject race such an aspiration misdirected on the one hand by the leadership of ignorant and misguided men and repressed by misunderstanding or harshness on the other might be fraught with the seeds of racial mistrust and discontent.’

‘That the Commission cannot but regard with concern the fact that many who have been prominently connected with the movement in its various phases are men lacking in the breadth of view, wisdom and forethought necessary properly to foster and direct the fledgling ideals of a people just emerging from ignorance and barbarism into a state of semi-enlightenment.’

‘That, reviewing these resolutions, the Commission would not advise any measure of legislative repression, unless unforeseen developments render it necessary, considering that effort should rather be directed towards securing efficient constitutional control and organisation in order that the influences at work may be wisely directed, and any individual cases in which pastors abuse the trust reposed in them, may be amenable to authoritative discipline. To this end the Commission would deprecate the recognition of detached secessionary fragments acknowledging no efficient central authority.’

Although this report purports to be brought up to the 30th June only, it is written on a date which enables me to record the result of recent journeys made by me through the thickly-populated parts of this Colony.

I found that almost without exception the natives were happy, contented, and law-abiding. It is true they complained of their taxes, as all people do. But as a rule they were prosperous and well-disposed. A series of bad seasons have made them feel the pinch of want. Drought, locusts and murrain have been the common enemy of all. Many have lost their entire herds of cattle,

and their health has probably suffered in consequence of the loss of milk diet to which they were habituated. My meetings with the natives followed closely upon the termination of the disturbances in Natal and Zululand. There is no doubt in my mind that these disturbances had a reflective action upon the natives of the Transvaal who were undoubtedly approached by emissaries from the rebellious centres. Rebellions are always far-reaching and cause a wave of unrest. We felt it in this Colony. In some quarters alarm was felt by the Europeans, but in no single instance did any tribes in this Colony commit any disloyal acts. They may have coquetted as they will always do; but they obeyed the orders of Government to remain quiet, and they listened to the counsel of their officers whose business it was to advise them. It was a period of anxiety for the Government and people of this Colony, but I felt secure in the knowledge that we had trustworthy officers placed over the natives who would compose and guide them, and to those officers I consider the highest tribute is to be paid for the way they did their duty. As during that eventful period, so during other anxious periods in the past few years they have performed a signal service to the Colony, which it is my high privilege to place on record to their credit."

"The fall in the supply on mines and works has been almost entirely consequent upon the shortage in the supply from the Transvaal, Cape Colony, Portuguese East Africa and Rhodesia.

The decrease so far as the gold and coal mines are concerned is partly attributable to the deflection of labour to other classes of employment, and to the diamond mines in this Colony and at Kimberley.

The apparent facility and success with which recruiting operations are carried on by the agents of diamond mines points to the fact that the gold and coal mines now have in them powerful recruiting rivals with whom, as regards wages and inducements generally, they are unable to compete, and that where and so long as recruiting for the former industry is actively prosecuted, and until its requirements are satisfied, no material supply can accrue to gold mines and other industries."

"Recruitment in Tropical Areas.—As a result of the exceedingly high rate of mortality amongst natives recruited for the mines from tropical areas it was decided in December last upon the authority of His Majesty's Government and by arrangement with the Witwatersrand Native Labour Association to suspend all recruiting operations north of latitude 22 in the territories of British Central Africa, Quilimane, Mozambique and Portuguese Nyassaland."

"On the 31st December, 1905, there were employed on Mines in all the labour districts of the Colony:—

Natives (exclusive of those recruited from tropical areas)	84,167
Natives recruited from tropical areas	10,570
Chinese	47,217

If it were decided to suspend recruiting in tropical areas, and if the recruitment of Chinese labour is discontinued, a serious position would present itself, and the mining industry would be left dependent for its supply upon the non-tropical areas, which (although they may not at present be exploited to their fullest capacity) might be quite unable to supply the deficiency. Again, if such a position did arise, and it were necessary to revert to recruiting in tropical areas, it would be months before the recruiting machinery at present in operation could be reorganised. The labourers now drawn from Portuguese East Africa, south of latitude 22 degs., are admittedly of superior physique to those who were recruited in the early days of the mining industry, and to account for this there is evidence that of the recruits from that area during the past year, over 50 per cent. were 'old mine boys.'

It is reasonable to suppose that the improved physique among these natives is, in a measure, due to the opportunities which have been afforded them to come out for work and to the increased circulation of money amongst them which has enabled them to better their living conditions at their kraals with the result that a valuable supply area has now been formed from which 60 per cent. of the native labour employed on the mines, and 80 per cent. of the total underground native labour supply, is drawn.

If such an improved condition of things has been evolved in respect of the natives recruited from Portuguese East Africa, south of latitude 22 degs., a similar result might possibly be obtained, in course of time, in respect of natives recruited from Quilimane, Mozambique, Rhodesia, and British Central Africa.

Although it is to be regretted that the efforts of the Government and the mining industry have failed to appreciably reduce the rate of mortality among the natives recruited from tropical areas, it is gratifying to notice the marked fall in mortality in respect of those recruited from areas south of latitude 22 degs.

That result might be ascribed to the improved recruiting organisation and arrangements for the conduct of natives to the goldfields, and to the improved conditions of life now obtaining on the mines.

It will be seen from this short retrospect, that from the very outset active efforts have been made in the care and welfare of the native labourers on the mines, whilst the records published in the Annual Blue Book Reports of this Department illustrate that the standard of living has been raised since 1902 to a useful, if not high level.

No one realised a few years ago what is now known to us from actual experience, that the employment of labourers from tropical regions is the principal cause of the high death rate."

ADMINISTRATION OF NORTHERN NIGERIA.

A SERIES of memoranda by Sir F. D. Lugard on administrative questions has been printed for the confidential use of the Protectorate officers. They show the care and pains which have been lavished on the problems of Northern Nigeria. There is hardly any matter of interest in such a country which Sir F. D. Lugard has not studied, and it is fortunate that he has been able to use the brief period between his two administrations in collating and revising these memoranda.

The greater part of the territory is practically under a feudal system. The land is parcelled out into estates held by the principal chiefs as fiefs from the Emir. The taxation was originally Koranic in character, but irregular taxes were invented. Every form of handicraft had its special tax, and in many places the collection was "farmed out." The object of the administration is to retain, as far as possible, the ancient forms of taxation and the old jurisdictions while preventing abuses.

We append some extracts:—

"A Resident, as the name implies, is an Officer charged rather with Political than with strictly Administrative functions, and the degree to which he may be called upon to act in the latter capacity will depend upon the influence and ability of the Native Chiefs in his Province, or in different parts of his Province. Generally speaking, it will be his endeavour to rule through the Native Chiefs, and to educate them in the duties of Rulers according to a civilised standard; to convince them that oppression of the people is not sound policy, or to the eventual benefit of the rulers; to bring home to their intelligence, as far as may be, the evils attendant on a system which holds the lower classes in a state of slavery or serfdom and so destroys individual responsibility, ambition, and development amongst them; and to inculcate the unspeakable benefit of justice, free from bribery, and open to all.

In those Provinces, or rather in those parts of Provinces, which are under the rule of a Chief of the first or of the second grade, this will be a Resident's primary duty and object, though the institution

of direct taxation, and the consequent duty of assessing all the towns and villages himself, will throw upon him a considerable amount of purely Administrative work, even in such districts. In this work he should invite the co-operation of the Chief, and endeavour to enlist his cordial assistance by making it clear to him that his own interests are deeply involved. In Provinces where there is no Chief of the first or second grade, a Resident's functions become more largely Administrative, and among uncivilised Pagan tribes he must assume the full onus of Administration to the extent to which time and opportunity permit."

"It is an important part of the duty of District Officers to encourage trade by every means in their power, informing the people of the nearest European trade-centres, and the products they should bring to market especially encouraging the growth of cotton, and reporting fully as to the output and the possibilities of increase of all products sylvan or agricultural. They will forward samples of actual and possible economic products for transmission to the Imperial Institute; will make full suggestions and proposals having for their object the increase of trade; and will report where the collection of sylvan produce is only partial, and is capable of development and extension; they will report also on the nature of the requirements of the people; what facilities for, or improvements in, means of transport of produce can be given by Government; and what openings there are for new trading-stations; what ferry tolls are collected; and whether the markets are well attended, and caravans frequent. For this purpose, as well as for administrative reasons, they will do, their utmost to promote road-making throughout their Provinces. Residents should do their utmost to promote the planting of trees of economic value in their Provinces, especially of Shea, Kola and Rubber, according to the locality and suitability of soil and climate. At their Headquarters they should plant fruit trees (Mango, Limes, Oranges, &c.), as well as Eucalyptus and flowering shrubs. Seeds or seedlings of these will be supplied, when available, on application to the Forestry Officer. The necessity of preventing deforestation of the country, and of replacing trees of economic value, will be impressed on the Chiefs, and the damage done by forest fires will be pointed out to them with a view to their prevention."

"The question of sanitation of Native towns is of sufficient importance to merit a word here. Beyond doubt the insanitary condition of Native towns and villages increases the prevalence of disease, and is a primary cause of the great rate of infant mortality, which is estimated by Dr. Miller, C.M.S., at perhaps 50 per cent. Residents are authorised to deal with this matter 'administratively,' first by clear orders and cautions, and later (if the warning is disregarded) by a

fine. Headmen may be warned that the tenure of their position will depend on their ability to enforce reasonable reform in these matters. Large cities, should, according to custom, be divided into Wards (*Unguwa*) the Chief of each Ward being held responsible for its sanitation (as well as for other matters, such as originating of false reports and alarms). Refuse heaps should be placed in selected situations at a distance from the water supply, and frequently fired, and an area of at least 100 yards all round each village should be kept entirely free of high grass and bush, and special precautions taken to preserve the water supply from contamination, which produces infantile enteritis and dysentery. If possible, Incinerators and Latrine pits should be introduced, and steps taken to establish regular cemeteries where they do not exist."

"Mohammedans of the better class are apt to consider it insulting to them, and a slur on their character to be called upon to swear to the truth of all evidence that they are about to give, and in consequence to become sulky and unwilling to tender it, or to respect the Oath that they will speak the truth. The Native (Mohammedan) custom is only to swear a man to a particular point if his statement on that point is challenged, and it is stated that in such circumstances self-respecting Mohammedans will rarely lie."

"In a country where the manufactures are limited to the most primitive wants of every day life, and are not for export, and where, in consequence, the exports are limited to raw material in payment for the manufactured goods received, it is obvious that indirect taxation in the form of customs is the simplest and cheapest mode of taxation. The disadvantage of limiting taxation to this source lies in the fact that, when a further stage of progress has been reached, it becomes difficult to inaugurate those direct contributions towards the cost of the Administration, which are recognised among all civilised nations as justly due from the individual, in proportion to his wealth, and the protection and benefits he receives from the State. This principle of direct taxation has been, I think, adopted by the French in all their African Colonies, and by the British in South and East Africa, but not, hitherto, in West Africa, except in Sierra Leone, where (probably because of its introduction at a late stage, instead of simultaneously with the assumption of rule) it produced trouble. If then it be assumed that direct taxation ought in some degree to be introduced at some not remote time, it appears to me to be the more far-seeing policy to introduce the principle simultaneously with the inclusion of the country under British control, when it is looked upon as a natural corollary to the assumption of rule.

On the other hand, direct taxation is unsuitable to a people who are held in a state of slavery or serfdom, for the responsibility of

the individual is then assumed by the slave-owner. A serf or slave cannot be expected to recognise or understand his obligation to the Government when the results of his labours are not his own, and the produce of his fields belongs to his master. He ceases to have an individual responsibility to the State for his actions, or an obligation to maintain the efficiency of the State by his contributions, however small; these obligations pass to his Overlord.

Direct taxation, therefore, as being the State recognition of the rights and responsibilities of the individual, is the moral charter of independence of a people. Communities, however, who have only recently emerged from such a state of servitude, are not, at first, wholly fit to appreciate those rights and to assume those duties, and they take some time to acquire the sense of responsibility and its obligations.

“Experience (I wrote in a former Memo.) seems to point to the conclusion that, in a country so fertile as this, taxation is a moral benefit to the people, by stimulating industry and production. Hitherto the male population has been largely engaged in tribal war, and the men have depended on the labour of their women and the great fertility of the soil to supply their needs in food. Where taxes were formerly paid (as in the Kabba Province) and have lapsed, I am informed that large areas have gone out of cultivation, and the male population, deprived of the necessity for producing a surplus to pay their taxes, and of the pastime of war, have become indolent and addicted to drinking and quarrelling. The pressure of population is the corrective in most countries, but in this country, devastated by years of war and slave raids, no such pressure at present exists.”

That it was wise to introduce the scheme tentatively, as soon as possible after the conquest of Sokoto and Kano, has, I think, been proved by the reports I have received from all sides of its ready acceptance by the Chiefs, and of the quieting effect that its inauguration has had upon the people. It has been welcomed by the former as moderate and just, and as evidence that the Government desires to support their position, to associate them with ourselves in the government of the country, and to secure to them an adequate revenue which they recognise that they are no longer able to wring from the people, and it has already relieved the almost desperate straits in which the upper classes found themselves in almost every Mohammedan Emirate, by providing an income for those who *earn* it by taking a share in the Administration of the country. The peasantry, on the other hand, are reported to be greatly pleased at the relief from the uncertain exactions of the past, and have

benefited much. Both classes were expectant that the new rulers would impose taxation of some kind to pay for Administration, and they have found the burden less heavy than they feared it might be. The returns of revenue have meanwhile increased rapidly."

"The forms of taxation, which were in operation formerly in the Fulani States, were many of them based on the Koranic law."

"The fanatical Fulani herdsmen, who had spread the Faith throughout Nigeria, had professed to institute the strict Koranic system of taxation. By this they were bound to pay the annual tithe themselves, and to devote it wholly to religious purposes or to the maintenance of the State, and to contribute annually to the support of the centre of their organisation at Sokoto and Gando, while they levied a fixed and proper tribute from the Unconverted.

As the desire for wealth and power, however, gradually supplanted the early religious zeal, the efforts to convert the Pagan races to the Faith, which are enjoined by the Koran, ceased, and the collection of Kurdin Kasa from all of them, irrespective of any nominal adhesion to Islam, became universal. The annual razzias were no longer wars waged for the extension of Islam, in which the vanquished are given the option of becoming one with the victors if they embrace Mohammedanism, but degenerated into mere raids for slaves. The rulers thus grew to look upon the peasantry merely as a means of acquiring wealth, and these, for the most part, remained Pagans. Latterly, when the ability to raid distant districts for slaves was curtailed in the Southern Emirates by the advent of Europeans, they even took to selling their own peasantry, while the levies upon the Pagans grew so heavy that they could only be met by payment in human-kind.

Irregular taxes were invented, or obsolete taxes of the Ilabe were revived, according to the need or the greed of each Emir, and these were imposed regardless of creed, while extortion and corruption increased in every grade. The Emirs came to regard themselves as Rulers first, and only afterwards as Moslems. Many of them were of very mixed blood, and though they one and all professed themselves to be devout Mohammedans, the primary object of their rule was to aggrandise themselves, their personal entourage and satellites, and their clique of office-holders, dignified with high-sounding titles, at the expense of the people whom they misgoverned. The extent to which the misgovernment, and the perversion of the original conception of Koranic taxation, took place, varied, of course, in different Emirates."

"As I have said in a previous paragraph, the abolition of the arbitrary impositions, together with the exactions of the Collectors (which, in some cases, probably equalled the regular taxes in amount,

and was incomparably more vexatious in its incidence), form together so great a relief to the peasantry, that they would welcome an increase of the nominal tribute, the extent of which they know, and which, when once paid, absolves them from all further dues. The object in view is not, however, to increase the incidence on the peasantry at present, but to render it less burdensome to the taxpayers and more remunerative to the Administration by a better system of assessment and collection. On the other hand, the Native Rulers, from lack of organisation and owing to frequent revolts, were in many places unable to collect the full taxes, and even where they were fully collected received less than half of the nominal amount. It appears, therefore, that even if the nominal tax is somewhat increased, and the Native Administration and Government take half each, the peasantry are well pleased, while the Principal Chief has practically as large a revenue as he ever had, and even, in some cases, as Emirs have frankly stated, much more. Out of the moiety assigned to the Native Administration, the Principal Chiefs will pay their allotted shares to the recognised Office-holders and to the District and Village Headmen. The amount assigned to each Native Official is at present a definite percentage of the tax, but later on when, on the one hand, the system has become fully established and effective, and, on the other hand, it has become more clear what incomes are required by the various grades and individuals in order to maintain their position, these percentages will be converted into fixed salaries, and the Native Administration will, then, as in India, become incorporated with the British. The total tax can then be shown on the Estimates as revenue, and the salaries of the Native Officials will appear under the Expenditure as personal emoluments of officials. Until the reform is more matured, however, this is not feasible."

"The general result of these reforms, as they gradually become fully operative, will, I trust, be as follows:—

(a) A substantial revenue will be secured to Native Chiefs to replace the loss by slave raiding and slave trading, and the levies on traders which crushed trade. This (taking into consideration the expenses they have no longer to bear) will leave them sufficiently well off, and in future they will *earn* their salaries by discharging responsible duties for the Administration.

(b) A considerable and increasing revenue will be secured to Government, partly due to better organisation and economy in collection, partly to the greater universality of the collection, and partly to increased taxes on certain wealthy classes. And coin currency, with its immense influence for progress and trade, will be greatly promoted."

"A Capitation or Poll-tax (misnamed a 'hut tax,' since it is levied upon each adult, and not on his house) is a class of taxation

applicable only to the lowest forms of human society, where every individual is practically on the same level, and such forms of wealth as exist are held in communal ownership. But as soon as a tribe emerges from this primitive stage, and individual ownership of property is recognised, a capitation tax should develop into an income-tax, so that each individual may be called upon to pay in proportion to his wealth and means, and in consequence, in proportion to the benefit he derives from the security afforded by Government. I concur, therefore, in a poll-tax only among the more savage and uncivilised Pagan tribes, where it takes the place of the tribute in slaves, or of annual raids. Where it is necessary to levy the tribute by such means, women, who are (at least equally with men) the manual labourers of Africa, should, I think, be assessed. The tax should, I propose, be calculated upon every male between 14 and 50 years of age, and on every female between 20 and 40 years. The rate should be low—say, a maximum of 3s. per annum for men and 2s. for women. But in many tribes recently brought under control it may not be feasible to fix a higher rate than 6d. per adult. The tax would be subject to slight increase or decrease according to the wealth of the community. The Germans in the Kameruns levy 3s. per man or woman, I think, but each married woman (except the first wife, who is untaxed) is charged 2s. only. I think this is a good plan. It is very low as compared to most African Colonies.”

“It is not infrequently urged (especially by those who are new to Africa) that Slavery is an institution well suited to the African, affording conditions under which he is, as a rule, happy, and that its supersession is a mistake. It is not possible in the compass of this Memo. to adequately discuss the reasons which have led thinking men to condemn the system of slavery, but the following are, in brief, among the principal ones. In the first place, slavery cannot be maintained without a supply of slaves, acquired under all the horrors of slave-raids, and transported with great loss of life from their original habitation; this results, not only in much human suffering, but also in a decrease of the population, and consequently in a decrease of the productive capacity of the country; secondly, no people can ever progress if personal initiative and personal responsibility is denied to them, as is the case with the slave class. That existing slaves may be happy in their lot is no argument to the mind of anyone who aims at the progress of the race in a remoter future.

Section 2 of the Proclamation abolishes the “legal status.” This means that, in the eye of the law, property in persons (as slaves) is not recognised, and that a “slave” is accounted to be personally responsible for his acts, and competent to give evidence

in Court. The institution of Domestic Slavery is not thereby abolished, as would be done by a decree of general emancipation, and, while as a matter of fact it gives the slave the means of asserting his freedom, it does not constitute it an offence for a native to own slaves. A master is not compelled to dismiss his slaves, and, so long as the two work harmoniously together, the law does not interfere with their relations towards each other. A slave has, however, the power of asserting his freedom at any time, for, if he leaves his master, the latter can enforce no claim to seize him, and is actionable if he resorts to force. It should not be made a necessary antecedent to the recognition of freedom that a slave should claim his freedom before a British Court, and be able to show proper means of subsistence if liberated. This has been done elsewhere in Africa, with the practical effect of nullifying the law. The right of a slave to assert his freedom when the Legal Status is abolished cannot be made dependent on such conditions, and no such limitation (not sanctioned by the law) can be legally enforced. The attempt to thus restrict the operation of the law appears to me to be neither logical nor just, for since the law does not recognise the Status of Slavery, it cannot detain a man in that status pending its own act of liberation.

If, however, slaves were to be encouraged to assert their freedom unnecessarily in large numbers, or if those so asserting it, by leaving their masters without some good cause, were indiscriminately upheld in their action by Political Officers, a state of anarchy and chaos would result, and the whole social system of the Mohammedan States would be dislocated. It might even become necessary to legalise the institution under some other name. It is, moreover, hardly necessary to point out that such a sudden repudiation of their obligations to their employers by the mass of the slave population would involve equal misery to the slaves and to their masters. The former would have no immediate means of livelihood, while the latter would be reduced to beggary, and to detestation of British rule which had brought this result about. The great cities would be filled with vagrants, criminals, and prostitutes; even now the large majority of the criminal class consists of runaway slaves.

Moreover, to prematurely abolish the almost universal form of labour contract, before a better system had been developed to take its place, would not only be an act of administrative folly, but would be an injustice to the masters, since Domestic Slavery is an institution sanctioned by the law of Islam, and property in slaves was as real as any other form of property among the Mohammedan population at the time that the British assumed the Government, a nullification of which would amount to nothing less than wholesale confiscation. This is equally true of both household and farm slaves. The status of the latter differs from that of household slaves, and they appear

to be rather serfs attached to the soil than slaves, that is to say, they have certain rights as regards produce, the houses they live in, and the hours or days during which they are allowed to work for themselves. It is important that these farm slaves or serfs should not leave their traditional employment in agriculture, and be induced to flock into the big cities as 'free' vagrants without means of subsistence. Residents will therefore do their best to discourage wholesale assertion of 'freedom' by such persons, pointing out to them, when occasion arises, the liberality, and from some points of view in present circumstances, the advantages of the form of labour contract under which they serve."

"Meanwhile, another result is already becoming manifest. The slave-owner, realising that he is powerless to retain or to re-capture his slaves by force, finds it necessary to treat them in such a way as to induce them to stay of their own free will. Their condition is thus improved, and the way is paved for the ultimate change to free labour. 'The result (writes Major Burdon) is that the existing slaves, having no longer the fear of sale or transfer away from the connections they have made, have become more contented, and less inclined to run away; and on the other hand, the masters having no longer the power to sell, nor the fear of confiscation or desertion, have come to treat their slaves more as part of the family. Desertion has become less common, and the formerly prevalent custom of deserting in order to seek Government employ is now very rare.' Similar reports reach me from Kano, Yola, and many other Provinces."

"In my view, it is infinitely better for the country that Government should acquire the sole right to minerals, and control their exploitation, than that Native Chiefs should dispose of rights to concession-hunters, which by Native law, they have, as a rule, no right to sell or give away. A lack of foresight in this matter has resulted in lamentable chaos in many British possessions, and Native Chiefs have sold concessions for a mere trifle in ignorance of their value, and have sold the same area, wholly or in part, to two or more different persons, thereby involving endless litigation and difficulty in settling titles. It appears to me also to be just that Government should share the profit on mineral industries with the actual promoters alone, awarding to the Natives only such compensation as, in the circumstances of the case, may seem just and right. The industry is thereby freed from the initial incubus (which has so hampered it in other countries) of large payments to the concessionaire from whom a syndicate may have purchased, and who had done nothing to earn his profits. Since the Company which actually takes in hand the development of a mineral field, has

been freed from this initial outlay, it can afford to pay a higher proportion of its profits to the Administration, and the share that thus accrues to Government is spent as a portion of the Revenue in lightening taxation, and for the development of the country. In other words, the country itself retains a direct share in the profits accruing from the development of its minerals. Government controls the prospector and the miner, and their relations with the natives whose interests it safeguards, while issuing to the *bona fide* miner a clear title, free of liabilities to any concessionaire. By the elimination of the middleman, the profits of the mining company (and the Government share of these profits) are increased, and both have a joint interest in the development of the industry."

"Crown lands are the private property of Government, and any person entering or building upon them commits a trespass. Public lands are held administratively by the Government, which in no way interferes with private titles, transfers or sales between individuals, but Government has the right at any time to take up any public land for public purposes, and Government can alone grant a title to a Non-Native or a Native who is not a Native of the Protectorate, for any public land. Money accruing from rentals and sales to persons other than Natives of the Protectorate forms part of the Revenue of the Protectorate."

"In Bornu a farm slave has to work five days in the week, and has two to himself, on which he can earn money privately or farm for himself, and out of these earnings he has to clothe, house, and feed himself. He has, in addition, to make certain small gifts to his master, *e.g.*, a portion of the produce of his own farm before sale at market. On the other hand, he is entitled to a small allowance of grain when it is being stored. He may own a farm of his own, and sell its produce, but pays dues to the Village Headman for it. Such slaves belong to their master, and do not pass with the transfer of the land. By law their property is their master's, but by custom it is seldom confiscated. Similarly a slave could formerly be sold or pawned, but this was never done unless the master was in great straits, or the slave was incorrigible. The slave often became very prosperous and owned cattle, &c., being sometimes in a position to help his master with a loan."

ADMINISTRATION OF BRITISH NEW GUINEA.

A VOLUMINOUS report upon "The Present Conditions, including the Method of Government of the Territory of Papua" (until recently known as British New Guinea), has been presented to the Commonwealth Parliament by a Royal Commission. It will be interesting to see how the Commonwealth—in which the principles of responsible government and democracy have obtained their fullest expression—will handle this problem of "Crown Colony" administration. It has begun, in the usual Australian fashion, with a full examination of the facts and much plain speaking. The conclusion that Australians are the men who are most likely to succeed there will command a ready assent. We shall not be so sanguine that men retiring from the Indian Army and Civil Services, "in the latter case, usually with good pensions," will be induced in any numbers to settle, or start their sons in Papua. Even if Cheltenham and Harrogate ceased to attract, such men are hardly of the class which is suited for agricultural work. But, no doubt, as the world's demands for tropical produce increase, as they are constantly doing, the Possession will become a valuable asset. We append extracts dealing with its character and resources.

"The white population at present consists of miners, the major part of whom are settled in three centres, namely, Woodlark Island, and the Yodda and the Gira fields. Digging to a small extent is also carried on at Milne Bay, and on the Island of Sudest, and there are doubtless odd prospectors in other parts of the Territory. Approximately, the digging population may be put down at 200. The rest of the population consists of Government officials, missionaries, storekeepers, traders, labour recruiters, and planters, but your Commissioners regret to state that the latter class are in a distinct minority, nor do they believe that there are at present more than ten plantations in the whole Territory, and of these only four or five at the most are being worked on lines which make for ultimate success.

This state of affairs is in no sense due to a want of proper natural advantages, for the soil of Papua is rich, virgin and easily worked, while its infinite variety makes the successful cultivation of almost all tropical products possible. Climatically, it may unhesitatingly be

said that the country has been much maligned, and Your Commissioners have no hesitation in stating that in this respect it will compare not unfavourably with any other tropical Possession of the British Empire. It is true there are very bad patches, and that, particularly in the Northern Division, an alarming mortality has prevailed in the past; but it must not be forgotten that this took place among officials whose duties led them into the worst parts, and diggers, who, in search for gold, accepted risks which need never be taken by agriculturists. We believe that even the worst areas, when cleared of mosquito harbours and opened to the sunlight by cultivation, will, as in Northern Queensland, become at least comparatively healthy. But at the present moment there is no necessity for settlers to risk their health in creating better conditions for a later generation. Papua possesses thousands of acres where a man who exercises ordinary care may live with no serious risk to his health."

"So far, the gold discovered in Papua has been almost all alluvial, but there is every reason to believe that in the ranges whence this gold must have come, reefs will yet be discovered. Indeed, Mr. Monckton, the Resident Magistrate of the Northern Division, who lately ascended Mount Albert Edward, has pointed out, in his evidence, that he saw well-defined reefs on its slopes. The geological formations give promise that other valuable minerals will yet be discovered, and Your Commissioners have every hope that, given proper encouragement, mining will yet provide employment for a large number of men. But, no matter how fruitful the soil of Papua may be, or how rich the deposits beneath its surface, Your Commissioners recognise that, owing to its tropical climate, it would be idle to ask white men to attempt its development if an ample and suitable unskilled labour supply was non-existent. Fortunately, this problem has not to be faced, for here the question of importing coloured labour need never arise, owing to the plentiful local supply, and mines and plantations can consequently be worked under natural conditions in no way antagonistic to the policy of the Australian Commonwealth.

While Your Commissioners have no doubt as to the practicability of converting Papua into an agricultural and pastoral asset of great value to the Commonwealth, they recognise that all its natural advantages and exceptional labour supply are alike useless unless the right type of white man can be induced to settle there and wake its dormant possibilities into fruitful life. How settlement, in our opinion, can be best encouraged is dealt with under the various sub-headings of this Report, but here Your Commissioners think it is opportune to point out the class of settlers most likely to be successful and to suggest where they may possibly be obtained. From our point of view, the average Englishman, unused to dealing with native races, and totally ignorant of tropical agriculture, apart from having to take the risk of acclimatization, is not the ideal pioneer.

Furthermore, Your Commissioners recognise that this type of man is wanted for Australia. For similar reasons, the southern Australian should not, in our opinion, be specially encouraged to leave his own country, even to develop the Commonwealth's first-born child. But, at any rate, as regards similarity of conditions, there is no reason why our northern Australians should not do admirably as colonists. Indeed, in our opinion, any Australian would be more likely to succeed than a settler fresh from the Old Country, and while we would regret to see any man contented with his lot here leave for Papua, still we recognise that there are a number of Australians who, rightly or wrongly, are dissatisfied with existing conditions, and who, as a consequence, are leaving for various parts of South America, where they are practically lost to their own country for ever. These, we think, should be, if possible, induced to settle in Papua, where they will still be citizens of the Commonwealth, and under possibly more congenial conditions can do good work, not only for themselves, but for their Motherland. There are other Australians who might be induced to settle in Papua, but who are at present drifting away to South America. Your Commissioners refer to men who either remained in South Africa after the war, or, having gone there since, are now realizing that it is not the El Dorado they anticipated.

While in no sense suggesting that anything but encouragement should be offered to suitable colonists from any part of the Western World, Your Commissioners would naturally like to see the future guiders of Papua's destiny British in blood and sympathies, and it appears to them that such could be obtained in India if Papua's possibilities were judiciously and generally advertised in that country. Men are constantly retiring from the Army and the Civil Service, in the latter case, usually with good pensions. Already many of them are turning their eyes towards Australia as a future home. We think that they would probably find an outlet for their small capital under more congenial conditions in Papua than here, and, even if they themselves decided to live in Australia, they would probably gladly seize the opportunities offered for giving their sons a start in a country close to home, and yet having more in common with their life-long point of view than Australia can ever offer. Speaking generally, it appears to Your Commissioners that the East should be exploited for colonists, and we believe, when they clearly understand the conditions about to obtain in Papua, that a fair number of British will be found with some knowledge of tropical agriculture and native management ready to help in building up a country under their own flag, in preference to that of some foreign power."

"The aboriginal population of the island consists approximately of from 300,000 to 400,000, split up into innumerable tribes, and

speaking many languages. They are to a greater or lesser extent agriculturists and traders. Those inhabiting the sea coast and islands, and certain of the inland tribes in the Central, Eastern, North-eastern, and Northern Divisions may be said to be under Government control, to an extent which varies from perfect safety for white settlement on the South-east coast, to practically the mere shadow of magisterial authority in parts of the Gulf and nearly the whole of the Western Division."

"At present, the coastal native need only work to eat, and his wife does most of the little labour that suffices for his food supply. Government protection has plunged him into a condition of peaceful sloth. To-day, thanks to imported implements, the Papuan can do what little labour he still finds necessary with less exertion and in half the time formerly demanded; so, not by the path of gradual and natural development, but as a consequence of trade tomahawks and knives, the native has stepped—in the short space of twenty years—from the stone into the iron age. This transition would have been too sudden, the gap to be bridged too wide, for beings of far more advanced mentality to have faced successfully. Naturally, the Papuan has failed. He can now obtain sufficient food at the cost of much less personal exertion than formerly, and having no fear of hostile attack, need not attend to his physical development; while, at the same time, his desires and wants have remained those of the stone age. Consequently, the net result of hurling him into the iron period has been to render him more effeminate, and correspondingly indolent and wanting in proper manly self-reliance.

To awake the Papuan from this lotus-eaters' dream is an imperative and immediate necessity if he is to be saved from the fate of most aboriginal races. White settlement has created new wants and aspirations among the black races of South Africa; Your Commissioners believe it will in Papua. To satisfy the wants so created, money will be required. Money can only be obtained either by working for others or for himself; *ergo*, the native must, by an inflexible law, either become more industrious, or remain impervious to the temptations of the white man's stores. The history of all native peoples of similar development gives a direct negative to this last supposition. Consequently, Your Commissioners suggest the encouragement of white settlement as one of the surest and most practical methods of arresting the present indolent, apathetic state into which Government protection is sinking a race capable of a more useful and worthy destiny.

As a further means of forcing the native to recognise the obligations he owes to Government, and his own personal responsibilities, Your Commissioners are strongly of opinion that the time has arrived for the imposition of some system of taxation, so far as those natives are concerned who are under recognised Government control, the

system to be applied (in a manner to best meet local conditions) to other tribes as they are brought within the sphere of Government influence, and so become partakers of its protective advantages."

"While Your Commissioners desire in no way to detract from the importance of mining as a factor in the future development of Papua, they yet feel that to agriculture the Government must chiefly look as a means of providing a stationary and steadily revenue-producing population."

"While freely admitting that up to the present the intending settler has had to struggle against disabilities often inexcusable, and under any circumstances certain to prove fatal to general development, Your Commissioners could not fail to note that another cause has been at work, which would have rendered failure almost a certainty even had other conditions been in every sense favourable, and they would like to point out most emphatically that this cause must be removed if tropical agriculture is to be successful. The old adage that what is worth doing is worth doing well has apparently had little application, so far as plantations are concerned in Papua. Men have been picked to create or manage plantations for apparently every other reason than the one that they could reasonably be supposed to know anything about the work they were called on to supervise. It was found that the destiny of a majority of the few plantations started had been handed over at different times to a private soldier, a pearl sheller, a storeman, a saddler, and a valet. Under these circumstances Your Commissioners have no hesitation in saying that they consider the poor results so far obtained inevitable, and in no sense indicative of anything more than a want of ordinary common sense. To sum up the whole position, in planting as in most other things, amateurism has been the curse of Papua, and until this fact is fully realized, no effort on the part of the Government can bring out its potential natural possibilities.

The products which, in the opinion of Your Commissioners, have stood the test of experiment, and may now be regarded as safe investments when intelligently worked, and the word 'intelligently' is used advisedly, are copra, rubber, and coffee."

Sugar.—As sugar has not yet been cultivated by white men in Papua, Your Commission has not included it amongst those products which, in their opinion, have passed beyond the stage of experiment. At the same time, both by reason of the character of much of the soil and the fact that it is indigenous to the country and largely used as an article of food by the natives, they feel justified in expressing the opinion that sugar production will yet be one of the most profitable and extensive industries carried on in Papua."

"Being convinced that much of the country is peculiarly adapted to the growth of coffee, Your Commissioners consider that every effort

should be made to foster this industry, and in view of the fact that the Commonwealth uses 1,000 tons of coffee per annum, of which all but 34 tons was last year imported from abroad, they think that the Commonwealth Government should give this industry the advantage of a certain Tariff preference as against the outside world, and that when the production warrants it the local Administration should see to the hulling, grading, and branding of the product for the grower, as is now done, they understand, in Queensland.

Tobacco.—Tobacco is another product indigenous to Papua, to which, in the opinion of Your Commissioners, the attention of growers should be directed. So far, it has only been cultivated in a most primitive fashion by the natives themselves, but, at any rate on the Fly River, its natural quality seems to be of a highly satisfactory order."

MINING.

Prospecting.

"On the whole, the condition of the gold-mining industry in the Territory is of an encouraging nature. During the last six years the gold exports have steadily increased from £32,926 in 1900, to £58,496 in 1905-6, and this result has been attained notwithstanding the fact that but comparatively little of the country has been even roughly prospected.

With the exception of the mining carried on on Woodlark Island, the gold-mining of the Territory is almost solely confined to alluvial work, and the present developments upon the alluvial fields do not indicate their capability of supporting a greater number of men than are now engaged upon them. This suggests the necessity for discovering and opening up new fields if the industry is to be fostered and encouraged.

Gold is found and worked for along the North-eastern portion of the Territory from Milne Bay in the south, to Mambare River in the north; and the more recent reported discovery of gold on the Waria River further north, and close to the German boundary, points to the conclusion that the trend of this known gold-bearing belt is towards German Territory. In some minds, indeed, there appears to be a doubt whether the Waria discovery is in our Territory or in that of Kaiser Wilhelm land. Already some of the best miners in the Northern Division of Papua are on the Waria field prospecting.

It is, therefore, important that the country generally should be examined, and the gold in our Territory located in order to prevent the exodus into German territory of our miners, which would otherwise inevitably result from the discovery of payable gold-fields in the latter country. Existing circumstances plainly require that the necessary search and examination of the country

should be made by the Government by means of a well-equipped party comprising a geologist and practical miners. This method (of Government prospecting) would recommend itself to Your Commissioners above all others under any circumstances, but more particularly so in the present instance, for the reason that there is great danger attending prospecting by small private parties in districts not under—or only partially under—Government control, by reason of the hostility of the natives; whilst prospecting by large private parties, on the other hand, is a menace to the natives themselves if collisions should, as they almost certainly would, take place.”

NATIVE LABOUR.

Recruiting.

“The recruiting of native labour for all purposes is regulated by the Native Labour Ordinance of 1900. Such labour is obtained through the medium of licensed recruiters. The number of natives recruited last year was—for miners, 1,000; for others, 783; and probably if recruits had been available another 400 boys could have been engaged for miners. It is thus safe to compute the present labour supply at 2,000 recruits.

There are objections to the present system of private recruiters, and all the evidence taken favours the removal of the middleman and the initiating of a Government system, and with this evidence we agree. Among the objections to the present system may be mentioned the abuse of their licence by certain recruiters; boys have been threatened by recruiters with the wrath of the Government if they did not recruit. Village constables, too, whilst they are instructed to hold aloof, and remain entirely neutral between the recruiter and the natives of the villages, seem to be unable to comprehend or realise the real meaning of their instructions, and there appears to be a tendency on their part either to advise the natives against offering themselves as recruits generally, or they distinguish between recruiters who are, and who are not, *persona grata* to them individually, and assist or prevent recruiting accordingly.”

“Amongst the advantages accruing under a Government system of recruiting are the following:—Government officers would, we think more readily obtain recruits. The natives would place greater reliance, and we think, properly so, upon receiving fair treatment from their employers if the Government were the go-between; the Government, by monopolising the right to recruit, and desiring to make no profit thereby, could afford to do so at a less cost to the employer, who would consequently be benefited; the Government would be in more constant touch with coastal native tribes; the decreased cost of recruits would enable the imposition of a fee for supervision and

should be made to foster this industry, and in view of the fact that the Commonwealth uses 1,000 tons of coffee per annum, of which all but 34 tons was last year imported from abroad, they think that the Commonwealth Government should give this industry the advantage of a certain Tariff preference as against the outside world, and that when the production warrants it the local Administration should see to the hulling, grading, and branding of the product for the grower, as is now done, they understand, in Queensland.

Tobacco.—Tobacco is another product indigenous to Papua, to which, in the opinion of Your Commissioners, the attention of growers should be directed. So far, it has only been cultivated in a most primitive fashion by the natives themselves, but, at any rate on the Fly River, its natural quality seems to be of a highly satisfactory order."

MINING.

Prospecting.

"On the whole, the condition of the gold-mining industry in the Territory is of an encouraging nature. During the last six years the gold exports have steadily increased from £32,926 in 1900, to £58,496 in 1905-6, and this result has been attained notwithstanding the fact that but comparatively little of the country has been even roughly prospected.

With the exception of the mining carried on on Woodlark Island, the gold-mining of the Territory is almost solely confined to alluvial work, and the present developments upon the alluvial fields do not indicate their capability of supporting a greater number of men than are now engaged upon them. This suggests the necessity for discovering and opening up new fields if the industry is to be fostered and encouraged.

Gold is found and worked for along the North-eastern portion of the Territory from Milne Bay in the south, to Mambare River in the north; and the more recent reported discovery of gold on the Waria River further north, and close to the German boundary, points to the conclusion that the trend of this known gold-bearing belt is towards German Territory. In some minds, indeed, there appears to be a doubt whether the Waria discovery is in our Territory or in that of Kaiser Wilhelm land. Already some of the best miners in the Northern Division of Papua are on the Waria field prospecting.

It is, therefore, important that the country generally should be examined, and the gold in our Territory located in order to prevent the exodus into German territory of our miners, which would otherwise inevitably result from the discovery of payable gold-fields in the latter country. Existing circumstances plainly require that the necessary search and examination of the country

should be made by the Government by means of a well-equipped party comprising a geologist and practical miners. This method (of Government prospecting) would recommend itself to Your Commissioners above all others under any circumstances, but more particularly so in the present instance, for the reason that there is great danger attending prospecting by small private parties in districts not under—or only partially under—Government control, by reason of the hostility of the natives; whilst prospecting by large private parties, on the other hand, is a menace to the natives themselves if collisions should, as they almost certainly would, take place.”

NATIVE LABOUR.

Recruiting.

“The recruiting of native labour for all purposes is regulated by the Native Labour Ordinance of 1900. Such labour is obtained through the medium of licensed recruiters. The number of natives recruited last year was—for miners, 1,000; for others, 783; and probably if recruits had been available another 400 boys could have been engaged for miners. It is thus safe to compute the present labour supply at 2,000 recruits.

There are objections to the present system of private recruiters, and all the evidence taken favours the removal of the middleman and the initiating of a Government system, and with this evidence we agree. Among the objections to the present system may be mentioned the abuse of their licence by certain recruiters; boys have been threatened by recruiters with the wrath of the Government if they did not recruit. Village constables, too, whilst they are instructed to hold aloof, and remain entirely neutral between the recruiter and the natives of the villages, seem to be unable to comprehend or realise the real meaning of their instructions, and there appears to be a tendency on their part either to advise the natives against offering themselves as recruits generally, or they distinguish between recruiters who are, and who are not, *persona grata* to them individually, and assist or prevent recruiting accordingly.”

“Amongst the advantages accruing under a Government system of recruiting are the following:—Government officers would, we think more readily obtain recruits. The natives would place greater reliance, and we think, properly so, upon receiving fair treatment from their employers if the Government were the go-between; the Government, by monopolising the right to recruit, and desiring to make no profit thereby, could afford to do so at a less cost to the employer, who would consequently be benefited; the Government would be in more constant touch with coastal native tribes; the decreased cost of recruits would enable the imposition of a fee for supervision and

thus provide more effective supervision of native employes, for which the present fee is inadequate. The foregoing and other minor advantages seem to Your Commissioners to be apparent. The system recommended is one which could do away with the holders of recruiting licences, and substitute for them the Government."

EDUCATION.

"Sir William MacGregor, fully realizing towards the close of his administration the many unanswerable reasons in favour of teaching the English language to the natives, made every effort towards the furtherance of this end. Your Commissioners regret that up to the present it appears to them that successive Administrators have done little or nothing towards the carrying out of his wishes, nor can they hold the various Missionary Societies, which have had the whole matter largely in their hands, blameless in this regard. It appears to us that they have, in the main, been more anxious to cultivate local dialects than to introduce one common language, and that the one spoken by the Empire to which they belong. Nor can we hold many Government officials individually blameless in this connexion. It is evident that a majority of them have taken little trouble in the past to teach either police or prisoners the English language, and our experience in Papua leads us to the conclusion that most of them still attach small importance to this matter.

Motuan, possibly because it is of itself a well-defined language, probably for the reason that it was the tongue spoken by the natives round Port Moresby, has practically been constituted the official language, and Your Commissioners understand that Government officials are supposed to be proficient in its use. Considering that the natives outside a moderate radius of Port Moresby speak an infinite variety of tongues totally apart from Motuan, and that, as a matter of fact, the official who wishes to make himself understood in any other Division, save in parts of the Central, must learn the dialect or dialects spoken in that particular Division, Your Commissioners can see little virtue in giving official significance to any particular native language. In their opinion, it would be wiser for officials to make themselves acquainted with the particular dialect which obtains where they may happen to be stationed, but at the same time to, on every occasion, accustom the natives to the use of English words which, it is felt sure, would at least result in their obtaining a sufficient smattering to enable them to understand and to be understood by white men."

NATIVE TAXATION.

"The question, alike of the justice and advisability, of taxing, in some form or other, the native population of Papua at present under control, has had the earnest consideration of Your Commissioners.

They have been impelled thereto by reasons widely different in themselves, yet they believe all working towards one common end, and that the ultimate good of the natives themselves.

Revenue is urgently required for the proper development of the country, and so from that stand-point alone the question of asking men who have received so much from the Government, to in their turn make some reasonable return, is in itself sufficient to command serious investigation.

It may be argued that the natives are already, in an indirect way, paying a certain amount of taxation in return for benefits received through the trade which they buy from Europeans, but in the opinion of Your Commissioners this is a totally inadequate *quid pro quo* for the money spent and being spent on their behalf, and therefore from the stand-point of payment in return for services rendered, Your Commissioners consider it would be only fair to ask the natives within the sphere of official influence to subscribe directly towards the upkeep of Government.

But there is another, and from the stand-point of Your Commissioners, far more important aspect of the question than that of revenue, which is, Will it operate towards the improvement of the natives themselves? We believe it will, for its tendency must be in the direction of making them work. If Papua is only to be considered as a natives' country, in the sense that they are to be allowed to work out their own destiny in their own way, then we have already gone too far, for in giving the coastal tribes a guarantee of peace we have removed the necessity for their being constantly prepared for war, and as a result they are rapidly falling into slothful and evil habits, sure twin companions of idleness in any country. That in the opinion of almost every witness, this picture is not overdrawn, is amply proved by the evidence given before Your Commissioners."

THE TARIFF QUESTION.

"The existing war of tariffs between the Commonwealth and Papua is such a glaring inversion of one of the Constitution's basic principles that Your Commissioners would feel no hesitation in recommending its immediate cessation were it not for the fact that the carrying out of a theoretical right might in this instance have the effect of inflicting practical wrong. The problem, they recognise, has to be solved, not on abstract principles, but along the lines of what may be most expedient alike in the interests of Australia and of Papua.

The Commonwealth having taken over the country, and created it into a Territory, we presume that this is the first constitutional step towards admitting it as a State. Meanwhile, Australia has made itself responsible for Papua's internal integrity and outside defence; and, further, now appoints its Lieutenant-Governor and all the

officials necessary for its proper government, and towards the upkeep of the Administration it has every year since it accepted these responsibilities paid £20,000 out of the general revenue.

Should our recommendations be given effect to, it will be necessary, in the interests of development, and in order to later receive a corresponding return, to spend further large sums of Australian money. Yet, in face of this fact the Commonwealth is retarding, if not killing, the development of Papua by placing its products on the same footing (from a Customs standpoint) as those of the outside world.

It may be argued that, owing to the supply of cheap labour, the Papuan settler will be in a position to face this handicap. The evidence of men on the spot does not, however, in the main support this contention, nor must it be forgotten that the cost of pioneering, and the risks inseparable from opening up tropical country, both from a health standpoint and the presence of a large and in many cases as yet uncivilized native population, have to be put against this argument of cheap labour. Further, it has to be remembered that other nations are doing all in their power to push settlement in the islands under their control, and that they, so far from discouraging their colonists by hostile tariffs, are in many cases paying them heavy bonuses. Consequently, we cannot hope to tempt men from purely patriotic motives to ruin themselves, or at best make a bare living, while it is possible under another flag to meet with more favourable treatment.

Three of the industries to which, in our opinion, every encouragement should be given, on the ground that they can be successfully carried on in Papua, viz., coffee, tobacco, and sugar, are all weighted with an import duty, while a number of other articles peculiarly adapted to its soil and climate are placed at a similar disadvantage; while other products, such as sandal wood (which is practically worked out), mangrove bark, and Natural History specimens, which are not likely in themselves to awaken enthusiasm in the minds of intending settlers, have generously been put on the free list."

"Your Commissioners recommend the introduction of a preference Tariff in favour of Papuan products as against those of the outside world, not as a permanent solution of the difficulty, but as a present means of encouraging and fostering settlement until such time as agricultural success and the payment of the rents of Crown lands open up new sources of revenue, and so make it financially sound to substitute for it freedom of trade between Australia and Papua."

FINANCIAL SUGGESTIONS.

"In the opinion of Your Commissioners, it is absolutely necessary for the successful development of Papua, and the eventual removal of

it from the category of a burden on the resources of the Commonwealth to that of a self-supporting and prosperous Territory, that a considerable sum of money be made available as required towards the furtherance of this end.

It may be argued that, in view of Papua's large native population, it is not fair to further tax the white ratepayers of Australia, even to bring about such a condition of affairs, but apart from the purely financial aspect of the question already touched on when dealing with the Tariff, Your Commissioners would point out that other considerations have to be faced separated altogether from mere monetary loss or gain. The Commonwealth, having undertaken the responsibility of governing Papua, admittedly under possibly premature pressure from the Imperial Government, it is nevertheless its bounden duty to rule its first and only Territory in such a way as to prove that it is not unworthy of the trust so accepted. In a sense the Commonwealth is on its trial as a governing power, and on the verdict which must soon be pronounced in this connexion will depend issues of the gravest import as regards her own future; for should she give practical assurance to the Imperial Government that she is capable of ruling Papua wisely and well, it is not unreasonable to suppose that other island possessions at present held by Great Britain may be handed over to her charge.

Your Commissioners, feeling that the true destiny of the Commonwealth is to be the paramount power in the Southern Seas, feel that this is not only a consummation to be earnestly sought after, but also that should it become a reality it must inevitably increase the respect in which Australia will be held by outside nations, and will also cause her voice to be listened to with deeper attention in the councils of the Empire."

"In the opinion of Your Commissioners, the sum at present authorized to be paid by the Commonwealth Treasurer in any one year, viz., £20,000, will not be sufficient, even in conjunction with local revenue, to meet all the extra initial cost of administration and development if their recommendations be carried into effect; nor is the present method sufficiently guarded against Parliamentary caprice to lift any systematic attempt at development beyond the realm of possible wreckage. The fact that there is no provision for eventual repayment by the Administration of Papua to the Commonwealth Treasury for sums advanced by it, is also, in the opinion of Your Commissioners, both financially unsound and calculated to encourage non-reproductive expenditure and want of a proper sense of responsibility on the part of the Papua Administration."

RAILWAY NOTES.

A CONSIDERABLE amount of discussion has been proceeding lately as to the effect of the adoption by the British Standards Committee of certain standard sections of rails. These standards all go in variations of weight of 5 lbs. per yard. There is reason to believe that in future manufacturers will, as a rule, only make and keep rolls for these standard sections, and that governments which continue to require other sections will find a difficulty in obtaining them and will have to pay a considerably enhanced price. There are a number of colonial railways which at present use several sections, none of which correspond to the standards. It will, it would seem, be necessary eventually to adopt the standard sizes. The transition will not really be difficult, as the new sizes can be joined to the old if properly designed fishplates are used. But there is some reluctance at present to admit that changes will be required.

The supply of hardwood sleepers is an important business, and the Australasian colonies have issued several handbooks on their forestry products: one published by the Western Australian Government in 1906 may be specially mentioned, as it gives the economic uses of the various timbers. It has always been difficult to decide among the conflicting claims, but a report by Mr. Adams, A.M.I.C.E., printed by the Indian Government, will be found a useful guide. Mr. Adams states that the species recommended by the various Australian governments possess ample strength and compare very favourably with teak; their specific weights are high (65 to 75 lbs. per cubic foot) and they hold the spikes well. The Governments inspect and have a system of "true-to-name" branding. Mr. Adams estimates the life of good "jarrah" sleepers in India at about 18 years, and that a reasonable price for ordinary broad gauge sizes is about 2s. per cubic foot c.i.f. main Indian ports. "Ironbark," coming from New South Wales and Queensland, appears to be equally durable.

Steel sleepers are however required in climates which are very hot and moist. These alone are used on the Port Darwin Line, Northern Territory.

Last year the Lagos Government procured a number of reports from railway administrations as to the comparative merits of metal and wood sleepers and cross-ties. On the whole the reports were in favour of wood. In Natal and the F.M.S. for instance, the use of metal sleepers has been discontinued. The men find it easier to keep the lines in order with wood, which, where there is regular traffic, is damaged little by white ants.

The following are some of the particulars of imported sleepers furnished :—

Railways.	Timber.	Cost per cubic foot, c.i.f.	Life in Years.
Beira, Mashonaland	Yellow Pine	—	15
	Baltic Pine	—	6 to 8
	Jarrah	2/3	15
Cape	Jarrah	2/2	—
	D'Jatti	2/2	—
	Pine Creosoted	2/4	10 to 13
Ceylon	Jarrah	2/1	10 to 12
	Baltic Pine	1/9	8 to 9
North Western... ..	Jarrah	1/9	26
	Pine Creosoted	1/6	12

On the whole it seems that traffic wear and tear are responsible for more injury than rot is. The cost of seasoning hardwood is ordinarily not justified, and the general opinion is that preservations are not necessary except in special circumstances.

On the other hand at the Washington International Railway Congress, 1905, the pickling of sleepers was generally recommended. We extract the following :—

“The proper seasoning of sleepers in the open air was generally advocated. On the Paris-Lyons and Mediterranean Railway Company's line, France, creosoted sleepers have been used for many years with excellent results. Creosote (oil of tar) containing from 10 to 15 per cent. of naphthaline and 67 per cent. of phenol is used. The cost per sleeper is about 5s. 4d. Gauge of tracks 4 ft. 8½ in.

The ties are subjected to vacuum in a cylinder and then the creosote is injected under a heavy pressure. The quantity of creosote used varies according to the density of the wood. For oak sleepers 14 lb. to 15 lb. of creosote per sleeper is used, while in the case of beech it is possible to inject from 45 lb. to 50 lb. per sleeper.

Naphthaline is considered beneficial, some of it being added to all creosote which lacks the standard proportion. A considerable discussion arose as to what proportion of naphthaline should be used. The practice of the Paris-Lyons and Mediterranean Railway Company was generally approved.

The Dutch Railways have used the zinc treatment for 15 years, and have got a life of 15 years for beech sleepers."

"The uncovering of sleepers by removing the ballast from the top surface does not appear to diminish the life of the wood even for untreated timber, and it has the advantage of enabling the track inspector to discover at once any defects in the track-fastenings, etc., and to apply a remedy. In some special cases, and especially in warm climates, it may be desirable to cover the timber with ballast.

It is of importance to combine rigid inspection in accepting sleepers with great care in the selection of ballast. The latter must be permeable, must be capable of being well packed and the packing well maintained, and give good adhesion between the sleeper and its seat. As far as this is concerned, the measures which are best for the preservation of the wood are also best for the stiffness of the track.

In order to prevent deterioration of the ballast, and at the same time help to preserve the sleepers, the careful drainage of the road-bed cannot be too carefully insisted upon, in order to ensure that water may run off properly.

To prevent mechanical wear of the rails upon the sleepers it is of the utmost importance to fasten the rail to the sleeper in such a way as to prevent as much as possible all vertical, lateral, and horizontal movement between the two. The old American method of using spikes only will not suffice. Lag screws seem to be necessary to obtain satisfactory results."

A valuable report on this congress, dealing with locomotive and many other railway questions has recently been issued in New Zealand in a Parliamentary Paper, 1—D.4. (1906).

In connection with the foregoing we append an extract from a letter sent by the Director of Fortifications and Works to General Officers Commanding Stations Abroad:—

"It has been found that a treatment of 'blue oil' protects wood against the attack of white ants besides acting as a preservative generally.

The specification governing the supply of 'blue oil' to the War Department contains the following provisions:—

- (a.) The oil to be a shale product.
- (b.) Its specific gravity (at 60° F.) to be 0.873 to 0.883.
- (c.) Its flashing temperature to be not lower than 275 F. (close test.)

An extract from the Report of a Trial of the 'blue oil' treatment of wood as a protective measure against the white ant is appended hereto.

The boxes treated with blue oil have been placed during the wet season in various positions in the open, and there is no sign

of their having been attacked by white ants, although a quantity of timber in close proximity to them was considerably damaged by these insects.

The blue oil has also acted as a preservative to the wood, which shows no sign of rotting from the extreme damp to which it has been exposed.

One of the ammunition boxes was lent to the O. C. West African Frontier Force, for trial in his magazine, which is infested with white ants. On returning the box, he stated :--

‘Herewith ammunition box and a piece of wood. Both have been lying in the same place ever since you lent me the box. When I placed the box in my magazine, this wood and the ground in close proximity was swarming with white ants. I placed the box under the wood, between it and the ground. Since then the ants have disappeared from the wood and the ground referred to ; the box is not touched.’”

We learn from the War Office that the price of blue oil used in this treatment is 4d. per gallon. The best plan is to soak the material to be rendered proof in a tank containing the blue oil for a day or two.

Notes on West African Timber with reference to its adaptability for Railway Work. (S. Nig. Public Works Department.)

The points of reference are :—

- (a.) Can native hard wood timbers in West Africa be used for Railway work, bridging, sleepers, etc., as they are in India, where the white ant has also to be contended with ?
- (b.) The cost of conversion of the timber.

With reference to (a) timber can be found in the West African forests suitable for all classes of Railway work, where wood can be used, *e.g.*, bridgework, sleepers, carriage work, station buildings.

There is a variety of timbers known to the natives which resist the white ant. These are used for verandah posts for their palaver shed, for house building, for doors, and for the simple articles of furniture that are made by the natives. There is at present a difficulty about the names for the various timbers thus used. The native names are different in each district, and on account of the timber thus used being as a rule very heavy and non-floatable, little attempt has been made by the owners of concessions to export them.

Bridgework.

I would not recommend native timber for permanent bridges in West Africa for the following reasons :--

- (a.) Too little is yet known about the timber.
- (b.) The timbers which appear to be suitable are very hard and heavy, entailing great expense in handling, conversion, and for transport.
- (c.) The skilled native labour is very inferior and difficulty would be found in getting the work properly put together. The first cost of such erections in West Africa is very heavy, and it pays in the end to put down permanent work from the beginning.

Sleepers.

There would be no difficulty about finding suitable timbers for railway sleepers in West Africa, provided the wood is impregnated with creosote or other reliable preservative.

My experience with the white ant is that ordinary sound native timbers are not touched until decay sets in. I have found that ordinary Mangrove posts if charred at the bottom, and coated with Stockholm tar will last in the ground for many years, whereas if the posts are used without such precautions they become a prey to the white ant in two or three years.

At Calabar I had samples of native timber, some of them soft and porous, coated with a preservative called "Stop-rot". The samples thus coated were buried in the ground and left for six months. When examined at the end of the six months there was no trace that the white ant had touched them, whilst in some cases the pegs which marked the places where the samples had been deposited, and which were uncoated with the preservative were nearly wholly destroyed by white ants.

In connection with Pitch Pine, which is said to be ant proof, I have often found that when the timber shewed signs of decay, the white ants were all over it. On the other hand I have never had any trouble with creosoted Pitch Pine from the white ant. In damp and exposed places creosoted Pitch Pine has three or four times the life of the same timber in its natural state.

Provided that the timber is impregnated with creosote or other reliable preservative there is, I think, but little reason to doubt that durable railway sleepers could be obtained from the Mangrove.

Mahogany and other floatable woods could also thus be used. On the Niger, in the vicinity of the Alabela creek, there are forests of an excellent timber of the sabine species. It is like Mahogany but is much heavier and tougher. This is the timber mostly converted at the Onitsha sawmill and is excellent for building and joinery

purposes. This timber will not float but is not difficult to saw or plane. There are other very hard and durable timbers found near Onitsha, called "Orachi" and "Ogbi" by the natives. Both are very heavy and hard to saw. "Orachi" appeared to me to be the strongest timber I have seen in the country. "Ogbi" is a red timber like the heart timber of the Mangrove, quite as hard and as durable. It splits very easily and is an excellent firewood. It is very plentiful in all the rivers in the reaches above the Mangrove belt. These timbers would make durable sleepers without being treated with a preservative, but I fear the cost of handling and sawing them would make the cost of the sleepers prohibitive.

The well-known "Oroko" is one of the best timbers in the African forests but it is not very plentiful; is not found near the river banks; is isolated in its growth, and is much too valuable for furniture and joinery to be used for railway sleepers.

The railway department in Lagos have some experience with sleepers from native timber. At present there is an European called Moody who makes a living at pit-sawing timber for the Lagos Railway. It is mostly "Oroko" which he saws and this timber is used for sleepers for points and crossings.

Mr. Cowan, Chief Inspecting Agent for Messrs. Miller Brother and Company, told me that he had on one of the concessions belonging to his firm, in the Benin country, a timber which appeared suitable for railway sleepers, and that if there was a demand for them he thought his firm was prepared to send out sawing plant to have the timber converted on the spot. The timber in question does not float and the only practicable method of dealing with it is to have it converted in the forest so that it can be possible for the sleepers to be carried to the waterside by porters and from thence to the steamers in the Benin Rivers in canoes.

Carriage Work.

"Orachi" could be recommended for frames, and "Oroko" and Mahogany for panelling and fittings.

Station Buildings.

There are many hard woods suitable for posts and framing and "Oroko" and Mahogany are suitable for joinery and furniture.

With reference to (b), the cost of conversion of the timber, there should be little difficulty in obtaining sawn timber at 2s. 6d. per cubic foot, provided that suitable plant is put down and the right kind of men are obtained to handle the timber and work the plant.

There are two Government saw-mills in Southern Nigeria, one at Onitsha on the Niger and the other at Elehetem, on the Cross River, about 40 miles up river from Calabar.

Until lately the working of the timber at Onitsha has been somewhat hampered for lack of transport for bringing the logs down from the Alabela Creek, and the cost of conversion was somewhat high on that account.

The conditions were more favourable at Elehetem and we were able there to fell timber in the vicinity of the mill and convert it for 2s. 6d. per cubic foot. This included all upkeep and working expenses, including European supervision but exclusive of any allowance for depreciation of plant.

At Lagos, Messrs. McIver and Company have a sawmill and sell the best native timbers, "Oroko" and Mahogany, sawn into boards and planks for from 3s. 6d. to 4s. per cubic foot. This, I understand, ensures a good working profit in spite of the fact that, owing to there being little timber near Lagos, the cost of the logs by the time they reach the mill is considerable.

Before I left Lagos, Moody, the European already mentioned, offered to supply sawn "Oroko," at Iddo Wharf, to the Lagos Public Works Department at 3s. 6d. per cubic foot. The timber is sawn at about 100 miles up country and Moody's offer included the cost of railway freights.

Native sawyers can make a good living at pit-sawing Mahogany and "Oroko," and selling at 2s. per cubic foot. Supplies from this source are, however, very unreliable as the native has little ambition to work at this calling. The work is too hard for him to persevere at.

It can, however, hardly be considered that the results as to the cost of conversion as indicated above are representative of what could be attained if an organised effort was made to produce converted timber on a large scale such as would be required for railway work.

The Government sawmills mentioned are not on a large scale and were put down as a tentative effort to obtain sound native timber for the manufacture of furniture and joinery and to obviate the high freights of such articles when obtained from England. The limited amount of European supervision available had to be considered and also that the power provided could be used for other purposes. At Onitsha the installation consists of brick-making machinery, wood-working machinery in addition to the sawing machine, and the engine power is also used for working a cable tramway. On the Cross River power is provided for brick making as well as saw milling.

There is one European in charge at each place and, having to give his attention to other work than the sawing alone, it necessarily follows that the results cannot be the same as if the conversion of timber and nothing else had to be attended to.

In the case of timber being required on a large scale it would be necessary to put down the plant in the middle of the forest, to have

portable plant, and to employ men who have been trained for such work from their youth.

There should be as little handling of the heavy logs as possible. Everything has to be done by manual labour and the timber should, as near the spot as possible where it is felled, be converted into the smaller pieces required for the work in which it is to be used.

It is only by such a method that the major cost in dealing with the timber, viz., that of transport, can be reduced to the minimum.

If Mangrove was being worked, it would, of course, be impossible to put down the sawmill in the swamp.

In this case, however, there would be no forestry restrictions as to the size of the trees to be felled, and trees would be selected which would saw up into two sleepers in section, or about 15 to 18 inches in diameter near the bottom. The trees would be cross-cut into sleeper lengths in the swamp and there would not then be any difficulty in getting the pieces into canoes for transport to the site of the mill."

The Management of Government Railways.

An interesting report on this subject by a Commission of which Dr. T. W. Smartt, Commissioner of Public Works, was Chairman, has been presented to the Cape Parliament. The most important recommendations are contained in the paragraphs printed below:—

"3. The Commission has carefully considered the important subject committed to it, and has compared, as far as possible, the different systems of control of Railways adopted in other countries. It is impressed with the necessity of removing as far as possible the Management of the Railways from the influence of Party politics, without at the same time lessening the legitimate right of control which must be exercised by Parliament as the representatives of the taxpayers; and with this object submits the following recommendations:—

Formation of Advisory Board.

4. That a Railway Board be established, to advise the Minister entrusted with the control and direction of the Railways in all important matters of policy, such Board to consist of:—

(a.) The Commissioner of Public Works or the Minister for the time being entrusted with the administration of the Railway Department, who shall be Chairman.

(b.) Four Members of Parliament, representing the Legislature, selected in accordance with the usual procedure adopted for appointing Select Committees.

(c.) Two Members (who may or may not be Members of Parliament) appointed by the Governor from a list of names to be submitted by the various Chambers of Commerce of the Colony, consisting of not more than six names, the names being selected for submission in such manner as may be determined by regulations promulgated under due authority.

(d.) Two Members (who may or may not be Members of Parliament) representing the Farming interest, appointed by the Governor.

(e.) A Secretary to the Board should be appointed.

Terms and Conditions of Appointment.

6. That the term of office of the Members of the Board be as follows:—

(a.) The Minister: during his term of office.

(b.) The four Members of Parliament: until a new Parliament is called together and its Representatives appointed, provided they have not ceased to be Members of Parliament before its dissolution: provided further that in the case of a vacancy occurring it shall be competent for the Governor to appoint a Member of Parliament to fill such vacancy *ad interim*.

(c.) and (d.) The four Members to be appointed by the Governor: a period of not less than three and not more than five years from the day of the publication of the notice of their appointment and at the expiry of the periods set forth the respective Members shall go out of office and a like number of Members shall be appointed in their places: provided that a Member going out of office shall be eligible for re-appointment if otherwise qualified: and provided further that, if at the expiration of the term of office of any Member of the Board a new Member has not been appointed, the retiring Member shall retain his seat and vote on the Board until his successor has been duly appointed.

9. That the Members of the Board appointed under Section 4, (b), (c) and (d), be paid:—

(a.) £2. 2s. per diem in respect of Members resident at or near the place of meeting, and

(b.) £3. 3s. per diem in respect of Members who are not resident at or near the place of meeting;

the payments to be made substantially on the lines adopted in regard to the payment of Members of Parliament, provided that in no one year a greater amount than £2,000 be disbursed in payment

of fees; and that where Railway communication does not exist between a Member's place of residence and the place of meeting, such payments as are necessarily made for road transport be refunded to him.

Functions of the Board.

10. That the Minister consult the Board, and that it be the duty of the Board to advise upon the following matters:—

(a.) The general policy of Railway Management in the Cape Colony, and the relations of the Cape Colonial to other Railways in South Africa.

(b.) Fixing rates and fares for all classes of traffic conveyed over the Cape Government Railways.

(c.) The Estimates to be submitted to Parliament.

(d.) All Bills providing for funds for Railway purposes.

(e.) The expenditure of any sum of money exceeding £5,000 in respect of any one work or service, for the purposes and within the sums from time to time appropriated by Parliament for the working, maintenance, or betterment of the Railways.

(f.) All expenditure proposed to be incurred on emergency works or services for which provision has not been made by Parliament.

(g.) All Contracts and Tenders of a value exceeding £5,000 proposed to be entered into by the Department.

(h.) Any change in the organization of the Department, or any change involving the abolition or creation of offices over £400 salary.

(i.) Alterations in the scale of salaries, wages, or hours of employment.

(j.) Alterations in the train service, both goods and passenger.

(k.) Measures of retrenchment of expenditure.

11. It is expressly recommended that the Board confine its labours mainly to large questions of policy, leaving the carrying out of all details of management to the Executive Officers of the Railway Department.

12. It shall be competent for the Board to require the attendance of any Officer of the Railway Department at any of its sittings; but, in order that there may be a minimum of interference in the actual management of the Railways, any request for information should be made through the Secretary to the General Manager.

New Railways.

13. (a.) That no proposal for a new line be presented to Parliament unless it is accompanied by a full and exhaustive report by the Board, setting forth, in detail, the capital expenditure to be incurred, estimates of the cost of working, of the probable volume of traffic to be influenced, and of the revenue likely to be earned, and also the probable effect on the traffic and earnings of existing lines which would be affected, and generally the Board should take such measures and procure such information as may enable it to inform or satisfy Parliament as to the expediency or otherwise of carrying out the extension in question. For this purpose the Board should have power to call for witnesses and papers.

(b.) All proposals for the construction of new lines must emanate from the Government.

Railways proposed to be subsidised or acquired.

14. That the conditions set forth in Section 13 apply equally in regard to lines in respect of which it is proposed to ask Parliament to give aid by way of subsidy; or which it is proposed the State should acquire.

Local Contributions to New Lines.

15. That it be competent for the Board to recommend that the construction of new lines shall be conditional on contributions from the inhabitants and landowners specially benefiting by the construction of such line towards:—

- (a.) Cost of construction ;
- (b.) Maintenance and working ;
- (c.) Interest on capital ;

in terms of Act 33 of 1906.

General.

16. That where Parliament authorises, contrary to the advice of the Board, the construction of a new line which does not produce revenue sufficient to pay interest on cost of construction and cost of working and maintenance of the said line, the annual loss resulting be notified by the Board to the Auditor-General, who shall certify as to the correctness of the loss, such loss to be provided by Parliament in the annual Appropriation Act.

17. That in any case in which the Minister departs from the advice of the Board he shall record, in writing, his reasons for his action, which shall be entered upon the Minutes, and laid before Parliament at its next ensuing session.

18. That an Annual Report by the Board be laid before both Houses of Parliament within three weeks of the opening of each session.

19. That a measure be introduced in the next session of Parliament giving effect to the recommendations which have been set out broadly in this report."

In connection with these recommendations it may be of interest to point out that, in all the Australian states, the management of Government railways has been removed from political control and vested in a Commission or Board of Commissioners independent of party.

Electric Lighting of Trains.

The following Report has been received from one of the Consulting Engineers :—

"There have been a good many different systems of electric lighting invented and tried, and one or two of them which are now in an experimental stage give promise of fair results, but up to the present the only system which has answered in practical working is Messrs. Stone's, and that has been largely used both in this country and on Colonial railways. The cost of electric lighting is, however, high, and judging as closely as we can from trains which have been lighted for other Colonial railways, we estimate that the cost of lighting one of your trains of six coaches would be £1,000; with this information you will be able to decide whether the advantage gained is worth the outlay. In the Stone's system the electricity is generated by a dynamo which is driven by a strap from the axle, and it is a mechanical defect in this system which has ensured its success, the slipping of the strap acting as a regulator. No system of direct train lighting by an engine and dynamo carried in the van has been successful. The Cape Authorities spent some thousands of pounds in endeavouring to perfect a system, but in the end they came back to the Stone's system, the others having proved failures."

Ceylon Government Railway—Report of 1905.

The receipts during 1905 amounted to £646,043, an increase of over 53,000 on the results of 1904, and the expenses to £347,126, an increase of £11,058. Profit on working is thus £298,917, nearly 6 per cent. on the capital cost of rather over £5,000,000. After making allowance for the amount actually paid for interest and sinking fund, the railway thus makes a clear contribution of £172,800 to the general revenue of the Colony.

The receipts per train mile were Rs. 5.58 or Rs. 0.11 lower than for 1904. The lower rate is attributed to the increased open mileage consequent on the opening of the northern section, and to the pilgrim traffic at low rates run on that line.

Working expenses at Rs. 3 are Rs. 0·22 per train mile lower. Almost the entire credit for this reduction is due to the Locomotive Department, which shows a reduction of Rs. 0·15 per train mile. Although train mileage increased 175,000 miles, the expenses of this department were actually less than in 1904 by, roughly, £1,500.

Owing to an abnormal fall of rain, a portion of an embankment subsided, and an engine fell into the breach: two firemen were killed. No other serious mishap occurred.

It has been arranged that Mr. Oliver should enquire into the grading and curvature of the proposed Ratnapura extension, and furnish a fresh estimate of the cost of construction.

WEST AFRICAN RAILWAYS.

The following statistical abstract shows the results of the working of the West African Railways for the latest period of 12 months for which complete figures are at present available:—

Colony.	12 Months ended.	Miles open.	Receipts.			Expenditure.		
			£	s.	d.	£	s.	d.
S. Nigeria (Lagos Railway)	Dec. 31, 1906	126½	72,649	2	2	56,775	13	2
Sierra Leone	June 30, 1906	225½	58,927	8	8½	52,834	1	9
Gold Coast	Dec. 31, 1906	168	171,918	5	1	77,256	14	10

Southern Nigeria Lagos Railway.

During 1905 and the greater portion of the year 1906 the Lagos Railway extended inland from Lagos to Ibadan, a distance of 125½ miles. A further section of 62 miles to Oshogbo was opened for traffic on the 20th of April, 1907. The construction of a further section, namely, from Oshogbo to Ilorin, a distance of 61 miles, has already been commenced and should be completed within the next 12 months. By April or May, 1908, therefore a traveller will be able to take train at Lagos and travel by rail into the interior, a distance of 250 miles. Beyond Ilorin a satisfactory trace has been obtained, and is now being located and staked out for a further extension of the railway from Ilorin to Jebba, the point at which it seems certain the railway will eventually cross the River Niger.

North of the river railway activity has already commenced, and a railway reconnaissance survey from Jebba to Zungeru, the present capital of Northern Nigeria, has been carried out. A sign of the vigorous manner in which the problem of railway communication of

Northern Nigeria is being attacked is the appointment of such a railway expert as Sir Percy Girouard as the High Commissioner of the Protectorate.

Gold Coast.

No railway construction has been undertaken in the Colony since 1903, when railhead reached Kumasi, a distance of 168 miles from Sekondi. The attention of the Government has therefore been concentrated on the improvement and development of the existing line and the satisfactory results of their endeavours are now becoming abundantly evident. Notwithstanding a reduction in the railway rates which took place in July, 1905, the receipts have shown a steady growth, and during the year 1906 reached the record total of £171,918, a sum which after meeting all working expenses leaves a margin which would be sufficient to pay interest at the rate of $4\frac{1}{2}$ per cent. on the capital outlay. With regard to the future construction of a branch from Tarkwa on the main line to Prestea, a distance of about 20 miles, is contemplated. A survey has also been undertaken for a new railway with its terminus at Accra, which would serve the eastern portion of the Colony, and a trace has been obtained and will be located and staked out for a distance of about 40 miles inland.

Sierra Leone.

The railway to Baiima was completed towards the end of 1905, and the latest figures available—to June 30th, 1906—show that the line which has a mileage of 226 miles is paying its way with a comfortable margin. The question of the railway rates is receiving the close attention of the Government. The construction of light branch or feeder lines to connect with the main line and thus to extend the trading area influenced by the line is under consideration.

MEDICAL NOTES.

Medical Expeditions to Central Africa.

CENTRAL AFRICA is shortly to be visited by two expeditions, organized by the Liverpool School of Tropical Medicine: one will study sleeping sickness, the other blackwater fever.

For some time past apprehension has been felt that sleeping sickness may spread into the British territories in Central Africa; it has, as is well known, devastated Uganda, it is prevalent also in the eastern portion of the Congo Free State. Consequently, the trade routes north to south and west to east, must equally be guarded. The sleeping sickness expedition will, therefore, have a dual object: first, it will study the questions still undecided as to the origin and treatment of the disease; secondly, it will advise what steps can be taken to protect Rhodesia and the British Central Africa Protectorate. Its attention will be concentrated especially on the Anglo-German and Anglo-Congolese borders. It will visit the head waters of the Kafue, the River Luapula, Lakes Bangweolo and Mweru, and subsequently it will turn east and traverse the country between Lakes Tanganyika and Nyassa.

The two doctors composing the expedition are Dr. A. Kinghorn and Mr. Montgomery. They left England for Kalomo, N.W. Rhodesia, on May 4th.

Both the British South Africa Company and the Government of the British Central Africa Protectorate, are contributing to the expenses of the expedition, by offering free transport in their territories to the doctors engaged upon it. In addition the Government of the British Central Africa Protectorate is contributing the sum of £100 to the cost of the doctors' passages.

The arrangements for the despatch of the blackwater fever expedition are not yet so far advanced. It will consist of two members, and its headquarters will be in the British Central Africa Protectorate, either at Zomba or Blantyre. The members of this expedition will try to keep in touch to some extent with the doctors engaged in investigating sleeping sickness, but it is too early to say how far this will be feasible.

The Governments of the three British Protectorates, East Africa, Uganda, and Central Africa, are each contributing the sum of £250 to the expenses of the blackwater fever expedition.

Report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1906. Presented to both Houses of Parliament by command of His Majesty. [Cd. 3306.]

This is the first report of an Advisory Committee constituted by Mr. Lyttelton in July, 1904, with Sir West Ridgeway as Chairman. The revenue of the Fund in 1906, amounting to £3,000, was derived from contributions from the Imperial Government, the Government of India, various Colonial Governments, and the Rhodes Trustees. Of this amount £2,750 has been expended in grants to the London and Liverpool Schools of Tropical Medicine, the University of London and the Royal Society, leaving a balance in hand of £250. The grant to the London School has been devoted to the payment of the salaries of a teacher and investigator of protozoology, and a teacher and investigator of helminthology, and to the provision of suitable apparatus. Special attention is drawn in the report to the valuable investigation into Dracontiasis (a disease widely prevalent among native races in tropical Africa, which has twice during the last five years broken out in epidemic form among the West African Frontier Force), by the lecturer in Helminthology. At the Liverpool School, lectureships in economic entomology and parasitology, and in tropical medicine, have been established, both lecturers being required to devote their spare time to research. A Professorship of Protozoology has been established at London University; and the grant to the Royal Society has been employed in the research into sleeping sickness. Systematic arrangements have been made, and are now in operation, for the instruction in tropical medicine of Government medical officers in tropical Colonies, and medical laboratories have been established at Singapore, Colombo, Kuala Lumpur, Port-of-Spain, Hong Kong, Demerara and Mauritius. The Appendices to the Report contain correspondence with the Colonial Governments on the subject of the training of medical officers in research work, and reports upon researches into tropical diseases by the London and Liverpool Schools of Tropical Medicine and the Royal Society.

The Foreign Office has issued a Report (Miscellaneous Series, No. 656) by Consul-General Sir Cecil Hertslet on "Precautions taken in Belgium to combat Ankylostomiasis." The report should be of interest to medical officers in tropical Colonies, where the disease is widely prevalent.

The Government of Barbados has issued a report by Dr. C. J. Manning, Superintendent of the Lunatic Asylum in that Colony,

on certain cases of *Psilosis Pigmentaria* or Pellagra, which have recently occurred in the Asylum. Dr. Manning considers that the cause of the disease has not yet been definitely determined, but that it is, "without shadow of doubt, communicable," and he strongly recommends the isolation of all patients in a Central Home. The report is accompanied by a bibliography, a large proportion of the works mentioned emanating from Italy, where the disease is prevalent.

Health and Sanitation on the West Coast of Africa. (An address to the African Trade Section of the Liverpool Chamber of Commerce, by W. S. PROUT, C.M.G., M.B.)

Dr. Prout in an eloquent address bore testimony to the great improvement in sanitary conditions in the last twenty years, and urged the appointment of a Director of the West African Medical Staff, and of a West African Medical Council to sit in London.

We append some interesting extracts:—

MOSQUITO-PROOF ROOM.

"Another method of preventing mosquitoes is that to which I have just referred, a *Mosquito-proof room*. I have used one for over five years, and I can strongly advise its adoption from personal experience. It is not expensive, and it is a simple matter to have light frames fitted with brass wire gauze fixed to the windows, and swing gauze frames to the doors. It is less close than the mosquito net, of which some people complain, and it is a wonderful comfort to be able to read and write inside it after dinner. Where individuals have to reside in strongly infected localities, it is a great advantage to make the whole house mosquito proof, and I show you here photographs of one or two which were constructed for the railway staff at Cline town some years ago. The railway staff resident there used to have a much higher percentage suffering from malarial fever than the rest of the Government staff put together, and it has been found that the health of those who live in the mosquito-proof houses has much improved. For the outlying isolated factories, especially when situated in the neighbourhood of native towns, it is a precaution it would pay the firms to adopt."

THE USE OF QUININE.

"A second most important thing is the *use of Quinine* as a preventive, and it is one which I have recommended for many years. When I first went out, I took quinine regularly, and the longer I remained on the Coast, the more convinced I was that the habitual use of quinine was a most efficient preventive of malaria. Of recent years all Government officers, before going on leave, have had

to be examined by a medical officer, and a report sent in which had to pass through my hands. I made a point of getting my medical officers to note whether the individual had been in the habit of taking quinine regularly or not, and it was very striking to observe how frequently, in the case of those who took quinine regularly, the report stated, "has not been on the sick list during his present term of residence," as compared with the frequent illnesses of those who did not take quinine. This is not the place, nor have I the time, to enter into a discussion of some objections which have been raised against the habitual use of quinine, but you may take it from me that it is harmless—that its use does *not* imply that if you do get a dose of fever you will have to take a great deal more—and that taking it regularly will *prevent* blackwater fever by preventing that condition which predisposes to that disease. I have not seen a single case of blackwater fever in a man who has taken quinine regularly as a preventive. I take up a very strong position on this point. I consider that it should be insisted on that all newcomers should take quinine regularly, and that this should be made a condition of their appointment, and I suggest that quinine should be supplied free by all firms trading on the Coast. If any man refuses to take quinine, or is unable from some idiosyncrasy—but this is very rare—to do so, he should be regarded as medically unfitted for the Coast, and should be dealt with accordingly."

SANITATION.

"There is another source of danger in Freetown, namely, the three perennial streams which run through it. There is no doubt in my mind that it is these streams which bridge over the long gap between the end of one rainy season and the beginning of the next, and provide for the propagation of the mosquito. The water-courses used to be flat, irregular and full of pools, in all of which mosquito larvæ could be found. I am glad to say, however, that His Excellency, Mr. Probyn, who has shown a great and active interest in sanitation, took this matter in hand, and a system of canalising the water-courses was carried out. Along the centre of each stream a small cement canal has been built, which is sufficiently large to carry off the water during the dry season. I show you a photograph of a gully which has been dealt with, and I may state that in one stream, where during the previous dry season there were hundreds of pools containing larvæ, during the last dry season not a single pool could be found along its course. During the rains, the flow of water is sufficient to prevent mosquitoes breeding in these gullies. In the photo which I have shown you, for example, the water will be from three to six feet deep, and with a current sufficient to sweep an individual off his feet. Of course with such a flow, repairs to these gutters will have to be done every year, but I look upon this work

as one of the most important anti-mosquito measures yet undertaken in Freetown. In Hong Kong, with a somewhat similar configuration, Sir Matthew Nathan informs me that the canalisation of the nullahs, or water-courses, has been fraught with the greatest benefit to health."

"It is then, to the younger generation that we must look for progress. In 1905 I gave a series of lectures on elementary hygiene and sanitation, which were very well attended. At the end of the course an examination was held, and a number of prizes were offered, and I was astonished at the intelligence which many of the answers showed, and the grasp of the subject which was exhibited.

The scheme received the most enthusiastic support from the Governor, Mr. Probyn, who has since developed it, and elementary hygiene is now being taught in the schools of Sierra Leone, and a Government grant has been given, dependent on the position which the different schools take in the examination. In time, therefore, we shall have a number of young people growing up acquainted with the elementary principles of sanitation, who will appreciate the advantages of healthy surroundings, and to whom we can look for assistance in improving the local conditions of the various towns on the West Coast."

STAMPS.

PRACTICALLY all Crown Colony stamps are manufactured in England, and a colonial officer has frequently to settle points relating to them without having, in the Colony, the means of ascertaining the technical processes. Some particulars may therefore be useful.

We propose to begin with a general survey of the subject, then to follow the different processes, from the making of the paper to the packing of the stamps, and finally to summarise any conclusions which we think may be deduced from the facts which have been set out. At the outset we will endeavour to place ourselves in the position of an officer called upon to arrange for a new issue of stamps.

There are three courses open, *i.e.*, to adopt—

- (1.) The head of His Majesty the King.
- (2.) The arms of the Colony.
- (3.) Designs illustrating the scenery, fauna, flora, or industries of the Colony.

When one of the above three courses has been decided upon, the next point which arises is whether the stamps shall be printed by the so-called copper plate or the surface printing method.

The former is the older way, and that by which the most artistically successful results have been obtained, as anyone who turns over the pages of a stamp album will at once perceive. The necessary plates are also cheaper, although the actual printing is a little more expensive, and, where large numbers of stamps of the same duty are required, much more expensive than the surface method.

The most important difference between the two kinds of plates is that, in case of the copper-plate the ink enters the sunk portions of the plate, and is completely cleaned away from the surface of the plate before printing takes place. In the case of the surface printing plate, which is really a stereo, the ink lies on the raised, engraved portion of the plate, and never touches the flat surface.

From this it follows that a very different kind of ink must be used for the copper plate. It must be of a thick, oily nature, and the paper on which the printing takes place must be wetted, so that

it may sink well into and extract all the ink from the lines engraved on the plate. The ink used for surface printing is, on the other hand, of a thinner kind, and the paper is used dry.

In ordinary copper-plate printing the plate, which is of steel, is itself engraved, every line being put in by hand, and a really artistic result is thus produced; but this method is not used in the manufacture of stamp plates, as not only would the expense be very great, but it would be impossible for any engraver to produce several absolutely identical engravings. Instead of directly engraving the plate a steel roll is pressed, when soft, upon the original engraving, which is of course of the size of a single stamp. When the roll has been hardened, it is in turn pressed 60 or 120 times on a sheet of soft steel, and this when hardened becomes the working plate, and according to the number of impressions which it will produce at one time, it is called 60 or 120 set.

The surface printing plate is made somewhat differently, but the details are a trade secret. The die is engraved in the same way as for copper-plate printing and the printing plate is prepared in much the same way.

There is only one Colony, *i.e.*, Falkland Islands, which has adopted a copper-plate design showing the head of H.M. the King. The more usual plan is to use the surface process and to print the body of the stamp from a keyplate bearing the King's Head and the words "Postage" or "Postage and Revenue," which is shared by all the Colonies and can be set up either 120 set or 240 set according to the set of the overprint plates which bear only the name of the Colony and the duty, and one of which is therefore required for each duty.

Colonies which issue large numbers of stamps of certain values often find it worth while to go to the expense of a special plate for each of such duties which prints the whole of the stamp at one operation and naturally therefore at a very much cheaper rate. Of course, the special plate costs a good deal more money than the overprint plate.

When pictorial designs are adopted each method of printing is freely employed. But there are two objections to printing stamps of high values by the copper-plate process, particularly if they are to be used for revenue as well as postal purposes :—

(1.) Such stamps are more easily forged than surface printed stamps.

(2.) As the paper has to be wet when printed on it is necessary to use ink of very stable character, with the consequence that ordinary ink cancellations can be removed without damaging the stamp.

Good examples of the different effects of the two processes in the case of views are the Dominica stamps (surface process) and the new

Brunei stamps (copper plate), and in the case of Colonial arms the Mauritius stamps (surface process) may be compared with those of Turks Islands (copper plate).

If it is decided to have stamps printed by the surface process it is necessary to decide whether such stamps shall be printed in singly or in doubly fugitive ink. This depends, for the reasons stated below, on whether the stamps are intended for use for postage only, or also for revenue purposes, and so are likely to be cancelled by ordinary writing ink.

The term "singly fugitive" ink means that if any attempt is made to remove a cancellation which has been applied by means of ordinary cancelling ink the colour of the stamp will suffer. "Doubly fugitive" ink is so sensitive that even if the stamp is cancelled with ordinary writing ink it was thought, until recently, to be impossible to remove the mark without injuring the appearance of the stamp. The duel between the fraudulent cleaner of stamps and the manufacturer is however similar to that between projectile and armour plate, and as will be seen below it is now necessary to make the surface of the stamp still more sensitive to manipulation.

The disadvantage of doubly fugitive ink is that it can only be obtained in three colours, *i.e.*, green, purple, and black. The existing universal keyplate (one example of which is to be seen in the Sierra Leone stamps) is almost the size of the whole stamp, narrow strips at top and bottom being left for the duty and the name of the Colony. It is of course unnecessary to print these strips in doubly fugitive ink, as they may easily escape cancellation altogether, but the body of the stamp must be printed in doubly fugitive ink. There are some objections to the use of black, so that only purple and green can in practice be used where the body of the stamp is of such extent as it is in the present universal keyplate.

If the bodies of all the stamps of a series are in either purple or green, it is extremely difficult to prevent confusion, even if a certain number of stamps are printed in doubly fugitive colours on red, blue, green or yellow paper. Printing on red and blue paper has, moreover, a very bad effect on the appearance of the stamp.

There is another disadvantage in having the bodies of many stamps in the same colour, *i.e.*, the possibility of fraudulent manipulation by substituting slips of high values for the low values.

This difficulty will be overcome in new issues of stamps bearing the King's Head, as the manufacturers are preparing a new keyplate showing only a central oval containing the King's Head, and this will be used with overprint plates bearing not only the name of the Colony and the duty, but also the words "Postage and Revenue," the whole of which will therefore be in one colour.

In the case of existing sets of stamps, the possibility of manipulation of the value can only be prevented by either purchasing a fresh set of duty plates for use with the keyplate mentioned in the last paragraph or by extending the use of singly fugitive ink further than the $\frac{1}{2}$ d., 1d. and $2\frac{1}{2}$ d. values, to which it is fairly generally admitted, possibly as far as 5d., and in this way diminishing the number of stamps which have to be printed in purple and green. The probability that anyone would find it worth his while to remove the cancellation from large numbers of stamps of comparatively low value, is one which each Colonial Government can alone estimate for itself. The regulations affecting the sale of stamps and the local labour conditions would probably be the main factors in the question, the danger being greater in countries inhabited by a clever population with a low standard of comfort.

The copper-plate process is not very suitable for printing stamps in two colours owing to the necessity of wetting the paper for each printing. Each time the paper is wetted it alters in size sufficiently to make it very difficult to make the second impression exactly fit the first. The result of this is that the cost of printing in two colours is considerably higher than that of printing in one colour and it will be generally found to be more economical in the long run to order a separate plate for each value, but this necessitates each stamp being printed in a single colour.

There is one class of stamp for which the copper-plate process is specially adapted. This is a series of stamps such as that of the Tonga Islands in which several designs are used.

It has recently been found that even the use of doubly fugitive ink by itself is an insufficient protection against cleaning, and all stamps which are printed in doubly fugitive ink are now further safeguarded by a special treatment of the paper before printing. The slightest tampering with stamps printed in doubly fugitive ink on paper so treated infallibly ruins the appearance of the stamp.

It is well known that all stamps of the Crown Colonies and Protectorates are printed on specially made paper, with a watermark showing a succession of devices, composed of a Crown and the letters C.A. standing for "Crown Agents." Each stamp shows portions of several of these designs. This paper was first introduced about four years ago in substitution for a paper which was intended to show one device on each stamp, but which was found not to fit all stamps, so that in some two nearly entire watermarks were found, and in others hardly any at all. The watermark is of course only a last resort in testing the genuineness of a stamp which has been affixed to a postal packet or document, as it is impossible to see it except by removing the stamp from the envelope, and looking at the back. A great advantage in using such paper is the check upon the production

of stamps, as the paper given out for each order will only enable a fixed number of stamps to be printed.

Before proceeding to the consecutive description of the processes of manufacture, the question of the colours of the stamps may be referred to. The Washington Convention recommended that every country in the Postal Union should adopt green, red and blue colours for the respective values of $\frac{1}{2}$ d., 1d., and $2\frac{1}{2}$ d., and their equivalents in other currencies, and the Rome Convention has now made these colours compulsory from the 1st October of this year. The colours of the other values have, until now, been chosen in the main arbitrarily, the intention in each case being to make a series of stamps as distinctive as possible *inter se*. There would, however, be some practical advantages in formulating a universal colour scheme for all the Crown Colonies and Protectorates. Further reference may be made to this subject in a future article.

(To be continued.)

REVIEWS AND NOTICES.

The Labour Movement in Australasia: A Study in Social Democracy.—By VICTOR S. CLARK, PH.D. *Constable & Co.*, pp. xii., 319.

THIS volume contains the most convenient account in a compendious form which has yet appeared of the progress of the labour movement in Australia and New Zealand, and the working of those experiments in the direction of the State control of industry which are attracting an ever-increasing attention at home. Dr. Clark visited Australasia in the years 1903 and 1904 upon a mission of investigation on behalf of the United States Government, and although this volume is addressed, not to the Government which commissioned him, but to the general public, it preserves to a large extent the impartial and disinterested tone which might be looked for in an official publication. The author states that he has endeavoured to write "from the standpoint of an agnostic in social needs," and he is so far successful that it is scarcely possible to detect any bias in favour either of socialistic or individualistic systems in his work. This quality is not in all respects an advantage; the keen adherent of a definite theory is generally able to make his descriptions somewhat more vivid, and his criticisms more incisive than Dr. Clark succeeds in doing, and there is something a little disappointing to the reader in a discussion of highly controversial questions ending almost invariably in an attitude of suspended judgment. But the book is nevertheless likely to prove an armoury for controversialists in both camps, and as such it will be of great value. The author begins with an interesting analysis of the conditions which have tended to promote the wide extension of State activities in Australia and New Zealand, among which may be noted homogeneity of race, and the remarkable concentration of the bulk of the population in a few cities, leading to a high centralisation of Government. He proceeds to trace the growth first of trade unionism, and then of the political organisation of labour, and points out how the old lines of political cleavage have been affected by the realisation of federal union. The most elaborate chapters of the book are devoted to a study of the operation of the laws relating to "minimum wage boards" and compulsory

arbitration in trade disputes, and these are followed by a sketch on a somewhat slighter scale of the extension of State ownership and industrial enterprise. Dr. Clark finds the Australian and New Zealander but little disposed to theoretic criticism. "Government ownership, so far as it has extended, is accepted as a matter of course, and is regarded as a debatable policy only in relation to new undertakings." Frequent and interesting comparisons are made with conditions affecting industrial workers in the United States of America. It will be remembered that the Home Government have sent out Mr. Ernest Aves upon a mission of enquiry not unlike that undertaken by Dr. Clark, and it will be interesting to compare his results with those achieved by an acute and competent foreign investigator.

The Life of an Empire. (By WALTER MEAKIN. *Fisher Unwin*, pp. x. 335, 6s.)

This volume represents the results of several years of travel and study on the part of the author. A merit which distinguishes it from the great mass of literature on imperial subjects is the very wide interpretation which is given to the term "Empire." Mr. Meakin deals with India and the Crown Colonies and Protectorates, as well as with the self-governing Colonies, and he does not omit the United Kingdom from his survey of the Empire. A brief narrative of the history of the development of the Empire, both internal and external, is followed by an interesting description of its component parts, while the remainder of the book deals with a number of topics such as the Native Question, Trade and Wealth, Schooling—a term which is made to cover a general estimate of the intellectual and social condition of the different countries described—and Foreign Relations. In a closing chapter Mr. Meakin appears as an advocate of Imperial Federation. The book is not an expert treatise or a work of reference, and no attempt is made to deal finally or exhaustively with the many highly controversial topics which are raised. But the author is unusually well-informed and is well qualified, both by enthusiasm for his subject and by the possession of a sound and well-balanced judgment for the performance of a difficult task. Readers with a close personal knowledge of individual colonies may find the author's method somewhat sketchy and cursory, but the book is admirably adapted to supply those who are familiar with a part or parts of the Empire with a more extended and correlated knowledge of the whole. Perhaps the chapter on Imperial Federation is the least satisfactory part of the volume. It is almost as easy as it is fascinating to sketch a federal constitution for the British Empire, but the very easiness of the task is a danger. The subject is one in which the practical details are of the very essence of the question, and the consideration of these details raises at once a

hundred difficulties as to which Mr. Meakin is silent. But this defect is one which, for the present, at any rate, is inherent in the nature of the subject, and it need not prevent us from cordially recommending Mr. Meakin's volume to all who are interested in Colonial questions.

Old Age Pensions in Australia.

The following recommendations are made in the Report of the Australian Royal Commission on Old Age Pensions which has been reprinted at home as a Parliamentary paper :—

(1.) That old-age pensions should be provided throughout the Commonwealth, and be paid out of the Consolidated Revenue.

(2.) That a Bill for this purpose should be submitted by Your Excellency's Advisers for the early consideration of Parliament.

(3.) That the rate of pension should be fixed at a maximum of 10s. per week, subject to any deductions hereinafter recommended.

(4.) That the qualifying age should be 65 years, but that it may be reduced to 60 where an applicant is permanently incapacitated for work.

(5.) That residential qualification should be imposed as follows :—

In all cases a continuous residence in the Commonwealth of 25 years, provided—

(a.) that where the applicant is a native-born resident with an aggregate residence of at least 50 years in the Commonwealth such continuity shall not be deemed to be interrupted by absences totalling not more than six years; nor

(b.) that in all other cases such continuity shall not be deemed to be interrupted by absences totalling not more than three years.

(6.) That where otherwise qualified the following persons shall be eligible for an old-age pension :—

(1.) All natural born British subjects of a white race; and

(2.) All persons resident in the Commonwealth (not being aboriginal natives of Australia, Asia, Africa, or the Islands of the Pacific) who have been naturalized for the period of three years next preceding the date on which they make their pension claims.

(7.) That every pension granted should be held subject to review, amendment, suspension, and cancellation at any time by the authorities clothed with power in that behalf.

(8.) That payments to pensioners should be made fortnightly.

(9.) That payments should be made through the Post Office.

(10.) That the general administration should be by a Commissioner, responsible to a Minister of State. That a Deputy-Commissioner be appointed for each State; the States to be divided into districts, and each district to have a Registrar, to whom all applications should be made, and by whom pension claims should be prepared and placed before a Police, Stipendiary, or Special Magistrate for investigation. The Magistrate should make recommendations to the Commissioner or a Deputy-Commissioner with reference to the granting or rejection of applications.

That in the event of the rejection of any claim an appeal should be allowed to the Minister. The Magistrate should also have power at any time during the currency of a pension to recommend cancellation, amendment, or suspension. In all such cases there should be a right of appeal to the Minister. The power of granting, cancellation, or suspension should be given to the Commissioner and Deputy Commissioners.

(11.) That applications be heard in open Court, provided that the Magistrate have power, if he deem it advisable, to hear any case *in camera*; all evidence to be taken on oath.

(12.) That provision should be made to compel a husband, wife, or children, as the case may be, if in a position to do so, to contribute the amount of the pension.

(13.) That if an applicant or a pensioner be proved to be of disreputable or intemperate habits, the Magistrate should have power to recommend :—

(a.) in the case of an applicant that the application be refused, or granted conditionally on payment being made through an agent;

(b.) In the case of a pensioner the forfeiture of one or more instalments, or that payment be made through an agent, or cancellation of the pension.

(14.) That the yearly income of a pensioner from all sources, inclusive of pension, should not exceed £52 per annum.

(15.) That the deduction on account of income from other sources be £1 for every pound over £26 per annum.

(16.) That the net capital value of accumulated property held by an applicant should not exceed £310.

(17.) That the deduction on account of property should be £1 from pension on every £10 of net capital value over £50, excepting where the property of an applicant consists of a home in which he permanently resides, and which produces no income, then an exemption of £100 should be allowed.

(18.) That the property of a pensioner at death should vest in the Registrar of Probates or the Curator of Intestate Estates, as the case may be, as officer acting for the Commonwealth Government,

and the indebtedness on account of pension money paid should be liquidated therefrom in priority to all other claims.

Pension money received from time to time should be a continuing charge on any land acquired by the pensioner before or after the receipt of the pension, notice of such charge to be recorded by the Registrar of Land Titles as from the date of grant of pension.

(19.) That a penalty should be imposed for supplying an old-age pensioner with intoxicating drink."

Mr. Asquith's undertaking to lay the foundations of an old-age pensions system for the United Kingdom during the current year lends an additional interest to these recommendations.

A Geological Report on Tobago.

The following extracts are taken from a Preliminary Report on the Island of Tobago, prepared by Mr. E. H. Cunningham Craig, Geologist to the Government of Trinidad. A sketch map accompanies the Report.

"The greater part of the island is formed of metamorphic rocks, which are naturally sub-divided into (a) those of sedimentary and (b) those of igneous origin.

These rocks consist chiefly of schistose grits, often very felspathic, with talcose and talc-mica schists, closely resembling some of the strata in the northern range of Trinidad.

Quartz veins are rare, and chiefly small stringers or segregations; no reefs worth testing for gold, with one doubtful exception, were observed, though minute quantities of the metal probably exist in some of the veinlets. It is possible, however, that a more detailed examination might be rewarded by the discovery of small auriferous reefs.

(b.) More than half of the island is formed of a mass of basic igneous rock, which has shared in the metamorphism of the schists and grits. The relations of this mass to the metamorphosed sediments have not been observed in any section, but there seems no doubt that the rock was originally intrusive.

Speaking generally, the characters of the igneous mass are fairly constant throughout the area, and taking the mass as a whole it will be more convenient to speak of it as "epidiorite," using the term in a general sense for metamorphosed basic igneous rocks. Until microscopic examination of a number of specimens has been made, no more precise classification of the rock can be attempted.

The importance of this mass of "epidiorite" can hardly be exaggerated. The rock decomposes often to a great depth and has earned the name of "rotten rock." Being of igneous origin its mineral constituents have not lost any of their soluble bases by

lixiviation and consequently their disintegration affords a soil of great richness. Rocks of this class are composed chiefly of ferromagnesian minerals and lime-soda feldspars with the secondary products of their decomposition, so the soil is naturally rich in iron, alumina, lime, magnesia and soda. Possibly in potash and phosphates it may be slightly deficient.

In mechanical condition the soil is also excellent, never becoming too stiff or impervious a clay, and allowing free growth of roots and percolation of surface water. There is no other soil in Trinidad or Tobago which exhibits such a combination of favourable characteristics, and the growth of cacao and castilleja upon the "epidiorite" or the alluvium derived from its disintegration bears eloquent testimony to the value of the soil from an agricultural point of view.

No quartz reefs of any size or importance have been observed in or near the margins of the "epidiorite," but any reefs or veins in such environment that may be discovered should be tested for gold. It is from such altered basic rocks that much of the gold supply of the world is, directly or indirectly, obtained.

When undecomposed the epidiorite forms an excellent road-metal, tougher and more capable of sustaining the effects of heavy traffic than any other rock in Trinidad or Tobago, while even when crushed by traffic it will not wash away in a sludge so readily as do the limestones so largely used in Trinidad for road-metal.

Apart from the Metamorphic Rocks the only strata exposed are Tertiary and Post Tertiary.

The evidence of the presence of petroleum, the occurrence of which in Tobago has been known since the latter part of the seventeenth century, has proved somewhat disappointing. An oil-rock certainly crops out below sea level near the south-western coast, and fragments of very pure pitch are washed up on the beach from Crown Point to Lowlands, but the locality of "the manjack rocks" from which according to Captain John Poyntz "the green tar" exudes, has not yet been rediscovered, nor has any outcrop of an oil-bearing stratum been observed on the island.

Possibly, however, a more thorough and detailed examination may furnish more reliable evidence.

The pitch is found sticking to the rough irregular surface of the coral limestone in patches in such a manner as to suggest that it has been quite soft or even semi-liquid when washed up. Much of it is still soft. This indicates that the pitch had not been exposed to the air for long before being washed ashore, and cannot be far from the place whence it originally exuded. I am informed that at the end of the dry season large quantities of this pitch can be collected and that it is used by the fishermen for caulking their boats. Judging from the almost horizontal dip of such Tertiary strata as are exposed, it is probable that the oil-rock which crops out in the sea extends

inland though covered and concealed by newer strata. It is possible, however, that the oil-rock belongs to a much older group in the Tertiary Series, and may not be in conformable succession with the younger strata exposed. To obtain certain information on these points a few shallow borings should be undertaken. Such borings could be made with a light portable plant or even a hand-drill, and need not be carried deeper than 200 feet. A variable thickness of coral limestone will first have to be pierced, and below that the Tertiary strata should be found. It must be remembered that the Tertiaries lie upon a very irregular surface of the metamorphic rocks, so it cannot be expected that any great thickness of Tertiaries will be found in any boring or that an oil-rock will be struck in every locality, but it is by no means improbable that an oil-field of some four square miles and of shallow depth, may be proved by such a series of borings.

Though there is no certainty of striking oil, if such borings were successful the conditions would be distinctly favourable for production, so much so that I consider that experimental work is justified."

"The Surveys and Explorations of British Africa." — Annual Report presented to Parliament. 1906.

The Colonial Survey Committee is an advisory committee formed in 1905 to advise the Secretary of State for the Colonies. It is their duty to make such recommendations as will ensure the rapid and economical prosecution of accurate surveys when these are required. The present report tabulates the progress made in the delimitation of British frontiers in Africa and explains the proceedings in each case.

Institute of Commercial Research in the Tropics.

The annual meeting was held in April in Liverpool. It was stated in the report that expeditions had been sent to Germany, Holland, Belgium and the United States, to study the methods of similar institutions. The West African colonies had been visited and much research was conducted, especially on cocoa and rubber. A new method of coagulating the rubber had been devised, which produced a commodity which sold at 4s. 10d. a pound, as against 10d. to 2s. previously. Twelve publications on tropical products have been issued. We congratulate the Institute on this record of sound and valuable work.

An interesting address has been delivered by Mr. Herbert Wright on Scientific Rubber-growing. At the conclusion of the address Mr. Wright was invited by Sir A. Jones to visit West Africa

on behalf of the Liverpool Chamber of Commerce. We append an extract from his speech, for which we are indebted to the *Liverpool Journal of Commerce*.

“The plantation rubber industry in the East is one of the most remarkable developments which has been chronicled in recent times. Ten years ago, though the Botanic and Forest Departments in Singapore, Ceylon, and India then possessed twenty-year-old trees of *Hevea Brasiliensis*, or Para rubber, the planting community and the investing public would not seriously consider the question of cultivating rubber trees. But to-day, in the Indo-Malaya region alone, we have nearly one-quarter million acres of land planted with, or prepared for, rubber trees. In a few years Ceylon alone may be expected to send from 5,000 to 7,000 tons of rubber annually, and the Indo-Malayan region can promise to ultimately supply more than the whole of Africa exported in the year 1906. In the East there has been more land planted with, or bought for, rubber trees during the last two years than in the previous 20 years, and the diverse conditions under which the various rubber-yielding species can be profitably grown will allow of extensive cultivation in the near future. Already there are over one hundred rubber planting companies, and British capital alone has been thus invested to the amount of several million sterling. (Applause.) Many mistakes have undoubtedly been made in the past owing to our ignorance of the real caoutchouc-yielding capacity of certain species of trees and vines in the tropical forests of Africa and America; errors in planting have been frequent owing to the absence of reliable information regarding the essential soil and climatic conditions for each species, and successive methods of later extraction and rubber-curing have been evolved, adopted, and, fortunately, forgotten. The cultivation of rubber-producing plants in all parts of the world, the exploitation of areas possessing indigenous rubber species, the collecting of the latex, the manufacture of rubber, and seed selection and plant sanitation operations on rubber estates are now rapidly developing along scientific lines. (Applause.) You may rest assured that as far as the plantation industry in the East is concerned, it has gone there to stay, and promises to be much more remunerative than other well-known tropical cultivations. Many people do not view the plantation rubber industry in a very serious light at the present time, but it is as well to repeat that the rise in export of plantation rubber in a few years will be as sharp and conspicuous as has been that of the planting of rubber trees, and for this we should be prepared. It will be remarkable for its constancy and purity, the minimum yearly output will be guaranteed, and with good management the quality should improve year by year. (Applause.)

AFRICAN RUBBER.

'The only other tropical territory in the British Empire which can be regarded as a reliable source of rubber is Africa. (Hear, hear.) The rubber plants in the African regions are widely distributed, and have been recorded from so far south as Natal, 28 degrees from the Equator. The rubber species abounding there differ from those in the tropical American region, and also from those on the planted areas in the Indo-Malayan region, in so far that they are largely of the climbing type. There are, however, signs that the rubber from Africa will soon show an intermingling of characters, and it may be expected, sooner or later, to partake of certain tropical American features. The exploitation of tree forms indigenous to various parts of Africa, and the planting of similar kinds introduced from America and the East, will soon have an effect on the character of the exported material from African ports. (Applause.)

EASTERN RUBBER

'In the cultivation of caoutchouc-yielding plants our Eastern possessions have led the way, and it is to the credit of the Indian Government and Kew that such good results have been rendered possible with species from regions so distant as West Africa, the Amazon Valley, the State of Ceara, and Mexico. On the chemical side much might be said, though it is perhaps dangerous to make many deductions from the empirical records of chemical analysis at present available. It is not sufficient to state the percentages of resinous, albuminous, mineral, and caoutchouc contents; it appears to me to be necessary to distinguish the components in each of these groups, to explain what differences exist between the proteid matter which is normally included in the coagulated rubber and that remaining in solution in the serum; to distinguish between the resins and even caoutchouc globules in trees of different ages, and in the latex from different species.' The speaker went on to say that the future for commercial enterprise in rubber was beyond realisation. But they required money, men, and time, and especially scientific research."

"Lectures on the Plants yielding Commercial Indianrubber."
By Sir D. MORRIS. (*W. Trousce, 2s.*) A reprint.

"Where the milk is obtainable in quantity, as in the case of the Para and Central American rubber trees, and can be collected in vessels holding a gallon or two, there is available a mechanical method for extracting the rubber which is likely to be of considerable value. Briefly stated the principle is almost identical with that of the cream separator. It

is the invention of Messrs. Howard and Biffen, who have carefully tested the plan in the rubber-producing countries of the New World.

In this method the latex, after being mixed with 50 per cent. of water, is placed in the machine and spun for the space of a few minutes. The machine is then allowed to come to rest gradually, when the rubber is found floating on the top of the liquid in a thick white mass. The albuminoids, proteids, and all dirt and chips are found at the bottom. The rubber is skimmed off and placed to drain on a porous surface. According to experiments carried on by Mr. Hart in Trinidad, it can be removed in about two hours, and in six hours afterwards it is comparatively dry.

The advantages of this method of extracting caoutchouc are as follows :—

- (1.) It produces absolutely pure rubber.
- (2.) The whole process is under scientific control.
- (3.) It is capable of dealing efficiently and immediately with any quantity of milk."

"The result of experience so far gained in the experimental cultivation of the Ceara rubber plant is summarised in the *Bulletin* as follows :

'1. The plant is readily propagated both from seeds and cuttings. Seeds are abundantly produced in almost every part of the world where the plant has been introduced. They may be gathered from plants when only three to five years old. There is therefore the great advantage that a large area could be planted within a comparatively short period. Sowing the seeds in the position where they are to grow permanently is universally adopted in Brazil. It is possible, if adopted elsewhere, this plan would greatly reduce the cost of establishing plantations.

'2. The Ceara rubber plant is very hardy, a fast grower, free from insect and fungoid attacks, requires little or no attention when once established, and thrives in poor, dry, and rocky soils unsuited to almost any other crop. It is evident, however, that the yield of a few trees cannot be remunerative, and only large areas can hope to make the industry a paying one.

'3. It produces a good class of rubber, second only, when well prepared, to the best Para rubber. For this there is a steady and continuous demand. The yield per tree is apparently small, but a return is obtained earlier than from any other rubber plant. With thick planting and judicious thinning as the trees grow up, it may be possible to increase the yield hitherto accorded; while with skilful treatment the permanent trees may be tapped twice yearly, and last in a productive state for 15 to 20 years.

'4. In spite, therefore, of the apparent want of success which so far has attended experiments with Ceara rubber plants in Ceylon and

other countries, the increasing importance of rubber as an article in large demand in all civilised countries at good prices, suggests a reconsideration of the merits of this interesting plant. In many of our colonies possessing a dry climate and a poor stony soil, it is possible that large areas could be profitably occupied with Ceara rubber trees so grown as to provide annual crops for tapping.'

Commenting on the above the *Ceylon Observer*, a high authority on tropical subjects, states: 'We feel very strongly that more might be done in Ceylon with Ceara rubber and that cultivation was not persevered with ten years ago, because of the "boom" in tea. But now in dry districts not suitable for Para the Ceara kind might well be planted.'

Some Imperial Aspects of Applied Chemistry.—An Address by
PROFESSOR W. DUNSTAN.

"Not less important than the service which science can render to existing industries and their extension, is that which it can contribute to the Imperial problem of ascertaining and rendering available for the manufacturer the vast undeveloped resources of our own Possessions. Our own experience and the example of other countries have shown that such work cannot be systematically carried on by private enterprise. Upon its successful accomplishment depends, not only the unrestricted supply of the necessary raw materials for which the manufacturer looks in increasing quantity, but also the prosperity of the country which produces these materials. This success can only be brought about by a combined effort on the part of the manufacturer and of the Government. The manufacturer can provide information as to the materials he needs. The preliminary work of discovering suitable material by scientific means, as several foreign Governments have already recognised, must be endowed, directed, and carried on with Imperial funds. It cannot be expected that private enterprise will take steps to explore the resources of little-known countries on the chance of a particular material being discovered, nor can the work, as a rule, be successfully done by this means. Experience shows that the most effective manner of promoting the commercial development of a new country is for the Government to carry out systematically with its own officers the preliminary work of exploration and examination of the natural resources, with the aid of such technical advice as may be necessary from manufacturers and users, and then, having established the fact that particular products of value can be found or cultivated in a given country, to leave commercial enterprise to do the rest. By action on these lines immense progress is being made in French, German, and Dutch Possessions, whilst the United States Government has taken similar action with the Philippines. In our own case, where this work exists it is in most cases in a more or less

embryonic condition, and lacks the organisation which is necessary for success.

In many of our Crown Colonies and Protectorates there already exist, or are in the process of organisation, agricultural and other scientific departments, many of which include officers who are engaged in the work of exploring and developing the vegetable resources of these countries especially by experimental planting. Chemists are attached to some, but not to all of these departments. In the West Indies the valuable work accomplished by Professor Harrison, Mr. Francis Watts, Professor Albuquerque, Professor Carmody, and Mr. Cousins is well known, and illustrates the great services which the science of chemistry may render, not only to tropical agriculture, but to every branch of economic development. It is clearly desirable that at least one scientific department should be attached to the Government of each of the principal Crown Colonies and Protectorates. As a rule, it is convenient that this should be an agricultural department with the services of a scientific chemist at its disposal. In a tropical climate, and with limited appliances at his command, it must be admitted that a chemist is severely handicapped, and, as a rule, he cannot be expected at first to be able to do much beyond the comparatively simple and preliminary work, chiefly analytical, which, however, in a little-known country is of the greatest importance to an agricultural department. In addition, he would have to deal with the composition of natural products of all kinds, both vegetable and mineral, as well as with the improvement of native industries. If the chemist is able to refer complicated or special investigations to a central department at home, and is provided with assistance in the routine work, he would be in a position to undertake the scientific investigation of a selection from the numerous problems with which a chemist will be confronted.

A chemist working in the spirit of an investigator will be able to render special services to the cause of tropical agriculture, and it is therefore of importance that in future the men appointed to these posts should be chosen as far as possible on account of the promise they have shown as investigators. The determination of the constituents of little-known indigenous plants as the first step towards ascertaining their economic value is another department of work which cannot be carried out without a chemist, and the same applies to the examination of poisonous plants, and also of minerals, in addition to the determination of the composition of food and feeding stuffs.

Tropical agriculture is a subject which is now of the first importance, especially in those countries in which our policy is to depend on a native population for the actual cultivation of the soil. We have two functions to perform in our position as supervisors; the one is to ascertain the nature and capabilities of the soil by actual

experiment, for which well-organised experimental stations are a necessary part of every agricultural department; the other duty is to convey to the natives, chiefly by means of demonstration, the results of this experimental work, so that they may be persuaded to make it a part of their agricultural practice.

Work on these lines is being done under Government auspices in the French and German Colonies, and I may allude to the French successes in Algeria, in Senegal, and in the Sudan, and to the advances made by Germany in East Africa. These achievements are mainly due to a policy of continuous scientific work on agricultural lines. We shall have the privilege of hearing from Dr. Greshoff, the eminent director of the Colonial Museum at Haarlem, an account of the chemical investigations which are being carried out in connection with Java and the Dutch East Indies.

In many of our own Colonies and Protectorates active agricultural departments, equipped with the means of experimental working, are only now in process of organisation. One of the most recently organised of these is that of the Transvaal, which, at Lord Milner's initiation, has been completely equipped on the lines of that model for all such effort, the agricultural department of the United States. This department has, as its chief chemist, Mr. Herbert Ingles, of the Yorkshire College, now the University of Leeds."

"So little has hitherto been done in this direction that the number of problems requiring attention is exceedingly large; and even with a specially trained staff of workers and extensive laboratories, such as now exist at the Imperial Institute, it becomes necessary to select as the principal subjects for investigation those which are regarded by the Governments of the countries concerned as of the most practical importance, and in which the British manufacturer is at the moment most concerned. There must, therefore, remain a large number of materials of unknown composition and of problems of purely scientific interest which offer an attractive field for the chemical investigator. Already steps have been taken to provide for the investigation of these subjects by scientific men who are willing to undertake them in communication with the Institute. For example, Mr. A. G. Perkin, F.R.S., has been furnished with material which has led to the identification and determination of the constitution of the colouring matters of a number of plants which are employed as dyes in India and the Colonies. Professor A. H. Church, F.R.S., has determined the composition of many new or little-known food grains. Dr. Crossley, Dr. Le Sueur, and Dr. Lewkowitch have examined the constituents of a large number of fats and oils furnished by seeds of Indian and African origin. Dr. W. J. Russell, F.R.S., has been furnished with selected materials for examination in connection with his interesting investigations of those substances which affect the

photographic plate in the dark, whilst the Hon. R. J. Strutt, F.R.S., has investigated the radioactivity of a number of new or little-known minerals containing rare earths. Last year over 500 different materials and problems were submitted from the Colonies and India for investigation to the Scientific Department of the Imperial Institute, and each year there must remain an increasing number of interesting subjects which cannot be included in the Department's annual programme of work. Many of these would furnish excellent subjects for chemical research by advanced students in connection with the universities and technical colleges throughout the country. It is nearly always possible to arrange to furnish the necessary material for any competent worker to deal with. Next year a list of such subjects awaiting investigation will be available at the Imperial Institute for those in search of subjects for chemical research."

"The services which chemistry can render to the elucidation of the problems of rubber production and utilisation are very numerous. Methods of treatment depending on a knowledge of the other constituents of the latex have led to the production of rubber in a purer condition. Much still remains to be elucidated by chemical means as to the nature of the remarkable coagulation of the latex. As is well known, the latex is a watery fluid resembling milk in appearance which contains the rubber, or, as I think more probable, the immediate precursor of rubber, together with proteids and other minor constituents. The constituent furnishing rubber is in suspension, and rises like cream when the latex is at rest. On the addition of an acid, or sometimes of alkali, or even on mere exposure, coagulation takes place and the rubber separates as a solid, the other constituents for the most part remaining dissolved in the aqueous liquid or 'serum.' The first view taken of the nature of the coagulation process was that, like the coagulation of milk by acids, it is dependent upon a process of proteid coagulation, the separated proteids carrying down the rubber during precipitation.

This explanation cannot, however, be considered complete by the chemist, and there are peculiarities connected with the coagulation of the latex which are opposed to the view that it is wholly explained by the coagulation of the associated proteids. The experimental investigation of the question on the chemical side is beset with many difficulties which are increased if access cannot be had to fresh latex. A number of experiments were made at the Imperial Institute with latex forwarded from India. The difficulties contended with in preventing coagulation during transit were great, but in the case of the latex derived from certain plants these were to some extent surmounted, and the results obtained, especially with reference to the behaviour of certain solvents towards the latex, led to the conclusion that 'coagulation' can take place after removal of the proteids, and

that in all probability it is the result of the polymerisation of a liquid which is held in suspension in the latex and on polymerisation changes into the solid colloid which we know as caoutchouc. Weber, by experiments conducted in South America with fresh latex, arrived at a similar conclusion, which later workers have confirmed. Although the nature of the process is not yet completely elucidated, there is little room for doubt that the coagulation is due to the 'condensation' or polymerisation of a liquid contained in the latex. For the chemist the important question remains as to the nature of this liquid from which caoutchouc is formed."

"Moreover, it cannot be doubted that chemical science will sooner or later be able to take a definite step towards the production of rubber by artificial means.

The production of caoutchouc by chemical means has, indeed, virtually been accomplished in its formation from isoprene. The exact nature of this change has still to be determined. When this has been done it will only remain to cheapen the cost of production to make the manufacture of synthetic rubber a purely practical problem. I should be the last to discourage the great extension of rubber planting which is now taking place. It is warranted by the present demand for material. It has also to be remembered that the actual cost of producing cultivated raw rubber, which is at present about one shilling per pound, will probably be reduced, and the market price of rubber may eventually be so considerably lowered that, as with quinine, the synthetic production could not be profitably carried on. That is a question which involves many factors at present unknown, and only time can decide. Chemists may, however, confidently predict that before the British Association again meets at York the synthetic production of rubber will be a fully accomplished fact."

Three technical papers follow on the "chemical aspects of cyanogenesis in plants," and the chemistry of rubber and gum.

BUSINESS NOTES.

It is proposed to discuss, *inter alia*, in these notes the stores requirements of the colonies, to mention difficulties which have occurred, and to invite discussions on the merits of different articles.

Tropical conditions of course affect materials considerably, and manufacturers make attempts to suit their goods to them, but it is often difficult to conclude whether the results are satisfactory. A comparison of results from various places could not fail to be useful, and we should be glad to receive any experiences.

Paint is an example of the numerous articles requiring special care when intended for use in a hot country.

A base of zinc oxide is the best, as lead is liable to discolouration, due to chemical influences. Anti-fouling compositions and anti-corrosive paints usually contain volatile constituents, and therefore dry by evaporation very quickly. For girders, Torbay paint is highly recommended, and (in Scotland) "Forth Bridge" paint. For rough woodwork, stone and plaster, a washable distemper is suitable; it can be obtained in the form of a dry powder, to be mixed with water. "Calcarium" and "Frescoria" are used a good deal, or the powder may be mixed with oil, as Carson's anti-corrosive paint, which has a high reputation. "Siderosthen" is a material which has been recommended from Northern Nigeria as good against white ants. "Stop-rot" on timber has yielded good results in Southern Nigeria; it is a combination of creosote, wood spirit, pitch and carbolic acid, and is very suitable for timber in mines. "Jodelite" is a preparation for similar purposes. But these special preparations command good prices, and for extensive work, it may be better to draw up a stringent specification, and to analyse the supply to see that the specification has been carried out.

Information as to the use to which it is intended to put the various items of an indent for paints should be given, whenever practicable.

The desire for sanitary improvement has led to a considerable demand for disinfecting apparatus. There are two types—the steam and the chemical—on the market. A well-known example of the first is the “Manton Alliot;” that, 7 feet long by 4 feet 2 inches high, by 2 feet 7 inches wide, with boiler, costs about £280. The “Equipose Disinfecting Stove” is rather cheaper, and does not require such high pressure steam. There is a small portable apparatus, manufactured by “Thresh,” costing about £27 or £37, according to size; this has been found very useful in recent cases of small-pox: a gaseous disinfectant (formaldehyde) is used with it. Formaldehyde is only made in Germany; it is apt to deteriorate in carboys which may be imperfectly stoppered, and should be imported in 16 oz. tin bottles (about 1s. per tin, which suffices for two operations). This chemical is also used for the disinfection of rooms, applied on a solid spray by means of a force-pump.

For disinfecting rooms and holds of ships, liquid sulphur dioxide is greatly approved. It can be obtained in sealed tins at about 1s. each, and one is sufficient to disinfect a large room with its contents. All doors and windows should be sealed up with gummed paper, which is sold for the purpose in long strips.

The portable “Clayton” apparatus is believed to destroy not only all vermin, but also the bacilli of plague and other infectious diseases. The premises are not disturbed. The gas is forced into the building by pumping machinery and enters all crevices. A supply of roll sulphur is required. This apparatus has been supplied to the Metropolitan Asylums Board.

The following Report has been supplied by the Medical Officer of Health of the Port of London:—

“If the apparatus is required to disinfect vessels with cargo in the holds, the only practical one is that manufactured by the Clayton Fire Extinguishing and Ventilating Company, Limited. Other methods can, however, be employed in empty vessels, such as burning sulphur in the hold, or the use of liquid sulphur dioxide.

At the International Sanitary Convention held at Paris in 1903 the question of disinfection of ships and the use of the Clayton apparatus was discussed, and a series of articles or regulations were drawn up for adoption by the countries represented, with a view to uniform action being taken in all cases of plague, &c., on ships. Owing to political questions these articles have not yet been ratified, but Sir Herbert Williams considers that they are already in very general use, and should be fully considered by the Colonial Government in the first instance.

If disinfection is made compulsory, serious claims for damage to cargo, especially corn, will arise, and Sir Herbert, therefore, recommends that the treatment should only be offered as an alternative to quarantine.

The effect of gas upon various materials, grain and food stuffs is dealt with in the Local Government Board Report by Drs. Haldane and Wade (pages 19 to 24).

An apparatus has been devised by Dr. Nocht, of Hamburg, for the destruction of rats by the use of carbon dioxide, but the system is considered dangerous, owing to the persistent nature of the gas used, and the fact that its presence, unlike that of the Clayton gas, which is at once apparent, is only detected by special means."

The cost of the Clayton apparatus varies with the size of the plant, from about £250 f.o.b. to £1,000 f.o.b. Their largest type of machine, which, they state, is generally employed for port fumigating and disinfecting purposes, is usually erected on a tug or barge, and the gas conveyed to the holds or compartments to be treated by means of suitable metallic tubing, costs about £1,000 f.o.b., or together with boiler and circulating pump, flexible tubing, &c., £1,200 f.o.b. This machine has a saturating capacity of upwards of 150,000 cubic feet of 5 per cent. Clayton gas. The percentage 5 they state is sufficient for all ordinary disinfections.

Their smallest type has a capacity of about 10,000 cubic feet, and costs complete, mounted on an iron trolley with oil engine and tubing, £250 f.o.b.

Another use for the Clayton apparatus is indicated in the following extract from the *British Medical Journal* :—

"One large source of mosquitoes is found in the rain-water drains, . . . all outlets being covered by mosquito netting, the system is then divided into sections and the gas blown through, rats, as well as mosquitoes and other life, being exterminated."

The following memorandum concerning experiments made in the Congo Free State in connection with the use of motor cars on earth roads in Africa has been communicated by the Belgian Government :—

"For the last seven years the Congo Free State has been considering the question of using motor wagons for the transport of stores on main roads of communication.

Their first efforts concerned the use of electric cars. The cars were to be driven by batteries with accumulators recharged at stopping places situated about 60 kilometres apart. Each stopping place was to consist of a 6 h.p. electric charging station driven by steam with boiler heated by wood fuel.

"This form of traction had to be abandoned owing to the inherent difficulties connected with the erection of these charging stations.

"The State then contemplated using cars with refined spirit as the basis of motor power, and attempts were made to manufacture the spirit on the spot from local products, such as maize, sorghum, millet, sweet potatoes, honey and rice. As, however, these efforts did not lead to any good results, the State experimented with steam cars heated by wood fuel. Three cars of the Thorneycroft system—the lightest manufactured by these works—were sent to the Congo. These cars weighed $5\frac{1}{2}$ tons when working, and were able to take a load of 3 tons and to draw a trailer with a load of 2 tons. Practice proved that they could only do good work on the strongest portion of the road and in the dry season, and some means of reducing the dead weight of the vehicles had to be devised.

"In addition to the above experiments, and concurrently with them, a type of light steam car was tried, and the solution so long sought seemed at last to have been found.

"Since September, 1905, the Free State has sent to the Congo five cars of light pattern (constructed at the Cockerill Works at Seraing) of 1,500 kilos., capable of carrying one ton in addition to the wood and water required for covering a distance of 25 kilometres. The boiler, heated with wood fuel, is of 'the flash type.'

"The water consumption per kilometre is from 5 to 6 litres, and the wood required for travelling the same distance weighs 5 or 6 kilograms.

"The cars of the type described have up to the present given excellent results, although the surface at different times has been greatly softened by rains.

"The Free State has also an order at the Cockerill Works, a car of 2 tons which will be able to carry a load of 2 tons.

"In the course of these extended experiments the Congo Free State has become convinced that on earth roads the use of light cars is indispensable. All attempts to use heavy cars on similar roads are sure to end in absolute failure.

"The trial car which led up to the one actually adopted has travelled thousands of kilometres on certain Belgian roads. The mechanism has therefore proved its value.

"A network of roads for motor traffic is in course of construction.

"In an ordinary cross section the motor roads are 5 metres wide and are bordered with ditches to drain off water. The profile of the road is dug out in the ground in such a manner as to profit by the resistance offered by the virgin soil. Avoidance of the use of rubble is strongly recommended except in case of absolute necessity.

" Generally speaking the roads are not covered with stone in the first instance. Later, if it should prove necessary two strips of broken stone, rolled in, are laid down for the wheels of the motor wagons.

" Unless absolutely necessary the gradients do not exceed one in ten.

" Road turnings are effected by curves of a minimum radius of 25 metres.

" Bridges of 5 metres span and less consist of a floor of planks of OM. 10 by OM. 20 section resting on two or three beams OM. 30 square.

" Bridges of 5 to 10 metres opening consist of a floor resting on two double beams.

" For a greater span than 10 metres piles placed from 4 to 6 metres apart are used.

" During the initial stages, to obviate delay in construction of the roads, transhipment has to be effected across rivers whose breadth exceeds 40 metres.

The following report (relating to the Bende Onitsha Hinterland Expedition) should interest the boot trade. It should be possible to produce in this country the article required, and there would no doubt be a considerable demand for the right thing:—

" The feature that strikes one as being the most remarkable in the sick returns of the native soldiers, is the number of men who reported ill and were incapacitated for marching for a longer or less period of time, through injuries of the feet and legs. Thus, in November, from the 27th to the 30th, eight soldiers led the way. In December the list swelled to 85; while the return for January, February, March and April, up to the 15th, was 59, 82, 40 and 19 respectively, making a total altogether of 293 men.

Only one conclusion can be drawn from these figures, and that is that the soldier in the Southern Nigeria Regiment is inefficiently shod. Indeed, no one is more aware of this fact than the soldier himself; and he loses no opportunity of making the most of any injuries he is liable to, in going through the bush or over rocky ground in bare feet.

The military authorities themselves appreciate this weak point in the force; and the matter was deemed of such pressing importance a few years ago that the leather socks and Chuppli were introduced into the kit—but did not find favour with the native. It is said that they chafed, blistered, caught in the bush, impeded progress and were not comfortable.

But a boot or shoe of some sort is, I think, strongly indicated, to prevent so inordinately large a proportion of each fighting unit being

thrown out of action as is usual on service at present. And in the absence of other suitable foot-gear I should suggest the introduction of a moccasin such as is worn by the bush Indians of Mexico and Central America.

This consists simply of two halves of soft leather uppers sewn on to a stout leather sole, and laced for a short distance above over the instep. Such a shoe worn with the puttie or, better still a knitted legging, would serve all purposes amply.

I am strongly against putting native soldiers or police into boots. Giving them boots destroys their efficiency, and has only one advantage that I know of, and that is it enables them to be drilled, to march in step more easily. But while strongly objecting to boots, I do think that when they are called upon to fight in thick brushwood and undergrowth, the natural dangers of which to bare feet are increased by the placing of the artificial spikes on the road by the enemy, they should be given some protection for their feet, and that it would be to the advantage of the Government to give this, but it should not be an ordinary European boot, and except when called out on active service they should not be allowed to use any foot-wear."

The following letter has been received from Trinity House, on the subject of Lights on a Breakwater:—

"15th April, 1907.

In reply to your letter of the 14th ultimo, requesting to be furnished with the observations of the Elder Brethren as to the most satisfactory method of marking the extension of the South-West Breakwater at Colombo, while the works are in progress, I am directed to acquaint you, for the information of the Colonial Authorities, that, in the opinion of the Elder Brethren, this might best be done by the placing of a gas-lighted buoy showing a white light, giving one occultation every ten seconds, to guard the submerged rubble base of the new arm, and the exhibition of two fixed white lights, placed vertically six feet apart, from a mast or stage erected on the seaward end of the permanent work. These lights should be of the ordinary type of fifth order Port Light, burning paraffin, and should be moved seawards as the construction of the pier proceeds, the cost of the two lights being estimated at £160 f.o.b. England.

As the obtaining of the gas supply for the proposed buoy from England would not only involve considerable expenditure but be unreliable, as difficulty would probably be experienced in obtaining freight for the charged gas-holders, and the change of temperature during transit would have a detrimental effect on the gas, the Elder Brethren consider that the most satisfactory arrangement

for ensuring the efficient maintenance of the gas buoy would be the construction of a small oil gas-producing plant at Colombo. This plant could be utilized later for supplying the illuminant for the permanent light which will be required at the end of the Breakwater on its completion, and which the Elder Brethren would recommend should be a fourth-order white double occulting oil gas light, automatic in action, thus saving the cost of continual attendance.

It is estimated that the cost of providing the necessary gas-making plant, two gas buoys and lanterns and one transport receiver, will amount to £1,250 f.o.b. in England, but to this amount must be added freight and the cost of foundations, as well as the provision and erection of a corrugated iron building at Colombo.

It will also be necessary to fit one of the tugs used in connection with the breakwater works with a small Westinghouse pump, for transferring the gas from the receiver, which would be conveyed by the tug to the buoy. The cost of this pump is included in the estimate of £1,250 already mentioned.

The time required for the preparation and shipment of the gas buoys and plant would be about three months, and the Elder Brethren would suggest that a preliminary Notice to Mariners relative to the proposed lights should be issued three months prior to their installation."

The following has been received from the Lilleshall Company, Limited :—

"It occurs to the undersigned that it may be of interest to you and to your various Colonial correspondents to record the following experience in regard to the World's demand in wrought iron bars.

Practically 99 per cent. of wrought iron flat bars ordered stops at six inches wide. There is a small percentage ordered seven inches and eight inches wide, but any width over eight inches in wrought iron is so rarely asked for as to make it exceedingly difficult to obtain such wide sizes. They can only be obtained sometimes after long delay, and at a heavy cost for mounting rolls.

Flat bars over six inches wide are used, and much more readily obtained in Mild Steel.

Similar remarks may also be made in regard to round and square bars that are larger than three inches."

A question was put in the House of Commons on the 11th of April, whether the Crown Agents issued any information as to the results of manufacturers' tenders, and the name of the successful

tenderers. The answer was to the effect that the Crown Agents like other departments, treat such matters as confidential.

None of the home departments publish such information. In 1888, the War Office and Admiralty, the largest spending departments, obtained opinions on the point from the majority (48) of the Chambers of Commerce, and from a large number (112) of leading manufacturers. The report (C. 5,348) commented on these replies as follows :—

“The Chambers, being more or less in touch with all the different classes connected with Commerce, reflect rather the feeling of the mercantile public as a whole, but it is noted that the preponderance of manufacturers or of merchants in a Chamber appears to turn the balance in favour of the views of that class. Of the forty-eight replies received, twenty-four are on the side of publicity, twenty are against it, and four are unable to come to any decision ; but the twenty Chambers which decide against publication include Birmingham, Glasgow, Leeds, Manchester, Nottingham, Sheffield and Walsall—that is to say, the chief manufacturing districts in the kingdom, whereas the bulk of those which incline the other way are of a more general commercial character, having little direct interest in, or experience of, Government contracts.

The negative reply is still more emphasised by the replies from individual manufacturers. Of the 112 answers received, no less than 101 are in favour of secrecy.

An analysis of the replies received is appended, from which it will be seen that at least twenty different reasons have been adduced in favour of secrecy. Some of the objections, it is true, affect, at any rate in the first instance, the individual contractor rather than the State at large, but it is clear that in most cases the department would either directly or indirectly be a sufferer. Indeed, even those who wish for publicity see little to be gained by such a course so far as the departments are concerned ; the only reason which has been put forward in favour of publication is the security thereby obtained against dishonesty. It is only right and proper, so it is argued, that those who compete for an order should, for their own protection, know the price at which it is taken ; and it is also only right and proper that the tax-paying community at large should see how their money is spent. Such a feeling is prompted partly by mere idle curiosity, and partly by a general love of open dealing, but it leaves out of all consideration both the wisdom and the economy of the proposal.”

The Admiralty summed up the nature of the replies received by them as follows :—

“Particulars of Replies received at the Admiralty.

“Letters were sent to sixty-one manufacturers, and replies have been received from all.”

All except six object to the publication of prices, for one or more of the following reasons, but mainly on account of the second :—

1. It is not in accordance with trade usages.
2. Manufacturers, for various reasons, such, for example, as a desire to keep their workmen employed, the magnitude of orders, security against bad debts, and prestige of holding Government contracts, constantly quote to the Government departments much lower rates than those quoted to private customers, who would learn the Government rates and demand them. To such an extent is this felt that many firms would cease to do business with the Government if the publication of prices were permitted, or be compelled to raise their prices.
3. The publication of prices would enable cutting firms to put in a price just below what was last accepted, and one probably which is unremunerative for reasons given before. They would recoup themselves, or try to do it, by inferiority of quality.
4. Contractors would find great difficulty in buying the raw material, and in dealing with their workpeople.
5. Occasionally the department might be compelled to accept a tender which was not the lowest. It would have to justify its action to disappointed competitors, to say what it thought about their character, and endless correspondence would arise. The effect would be that those persons who have to adjudicate upon tenders would be tempted to neglect every consideration, excepting price.
6. The practice of publishing prices in foreign countries throws the business into the hands of third or fourth rate houses and agents.

Of the six firms who do not object to the publication of prices, not one gives any reason for the opinion expressed."

Contract Work.

The following extract gives the views of the Governor of the Gold Coast on the much-debated question of the best mode of carrying out such public works as railways :—

" Extract from the Minutes of a Meeting of the Legislative Council held on the 1st May, 1905, in connection with the Loans Ordinance No. 5 of 1905.

The Governor expresses full sympathy with the unofficial members in their desire that Government money should only be expended in the most economical and effective manner; but, when considering the expenditure incurred on the railway from Sekondi to Kumasi, which has been so severely criticised, they must always bear in mind the special conditions under which this line was con-

structed. At the time it was commenced, there was no Local Railway Department; the mine owners at Tarkwa and Obuassi were clamouring for the immediate establishment of railway communications; the original approximate estimate of cost was subsequently invalidated by the Ashanti disturbances, and the mining 'boom,' which entirely disorganised the local labour market: while the sickness and mortality among the Europeans, the want of landing facilities at Sekondi, and the difficulties of railway construction through a trackless forest proved even greater than were anticipated. Had the Government awaited the preparation of detailed surveys, estimates, plans and specifications—necessary for its own protection, if this line had been constructed by contract—before commencing construction, there can be little doubt that the delay would have been vehemently opposed by all mine-owners and others interested in the immediate improvement of transport; and to assist the vital interests concerned, it was decided to construct, without delay, what has certainly proved to be an expensive line, but also a most valuable and important one. The respective advantages and disadvantages of the contract system, and of what may be termed the 'English' departmental system, of constructing railways in the Colonies were discussed in a recent Report by the Consulting Engineers to the Secretary of State, which was distributed to Honourable Members and also gazetted.

The Governor has no personal experience of the departmental system in question, but believes that it has been frequently and successfully employed in the construction of railways, in Ceylon and elsewhere. He has, however, seen a good deal of railway contract construction in the East, and has seldom found it satisfactory. In the first place, much time must necessarily elapse before the detailed surveys can be made, and the detailed estimates, plans and specifications prepared, without which it would be obviously imprudent to invite tenders for a contract; since the slightest ambiguity or deviation might, and probably would, involve claims for damages by the contractor; and the most carefully drafted contract seldom avoids litigation. Then it is not unusual, within the Governor's experience, for a railway contractor to carry out the slightest earthworks, and the easiest bridges and culverts, shortly afterwards to abandon the work, and refer the contract to arbitration; leaving the Government to engage engineers, organise a labour force, and complete all the heaviest cuttings and embankments, the most difficult bridgework, and most of the buildings. Railway construction by contract was found so unsatisfactory in the Federated Malay States that it was entirely given up, and, for several years past, every new line has been constructed on the 'local' departmental system; all work being under the direct supervision of the Head of the Railway Department, and much of it carried out directly by means of departmental

labour; only subsidiary contracts being let, when considered advisable, for specific earthworks, buildings and bridges As to the system to be eventually adopted in carrying out the various Public Works specified in the Schedule to this Bill, he cannot bind the Government beforehand. Each of the three systems referred to has its advantages and disadvantages, having regard to surrounding circumstances, and each is susceptible of modification, according to requirements of the particular Colony concerned. Although, however, he cannot bind the Government to definitely adopt beforehand any given system of construction, he can assure Honourable Members that the whole question will be fully and carefully considered in connection with every item entered in the Schedule, before any final decision is arrived at."

These remarks may be supplemented by the experience of the district authorities in this country in road repairing. A Colony asked to be supplied with information as to the contracts made here for this purpose, and it was ascertained that the contract system had been given up everywhere. The last county to retain it has recently abandoned it, and we append some extracts from the report of a specialist, on which it was decided to abandon the system.

"The question of Contract *versus* Departmental agency passed out of the experimental stage many years ago, and is nowhere adopted, so far as I know, outside of this county. I know of few engineering undertakings on which it is so easy to lose money as on the annual maintenance of roads. The work is so varied, scattered, sub-divided, so beyond the limits of precise specification, and in many parts of the processes so unmeasurable and uncountable in its multifarious details, that nothing short of the best business methods, and the closest supervision of quantities and qualities of materials and work during its progress, can secure economy. It is impossible to judge adequately of road work merely by the apparent quality of surface. No mere inspection of completed work will tell even an expert whether the road has the full quantity of metal upon it which has been paid for, or how long the road surface will last."

"I believe there is an impression that Departmental management of work, where the authority itself employs and pays the labour, is difficult and costly, and that Contractors of repute may be expected to get more and better work out of the labour. It is assumed that where work is paid for by the day and not by the piece, the labour will prove careless and perfunctory, and the work will cost much more than it would by Contract. This is greatly true in regard to many engineering works, where the various processes are specialised, where special materials and special appliances are used, and where most of the labour is skilled labour. What has been already written

shows that road work is an exception to the general rule. Departmental road work, as it is termed, is not nearly so costly as work done by the Contract system, and its quality is far superior. There is no getting over these facts. They are facts, and well known to professional men."

"Feeble control is one of the defects of a Road Contract system. There is a tendency running all through the system to depend upon the Contractors, and to rely upon the Contractor's large establishment for the supervision of work. There is, I believe, a current impression that road work done by Contract does not require the same supervision as when done Departmentally, and that Contractors can be relied upon to get good value for the County out of labour on the roads. This is wholly fallacious. Contractors' economies are economies for the Contractor's pocket and not for the County's. Road Contract work requires more constant personal supervision by the Authority than any Contract work I know of, and lax supervision on the part of the Authority is ruinous to that Authority. In saying this I do not in the least degree suggest unfair motives or practices on the part of Contractors. Road Contractors' interests are throughout naturally and inevitably in conflict with the true interests of the Authority, and they cannot be expected to point out defects of system (or of its application) to their own detriment. This applies still more, if possible, to the supply of materials, which is by far the largest item of road expenditure, amounts here to between £50,000 and £60,000 yearly. Contractors are naturally, and necessarily, and honestly, too, ready and anxious to supply as much material as the County will buy, and to supply the material which is most profitable to the Contractor. It is natural and it is business. It is, on the other hand, to the best interests of the County to buy as little as is absolutely necessary, and not to choose a material which is convenient and profitable to the Contractor, but to choose the best and most enduring material in the most open and cheapest market. By every defect of the Contract system or of its application, the Contractor must invariably be a gainer, and the Authority a loser."

"Apparently this latter work is an 'extra.' It is not traceable in either Tender or Specification. No doubt there are many 'extras.' Apart from these and many other defects of specification which make it difficult to understand, I do not think that it is possible to provide a complete and satisfactory Specification for Contract work in maintenance of roads, or to contrive satisfactory methods of measurement or of effective control."

The last remark touches the real difficulty. If it is practically impossible to specify everything that has to be done and how it has

to be done, the contractor is not fully bound, and may take advantage of the situation to charge "extras," or to do the work in an unsatisfactory manner.

Even when it is practicable to compile a complete specification and set of conditions, unexpected difficulties are apt to occur and demands for special allowances are made.

On the other hand there may be a great advantage in employing a contractor, who, as is often the case, is a man of great personal ability and organising power. And it is sometimes suggested that a manufacturer should in certain cases be allowed to devise his own means of attaining the object desired. In matters of detail it is an every-day occurrence for manufacturers to make suggestions. But it is obviously a less responsible matter for a manufacturer to work to a design furnished by his employers than to make one himself, and generally speaking he is reluctant to do the latter.

If it is desired to leave any discretion and responsibility to a contractor, this should of course be made quite clear from the first. Occasionally there is some confusion in this respect. Thus a colonial government recently ordered certain rack locomotives on designs furnished by themselves; the contractor made certain suggestions and the government revised the designs in accordance with them. The engines failed to do the work for which they were designed and intended. The colonial government appear to have inferred from the suggestions made by the firm that they in effect undertook that the engines so constructed would do the work expected. But this was not made a condition of the order. It appears doubtful however whether any first-class firm would give a guarantee that an engine made for such a special purpose would accomplish it.

We reproduce the following letter which appeared recently in several newspapers.

PREFERENCE FOR ROTTERDAM.

"Sir,—It may interest the British taxpayer to know how far the present Government are prepared to carry their principle of Free Trade within the Empire, when I am able to state that I have learnt from an unimpeachable source that the Crown Agents for the Colonies have placed several orders for steel motor vessels propelled by paraffin engines to be built and shipped from the port of Rotterdam.

Whether the fact of this Department being open to receive tenders was notified in the usual manner by advertisement I am

unable to state positively, but this I do know that the British houses engaged in this particular line of work are quite as able to construct the hull and fit the most approved propelling motor as any Continental house. Mr. David McBrayne has installed a vessel built at Greenock with an excellent type for his West Highland loch passenger trade; and the Thames and Solent, in fact, all the South Coast abounds with most economical working types of paraffin engine, without necessity to bring the foreigner on the scene, I trust that some energetic member of the House of Commons will place this matter prominently before the Government, and that the Department concerned may learn that 'those who pay the piper have a right to call the tune.'

PASSED OVER."

We think that our readers, official and unofficial, will be interested to know the facts which have led to this severe arraignment. Last year the Southern Nigerian Government ordered a motor barge (the "several orders" is an embellishment) to carry 60 tons on 4 ft. draught, to be made by a certain foreign firm which has had considerable experience of work of this kind. The barge was to be similar to one built for Messrs. Pickford, the well-known carriers, and upon which the *Motor Boat* of May 31st, 1906, commented as follows:—

"It is certainly a matter for congratulation that this, one of the earliest genuine attempts on the part of a shipowner to adopt the internal combustion engine for every-day commercial work, should have been made with the best materials procurable. Too often a new invention has suffered through being applied initially under very unfavourable conditions, and, curiously enough, one of the clearest instances of this in modern times is to be found in the history of that first cousin of the marine motor, the motor omnibus engine. Some of the earliest attempts to produce motor-buses were such conspicuous failures, owing chiefly to bad design and a suicidal policy of cutting down the cost of construction, that the vehicles made a very bad impression on the public, which it took the newer and more up-to-date types some time to efface.

But in the present instance there has been no mistake of this kind. No more suitable engine for the work could be found than the Kromhout, from the fact that the motor is so simple and automatic that an engineer is not required, an ordinary hand from the crew being able to run it quite successfully. Many barges of even 100 tons in Holland run with one hand only on the canals there. In a tideway such as the Thames, or for sea work, two hands would be required, not necessarily to work the motor, but because, as is well known, a couple of hands are an absolute necessity on a barge in a tideway."

"The boat crossed from Holland under her own power. The original intention was to cross direct from Flushing to the Thames, but upon leaving there dense fogs were encountered, and the barge had to put into Ostend, from which place she crossed direct, without incident, in just over 12 hours, the engine running without a hitch the whole time.

"We understand Messrs. Pickford intend using the barge in connection with their Portsmouth and Southampton trade."

It will be seen from this that the case was a very special one, and that the colonial government, which would not be justified in trying experiments, or in taking any but a well tried and approved type, had a strong reason for selecting a foreign made vessel. Whether they could have done equally well in this country is, of course, a perfectly fair and proper question for discussion. Whenever, in fact, a colonial government buys abroad, it is desirable to investigate the circumstances. No colonial government desires to do so if it can be helped, and it may safely be assumed that when it does so it is after much enquiry and consideration; the discussion of the case, however, may be instructive both to governments and to manufacturers, and we should always be glad to give whatever help we can in the elucidation of the facts.

We do object, however, to the assumption contained in the above letter that the "British taxpayer" has a sort of vested interest in any orders which a Crown Colony may have to place. Southern Nigeria is self-supporting and does not receive a penny from the Imperial Treasury; on the contrary she makes a large contribution to the support of Northern Nigeria. It is difficult, therefore, to see how the "British taxpayer" is affected. We quite agree that "those who pay the piper have a right to call the tune," and would point out that the first question is, who does pay? It would, we submit, be unfortunate if the Colonies got the impression that manufacturers in this country claim all colonial orders, without any corresponding obligation on their part; and, if we may so far presume on our newly acquired editorial status, we would suggest to our colleagues of the Press that such complaints, coupled with threats to appeal to members of Parliament, are hardly calculated to foster a good feeling in the Colonies.

The exhibition held in April at the Board of Trade under the auspices of the British Cotton Growing Association contained some remarkable articles manufactured from colonial cotton. Curtains and handkerchiefs were displayed which only an expert could distinguish from silk. As an instance of the growth of the industry, it may be noted that in 1903 the West Indies sent us £20,000 worth of cotton; this year it is anticipated that they will send us ten times as much.

APPOINTMENTS.

Important changes have taken place in the staff of the Colonial Office during the current year. SIR MONTAGU OMMANNEY, G.C.M.G., K.C.B., I.S.O., retired from the post of Permanent Under-Secretary on the 15th of January, and was succeeded by SIR FRANCIS HOPWOOD, K.C.B., K.C.M.G. Sir Montagu Ommanney's connection with the Colonial Office dates back to March, 1874, when he became private secretary to the Earl of Carnarvon, then Secretary of State. In January, 1877, he was appointed one of the Crown Agents for the Colonies, and in June, 1900, he succeeded Sir Edward Wingfield as Permanent Under-Secretary. SIR FRANCIS HOPWOOD has been Permanent Secretary to the Board of Trade since 1901. He acted as honorary secretary to the Chairman of the House of Commons' Committee on the Jameson Raid, and it will be remembered that he was one of the Committee which visited South Africa last year to advise the Secretary of State on the subject of the form of constitution to be granted to the Transvaal and Orange River Colony.

MR. F. GRAHAM retired from the post of Assistant Under-Secretary on the 10th of January, when His Majesty bestowed on him the honour of a K.C.B. Sir Frederick Graham entered the Colonial Office in 1870, and had held the post of Assistant Under-Secretary for close upon ten years. He was specially responsible for South African affairs. He is succeeded in the post of Assistant Under-Secretary, and in the charge of the affairs of South Africa, by MR. H. W. JUST, C.B., C.M.G., until recently head of the South African Department. Mr. Just entered the Colonial Office in 1878. He accompanied Mr. Chamberlain in his visit to South Africa after the war in 1902-3, and he is one of the joint secretaries to the present Colonial Conference.

MR. A. A. PEARSON, C.M.G., Principal Clerk in the West Indian Department, retired on the 31st of December. Mr. Pearson entered the office in 1867, and had been a Principal Clerk since

1895. He represented the Crown Colonies at the International Postal Conference in London in 1898 and he was one of the British delegates at the Brussels Sugar Conference in 1901-2. He was at Kingston, Jamaica, with Sir Alfred Jones's party, at the time of the recent earthquake.

MR. SYDNEY OLIVIER, C.M.G., who succeeded Mr. Pearson in the charge of the West Indian Department, has been appointed to succeed Sir Alexander Swettenham as Governor of Jamaica. Mr. Olivier, who entered the Colonial Office in 1882, has an extensive knowledge of the West Indian Colonies. He acted as Auditor-General of British Honduras from October, 1890, to April, 1891, and as Auditor-General of the Leeward Islands from October, 1895, to February, 1896. He was secretary to the West Indian Royal Commission of 1896-7, whose report on the position of those Colonies marks a turning-point in their history, and has been the basis of administrative policy in the West Indies during the past ten years. In 1900 he went to Jamaica as Colonial Secretary, remaining there until 1905, and administering the government on several occasions and for considerable periods.

SIR H. E. McCALLUM, G.C.M.G., A.D.C., R.E., who has been Governor of Natal since 1901, has been appointed to succeed Sir H. A. BLAKE, G.C.M.G., as Governor of Ceylon. He served for a number of years as Colonial Engineer of the Straits Settlements, and became Governor of Lagos in 1897. In 1898 he was transferred from Lagos to Newfoundland, and from there in 1901 to Natal.

SIR HENRY McCALLUM is succeeded in Natal by SIR MATTHEW NATHAN, K.C.M.G., R.E., who administered Sierra Leone in 1899, and became Governor of the Gold Coast in 1900; he was transferred to Hong Kong in 1903. Before these appointments he fought in Egypt and the North West Frontier, and from 1895 to 1899 he was Secretary of the Colonial Defence Committee in London. One of his brothers, Lieut.-Col. Sir F. L. Nathan, R.A., is Superintendent of the Government Gunpowder Factory at Waltham; another was Private Secretary to Lord Curzon when Viceroy; and a third was Attorney-General of Trinidad.

SIR FREDERICK LUGARD, K.C.M.G., C.B., D.S.O., succeeds Sir Matthew Nathan at Hong Kong. Sir F. Lugard has seen active service in many parts of the world, including Afghanistan, the

Soudan and Burma, and administered Uganda, 1889-1892 ; but he is most closely associated with West Africa, which he first visited in 1895. Going out in March, 1898, as Commandant of the West African Frontier Force, he became in December, 1899, High Commissioner for Northern Nigeria, a post which he resigned last September. Altogether he has had a particularly strenuous career. Miss Flora Shaw, now Lady Lugard, was a distinguished contributor to the *Times* on colonial subjects.

MR. H. C. CLIFFORD, C.M.G., has been appointed Lieutenant-Governor and Colonial Secretary of Ceylon, in succession to the late SIR ALEXANDER ASHMORE, K.C.M.G. He has been Colonial Secretary of Trinidad and Tobago since September, 1903, but the whole of his previous service was in the Eastern Colonies. He was Governor of British North Borneo and Labuan from 1899 to 1901. He has produced a number of excellent studies on colonial subjects.

SIR H. M. JACKSON, K.C.M.G., Governor of Trinidad and Tobago, is proceeding to England on sick leave. In his absence, SIR GILBERT CARTER, K.C.M.G., Governor of Barbados, will administer the Government of Trinidad, the administration of the Government of Barbados devolving upon the Colonial Secretary, MR. S. W. KNAGGS.

LIEUT.-GENERAL J. H. WODEHOUSE, C.B., C.M.G., has been appointed Governor and Commander-in-Chief of Bermuda, in succession to LIEUT.-GENERAL R. M. STEWART, K.C.B.

The Transvaal Government have appointed SIR RICHARD SOLOMON, K.C.B., K.C.M.G., to be the first Agent-General for the Colony in London. Sir Richard was Attorney-General in the Schreiner Ministry in Cape Colony from 1898-1900, and subsequently Attorney-General and Acting Lieut.-Governor of the Transvaal. His brother, Mr. E. P. Solomon, is a member of the Transvaal Ministry.

LIST OF COLONIAL OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY

Whose Leave Certificates are received at the Office of the
Crown Agents for the Colonies.

The dates given are those of the expiration of the leave.

The Editors would suggest that whenever an official desires the insertion of an address he should arrange to have a note entered accordingly on his Leave Certificate.

As officials from the self-governing Colonies other than the Transvaal seldom reside in this country for any long period, the Editors do not propose to endeavour to include them.

GOLD COAST

ABBOTT, E. G.	21 July, '07	COPE, DR. R.	21 June, '07
ADAMS, J. C.	29 June, '07	COOKE, S. B. R....	18 June, '07
ANDERSON, J.	26 June, '07	COUZENS, S.	21 June, '07
BAXTER, E. G.	28 July, '07	CRAVEN, C. S.	8 Sept., '07
BHUTLACHARJI, Dr. J. C.	7 July, '07	COZENS HARDY, E. W....	17 July, '07
BARKER, Lt. E. B. ...		CONBROUGH, W. E. ...	6 July, '07
Junior Naval and		DENNY, Capt. H. DE C....	24 Aug., '07
Military Club, 96, Pic-		DAVIS, S. S.	28 Aug., '07
cadilly, W.		Royal Colonial Insti-	
BONNYMAN, Capt. F. J. C.	18 Aug., '07	tute Northumberland	
BURBRIDGE, K. G. ...	17 July, '07	Avenue, W.C.	
BRANTINGHAM, W. ...	4 Aug., '07	DEACON, T.	
BURKE, B.	20 Sept., '07	FORD, A. G.	16 June, '07
CHERRILE, H. R.	17 July, '07	FLEURY, Lt. A. M. ...	12 June, '07
CARLOW, Dr. H.	3 July, '07	FRANCE, H. D.*	29 July, '07
CLARKE, M.	13 Sept., '07	FRASER, ARM. SERGT. J. B.	18 Sept., '07
COCECRAFT, Lt. L. W.		HASTINGS, CAPT. G. H.	17 July, '07
LA J.	17 July, '07	HARPER, DR. F. S. ...	4 Aug., '07
COCKRAN, Capt., H. P. G.		KITSON, MAJOR A. W.	28 May, '07
COLLIER, Dr. J. H. ...	3 Oct., '07	KEYWORTH, CAPT. R. D.	24 Aug., '07

GOLD COAST—continued.

LYFORD, F. ...	17 July, '07	REED, W. T. ...	6 June, '07
LINDSAY, W. ...	21 June, '07	ROBINSON, F. A. C. C. ...	4 July, '07
LATHBRIDGE, W. G. ...		Royal Colonial Institute, Northumberland Avenue, W. C.	
MACLEAR, Capt. H. ...	27 June, '07	RIMMER, T. ...	7 July, '07
MASKELL, W. T. ...	26 June, '07	RICHARDS, R. W. ...	17 July, '07
MCDONALL, Dr. J. C. S. ...	7 July, '07	ROWDEN, E. G. ...	18 Aug., '07
MICHELIEU, W. P. ...	6 July, '07	STEPHENSON, A. ...	21 June, '07
MAIN, F. G. ...	22 Aug., '07	SIMMONS, W. H. ...	12 June, '07
MCGOWAN, R. ...	6 Aug., '07	STOKES, R. H. ...	18 Aug., '07
OSBORNE, A. W. ...	31 July, '07	WINTER, T. F. ...	7 July, '07
O'BRIEN, C. A. ...	5 Sept., '07	WEBB, Dr. W. S. ...	4 Aug., '07
PARK, A. ...	3 July, '07		
POPHAM, Lt. H. B. ...	7 July, '07		
PURCELL, G. K. T. ...	3 Oct., '07		

GAMBIA.

BATTY, R. F. ...	14 June, '07	BRANDFORD GRIFFITH, H. M., C.M.G. ...	24 Aug., '07
------------------	--------------	---------------------------------------	--------------

SIERRA LEONE.

BILL, Lt., J. F. ...	4 Aug. '07	RENSHAW, S. ...	17 July, '07
BAILEY, H. E. ...	8 Sept. '07	SHELDRAKE, J. H. ...	30 May, '07
BODDY, A. W. ...	18 Aug. '07	SPENCE, A. ...	21 June, '07
BASING, G. ...	15 July, '07	SKELTON, Lt., E. G. ...	17 July, '07
CLIFFORD, J. W. ...	4 Aug., '07	STEWART, B. ...	8 Aug., '07
DUFF, J. H. ...	25 July, '07	TOMLINSON, Miss, E. M. ...	27 July, '07
ESPENT, R. W. A. ...	26 Aug., '07	WILBRAHAM, D. F. ...	19 July, '07
HENSTRIDGE, H. G. ...	30 May, '07	Wellington Club,	
HUNT, R. L. ...	3 July, '07	Grosvenor Place, W.	
NORMAN, Capt., C. C. ...	3 June, '07	WRIGHT, G. ...	4 Aug., '07
PICKIN, J. J. ...	4 Aug., '07		

SOUTHERN NIGERIA.

ANDERSON, H. ...	31 July, '07	BUTTERWORTH, Capt., A. W. ...	4 Aug., '07
ALDER, J. F. ...	29 June, '07	CAVANAGH, Sergt., B. G. ...	3 June, '07
AIREY, T. A. ...	15 June, '07	CUMMINS, E. O. ...	31 July, '07
BIDDELL, A. W. ...	3 July, '07	CURRIE, Dr. J. ...	3 July, '07
BURGESS, Dr., H. L. ...	17 July, '07	CORSELLIS, Capt., M. H. ...	9 July, '07
BLACKWELL, Major, L. N. ...	17 July, '07	COCKBURN, Maj. W. A. C. ...	15 Aug., '07
BURROWS, T. F. ...	26 Sept., '07	Cavalry Club, Piccadilly, W.	
BEST, W. H. G. H. ...	13 July, '07	CLARKE, R. C. ...	13 July, '07
c/o Messrs. Holt & Co.,		COLLEY, Lt. A. W. ...	28 Aug., '07
3, Whitehall Place,		CHUTE, E. L. ...	22 Aug., '07
S.W.		Sports Club, St. James' Square, S.W.	
BALL, G. L. ...	6 Aug., '07	de KENTZON, Lt. A. H. ...	
BRIERLEY, Dr., R. H. ...	7 July, '07	R.N. (retired) ...	29 July, '07
BEAMISH, Capt., W. E. ...		DANN, T. W. ...	12 Aug., '07
BURT, F. W. ...	15 June, '07		
BOAG, G. L. ...	6 Aug., '07		
BOURNE, A. ...	21 July, '07		

SOUTHERN NIGERIA—*continued.*

DUNCAN, Lt. N. C. ...	15 June, '07	MOULE, Lt., L. H. D. O.,	
DAY, Lt. T. E., R.N.R....	30 July, '07	Junior Naval and	
EDWARD, Lt. H. A.,		Military Club, 96,	
R.N.R. ...	2 June, '07	Piccadilly.	
FISHER, M. H. ...	17 Sept., '07	MOORE, Lt., A., D.S.O.,	
FOX, Lt. C. U. ...	24 June, '07	MILNE-STEWART, J. D....	21 June, '07
FLEMING, W. J....	15 June, '07	MAPLES, Dr., E. E. ...	12 Aug., '07
FARMER, W. ...	7 July, '07	MCLEOD, N. C. ...	8 Sept., '07
FINLAY, Dr. J. D. ...	4 Aug., '07	MAXWELL, T. D. ...	6 Sept., '07
FENNER, W. ...	4 Aug., '07	MANSFIELD, H. B. ...	13 July, '07
GINGELL, S. J. ...	2 June, '07	NEWMAN, D. A....	18 Aug., '07
GETTY, J. G. ...	24 Aug., '07	NICHOLS, R. J. ...	1 June, '07
GOVIER, L. J. ...	21 July, '07	OBORNE, E. W. ...	19 June, '07
GRAHAM, Miss M. ...	15 Aug., '07	PEDDER, W. ...	6 June, '07
HENDERSON, Sergt. J. ...		PHILLIPS, P. H. ...	12 Sept., '07
HANSON, A. E. ...	12 Aug., '07	RENDLE, Dr. A. R. ...	21 June, '07
HEATHCOTE, Capt., C. E.	24 Aug., '07	RUDKIN, Capt. W. C. E.	7 July, '07
HUGHES, F. J. ...	6 June, '07	Army & Navy Club,	
HUNGERFORD, Dr. G. ...	29 July, '07	Pall Mall, S.W.	
HARCOURT, A. G. B. ...	18 Aug., '07	RIDDLE, C. ...	12 July, '07
c/o Sir C. R. McGregor		ROOTS, A. E. ...	11 Aug., '07
Bart & Co., 25, Charles		RYAN, Dr. J. C....	3 July, '07
Street, S.W.		RYAN, Corporal J. G. ...	24 Aug., '07
HURFORD, J. ...	16 June, '07	SINCLAIR, G. G....	19 June, '07
HISCOCK, Dr. R. C. ...	1 July, '07	SMALLBONE, W....	25 June, '07
HADDON SMITH, H. B....		SMITH, W. ...	5 July, '07
KLEE, Sergt., A. E. ...	3 July, '07	SYER, R. H. ...	30 May, '07
LAVIE, Lt., H. E. ...	29 July, '07	Blenheim Club, St.	
MASSIAH, C. A....	21 June, '07	James' Square, S.W.	
MICKLETHWAIT, W. ...	21 July, '07	SMARTT, J. P. ...	4 Aug., '07
MACFARLANE, Dr., W. F.	4 Aug., '07	SWANSTON, Capt., H. O.	28 Aug., '07
c/o Bank of British		STORY, W. ...	15 June, '07
West Africa, Ltd.,		SMITH, Capt., E. H. ...	2 Sept., '07
Leadenhall St., E.C.		STEELE, W. M. ...	6 June, '07
MOORHOUSE, Lt.-Col.,		THOMPSON, P. G. ...	9 June, '07
H. C. ...	24 Sept., '07	TURSON, C. R. ...	17 July, '07
MOHNEUX, C. R. N. ...	3 July, '07	TYSON, A. W. ...	18 Aug., '07
MACCULLOCK, Capt., B. D.	15 Oct., '07	TOMBLESON, Dr. J. B. ...	11 July, '07
Cavalry Club, Picca-		WILDE, J. L. ...	7 July, '07
dilly, W.		WRIGHT, A. ...	23 July, '07
MORRIS, E. H. ...	23 July, '07	WHITEHOUSE, A. A. ...	25 June, '07
MOIR, S. R. ...	30 May, '07		

NORTHERN NIGERIA.

ARNETT, E. J. ...	11 Sept., '07	BURDON, Maj. J. A.,	
AUBIN, Lt. A. C. ...	21 July, '07	C.M.G. ...	15 July, '07
ADAMS, Dr. E. C. ...		Junior Naval and	
BRACKEN, R. G. ...	3 July, '07	Military Club, 96,	
BRUCE, Capt. R. W. V.	7 Aug., '07	Piccadilly, W.	

NORTHERN NIGERIA—continued.

BRYANT, E. C.	12 June, '07	HUDDART, J.	3 July, '07
BRATT, J. H. D.	25 July, '07	HERBERT, Lt. W. N. ...	
c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.		JOHNSON, Sergt. W. ...	21 July, '07
BAILLIE, G.	17 July, '07	JONES, Capt. A. W. ...	25 June, '07
BROWNE, Capt. J. G. ...	12 Aug., '07	JONES, Sergt. A. E. ...	
BRACKENBURY, Capt. E. A.		LAGONE, Capt. A. M. ...	24 Aug., '07
c/o Messrs. Way & Co., Billiter Buildings, Billiter St., E.C.		LANGLEY, Dr. W. H., C.M.G.	27 July, '07
CONDON, Capt. G.	19 June, '07	LECKIE-EWING, Lt. W. C.	21 June, '07
COLLINS, Arm. Sergt. A. ...	18 Aug., '07	LUCKING, A.	12 Aug., '07
COLE, Lt. Col. A. W. G. ...		MACKENZIE, Capt. J., V.C.	
LOURY, D.S.O.	10 June, '07	Junior Naval and Military Club, 96, Piccadilly, W.	
CUNLIFFE, Lt. Col. F. H. G.	28 Aug., '07	McKAY, Sergt. R. J. ...	31 July, '07
Army and Navy Club, Pall Mall, S.W.		McKINLAY, Sergt. W....	6 Aug., '07
CHATTON, Lt. C. A.	1 July, '07	MATTHEWS, Sergt. P. E.	
CLARKE, Lt. J. C. O. R.N.R.	29 July, '07	MORTON-LLOYD, Miss E. C.	7 July, '07
CHANNELL, Sergt. C. W. ...	10 Aug., '07	MARQUIS, F. A.	
COCKBURN, Maj. J. B. ...		O'NEILL, F. R.	12 Aug., '07
DOYLE, P. J.		O'SULLIVAN, Lt. A. M....	18 Sept., '07
ELLIS, Dr. M. F.	14 Sept., '07	PUGH, W. A.	6 July, '07
EASTERBROOK, Sergt. F. W.	24 July, '07	PARSONS, Dr. A. C. ...	10 Aug., '07
FOWLER, Capt. W. M. ...	29 June, '07	PIKE, R. M.	26 July, '07
FLETCHER, Miss E. F. ...		ROBSON, F. G.	7 July, '07
FOX, Lt. R. W.		ROBERTS, Capt. J. J. E.	24 Sept., '07
Junior Naval and Military Club, 96, Piccadilly, W.		SEUME, F. A.	10 Aug., '07
GREEN, Capt. A. D., D.S.O.	16 Oct., '07	SEUME, H. V.	25 July, '07
GOLDING, Capt. G. J. L. ...	23 Aug., '07	SHOTT, Lt. H. H., D.S.O.	8 Sept., '07
Royal Societies Club, St. James' St., S. W.		Junior Naval and Military Club, 96, Piccadilly, W.	
GLENTWORTH, J.	28 Sept., '07	SCOTT, J.	4 July, '07
GOSLING, Sergt. C. H. ...	6 Aug., '07	STURGIS, Capt. H. R. ...	
GRAHAM, A.	6 July, '07	SINCLAIR, Sergt. F. ...	21 July, '07
GALLOWAY, L.		THOMPSON, Lt. H. C. ...	1 July, '07
HUNT, J. H.	4 Aug., '07	UNIACKE, Lt. G. L. ...	18 Sept., '07
HAMILTON-BROWNE, Capt. W. H., D.S.O. ...	16 Sept., '07	WILLIAMS, W.	29 July, '07
		WILLIAMS, Sergt Maj. G. F.	26 June, '07
		WEST, Sergt.	14 June, '07

BRITISH CENTRAL AFRICA.

ARMBRUSTER, H.	25 June, '07	FARRAR, N.	11 Sept., '07
BEST, T. A. V.	6 Sept., '07	HAYNES, F. G.	6 Sept., '07
BEECHING, Capt., C. F....	6 July, '07	KIRBY-GREEN, W.	9 July, '07
CHEITTE, H. S.	20 July, '07	PATERSON, Miss R. ...	12 Aug. '07
CARDEW, C. A.	7 Aug., '07	PURVES, J. M.	6 Sept., '07
EASTERBROOK, A. D. ...	18 Sept., '07	ROBINS, S.	14 July 07

BRITISH EAST AFRICA.

BAKER, G. S.	27 June, '07	LAW, J. C.	27 Aug., '07
BELL, H. F. G.	27 July, '07	LANE, Capt., G.	
BÜDEKER, Dr. H. A. ...	27 Aug., '07	NELSON, Capt. J. W. ...	
c/o National Bank of		NELIGAN, C. W.	15 Aug., '07
India, Ltd., 17, Bishops-		RAYNE, H.	18 July, '07
gate Street, E.C.		RADFORD, Dr. W. J. ...	27 Sept., '07
BACON, Capt.. C. R. K. ...	9 June, '07	STOCKER, J. E.	27 June, '07
CRAMPTON, D. R.	9 July, '07	SWEENIE, J. W.	27 Aug., '07
CONNELL, Lt. H. B.	27 Aug., '07	SMITH, A.	15 Sept., '07
DE CRESPIGNY, Lt., V.C.	27 Sept., '07	WHISTER, Capt. J. K. T.	18 July, '07
HILL, J. K.	27 Aug., '07	WEBSTER, E. F.	1 June, '07
ISHMAEL, H. P.	27 May, '07	WALLER, D. D.	9 June, '07
c/o H. S. King & Co.,		(Uganda Railway)	
9, Pall Mall, S.W.		WAKEFORD, F. W.	27 Sept., '07
LEWIS, Lt. R. P.	21 June, '07		

UGANDA.

BANIES, D. L.	27 Aug., '07	ISHMAEL, G.	27 June, '07
BONE, Sergt. W.	27 Sept., '07	KNOLLYS, A. C.	27 June, '07
DAIN, C. K.	27 July, '07	ORMSBY, G.	12 Oct., '07
ENNIS, G. F. M.	27 Sept., '07	Sports Club, St. James'	
HALDANE, J. O.	18 Aug., '07	Square, S.W.	

SOMALILAND.

BELL, Lt. F. W., V.C. ...	...	...	...	29 July, '07
HANNYNGTON, Maj. J. A.,	c/o Messrs. T. Cook & Sons,	Ludgate		
Circus, E.C. ... ..	...	...	...	5 June, '07
PAGET, Dr. A. J. M. ... ..	...	...	...	4 Oct., '07

TRANSVAAL.

ALLEN, H. G.	31 Aug., '07	CLEGG, H. F.	7 Oct., '07
ALEXANDER, J.	30 Sept., '07	DODD, G. F.	23 July, '07
BARTON, F.C.M.		DIDSBURY, S.	10 July, '07
Royal Colonial Insti-		FRIQUET, Miss M. M. R.	22 July, '07
tute, Northumberland		FARQUHARSON, G. F. ...	31 Oct., '07
Avenue, W.C.		FRIEND, S. H.	17 Sept., '07
BURTON, Miss M. E.	22 July, '07	FITZGERALD, T. R.	30 Sept., '07
BURT-DAVY, J.	25 Aug., '07	FITZGIBBON, M. C.	20 Sept., '07
BAKER, F.W.	31 Aug., '07	GLYN, D. J.	18 Oct., '07
BALLARD, W. J.	6 July, '07	GORIE, J. S.	7 Oct., '07
BOLTON, P. J.	17 Sept., '07	GYDE, C. E.	30 Sept., '07
BENNETT, W. E. D.	1 Oct., '07	GODLEY, G. A.	1 Oct., '07
BARRY, E. S.	7 Oct., '07	GARVIE, Miss H. F. ...	30 Sept., '07
BERESFORD, H.	7 Oct., '07	HALE, H. W.	3 June, '07
CROW, J.	14 Aug., '07	HIRD, J. A.	30 June, '07
COLLEY, Capt. G. H. P. ...	7 Aug., '07	HOOPER, E. C.	4 Sept., '07
COOPER, A.	31 Aug., '07	HODDER, S.	9 Sept., '07
CONUELLAN, M.	14 Sept., '07	HODKINSON, T. W.	7 Oct., '07

TRANSVAAL—continued.

HARBORD, M. A. ...	21 Sept., '07	QUIBELE, J. H. ...	21 Sept., '07
HILL, C. P. ...	7 Oct., '07	RODDA, Miss A. ...	13 Sept., '07
JONES, Miss E. ...	14 Oct., '07	ROBERTSON, A. J. ...	29 June, '07
JEOPFREYS, J. H. ...	23 Sept., '07	SHORT, J. ...	30 June, '07
JORGENSEN, W. H. ...	17 Aug., '07	SMURTHWAITE, A. ...	31 Aug., '07
KNAPMAN, G. W. ...	2 June, '07	STAPLES, Miss G. G. ...	19 Aug., '07
KEY, H. A. ...	21 Oct., '07	SKEELS, L. S. ...	8 Oct., '07
KAY, E. J. ...	1 Oct., '07	SPRIGG, Miss L....	7 Oct., '07
LANE, A. ...		STEPHEN, A. ...	7 Oct., '07
McKENZIE, Miss G.M.M.	30 June, '07	THOMPSON, F. H. ...	20 Sept., '07
MOBLEY, F. G. ...	10 Aug., '07	TURNER, T. E. ...	14 Oct., '07
NICHOLSON, B., D.S.O.,	23 July, '07	TYRWHITT, T. ...	25 Sept., '07
OSWELL, Miss M. A. E.	7 Oct., '07	TATTERSALL, J. C. ...	29 Sept., '07
PERRY, E. E. ...	29 June, '07	TIERNEY, J. F. ...	28 Aug., '07
PAINE, C. H. ...	9 Oct., '07	WILSON, W. O. S. ...	25 Sept., '07
PATERSON, A. C. ...	3 Sept., '07	WARE, O. W. ...	1 July, '07
PUNTIS, W. E. ...	11 Sept., '07	WEDLAKE, H. D. ...	21 June, '07
POLLARD, J. ...	4 Oct., '07	WARD, A. B. ...	7 Oct., '07
PHILLIPS, Mrs. A. E. ...	7 Oct., '07		

ORANGE RIVER COLONY.

BLACKWOOD, LORD B. ...	7 Aug., '07	HAXTON, R. E. ...	26 Sept., '07
CLARKE, J. D. ...	14 June, '07	MOSSOP, Dr. A. G. ...	8 Sept., '07
CHILD, W. O. ...	22 June, '07	MARAIS, Miss M. J. ...	30 Sept., '07
CRAWFORD, Miss M. M.	15 July, '07	ROBERTSON, J. W. ...	30 June, '07
EVANS, G. R. ...	10 Aug., '07	SHORT, E. A. ...	7 Oct., '07
FAIRLIE, E. ...	26 Sept., '07	TROLLOPE, Capt., A. G.	19 July, '07
GRAY, J....	25 July, '07	VILLACOTT, Dr. P. N. ...	6 Sept., '07
GUNN, H.			

CENTRAL SOUTH AFRICAN RAILWAYS.

BARRIE, W. T. ...	5 Aug., '07	MENDS, A. ...	22 Aug., '07
CRAIG, R. ...	30 June, '07	MULLAN, F. ...	8 Oct., '07
CAMPBELL, T. G. ...	31 Aug., '07	PHILLIPS, W. G. ...	9 June, '07
COLEMAN, E. A. ...	1 Oct., '07	ROBINSON, C. ...	21 Sept., '07
GAISFORD, W. J. A. ...	31 Aug., '07	RAMPLING, H. C. ...	31 July, '07
IRONS, A. P. ...	20 June, '07	SAMUELS, J. W. ...	6 July, '07
JOHNS, E. ...	30 Sept., '07	VAN OOSTEN, W. F. ...	4 Sept., '07
LYLE, C. G. ...	8 Aug., '07		

BASUTOLAND.

SINCLAIR, I. G....	19 Oct., '07	WELLS, B. ...	31 Aug., '07
--------------------	--------------	---------------	--------------

SWAZILAND.

PITCHER, A. H.	17 Oct., '07
--------------------	-----	-----	--------------

BECHUANALAND.

BURLY, E. O.	CHASE, W. H. ...	30 Sept., '07
MERRY, G. A. c/o The Standard Bank of South Africa, Ltd.,		
10, Clement's Lane, E.C.	...	10 Sept., '07

SOUTH AFRICAN CONSTABULARY.

ANTILL, T. T. ...	10 Aug., '07	KNOX, W. H. ...	25 Sept., '07
APPLEBY, E. W. ...	2 July, '07	KNOX, J. ...	30 Sept., '07
BARTON, W. H. ...	30 June, '07	LYNOTT, T. ...	30 Sept., '07
BARTLETT, G. ...	4 July, '07	MAIDMAN, L. ...	6 July, '07
BROWN, D. ...	10 Aug., '07	MONK, C. ...	10 July, '07
BAXTER, J. ...	3 Sept., '07	MCCORDUCK, R. ...	4 July, '07
BRYANT, H. J. ...	3 Sept., '07	MITCHELL, L. ...	30 June, '07
BAXTER, W. ...	22 Sept., '07	MCGOWAN, F. S. ...	31 Aug., '07
BRANDER, G. A. ...	20 Sept., '07	MALYUM, J. F. ...	2 Sept., '07
CRAWFORD, R. J. ...	30 Sept., '07	MACNAMARA, J. P. ...	31 Aug., '07
CLARESON, A. G. ...	21 Aug., '07	MELLE, J. A. ...	24 Sept., '07
CONNELLY, P. ...	31 Aug., '07	NICHOLLS, E. ...	2 Aug., '07
CLARKE, H. S. ...	9 Sept., '07	NEWTON, G. M. ...	7 July, '07
CAREY, F. A. ...	30 June, '07	NUNNELY, W. ...	11 Aug., '07
DOO, F. B. ...	31 July, '07	O'MAHONEY, W. D. ...	30 Sept., '07
ELBORN, H. ...	9 Aug., '07	OXTON, G. ...	9 July, '07
FINCH, J. ...	11 Aug., '07	PAPENGUSS, W. ...	3 July, '07
FROST, S. H. ...	3 Sept., '07	PHILLIPS, C. ...	4 Sept., '07
GLADWISH, E. L. ...	10 July, '07	PARKER, H. K. ...	30 Sept., '07
GOUCHER, R. H. ...	19 Aug., '07	PODEVIN, G. ...	4 Oct., '07
GREENWOOD, J. W. ...	30 Sept., '07	ROONEY, T. ...	5 July, '07
GEORGE, W. C. ...	7 Oct., '07	SMITH, C. ...	18 July, '07
HOHNEN, E. C. ...	30 Sept., '07	SCALES, P. ...	31 Aug., '07
HOOPER, F. ...	30 Sept., '07	SANDY, O. ...	5 Sept., '07
HOOPER, J. H. ...	30 Sept., '07	SMITH, R. H. ...	30 Sept., '07
HASLAM, W. G. ...	31 Aug., '07	SHERMAN, E. C. ...	30 Sept., '07
HARWOOD, C. ...	10 Aug., '07	VARLEY, W. E. ...	3 Sept., '07
HARRISON, A. ...	4 Aug., '07	WALSH, J. ...	31 Aug., '07
HOWE, E. ...	19 June, '07	WALTON, J. J. ...	30 June, '07
INGE, B. ...	10 Aug., '07	WATSON, H. DE N. ...	30 June, '07
INGLE, W. A. ...	20 Aug., '07	WATSON, J. P. ...	12 Aug., '07
JACKSON, H. J. W. ...	4 Aug., '07	YOUNGER, W. ...	30 Sept., '07
KENDALL, H. C. ...	3 Sept., '07		

JAMAICA.

ALLWOOD, Dr. J. A. ...	10 Oct., '07	DAVIS, Miss J. ...	1 Aug., '07
BROWN, W. F. ...	25 July, '07	MORRIS, P. H. ...	
CLARK, W. P. ...	1 July, '07	MAY, D. R. ...	10 June, '07
COX, E. F. H. ...	19 July, '07	SMITH, J. A. B. ...	10 July, '07
COOPER, E. G. ...	11 July, '07	STANLEY, Miss M. E. ...	15 May, '07
CHAPPLE, A. J. ...	1 June, '07	SLADER, C. H. G. ...	10 July, '07
CLARKE, Sir F. ...	8 Dec., '07	YOUNG, A. ...	10 Oct., '07

ST. KITTS, NEVIS.

HANLEY, G. A. ...	16 Aug., '07
-------------------	--------------

DOMINICA.

JARVIS, L. H. ...	2 Sept., '07
-------------------	--------------

TRINIDAD.

BRAKE, Lt.-Col. H. E. J.	14 July, '07	MONCKTON, C. C. F.	...
EMPSON, Sergt.-Maj. H.	13 Sept., '07	MACGILLIVRAY, J. W.	9 Oct., '07
HUGGINS, H. D.	29 June, '07	SCHEULT, R.	31 July, '07
HANCOCK, H. H.	15 Sept., '07	WILSON, J. W.	3 Oct., '07

BRITISH GUIANA.

ADAMS, J. E.	6 Aug., '07	GODFREY, J. E.	15 Dec., '07
BRASSINGTON, H. D.	27 July, '07	HARRISON, J. B., C.M.G.	30 June, '07
COX, C. T., C.M.G.	...	MCINROY, J. R.	30 June, '07
DE FREITAS, Dr. G. B.	29 Dec., '07	SMARTT, Dr. W. F.	24 Sept., '07

FIJI.

LYNCH, G. W. A.	22 July, '07	MAJOR, C.	25 Mar., '08
-----------------	--------------	-----------	--------------

BRITISH HONDURAS.

GANN, Dr. T. W. F.	27 Dec., '07	WYGATE, R.	3 Jan., '07
REES DAVIES, C.	14 Sept., '07	...	...

CYPRUS.

REES DAVIES, W.	12 June, '07	WILLIAMS, W.	28 Aug., '07
-----------------	--------------	--------------	--------------

SEYCHELLES.

RIND, W. L.	10 Dec., '07
-------------	-----	-----	--------------

MAURITIUS.

ACTON, W. E.	21 Sept., '07	DUVIVIER, A.	21 Oct., '07
BONAME, P.	31 July, '07	McIRVINE, W.	12 Nov., '07
BERNON, A.	12 June, '07	RUSSELL, W. F. (c/o	...
CLINTON, Rev. T. W.	9 June, '07	Messrs. Grindlay &	...
EMIGRATION AGENT IN INDIA.	...	Co., 54, Parliament	...
GIBBLES, R. P.	27 June, '07	Street, S.W.)	31 Aug., '07

HONG KONG.

BELL, Dr. J.	6 Sept., '07	PEARSE, Dr. W. W.	2 Feb., '08
COUNSELL, Sergt. A.	2 Aug., '07	ROBERTSON, W.	8 Dec., '07
FRANKLIN, A. C.	19 Nov., '07	SHELBOURNE, Miss C.	4 July, '07
GALE, C. H.	19 Mar., '08	SERCOMBE SMITH, T.	28 Oct., '07
GIBSON, A.	10 Dec., '07	SETH, A.	13 Nov., '07
GREY, B. W.	11 July, '07	TANNER, B.	26 Sept., '07
JONES, P. N. H.	30 Nov., '07	WOOD, J. R.	19 Mar., '07
JOHNSON, E. A.	19 Mar., '08	WILTSHIRE, J.	19 Oct., '07
JOHNSTON, L. A. M.	22 Mar., '08	WATSON, A.	19 June, '07
KEYT, Dr. F. T. (c/o London City & Midland Bank, Ltd., St. Heliers, Jersey)	25 Sept., '07	...	...

STRAITS SETTLEMENTS.

BARNES, W. D. ...	7 Dec., '07	MURRELL, H. J. ...	18 Feb., '08
DUNNE, J. J. ...	22 Aug., '07	MUIR, H. ...	31 Mar., '08
FREER, Dr. G. D. ...	8 Dec., '07	MACINTYRE, Comm.	
FARRAR, R. J. ...	30 May, '08	D. C. ...	2 July, '07
FORD, J. C. C. ...	3 Nov., '07	NUNN, B. ...	20 Feb., '08
GORDON, J. ...	25 Sept., '07	PEREIRA, J. J. ...	20 July, '07
HILL, E. C. H. ...	6 Oct., '07	SCOTT, R. ...	10 Nov., '07
HORTH, C. E. ...	4 Aug., '07	SINGER, Dr. C. ...	
HARPER, J. C. ...	11 Mar., '08	SPRY, F. ...	2 July, '07
IZARD, Rev. H. C. ...	31 Dec., '07	WILSON, G. G. ...	16 Feb., '08
KENNALLY, J. ...	27 Sept., '07	WHITEHEAD, C. B. ...	8 June, '08
LUCY, S. R. ...	23 Dec., '07	Tanjong Pagar Dock :—	
MURRAY, A. ...	31 Mar., '08	COX, A. H. ...	31 Aug., '07

PAHANG.

KENNEDY, H. A.	1 Mar., '08
--------------------	-----	-----	-----	-----	-----	-----	-------------

NEGRI SEMBILAN.

CHAPMAN, W. T. ...	5 Jan., '08	SWEENEY, E. ...	16 Nov. '07
CAMPBELL, D. G. ...	21 Apl., '08	SIMMONS, J. W. ...	9 Nov., '07
MASON, J. S. ...	1 Aug., '07		

SELANGOR.

CLAYTON, T. W....	3 June, '08	RIDGES, H. C. ...	2 Mar., '08
FORD, T. A. ...	15 Jan., '08	REYNE, S. B. R....	16 Feb., '08
MCLEAN, L. ...	1 Apl., '08	STAFFORD, L. U. ...	25 Nov., '07
MOULLIN, H. R. ...	7 Dec., '07	WARD, J. F. ...	3 June, '08

PERAK.

ALEXANDER, C. S. ...	29 Jan., '08	PRATT, E. ...	10 July, '07
ALLEN, M. A. V. ...	9 Feb., '08	REAY, J. McC. ...	1 Oct., '07
HOUGHTON, Miss M. ...	4 July, '08	ROSS, W....	24 Dec., '07
JOHNSON, Miss M. ...	27 June, '07	WOOD, E. G. ...	1 July, '07
KENT, M. M. ...	31 Oct., '07		

FEDERATED MALAY STATES.

BLACKMORE, W. H. ...	21 Dec., '07	FURNIVALL, H. ...	20 Feb., '08
BADGER, W. ...	2 Dec., '07	LAW, A. F. G. ...	22 Aug., '07
BARNARD, B. H. F. ...	22 Nov., '07	LEICESTER, Dr. G. F. ...	25 Aug., '07
COCHRANE, C. W. H. ...	23 June, '07	MATTHEWS, T. ...	10 Aug., '07
CONWAY, G. H. ...	24 June, '07	MCCALLUM, E. ...	12 Nov., '07
CRICKTON, R. ...	26 Jan., '08	STEVENS, E. G. ...	30 June, '08
CAMPBELL, A. ...	14 June, '08	TAYLOR, F. E. ...	16 Jan., '08
DARKE, R. W. B. ...	23 Oct., '07	TALBOT, F. W. ...	19 Oct., '07
ECKHARDT, H. C. ...	20 Aug., '07	WILLIAMS, W. H. ...	19 June, '08

CEYLON.

ALCOCK, F.		HORSEBROUGH, B.	20 Mar., '08
ACKERLEY, H.	31 Oct., '07	HAMPTON, J. L.	
ARMSTRONG, R. J.	7 Aug., '07	LOVETT, H. J.	2 Apl., '08
BIGGS, J....	14 Oct., '07	LONGDEN, C. C.(c/o Cocks,	
BROWN, W.	1 Sept., '07	Biddulph & Co., 43,	
BARNARD, A. S.... ...	3 June, '07	Charing Cross, W.C.)	14 Oct., '07
BAUMGARTNER, G. A ...	1 July, '07	MORETON, S. C.	1 Aug., '07
BURLEY, A.	9 Oct., '07	MURTY, J. O. K.	31 Dec., '07
CONSTANTINE, B.	21 Sept., '07	NICOLLE, H. C.	3 Apl., '08
CAMPBELL, T. J. (c/o		PARK, J. H. W.... ...	14 Nov., '07
Messrs. H. S. King		POLE FLETCHER, W. W.	31 Dec., '07
& Co., 9, Pall Mall,	4 July, '07	STRICKLAND, R. B. ...	29 May, '07
S.W.)		SPAAR, Dr., A. E. ...	9 June, '07
COLVIN, J.	30 Sept., '07	STURGESS, G. W. ...	18 Mar., '08
COOKSON, G. M.	21 July, '07	SPENCE, J. B.	29 Jan., '08
CHURCHILL, A. F.	19 Mar., '08	SCHOKMAN, E. H. ...	7 Oct., '07
COOPER, F. A., C.M.G....	10 Jan., '08	TILLECRATUE, Dr. C. J.	16 July, '07
DUNSTAN, W. J.	27 Sept., '07	THORNHILL, W. J. ...	2 Feb., '08
DAWSON, A. H. G.	17 Mar., '08	TOMALIN, H. F.... ...	23 Mar., '08
DUTTON, B. J.	31 Aug., '08	THAINE, R. N.	25 Mar., '08
EMERSON, L. P.	11 July, '07	WILSON, Col.-Sergt. R.	28 Sept., '07
EMERSON, C. F.	21 Sept., '07	WADDELL, G.(c/o Messrs.	19 Aug., '07
FERNANDO, Dr. H. M. ...	5 Oct., '07	H. S. King & Co., 65,	
FOX, H. O.	10 Jan., '08	Cornhill, E.C.)	
FESTING, R. A. G.	26 Feb., '08	WALKER, L.	6 Oct., '07
FISHER, H.	30 June, '07	WRIGHT, H.	12 Jan., '08
GRENIER, Dr. F.	13 Mar., '08	WALKER, W.	21 Sept., '07

THE COLONIAL OFFICE JOURNAL.

VOL. I.

OCTOBER, 1907.

No. 2.

EDITORIAL NOTES.

WE have received many kind criticisms of our first number and many sympathetic suggestions. One reviewer observes that he sees many rocks and pitfalls in front of us, and no doubt the endeavour to discuss public questions, with the help of information which is only accessible officially, is attended with difficulties. There is, however, a fairly clear line between observations which would embarrass and annoy governments and those which are innocuous and possibly helpful in the discussion of a subject, and we shall do our best to keep it in view.

We take all the responsibility for the publication of any matter which is sent to us, but any opinions which are expressed are put forward for what they are worth and with no official authority.

A more frequent warning on the other hand has been that a journal largely devoted to digests of blue-books and official reports would be found uninviting, and one critic of great reputation recommends us to put in some "seasoning." The advice is no doubt good. Such documents, full of excellent matter though they are, are a bye-word for dullness and obscurity. The reason is not far to seek. They are usually arranged in the form of correspondence in chronological order, but many separate matters are mixed up together, and it is difficult and tedious to disentangle the different threads and to make out what happened and why.

A former Parliamentary Under Secretary in the Colonial Office (occupying a more responsible post in the present Government) was so impressed with the inconvenience of this zigzag and tortuous

method of presenting a case that he took an early opportunity of compiling a blue-book of correspondence on a different method. He picked out the main points with which the papers dealt, and divided the correspondence accordingly under separate headings. But we believe the experiment was never made again. The correspondence is usually too interwoven to admit of such treatment, and any attempt to classify it upsets the historical order. The novelist can hark back, but not, we think, the dramatist; and official correspondence is more in the latter than the former plane.

The only way to eliminate the unnecessary and to give the true effect is to make an abstract of the correspondence and relate the matter historically. This, however, will not do when the actual correspondence is called for for controversial purposes. Parliament and the press want to know exactly what someone said on a particular occasion, and a digest which largely eliminates the personal element would be generally unattractive from this point of view and always open to mistrust.

Such summaries on suitable occasions not only save a great deal of labour, but may give essential explanations which cannot be gathered from the correspondence. Thus, in the case of the Pacific Cable, an account of which we give in the present number, several parliamentary papers of correspondence and reports were issued by the Colonial Office, but they stop short of the most important point of all—the agreement of the Home Government to find the capital and the understanding as to the proportion in which the contributing governments were to share the liability. This arrangement was made verbally by the Chancellor of the Exchequer.

Blue-books, which consist of the evidence taken by committee and of their reports, are afflicted by the difficulty of voicing the opinions and expressions of several men. The secretary or whoever first drafts the report, is usually prudent enough to confine himself as far as possible to concocting answers to the specific questions put to the committee. The conditions of the case do not encourage historical surveys, general views, and strong opinions. The qualities which are most attractive in an individual writer are therefore absent. The spirit of compromise is not an effective stimulant, and most readers enjoy a statement most when it is presented with a good robust bias from one side or the other. Nevertheless, the intellectual volup-tuaries who like to see the facts sifted and marshalled fully and impartially will find admirable instances of keen examination and

judicious conclusions. The witnesses and the judges are of the best. Much of the best ability of the country is recorded on the patient pages of parliamentary papers.

The action of the Australian Commonwealth in giving a preference to British goods is evidence of the strength of the Empire feeling, and this distinction is not affected by the fact that the new tariff gives further protection to the Australian manufacturer. The same spirit, different as the economical policy is, is certainly prevalent in this country. Preference for the Colonies in a general sense is as widespread as any political doctrine. Large grants are made every year to assist the development of possessions which require them, and the Home Government takes much of the responsibility for great enterprises in the Crown Colonies. Australia and Canada benefit, and will benefit much more, by the progress of our Eastern possessions, and the settlement of South Africa. All classes in this country have contributed heavily in recent years to the maintenance of the Empire, and hardly any expenditure passes through Parliament with more general consent than the grants-in-aid which are made on various occasions to the Colonies.

The division of the Colonial Office into two geographical sections, the one, under Mr. C. P. Lucas, concerned with the self-governing Colonies or "dominions" and the possessions geographically connected with them; and the other, under Mr. R. L. Antrobus, with the Crown Colonies, will meet the suggestion made by Mr. Deakin and Sir Joseph Ward at the Imperial Conference, that the self-governing Colonies should be put in a different category from the Crown Colonies. A third section, under Mr. H. B. Cox, will deal with legal and general business, and an important feature of this arrangement is that certain subjects of general application, such as railway construction and management, will be dealt with by committees selected from various geographical departments. Mr. H. W. Just will be Permanent Secretary to the Imperial Conference, and in that capacity will be associated with the Dominion division. Many persons will share Lord Elgin's feeling of regret that the old term Colony, with its classical and historical associations, should be displaced, but some mark of differentiation was called for. The two divisions of the Colonial Office will be called the Dominion Department and the Colonial Department, and the change no doubt implies a definite recognition of the fact that the self-governing communities will be dealt with in negotiations as on a level with the Mother Country. Whether there was any ground for supposing that this position was not fully recognised before is a question which need not

here be discussed; there is a good deal in the appearance and arrangement of things, and, if a new office organisation can help to promote a good understanding, it is clearly right to have it.

The British North America Act, 1907, passed in the last Session of the Imperial Parliament, deserves attention. It amends the scale of payments to the Provinces of the Dominion by the Dominion Government for the support of their Governments and Legislatures. These payments were fixed in the case of Ontario, Quebec, Nova Scotia, and New Brunswick by the Confederation Act of 1867, and in the case of the other Provinces by Dominion legislation, or by the Orders-in-Council under the Act of 1867, regulating the terms of admission of new Provinces into the Dominion. For some years the Provinces have been anxious to obtain increased subsidies, and these are now secured by the Imperial Act. In future each Province will receive a grant varying according to its population. When the population—

is under 150,000 the grant will be	...	...	\$100,000 ;
is 150,000, but under 200,000, the grant will be			150,000 ;
is 200,000, but under 400,000, the grant will be			180,000 ;
is 400,000, but under 800,000, the grant will be			190,000 ;
is 800,000, but under 1,500,000, the grant will be			220,000 ;
is 1,500,000 or over	...	...	240,000.

Further, each Province will receive a payment at the rate of eighty cents. a head on the population ascertained from time to time by the census until the population exceeds 2,500,000, and at the rate of 60 cents. a head for such part of the population as may exceed 2,500,000. An additional allowance of \$100,000 for ten years is assigned to British Columbia in view of the exceptional circumstances of that Province.

The procedure in such a matter of merely local interest by an Imperial Act is unusual, but arises from the fact that, save in certain matters provided in the British North America Act, 1867, the Parliament of Canada has no power to alter the Constitution of the country as contained in that Act. Every other self-governing Colony has this power, which was conferred even on the Leeward Islands Federation by the Imperial Act of 1871, but it must be remembered that the terms of the Confederation of Canada formed, as it were, a treaty of union between the federating Provinces, which they desired to render unalterable by the Dominion which they created, leaving the power of alteration to the Imperial Parliament alone, which was thus constituted the guardian of Provincial rights. Strictly speaking, an Imperial Act could have been dispensed with,

since in all cases the subsidies payable are increased, and the increases could have been secured by Dominion Legislation, but the Dominion Government preferred to obtain the formal approval of the Imperial Parliament for the alteration in the subsidies.

The publication of the Letters Patent conferring responsible Government on the Orange River Colony has been received quietly. It was known that the lines of the Transvaal constitution were to be very closely followed, and as long ago as last December the decision of the Government upon most of the questions to be determined was announced in the House of Commons. But the working of the new system will be watched with very great interest. The Transvaal Legislature has adapted itself with an almost precocious facility to the system of Parliamentary Government on the British model, and it is difficult for anyone who studies its votes and proceedings or reads the reports of its debates to realize that the latest Parliament of the Empire is still in its infancy. In the Orange River Colony there will be a more complete novelty in the form of Government, and the predisposition towards the ordinary forms of party government will hardly be so strong. But the Parliamentary habit seems to be easily acquired, and it is probably safe to prophesy that the new Legislature about to be established in Bloemfontein will very soon acquire the dignity and self-confidence which already characterize its neighbours.

The most important recent event in connection with South African affairs has been the publication of Lord Selborne's memorandum on Federation, which has greatly enhanced a reputation which has been steadily and deservedly growing ever since Lord Selborne first held public office. The memorandum has been favourably received throughout the Colonies affected, and the preliminary steps towards the federation of British South Africa will probably be taken next year. The task to be faced is a great and difficult one, and if we may judge from experience elsewhere, will probably take some years to accomplish. One difficulty is to be found in the close relations subsisting between the Transvaal and Portuguese East Africa, and this has been emphasised by the *communiqué* which the Transvaal ministers issued simultaneously with the publication of the memorandum. Another, it may be surmised will arise from the existence in Natal of a system of indentured Asiatic labour under conditions which will certainly not be allowed by the other Colonies to extend to their own areas. But the end in view is so clearly favoured by economic, geographical and political conditions that its accomplishment is only a matter of time.

When consolidation has been effected, there will be an end of inter-port rivalry and the jealousies of coast and interior communities.

The Financial Report of the Straits Settlements for 1906 contains an instructive account of the measures taken by the Government to keep steady the exchange value of the dollar. The rate was kept firm by the Government taking power to issue gold in exchange for notes, and to sell telegraphic transfers payable in London against notes, thus contracting the currency. The extreme high water and low water limits of the sterling value of the dollar, as determined by the cost of bringing gold to Singapore or sending it to London, are put at $2/4\frac{5}{8}$ buying, and $2/3\frac{1}{8}$ selling. In consequence of the rise in the value of bar silver, the bold step was taken of deciding to reduce the bullion value of the dollar; this is done by reducing the weight to 312 grams but without altering the fineness. The detailed facts are clearly stated by Mr. Anthonisz, and the Colonial Government are to be congratulated on the skill with which they handled this delicate subject.

The Royal Commission on Shipping Rings has taken a great deal of interesting evidence, and is sending a committee of its members to make enquiries in South Africa. Shipping rings, like most other rings, are, as a rule, the result of keen competition which has brought down the rate of profit to a figure which makes it necessary for those concerned to consider whether they should abandon the business or take measures to mitigate the competition. The first step usual in such cases is to form a ring, the members of which agree among themselves not to do business below an agreed figure, and when outsiders try to cut into the business, the ring protects itself by the above system, and, if necessary, by cutting down their rates to a figure at which the outsiders can only go on at a loss. The competition then becomes a question of endurance and length of purse, and the result is always that the outsider either forces the ring to admit him to membership or abandons the struggle. In either case rates are put up to their old figure or perhaps higher to recoup the ring for their losses during the struggle.

The monopoly acquired by the ring may be used harshly, and in any case it is only human nature that complaints should be made against a body that controls the situation. On the other hand, there is a considerable amount of evidence that merchants are willing to put up with the high rates because they are fixed. This consideration, however, does not appeal to the Government or the

public which eventually has to pay, and it is not surprising that in many parts agitations are going on against the rates charged by conference lines. The favourite suggestion is that deferred rebates, given on condition that the shipper uses no other line, should be made illegal; but it is very doubtful whether this would break up the combination, whose strength rests mostly on their financial resources and complete organization of trade. This is shown by the failure of all schemes for state-owned or merchant-owned steamship services. Such ideas have a great fascination for Colonial publics, but, to say nothing of the special skill and experience which the working of such services requires, it would be extremely difficult for either the state or a combination of merchants to collect business enough to support regular sailings. The Australian proposal for a state-owned line appears to have collapsed.

We do not presume to anticipate the finding of the Royal Commission by expressing any opinion as to whether rebates should be prohibited, but in any case there are two practical grievances which seem remediable. It is a great annoyance to merchants, and eventually to both producers and consumers, when, as frequently happens, rates are put up with practically no notice. Legislative provision might be made to require that reasonable notice should be given, and arrangements made for the discussion of such matters by ship-owners and merchants together. Secondly, it is not fair or in the long run beneficial to the consumer that shipowners should themselves send in goods, "on ship's account," at a lower rate than is charged to the merchants, and if this is done, it should at any rate be required that proper notice should be given.

We print a forcible rejoinder by Mr. Eyre Hutson to the contention that Canada's consuming power is not sufficient now, and cannot for many years be sufficient to cope with the producing power of the West Indies. The increase in Canada's consumption of tropical products in the last few years is very remarkable. The United States will always be a naturally handy market for fresh fruit and vegetables, but Canada's demands for more durable produce will grow fast, and will be more reliable than those of the United States. The expansion of Canada and the Panama Canal, which will at once put the West Indies in a similar position as regards the entrépôt trade to that occupied in the Mediterranean by Gibraltar and Malta, are the two great factors in the future prosperity of the West Indies.

An illustration of the improvement in the West Indies is supplied by the statements of the Revenue and Expenditure for 1906-07, of the five Presidencies included in the Colony of the Leeward Islands, which show that the position of the Colony on the 31st March last, was far more satisfactory than it has been for several years past. Of the five Presidencies, Antigua, which is still staggering under debt charges amounting to nearly £7,000 a year, was the only Presidency that closed its accounts of the last financial year with a deficit, and that deficit, instead of being £5,572, as was anticipated when the Estimates for 1906-07 were framed, was only £1,031. On the financial transactions of last year the Presidency of St. Kitts-Nevis showed a surplus of £3,546, the Presidency of Dominica a surplus of £3,094, the Presidency of Montserrat a surplus of £1,681, and the Presidency of the Virgin Islands a surplus of £393. After deducting Antigua's deficit from the surpluses of the other Presidencies for the year 1906-07, there remained a surplus of £7,683 in favour of Revenue over Expenditure in the last financial year, taking the Colony as a whole. On the 1st April, 1907, the Presidency of St. Kitts-Nevis had a surplus of assets over liabilities of £12,577, Dominica a surplus of £5,353, and the Virgin Islands a surplus of £451, and, if the present satisfactory indications of the prospects of the five Presidencies are fulfilled during the current financial year, the position of the Colony will be still more favourable on the 31st March, 1908. There is reason even for hoping that Antigua may be able, for the first time for many years, to make its local revenue sufficient to meet its local expenditure.

A different picture is unfortunately presented by the affairs of St. Helena, where the 3,500 inhabitants are feeling acutely the loss of trade and the withdrawal of the garrison. An attempt will be made to relieve them by re-establishing the flax industry there. The "New Zealand flax" which grows there is a kind of hemp, and hopes are entertained that a good profit will be yielded by the industry. A grant of about £4,000 has been made by Parliament, and with this sum buildings and machinery can be provided and wages paid till some fibre can be placed on the London market. Mr. Fulton, the leading fibre expert in New Zealand, has been to the island to start the undertaking, to which we trust the steamship companies will be kind. A further grant of £470 has been made to send out a lady expert to teach lace-making to the women and girls. It is greatly to be hoped that these industries will be successful and compensate for the withdrawal of the garrison, but some time must elapse before substantial results can be achieved.

The Colonial Office has often been charged with ignorance of the Colonies ; but it is satisfactory to find that the *Natal Witness* knows all about the Colonial Office. We take the liberty of reproducing its description :—

“The Colonial Office—except during the term of office of Mr. Chamberlain—was the archetype of Dickens’ Circumlocution Office. It was a warm nest for the younger sons of the aristocracy who could not be feathered in the more comfortable incubation of the Foreign Office. It had men in charge of Colonial departments whose knowledge of the territories assigned to their care was only added to at brief intervals when an eyeglass was requisitioned to survey the map with the view of finding out where the ‘demmed place’ really was. After Mr. Chamberlain’s departure from the Colonial Office, tried men, like Lord Elgin, and untried men, like Mr. Winston Churchill, assumed the reins of guidance. The reins, providentially, fell into good hands, but the working staff of the Colonial Office remained the same, and the interests of the Colonies were retained in the hands of gentlemen who occasionally prepared minutes in the short time allowed them by rides in the Park, an hour or two at the club, and evenings spent in dinners, receptions and fashionable gatherings to which Colonists were only admitted on sufferance.

“The heads of departments in the Colonial Office are tried and good men, but the rank and file are merely butterflies of fashion.”

This description we are sure has nowhere received more cordial appreciation than within the walls of the warm nest of butterflies in Downing Street.



IMPERIAL ORGANIZATION.

So much has been spoken and written on the subject of Mr. Deakin's proposal for the establishment, in connection with the Imperial Conference, of a Permanent Secretariat wholly distinct from and independent of the Colonial Office that it may seem a superfluous task to re-open a discussion already inordinately protracted. But although a rich chorus of lamentation has been aroused by the failure of the Australian Premier to induce the Conference to accept his proposals in anything like their original form, very little effort has been made to appreciate either the principle underlying the scheme, or the reasons which led to its rejection. Was it merely the want of sympathy on the part of the Home Government, and the determination of the Secretary of State for the Colonies to cling to an obsolete prerogative, that frustrated Mr. Deakin's efforts? If this be the correct view, it is a remarkable circumstance that in a policy of mere obstruction the Home Government should have found such ready accomplices in Sir Wilfrid Laurier and General Botha; but a cursory reading of the proceedings of the Conference makes it clear that this view is wholly incorrect. The real objection to the constitution of a Secretariat on the lines proposed by Mr. Deakin is the impossibility, clearly pointed out by Sir Wilfrid Laurier, of reconciling it with the principle of ministerial responsibility which, throughout the British dominions, is the central principle of every self-governing community. There is no Imperial Minister to which such a department could be made subordinate; no Imperial Cabinet to which such a minister could belong; no Imperial Parliament, representative of all the self-governing dominions, to which such a Cabinet could be responsible; no Imperial electorate on whose votes such a Parliament could depend. In a word, the scheme presupposes the existence of a system of Imperial Federation. Mr. Deakin, of course, did not go so far as this; he did not suggest, and probably would not admit, that Imperial Federation was even the ultimate goal at which he aimed. But the Australian Premier is a statesman

with progressive ideals ; he spoke of his scheme as a comparatively humble beginning which was to lead to greater things ; and assuming the essential characteristics of the scheme as he outlined it to have been accepted, it is not easy to see how it could have developed along any other line.

The idea of Imperial Federation is one which has long exercised a powerful attraction over thinkers of very different political schools, and it is possible to marshal an impressive array of arguments in its favour. The political theorist may argue upon abstract grounds that it is impossible for the organization of the British Empire to remain in a state of rest ; that there are both centripetal and centrifugal tendencies constantly at work within it, and that unless the former be encouraged the latter will, sooner or latter, win the day. And in support of this abstract argument a number of striking historical parallels can be adduced. The two principles can be shown in conflict in the history of the German Empire and of the United States of America, as well as in that of our own Dominion of Canada and Commonwealth of Australia, and the moral and material advantages of closer union can be convincingly illustrated in each of these cases. Lord Selborne's recent memorandum on the advantages of federation in South Africa is a notable instance of the force with which this method of argument can be employed, and in Mr. F. S. Oliver's brilliant essay on Alexander Hamilton, it is expressly applied to the question of the general organization of the Empire as a whole. And, on a somewhat lower plane of argument, nothing is easier than to demonstrate the inconveniences of our present system. There is a variety of subjects on which it is desirable that there should be uniform legislation throughout the Empire, and in most cases there is no vital interest standing in the way of such uniformity. The obstacle is the existence of a number of legislatures, each jealous of its independence. It is possible that in many cases the different Prime Ministers of the Empire could come to an agreement as to the lines on which legislation should proceed ; but they are unable to commit their respective legislatures in advance, and measures cannot be introduced into any British Parliament with an intimation that they must be passed unaltered, because they represent the outcome of an agreement between the self-governing dominions. Thus the convenient uniformity of legislation which is possible under the more mechanical Crown Colony system, by which the passage of a "model" Ordinance through a dozen different legislatures can be safely ensured, remains for the more important parts of the Empire an unattainable ideal. But neither abstract theories as to the necessity of either consolidation or disintegration of the British Empire taking place, nor parables preached on the text of foreign experience, nor practical considerations as to the advantages of an orderly and symmetrical machine, are likely to exercise a determining influence upon the

development of our Imperial institutions. The political instinct of Great Britain has always been independent and even impatient of strict logic, and this characteristic attaches, certainly not less strongly, to the Colonies. Statesmen must face the task of imperial organization, not as doctrinaire purveyors of constitutions, but as men able to weigh and appraise the practical sentiment operative throughout the different members of the Empire. At the present time that sentiment is unmistakeably one of local independence. One of the forms which it takes is a desire to get rid of all traces of the period which preceded self-government. The old name of "Colony," as Lord Elgin noted with regret in his speech at the Corona Club dinner, is becoming unpopular, and such titles as Dominion, Commonwealth, and State are replacing it. There is a tendency to view with suspicion the functions of the Colonial Office as a medium of imperial communication, because the Colonial Office still "governs" to a considerable extent the Crown Colonies and Dependencies which have not attained to self-government, and is credited, rightly or wrongly, with an occasional disposition to treat the self-governing "dominions" in the same spirit. But the sentiment of local independence goes very much further than a desire to shake off any assertion of control by Great Britain. It is a fact, and a fact which was emphasized by one premier after another at the Conference, that control by a central Imperial Council would be regarded as not less intolerable; and this fact is the obstacle, for the present clearly insuperable, which every scheme of Imperial Federation has to encounter.

Is it reasonable or accurate to describe this sentiment as it exists to-day in Canada, in Australasia and in South Africa by such words as "centrifugal" or "separatist"? Can it fairly be compared with the sentiment animating some of the American States before the adoption of the constitution,—the sentiment against which Hamilton fought and against which Lincoln was to fight years afterwards? Is it the same thing as the sentiment which postponed federation in Canada and Australia, and may perhaps postpone it in South Africa? To such questions the attitude of the leading Colonial statesmen constitutes in itself a sufficient answer. The imperial sentiment is strongest and most vigorous in those in whom the sentiment of local independence is most fully developed. There is no psychological anomaly in this, for local and imperial patriotism spring from the same root of sentiment, and it would be ridiculous to marvel at the existence in the Canadian and the Australian of a habit of mind which is accepted as natural and inevitable in the Welshman and the Scotchman. But it is not a matter of sentiment only: it is founded upon a practical consideration of the utmost importance, which differentiates the question of the federation of the British Empire as a whole from those other cases of federation which have been mentioned. For the

citizen of a Canadian province, the questions which the Dominion Government has the power to decide are of far greater importance than those which are within the competence of the provincial government; and the same statement may be made, though with considerable qualifications, with regard to the governments of the Commonwealth and the Australian states. But if the relation of the British Empire, as a whole, to its constituent parts be considered, the position will be found to be reversed. If an Imperial Council or an Imperial Parliament were to be established, the matters with which it might deal would certainly be of less direct importance to an Englishman than those which would remain within the sphere of the British Parliament, and the position is the same for the Canadian, the Australian and the South African. The fiscal question, the land question, the education question, questions of social and industrial organization, the question of the churches, the question of state ownership versus private enterprise—all these are matters of the utmost importance to the ordinary citizen in his daily life and are, and must remain, wholly within the competence of local Parliaments, as distinct from any possible Imperial Council; and to whatever lengths Imperial organization may be carried, it must be recognised as inevitable that Imperial questions properly so-called are never likely to provoke the keen and passionate interest which will naturally attach to local politics. For this reason a strong and highly centralized federal government for the British dominions is unthinkable, and the best energies and abilities of its constituent populations are always likely to be concentrated upon the settlement of their own problems, rather than in the furtherance of the interests of the Empire at large. So long as men's minds are deflected in the pursuit of an unattainable Utopia, no progress is likely to be made with the solution of the real problem, that of converting a loose affiliation into a closely-knit alliance, in which an interchange of experience, a readiness to compromise conflicting interests and a strong sentiment of union are normal features. This, no doubt, is the problem which Mr. Deakin set himself to solve, but the particular solution which he proposed seemed to lead, if anywhere, towards that Utopia which can never be attained. The scheme which the Conference ultimately accepted—for a Secretariat charged under the direction of the Secretary of State for the Colonies with the duty of obtaining information and conducting correspondence—is modest and unambitious; but it is a first step which will never have to be retraced, and it is better to proceed cautiously only so far as the path is clear, than to enter upon doubtful experiments whose failure would prejudice the cause which they are intended to promote.

An incident of Mr. Deakin's proposals was his criticism of the Colonial Office, which he was anxious to displace from its position

as the medium of communication between the self-governing Dominions and the Home Government. The principle which he sought to establish was that the Governments of those Dominions should discuss matters with the British Government upon a footing of equality. He regarded the "intervention" of the Colonial Office as detracting from this principle, and therefore sought to obtain direct access to the Prime Minister. The competency, or incompetency, of the Colonial Office was not the question at issue. Mr. Deakin disclaimed all hostility towards it, and Sir Wilfrid Laurier and Sir Joseph Ward went out of their way to pay it compliments, possibly more generous than its performances warranted. But it is difficult to see how Mr. Deakin's views in the matter could well have been met. The complicated task of Government can hardly be carried on otherwise than through the machinery of departments. When France and Germany negotiate with Great Britain they negotiate as Government with Government upon a footing of complete equality. But they do not approach His Majesty's Government as a whole, or the Prime Minister as representing it: they approach the Foreign Office. Almost precisely similar are the functions which the Colonial Office performs in its relations with the self-governing dominions. It is a specialized department, devoted to one particular branch of the immensely varied business which the British Government has to conduct. It is merely the mouthpiece of the British Government, and in no sense an independent entity, any more than the Commonwealth Department of External Affairs is independent of the Commonwealth Government. To set it aside would be to leave the British Government without means at its disposal for dealing systematically and thoroughly with Colonial affairs. Nor can the proposal be more favourably regarded if it is held to mean only that the Prime Minister should take personal charge of the department dealing with the relation of his Government to the self-governing dominions. Sir Henry Campbell-Bannerman intimated that he was not prepared to accept such a re-arrangement, and Sir Wilfrid Laurier expressed his entire agreement. The severe criticism which was directed against Lord Salisbury only a few years ago for holding at the same time the posts of Prime Minister and Foreign Secretary sufficiently indicates the unsoundness of the proposal: when, as now, the Prime Minister is in the House of Commons, it would be clearly unworkable. But there are indications that the real grievance is the combination in a single department of work connected with the Crown Colonies and that connected with the self-governing dominions. Mr. Deakin, at the outset, urged that the Colonial Office should in the future be what it was at the commencement, simply the office for the Crown Colonies. His view was that the self-governing Colonies suffered from the demands made by the Crown Colonies on the attention of

the Secretary of State for the Colonies. But it can hardly be thought that this evil, if it exists, would be removed by adding the task of controlling our relations with British North America, Australasia and South Africa to the duties of an already overburdened Premier; and the logical method of removing the grievance would apparently be, not to do without any Colonial Secretary, but to have two Colonial Secretaries. This would be a heroic and expensive measure, hardly likely to commend itself to the British taxpayer, and it has the attendant disadvantage that neither of the two Ministers would have enough important work to occupy his time. Provided that the status of the self-governing dominions is on all occasions frankly recognized by the Home Government, and that this recognition is sufficiently emphatic and ungrudging to allay any possible feeling of suspicion or sensitiveness overseas, Mr. Deakin's objects will be attained more completely and more easily than they could be by any mere change of machinery.

THE STORY OF THE PACIFIC CABLE.

THE idea of a trans-Pacific cable followed naturally the laying of the Trans-Continental line of telegraph across Canada, which was undertaken in conjunction with the building of the Canadian Pacific Railway. Seven years before the road was opened from Montreal to Vancouver, Mr. Sandford Fleming, the Engineer-in-Chief of the whole line, submitted a scheme for an all-British route to Australia and thence to South Africa, and it is believed that Lord Beaconsfield was much impressed with the idea. The route projected by Mr. Fleming was a northern one, by way of the Aleutian Islands to Japan, where the line would join the Eastern Company's system. At that time there was little definite information about the Pacific Ocean, and the great distances and depths appeared to present insuperable obstacles to a direct route to Australia. The successful construction, in 1902, of the cable by the direct route showed that engineering foresight and skill could triumph over these difficulties. But it took several years of discussion and correspondence before the authorities could come to a decision, and in that time electrical science made advances which greatly facilitated the project. The story of the negotiations shows the gradual simplification of the engineering difficulties. It also shows the growth of the desire of the Mother Country and the Colonies to combine together in an enterprise, the leading feature of which was that it would bind them more closely together.

The scheme sprang into prominence at the first Colonial Conference held in 1887. A definite proposal was made on behalf of a projected "Pacific Telegraph Company." They proposed a cable by a direct route, the through rate from England to Australia to be 4s. a word, and they asked for a subsidy of £75,000 a year for 25 years. The Canadian Government expressed its willingness to pay one-tenth of the subsidy. The Conference, however, had not the material for weighing the merit of the proposal, and contented itself with resolutions that the cable was a project of general importance to the Empire, and that every doubt as to its practicability should, without delay, be set at rest by a thorough and exhaustive survey.

For some years after the Conference a somewhat desultory correspondence dragged itself along without any real progress. This case can be cited as an argument for some special machinery for carrying on inquiries and negotiations between the Companies. It is clearly impossible for a Conference to collect facts from all quarters and to conduct the correspondence which is necessary before the case is ripe for judgment. This must be done in the intervals, and it is a great gain to have it provided that the work shall be somebody's business. The thorough survey recommended by the Conference was never undertaken. The Home Government appeared to assume that the Colonial Governments should find the money. The Canadian Government proposed to send Commissioners to discuss the whole subject with Australia, but various difficulties occurred, one being the prospect of federation, and nothing was done for several years. In 1893 the Canadian Minister of Trade (the Hon. M. Bowell), accompanied by Mr. Sandford Fleming, visited Australia, and the Ottawa Conference of 1894 was the result of this mission.

In the meantime the Eastern Companies had greatly strengthened their position, as against the Pacific project. At the time of the first Conference their ordinary rates per unit were from 9s. 4d. to Victoria to 10s. 6d. to New Zealand. These high rates were a chronic source of dissatisfaction, and although the Pacific scheme was based by its advocates more on general considerations of an imperial character than on its being a competitor with the Eastern lines, it appealed to a large public as likely to effect a substantial reduction of the charges. There were, furthermore, occasional interruptions ascribed to volcanic action on the Eastern lines, which indicated the advantage of having another line by a wholly different route. The Companies took steps to fortify themselves in both respects.

In 1889, after an interruption of twelve days on the single line between Sydney and Nelson, New Zealand, they proposed to duplicate it. They at first asked for an assurance that they would be secured against any competition not necessary, with a due regard to the public interest, provided they dealt efficiently with the traffic, but very soon afterwards they decided to duplicate the cable without waiting for an answer to this application. They also triplicated the communication between Australia and Java by connecting Western Australia with Java. In the following year they proposed that the charges for telegrams should be reduced by about one-half, on condition that a certain revenue should be guaranteed, and the deficit, if any, halved between the parties. It was supposed that this guarantee would mean a payment of £54,000 a year by the guaranteeing governments. The advocates of the Pacific cable at once took up arms against this proposal. It was obvious that its acceptance would be a serious blow to their project. The Imperial Government declined without delay to join in the guarantee, but on the general principle that they would

only subsidize submarine cables for political or strategic reasons. Six of the seven Australasian Colonies agreed, and the rate was reduced to 4s. In the first year of the guarantee the payment made by the Colonies was £55,040, and in the second £43,558; in view of this loss the Colonies then asked the Companies to increase the rate to 4s. 9d., which was done in 1893. It may be added that afterwards there was no deficit and therefore no call upon the Colonies.

In 1892 the Associated Chambers of Commerce of the United Kingdom took up the flagging movement by a resolution, "That, in the opinion of this Association, the extension of direct telegraphic communication between the component parts of the British Empire will facilitate defence, promote trade and investments, emphasize community of interests, and generally stimulate the development and consolidation of the Empire." They received, however, no encouragement from the Colonial Office, which replied that there did not seem to be any indication, having regard to the magnitude and corresponding cost of the enterprise, that the project could be arrived at with any prospect of success. In the following year, however, some solicitude was shown for the project. This was due to the action of Queensland and New South Wales in countenancing and subsidizing a French cable between Australia and New Caledonia. Australia was doing a useful trade in sending supplies to the French colony and a cable was wanted, but there was good reason to believe that this cable was intended to be the first section of a trans-Pacific line. England might hold that she had no particular interest in establishing a Pacific cable, but if there was to be one it was clearly desirable that it should be under her control. Thus there entered into the case a new element of competition, and the action of the two Australian colonies was accordingly viewed with some apprehension. The Secretary of State wrote to them that, while regarding with satisfaction the telegraphic concessions of Australia with New Caledonia, Her Majesty's Government could not but view with regret the action taken, as it implied a "departure from principles with regard to Colonial cohesion and the consideration of Imperial interests to which prominence was given in the discussions of the Colonial Conference of 1887," and diminished the chance of the assistance of the two Colonies in laying any future cable "passing through British possessions or protected territory, and avoiding the possessions of European Powers."

On the other hand the Colonial Office received about the same time a discouraging report on the project from the General Post Office. This department considered that, to secure even the moderate working speed of 12 words a minute, the cable must have a core of 940 lbs. copper and 940 lbs. gutta-percha to the knot over the Vancouver-Fanning section, and they estimated the cost of manufacturing and laying this section at about £600 per knot, or £2,374,200

and that of the whole cable at £2,924,000. They added that it might well be doubted whether, with existing appliances, the Vancouver-Fanning section could be either laid or maintained. They put the possible revenue, at first and for many years, at not more than £70,000 a year, and the expense at £227,164, leaving a deficit of £157,164.

The Colonial Office had also before it a report received from the Admiralty, which indicated that no support would be given by that office. Looked at from an Admiralty point of view, the report stated, the sole advantage of a submarine cable across the Pacific would be the power of communication with ships at Honolulu and the Fijis and surrounding groups. This advantage, it was observed, could not be considered as great in peace time, and would not appear to be important in time of war, as the Fijis were the sole possession affected. The report made no reference to the fact that the cable would give an alternative route to Australia and New Zealand, and that some value might be ascribed to it in case of interruptions in time of war on the Eastern lines. Possibly the Admiralty might have been less discouraging if there had not been another cable project under consideration in which they took a stronger interest. This was a scheme of the Eastern Companies for laying another cable to South Africa, not along the West Coast, where, owing to volcanic and other forces, interruptions were not infrequent, but out at sea via St. Helena and Ascension. For this work a subsidy was at first asked for and favoured by the Admiralty; eventually it was carried out (with some difference in the route) by the Companies without assistance.

From a commercial point of view it was by no means clear that it would be to the interest of the United Kingdom to procure the laying of a cable across the Pacific. England was the telegraph exchange of the world. It was the centre of all the great lines of communication. To the westward the telegraph lines came to a dead stop on the western side of the continent of North and South America, and in the opposite direction they terminated in Australasia, and on the coasts of Annam, China, Japan and Asiatic Russia. This position gave the merchants of England an advantage over their rivals in every other part of the world. Thus, in particular, if there was any business to be done in the far East, the English merchant could hear of it before his American competitor.

No one foresaw that within a few years political events would invest the shores of the Northern Pacific on either side with such importance that the extension of the cable system to this ocean would be a matter of course. The prospect of any line joining America and the East was extremely remote. The cable from San Francisco to the Hawaiian Islands was hardly talked of till 1890. The construction of a cable from Canada to Australia, which would

at once open up communication between the East and America via Australia and invite an extension from the mid Pacific to the East appeared to jeopardize the advantageous position of England.

Not only did it appear to be in opposition to the commercial interests of the Mother Country to give a subsidy for a cable across the Pacific, but the whole procedure was contrary to the practice of the Imperial Government. Nowhere had the Government subsidised a cable to a British possession which was already provided with an efficient means of telegraphic communication. The subsidies paid for the cables to Bermuda, the Seychelles, and Mauritius were for the purpose of establishing telegraphic communication where there was none before. It was a very different matter to subsidise a cable to compete with those of the Eastern Extension Telegraph Company. It was argued with no little force that it would be unfair for the Government to undertake or assist an opposition to a service which had been established by private enterprise and which was efficient.

Practically no progress was made until arrangements were made about the end of 1893 for the holding of a Conference at Ottawa, at which the cable scheme was to be one of the principal subjects of discussion. Possibly in view of this understanding Sir John Pender, on behalf of the companies, approached the Colonial Office with an offer to co-operate with the Home and Colonial Governments in carrying out the work if the necessary subsidies were forthcoming. He estimated the annual sum which would be required (for a cable via Honolulu) at about £200,000.

A Conference held at Wellington, New Zealand, in the spring of 1894, put the matter in a more favourable light, and shortly afterwards the Marquess of Ripon, writing to the India Office, said that he would view with satisfaction the establishment of the cable if it should appear after the meeting in Ottawa that the representatives of the Colonial Governments considered the project feasible. He made the important statement that, while it was natural that Sir J. Pender and others financially interested in the existing cables should view with disfavour a project of a competitive character, that fact alone would not in his opinion justify Her Majesty's Government in withholding such support as might be prudent and possible from a line binding together that large portion of the empire which was interested in the scheme. This pronouncement finally decided the attitude of the Colonial Office on the point of competition with private enterprise.

At the Ottawa Conference in 1894 a resolution in favour of the scheme was passed, and the Canadian Government were requested to make inquiries as to the cost. Tenders were accordingly invited, and the answers were very encouraging. This result led to the appointment of a Committee which sat at the Colonial Office in 1896,

and ascertained that a cable of a type recommended by Lord Kelvin could be laid for £1,517,000—a very much smaller sum than had been contemplated by General Post Office. This type, for the long section between Vancouver and Fanning Island, had a core of 552 lbs. copper and 368 lbs. gutta-percha, and no little diversity of opinion was shown by the experts as to the carrying capacity of such a line, their estimates varying from 63 to 80 letters a minute. The result of the Committee's recommendations was, that the Colonial Office informed the Colonies that Her Majesty's Government was willing to offer an annual subsidy of five-eighteenthths of the deficit, the amount so paid not to exceed £20,000, and the line to be constructed and provided for by the Canadian and Australasian Governments. It was observed that Her Majesty's Government considered that the cable was a matter of much greater importance to the Colonies than to the United Kingdom, and that they would not have been disposed to recommend Parliament to aid it but for their desire to afford the support of the Mother Country in a project the success of which could not fail to promote Imperial unity. The Colonies, however, did not like this proposal, which did not place the Home Government on the same footing in the matter as the Colonies. They argued, and with force, that the principle of joint ownership and control was the keynote of all the negotiations. They also pointed out that, if the United Kingdom did not join in raising the capital, the cost of doing so would be greatly increased. These objections proved effective, and in July, 1899, the Home Government agreed to co-operate fully with the Colonies. The arrangement was that the Home Government should provide a capital sum of £2,000,000, for which the sum of £77,544. 18s. 0d. was to be paid yearly by the undertaking for interest and sinking fund; any deficit was to be made up by the contributing parties in the following proportions: England, five-eighteenthths; Canada, five-eighteenthths; Australia, six-eighteenthths; and New Zealand, two-eighteenthths.

When this decision became known, the Eastern companies took a strong step—they offered to reduce the rates immediately to 4s. a word on ordinary messages (3s. on Government and to 1s. 6d. on press messages), and to make further reductions to 3s. 6d., 3s., and 2s. 6d., if certain average receipts were obtained. They also offered to lay a cable from Australia to South Africa. The consideration wanted for these terms was, that the companies should be allowed to open offices in Australia for the reception and delivery of telegrams—a power which they did not possess at the time, as the Government held the monopoly of such business. It was clear that, if these reductions were carried out, the Pacific charges would have to follow suit, and that a through rate of 3s. would probably be necessary. Another committee sat (in 1900) to consider the position. They

estimated the deficit at £54,000 a year, on the basis of a 3s. rate, and observed that the commercial object of the project was the reduction of the rate, and that the saving to the public from a reduction of the rate from 4s. 9d. to 3s. would be about £200,000 a year on the then traffic. They estimated that the traffic would amount to 960,000 words, and the revenue to £96,000. The consulting engineers (Messrs. Clark, Forde and Taylor) recommended, as a more economical distribution of material, a core of 600 lbs. copper and 340 gutta-percha for the longest section, with lighter and cheaper cables for the shorter sections. Tenders were again invited on the footing, with the result that the Telegraph Construction and Maintenance Company made the most favourable offer, their figure being £1,795,000. The price of gutta-percha had risen very considerably, and one tenderer rather plaintively stated that since the issue of the form of tender, practically the whole of the gutta-percha suitable for the cable had been taken off the market: no doubt the Construction Company had taken time by the forelock. The previous estimates were therefore substantially exceeded, but under the circumstances the tender was a satisfactory one, and was accepted about the end of 1900. The cable was laid without a hitch, and was opened for traffic in 1902.

The results, from an engineering point of view, have been extremely good. The best hopes as to the reliability and speed of the cable have been borne out to the full. No fault or interruption has occurred in the long section to Fanning Island—or on any other—and there is good reason to conclude that the cable, except where it necessarily traverses shallow waters, lies safely embedded in the primeval ooze, far below the limits of borers and such destructive life. The deeper the water the softer the bottom, and the more of the globigerina ooze the longer the cable will last: great depth, in fact, is almost a guarantee of safety. For the shore ends and all lengths in shallow water the cable has, of course, been specially strengthened to resist as far as practicable the destructive influences it must necessarily encounter. The working has also proved very satisfactory. Without going into technicalities, it will be enough to instance that the result of a test match in Australia reached London over the Pacific Cable in eleven minutes after stumps were drawn, and was automatically telegraphed to every London evening paper within ten seconds. The message was handed in at the office in Sydney at 2.40 a.m., and was delivered in London at 2.43½: it traversed a route of 14,566 miles, at an average rate of 4,162 miles per minute. This beat all records. The message in this transit was received and retransmitted five times at intermediate stations, and it goes without saying that it is dealt with on these occasions with breathless zeal. The operators are the pick of their profession, and it is their marvellous quickness and accuracy, saving every fraction of

a second, that makes such performances possible. To them an important occasion has the exhilaration of a sport, and great is the joy of knocking something off the record.

The receipts have increased from £80,118 in 1903-4 to £113,516 in 1906-7. This seems to show a satisfactory rate of development, but some disappointment has been felt that the cable has so far failed to obtain, in competition with the Eastern lines, one-half of the Australasian traffic. The Pacific Cable Committee of 1899 did not anticipate that it would, but put the share of the cable at between one-half and one-third of the whole traffic. The share actually obtained has been less than one-third. The statistics indicate the explanation clearly. New Zealand has diverted to the Pacific some 78 per cent. of its traffic, but Australia only about 21 per cent. ; Queensland gives a whole-hearted support, but in Victoria and New South Wales the results have been disappointing. This was due to the right which the Eastern Companies acquired by the agreement of 1901 and subsequent arrangements to open their own offices in those two colonies, and to the energetic use which they made of that right. The concession, in fact, altered the position by giving the Eastern Companies a valuable privilege and the Pacific cable suffered accordingly. So much criticism was excited by the matter that the Secretary of State held a conference in 1905 to consider the position. If the enterprise had been a private one, it might have been argued with great force that it was wrong for any one of the partners, after being committed to the scheme, to lessen the chances of its success by giving a new privilege to its competitor ; but in a public matter the convenience of the public is the strongest factor, and the inducement from this point of view to New South Wales to accept the offer of the Eastern Companies was very great. In any case, the thing being done, there was nothing for it but for the Pacific Cable Board to come to terms with the Eastern Companies or to fight them by opening competing offices at Melbourne and Sydney, or to obtain the closing of the Companies' offices. Some informal negotiations took place, but led to nothing, and the Board eventually decided to open an office in Sydney. In Melbourne, the Federal Government had the power to close the Companies' office, and did so, leaving the Post Office to act equally for both the Pacific and the Eastern routes. It may reasonably be anticipated that these steps, taken in 1906, will result in a larger share of the traffic being secured.

The expenditure, which has been very steady, was in 1906-1907 £168,439 ; this includes not only interest and sinking fund on the capital, but a renewal account of £33,000, so that really a double provision is being made for the replacement of the cable when necessary. The deficit on this footing was £54,923, of which £15,256—a substantially lower figure than, as shown above, was originally contemplated—fell to England. Taking the £33,000 as

a profit set aside, it would be very satisfactory if the difference between this sum and the above deficit could be swept away by an increase of traffic. When it is considered that the line passes practically from end to end with very little intermediate traffic, such a result would be no small achievement.

Looking back upon the story, it is clear that it was the high rates originally charged by the Eastern Companies that led to the Pacific cable. No great support was even given to the scheme by the military experts. Substantially, it was a commercial enterprise. It is easy to criticise after the event, and want of enterprise or decision is the last thing that any one would attribute to the managers of the Eastern lines; but it is certainly more than possible that, if the reduction which they ultimately made had been made a year or two earlier, the Pacific line would never have been made. As it was they were made at the eleventh hour, too late to stop the project. It is a difficult matter to launch a Government scheme, but it is by no means easy to stop it when launched.

The public—mostly financial and commercial—which uses the cables, has gained greatly by the result. There has been a permanent increase of communication and a permanent reduction of rates at a comparatively small expense. On the other hand, it may be argued that the cable is a direct interference with prior private enterprise, that it does not pay, and is only run at a loss both to the proprietors and the competitive lines. The subject of such interference is an interesting one academically, but when it comes to a specific scheme there is little chance of discussion on academic lines; the matter is settled one way or the other on its own merits, according to the magnitude of the public interests involved. In this case there was not only the cheapening of the rates to be considered, but also the completion of a "round-the-world" chain of cables, giving the security of an additional route which lies remote from any risks which might affect the Eastern. That these risks are not imaginary is shown by the recent breakdown of all three cables between Banjowangie and Australia. What the effect strategically would be of the cutting of the Eastern lines in case of a great European war, if there were no alternative route, is beyond our calculations; it is enough to say that if, as is fairly certain, the lines were cut somewhere, the result commercially would be disastrous.

We cannot close this short review without a reference to the labours of the late Chairman of the Board, Sir Spencer Walpole, who died in July. He showed throughout a clear grasp of all the facts and figures which had to be considered. He spared no pains and overlooked no detail. He endeared himself to his colleagues and the staff by his fine personal qualities. He had seen politics from the inside, officially and socially, and had decided views of his own, and whatever he had to say was said with a tact and earnestness which went far to convince. His loss is deeply regretted.

EMIGRATION AND THE EMIGRANTS' INFORMATION OFFICE.

IN the years 1884-6, there was a good deal of distress among the working classes, and much pressure was put upon the Government to encourage emigration. The Government ultimately declined to give a subsidy for this purpose, but decided to open an office at which intending emigrants could get information and guidance. Thus the Emigrants' Information Office was opened in October, 1886.

This office, unlike the generality of emigration agencies, has no special interest in any particular place. It is there to spread information and to answer questions, and this it does on a big scale—thus 335,000 free circulars were distributed last year. But it has no propaganda. It does not directly either encourage or discourage emigration, but aims only at giving facts in an impartial manner. Practically, however, its function of spreading information which can be and is relied on, has a great effect, and has operated in the direction of diverting to the Colonies much emigration that would otherwise have gone elsewhere. From time to time it has issued warnings against emigration to certain places (*e.g.*, recently, Brazil), which are quite unsuitable for the ordinary emigrant, or where the demand is temporary and exceptional, as when caused by a strike.

The general advantages of our Colonies, such as the community of race and language and the similarity of institutions, are kept steadily in view, and any special attractions, such as grants of land to settlers, are put prominently forward. The enquirer knows that the facts given are free from colouring and misrepresentation; he goes out with a knowledge of what he has to meet, and if he is disappointed, he cannot at any rate excuse himself on the ground that he has been misled. The feeling of confidence in the accuracy of the information given is of great service to the Colonies.

It is always difficult to estimate the effect of any one influence when there are others at work, and of course the efforts and growth of the Colonies themselves are the principal consideration. Also the circumstances which promote or retard emigration as a whole, are beyond any government agency. But selection is no doubt very

appreciably affected by the office's pamphlets and circulars. At the present time there is good reason to be satisfied, from the point of view of the Colonies, with the general trend of emigration. In 1880, out of a total emigration from the United Kingdom of 180,535 there went to the United States 140,052; in 1906, out of a total of 194,671, only 85,941. In 1880, only 16,214 persons went to British North America; in 1905 and 1906, we need hardly say for the first time, the number exceeded that to the United States. Great strides are now being made by Australia, the number having risen from 3,693 in 1903 to 9,920 in 1906; but we are still a long way from the figures of the eighties, where they rose to 64,420 (1883), and there is good reason to anticipate that the present development will go on. The only cloud is that which at present hangs over South Africa, where the figures, which stood at about 28,000 in 1902 and 1903, came down in 1906 to 3,160. The war left the country with a large floating population which could not be immediately absorbed.

Some correspondence on emigration was laid before the Imperial Conference, and shows that the Australian States generally are encouraging emigration by opening government land for selection. The practical difficulty is to secure that immigration will be followed by colonisation. In Australia it is considered that labourers can only be absorbed in a proportion of about four to each farmer provided with capital enough for his purposes, and farmers with capital are not easily obtained. This is one of the difficulties of state-aided emigration. It encourages many persons to go out who are, in the actual circumstances, undesirable. Sir Joseph Ward put this very plainly at the Conference. New Zealand will not go with anything like a wholesale scheme of immigration with state aid. But they give a grant of £10 towards the passage of a selected emigrant, and under this system 6,632 persons came to the colony in two years and brought with them the sum of £275,000. They are satisfied with this healthy and steady progress, and with good reason, for they "have not known the meaning of unemployed in the ordinary sense for many years."

In sub-tropical countries the question arises how far agricultural and other labour can be carried on by Europeans. Australia wishes to substitute white for Kanaka labour on the Queensland sugar plantations, and it is of course much to be hoped that white men will find it possible to do the work. New arrivals will find the work of harvesting very trying, but Mr. Deakin pointed out that the cane-cutting would be varied by work of a much less trying character during the rest of the year further south. Much of the rural labour in Australia is nomadic, the shearers travelling from the north right down to Victoria. On the other hand, Dr. Jameson said that in South Africa the experiment of trying to get white men to do the

work now done by black labour had been tried and failed. He gave as an instance the case of navvies imported from this country. Several hundreds were sent out at one time to work on the Central South African Railways, and they were found unsatisfactory and were sent back. The incident however does not appear to us to prove much. These men are habitually employed here from day to day and under close supervision ; in South Africa they were engaged for a year, and, as might have been expected, they took advantage of this circumstance. The position of a labourer under a private employer is very different. General Botha made it clear that he was entirely in harmony with Mr. Deakin in the desire to encourage white immigration. "We think," he said, "we can have a population of millions of people." Irrigation is the prime necessity for a movement in this direction.

One thing stands out clearly from the mass of official literature on the subject, and that is that successful emigration must be in connection with the going concerns of the Colony ; the emigrant must mix in its life and be absorbed naturally into his proper place. There is a long list of colonisation schemes in the sense of special settlements in selected districts, but, in spite of the pains that have been lavished on these projects and the suitability of the settlers for agricultural work, they have lamentably failed. Apparently these cut and dried schemes do not fit in with the spirit of independence of many British emigrants, and pioneering work is not to every one's taste ; in any case men drift away and the scheme fails. Furthermore, the majority of emigrants are unfit to take up land for themselves immediately on arrival. Some experience of local conditions should be acquired on existing farms. When a large number of families are taken away from this country and dumped down in a strange region to make their way as best they can, it is probable that they will soon find their way to more settled parts. It is not surprising therefore that such settlements as that of the Highland crofters at Saltcoats in Canada practically disappear after a time, and if this happens in the case of men from the country it is of course sure to happen with town-bred men. This is in short the objection to such large schemes of organised emigration as that advocated by Mr. Rider Haggard.

But organization is required, and on a large scale, to advise, assist and take charge of individual emigrants. The emigration societies have been greatly extended and improved of recent years. They select carefully, assist generally, make arrangements carefully, and keep up a sympathetic correspondence which has a most beneficial moral effect. The work is largely a labour of love, and because it is so is effective for good. If any financial help is forthcoming, whether from the state or the philanthropist, it should be on the basis of encouraging and relying on these bodies. The Canadian and

Australian governments have also organized agencies which have shown remarkable energy and judgment.

It is, however, very doubtful whether any state aid is desirable or justifiable, unless under very exceptional circumstances. The chronic distress which exists in our large towns is due to deep-seated causes, which would not be removed by emigration. It is not the weak-minded and the feeble-bodied who would go. Any artificial influence would simply take away some of the healthy and enterprising men and women, and no one supposes that their removal would cause the rest to level up. Emigration is rather for the benefit of the individual than of the state, and is best left, as a rule, to the wishes of the individual and the assistance of the colonial and philanthropic agencies. Severe distress in a particular trade or locality may call for special action, but the evil is usually temporary, and would rarely justify the expenditure of national funds.

To the large number of men who are willing to emigrate and suitable for the career our colonies are an immense benefit. Not only do they find there great possibilities and a more wholesome life, but, as Mr. Deakin said at the Conference, "they will find government, business relations and social conditions much nearer to those they have left than they can hope to find anywhere else." And apart from the main sources of emigration, there is a considerable amount of employment in the Crown Colonies of artisans who are engaged for more or less short periods. In any large engineering shop at home there is usually someone who has crossed the seas to the east or the west to erect or run machinery. All these experiences help to widen the range and enrich the ideas of the working classes.

BRITISH MANUFACTURES IN COLONIAL MARKETS.

WHENEVER there is any appearance of British trade losing ground in the Colonies, the Board of Trade is on the alert, ready to give the statistics, point out the articles which the enterprising foreigner is selling with increasing success, and indicate to the manufacturer at home the supplies which he is neglecting. A recent instance of this activity is the report (Cd. 3,639) on the conditions and prospects of British trade in Australia, based upon information collected by the Board's commissioner, Mr. R. J. Jeffray.

The report points out in a very lucid way that much of the falling off in British exports, as compared with foreign, is due to the fact that many foreign goods, which were formerly sent to London to be shipped to Australia and thus swelled the totals of so-called British exports, are now, in consequence of improved shipping facilities, sent direct from continental ports. In 1905 an attempt was made to distinguish between the totals shipped and the articles of which the United Kingdom was the country of origin, and it was shown that our actual share was about 15 per cent. less than our apparent share. Probably the direct shipment of goods from the country of origin will increase, and this is a factor to be reckoned with in considering whether British-made goods are holding their ground.

Nevertheless it is clear that, while the progress of foreign trade in Australia in comparison with ours has been exaggerated, there has been a greater growth than ours has enjoyed. The result of the enquiry, however, is that on the whole the British manufacturer has maintained his position against the foreigner in the chief staple lines; it is in the miscellaneous requirements, mostly cheap qualities, that he fails, and this chiefly because he does not study the local conditions so carefully as the American and the German. What is wanted is greater adaptability and attention to small details.

The home manufacturer might reply to this criticism that he cannot do everything, and that it pays him better to devote his attention to a big output of an article which is in great demand and commands a good price than to compete for requirements of a special

character. So long as the mills are fully occupied, as at present, this is sound enough. But it is bad policy in the long run to lose any market, and it is to be hoped that our manufacturers will not neglect the openings for goods designed with a view to local customs and convenience.

It is here that reports on colonial requirements may be very useful. The reporter should not be satisfied with stating general considerations and compiling statistics—more than half of the Report under review consists of arid tables of figures which no manufacturer will look at—but should indicate specifically what alterations are wanted in British goods to suit local conditions. This was done to a valuable extent in Mr. Jenkin's Report on the trades of South Africa, and in Mr. Whitham's on the textile trades. In these works, for instance, the types of popular axes and hammers, and of the printed cottons in general use, are explained and illustrated. We find nothing of this kind in the present Report, and the manufacturers therefore will obtain no definite instruction from it. Also we do not think that sufficient consideration has been given to the special advantages which in some cases the foreign manufacturer has, just as ours has in others. Thus mention is made that in fancy woollens a German cloth is successful, but it is well known that Saxony wool is a very high-class product and accounts for the goodness of some German blankets and rugs. In another place it is pointed out that the sales of some foreign papers are increasing, because the makers "will eagerly make what is required;" the explanation is perhaps rather that our manufacturers have no local material for certain special styles; thus, esparto grass has to be imported for some choice writing papers.

To make the requirements quite clear to the manufacturer the ideal course would be to have an exhibition room of patterns of the articles required. Exhibitions are almost invariably of things which the locality can produce, not of what is wanted elsewhere, and unfortunately the people abroad do not to any great extent see them. A pattern-room would be more useful to the manufacturer. The Government acts on this principle; it keeps here patterns of the articles which the Colonial and Indian Governments require, and the manufacturer goes to inspect them.

Speaking generally, what is required in textiles for Colonial use is brighter colour, more attractive design, and really fast dyes. The warm rains which occur in most of the Colonies are very trying to the dye, and though indigo is largely used there seems to be great difficulty in this country in making it really fast on cotton. The Germans are said to have an absolutely fast dye. This matter is of the first importance, as when the colour has begun to run the article looks bad, however good the material may be. Such tests as washing in water and soda or boiling are not severe enough to show that the

dye will resist long exposure to tropical weather. Our manufacturers might very well attempt to obtain the trade in "denims," now the usual material for the farming classes in Australia. In this line the Report states that the Americans have turned out "some magnificent cloth"; but we believe that the real secret of their success was they used suitable machinery for giving the material a surface dye, instead of dyeing the yarns.

In hardware the question is largely that of patterns. Much more trade could be done if this consideration were studied. Our manufacturers, however, should beware of selecting articles in which much wood is required, for in this respect the Americans have an advantage. But probably the detail which most requires improvement is packing. Manufacturers, who pay rail carriage here by weight, should remember that on ships freight is mostly charged by measurement. Packages should therefore be carefully designed, and should not be too large or too heavy for easy handling. The outside should be properly marked with an indication of the contents.

Much also depends on the tone of letters replying to complaints or inquiries. Offence is often given quite unintentionally by curt and unsympathetic answers. Some firms which put a great amount of energy and thought into their productions seem to relegate their correspondence to an inferior plane. It need surely hardly be remarked that this is a grave mistake, the more regrettable as for honesty and conscientiousness the British manufacturer maintains his high reputation everywhere.

THE DEVELOPMENT OF NORTHERN NIGERIA.

It is seven years since H.M.'s Government took over the administration of the territories of the Royal Niger Company, and during that period their responsibilities have greatly increased. It is impossible in practice to limit policy in such countries to the requirements of the moment, and to take thought merely of the gradual extension of trade. Crime and disorder on the margin of the effective occupation are continually necessitating a step further. Thus we have now the burden of maintaining peace and order in a territory some 400 miles from north to south, and 600 from east to west. On the other hand one important object of taking over the administration from the Royal Niger Company—the effective opening of the river to general trade—has not been accomplished. It was hardly realized at the time of the transfer that the strength of the Company lay not so much in its administrative rights as in its commercial organization, its launches and its landing places. The monopoly which it had then it has continued to enjoy.

In the meantime a consideration has come prominently forward which makes the speedy utilization of these enormous territories a matter of the greatest importance. The cotton industry in this country, upon which it is estimated that ten million persons are more or less dependent, draws 85 per cent. of its raw material from America, and is frequently agitated by violent fluctuations of price which are caused partly by variations in the crop and partly by enormous gambling. In 1899 the American corn crop fell short of that of the previous year by $1\frac{3}{4}$ million bales, and prices went up to a great height. All the mills went on short time and general distress followed. The moral was obvious. The risk of a shortcoming in America must be met by reducing the dependence on the supplies from that quarter; the predatory habits of New York and Liverpool gamblers must be countered by developing new areas of production within the British Empire. The Royal British Cotton Growing

Association was formed with this object, and considering the comparatively small fund at its disposal has done remarkably good work. The West Indies, West and South Africa, have all felt the impulse. In 1903 Lagos sent 500 bales; in the present year it will send 12,000; altogether West Africa will send about £200,000 worth. But the output required is so immense that the present performances can only be regarded as proof of ability to produce rather than as substantial achievements. Some new field must be found, and in the vast plains of Northern Nigeria the essential requisites are at hand for an enormous supply. The soil and climate are suitable, yielding a long and white staple; land is cheap and labour abundant. Sir A. L. Jones has recently stated that he owns about 100 square miles which had been given to him, and on which he had already commenced to grow cotton, and that the other day he refused an offer of 600,000 acres at one shilling an acre. These figures suggest the trading possibilities of the future.

To enable the administration of the territory to be carried on—to open up the country to the trader—to utilize the possibilities of the land as a source of cotton supply, it is necessary to construct a railway 400 miles long through the heart of Northern Nigeria. At present the inland provinces are cut off from the world. The trade of these Hausa states, such as it is, is with the distant Mediterranean shores. They are not accessible from the Niger. The highest point of this river to which there is throughout the year enough water for navigation must be the starting point of the railway. This point may be taken to be at Baro, where the river bends away to the west and away from the inland provinces. The river is fairly navigable so far: at Baro the depth at present is from 4 to 12 feet according to season, but dredging will be required not only at Baro but in many places below, to make the river passable for the trade that will come. Baro is seventy miles above Lokoja, which is some 300 miles from the coast. From Baro the line will run through Bida and near Zungeru to Zaria and Kano. It is contemplated that Zungeru will be reached by the end of 1909, Zaria in 1910, and Kano in 1911. It is believed that the line, on a 3 ft. 6 in. gauge, can be constructed at a cost not exceeding £3,000 a mile, on the footing that stations, quarters, plant and rolling-stock are to be added as may be possible, and that light bridges shall be laid in the first instance. The policy will be to construct the line as cheaply and quickly as possible and to improve it as resources admit when the traffic has begun. It was only possible to win consent to the undertaking on the understanding that construction was practicable at the above figure, and the Protectorate authorities can be relied upon to give the work that careful supervision on which expenditure so much depends. It is specially fortunate that Sir Percy Girouard, who constructed the Desert railway from Wady Halfa to Atbara at, we

believe, little over £2,000 per mile, excluding military labour, is at the head of affairs.

Thus the total cost of the line, including a dredger at £30,000, will be £1,230,000, and it may be anticipated that the requirements will be :—

					£
To the end of 1909	...	...	...	...	500,000
In 1910	...	...	...	...	430,000
In 1911	...	...	...	...	300,000

Side by side with this project is the extension of the Lagos railway, to the Niger at Jebba. The two schemes have to a certain extent been regarded as rival alternatives, but this was mainly on financial grounds; each stands on its own merit topographically. The idea now is to connect the Lagos line with the Northern Nigerian by an extension from Jebba to Zungeru. The bulk of North Nigerian trade would however no doubt continue to go to Baro and down the Niger. In the meantime the section Ibadan to Iwo, (30 miles) was opened in October last; the extension to Oshogbo, the 185 miles point, has made satisfactory progress; and a reconnaissance survey has been made to Zungeru. Up to Zungeru, the two routes—the Lagos and the Niger—will be in competition with one another, and, perhaps, if everything that has happened could have been foreseen a few years ago, a different scheme would have been adopted, but there is room for both. The Niger may be made navigable up to Baro for vessels drawing 12 feet, and which could make the voyage from England; but this would only be for a limited part of the year. The solution of the difficulty may eventually be found in the extension of the line from Baro to the Cross River.

The railways in other parts of West Africa are too young yet to be fairly judged, but the results are so far satisfactory and encouraging. In the Gold Coast, a net profit is anticipated this year of £87,000, equivalent to $4\frac{1}{2}$ per cent. on the outlay. To this, of course, should be added the increased customs revenue and the mining royalties due to the facilities afforded by the railway; the royalties alone amount to about £50,000 a year, and the revenue has increased by 150 per cent. in ten years. The Lagos railway already yields 2 per cent. on the cost, and taking into account the additional customs duties, may reasonably be considered to be a paying concern. In Sierra Leone it is estimated that there will be this year a net profit of £14,000, and £20,000 additional customs receipts due to the line, which then yields $3\frac{1}{2}$ per cent. By way of comparison we may observe that the French Government have recently provided no less than £6,400,000 for the development of their West African Colonies.

The reconnaissance survey from Jebba to Zungeru was carried out early this year by Mr. S. G. Brounger, who found the country so favourable as to admit of the construction of a direct line with a maximum gradient of 1 in 80 and moderate works. The distance is about 120 miles. Mr. Brounger in a very readable report states that the line would run through a well-watered and fertile country capable of growing practically anything. Cultivation has been, in times gone by, carried on to a vast extent, but the population is sparse, and the inhabitants, who are Nupés, are proverbially an indolent race. They are, however, tillers of the soil, and it is probable that under British rule the population will again increase in the course of many years and that agriculture may again flourish.

The crops grown at present consist chiefly of yams, Guinea corn, cassava, Indian corn (mealies), sweet potatoes and cotton; while patches of peppers (chillies), indigo and rice, are occasionally met with. A considerable quantity of palm wine, and native beer made from Guinea corn, is produced for home consumption, and many of the chiefs and monied men are said to indulge somewhat freely in these intoxicating liquors.

As a general rule, however, drunkenness is absent, and the people are quiet, friendly, and well disposed, as far as a white man can judge of the intricacies of the native mind.

As regards natural products, Shea butter trees abound from Jebba to Zungeru, and only require labour in sufficient quantities to deal with them. At present probably 95 per cent. of the shea nuts are allowed to go to waste. Palms and bananas occur in considerable quantities, and tamarind trees were occasionally seen.

The country abounds in game, the tracks of a very great variety having been met with daily in large numbers. Bush cow (buffalo), roan antelope, kob, harness antelope, duikers, and many others occur in great numbers, while bush fowl and at least two other varieties of partridge, as well as sand grouse, and numberless guinea fowl were constantly seen (and shot). Leopard, pig and hyenas also occur in considerable numbers, and here and there lions exist, but they are few and far between.

A curious case of natural history may be cited from the report. At one place Mr. Brounger found a stream "which must extend underground for a considerable distance, and open out into pools of some size and depth; for many crocodiles, held sacred by the natives, make their home in these unexplored depths, and constantly come out and sun themselves in the adjacent pool from which the natives draw their water. These reptiles are perfectly tame, harmless, and familiar, and upon any sunny afternoon, men, women, children and crocodiles may be seen freely disporting themselves in the pools, and though I never saw one of the latter more than about five feet in

length, I was told that much larger ones are often met with, and that they are upon as friendly terms with the people as their smaller brethren."

Mr. Brounger also made a reconnaissance survey of the river Niger between Jebba and Baro, and seems to prove conclusively the impracticability of crossing the Niger by a bridge at any point other than Jebba. He describes the valley of the river between Lokoja and Jebba as one vast swamp extending for miles on either side of the normal channel. Jebba is the only point where there is fairly high ground on both sides. This conclusion would of course apply also to a ferry.

BRITISH AND FRENCH METHODS IN WEST AFRICA.

"La Situation Economique de Afrique Occidentale Anglaise et Française," par EMILE BAILLAUD. (A. CHALLAMEL, Paris, 1907.)

"La Politique Indigene de l'Angleterre en Afrique Occidentale," par EMILE BAILLAUD.

(*"Annales des Sciences Politiques."* November 15th, 1906).

ADMINISTRATIVE methods in the British Colonies of West Africa have recently formed the subject of several reviews in the Journals devoted by the French to their colonial interests. It is interesting, if not always agreeable, to see ourselves as others see us. There is, however, nothing disagreeable in the two works just published by Monsieur Emile Baillaud, Special Commissioner of the French Government, who has given, as the result of his observations during several years spent in tropical Africa, some unique comparisons between British and French systems of Government there.

The following quotation from "*La Situation Economique de l'Afrique Occidentale*" affords an index to the unprejudiced tone of the author's criticisms: "Nothing distinguishes more completely the English method of administration and that of the French colonies than the extensive employment by the British of their 'educated natives,' while among ourselves practically all the administrative work of the Colonies is done by whites, and natives are not employed in any office higher than those of interpreters and copyists. This results from the fact that, although we have natives who are as well educated as those employed as civil servants in the British Colonies, our system is much more complicated than that adopted by the English . . . Their financial organization is as simple as ours is complicated."

In British West Africa, natives are employed in comparatively highly paid clerical posts in the Secretariat and Treasury, and in some cases as inspectors of schools, district commissioners, medical officers, and in appointments of importance and responsibility in the

Customs and Post Office. This results in a substantial difference in the expenditure of the Colonies under the head of European Staff, but Monsieur Baillaud finds that although the English Colonies employ fewer white officials, the average rate of salary is considerably higher than that obtaining on the French Civil Staff. In 1905, French officials to the number of 1,660 accounted for £392,693, whereas the estimates of the British Colonies provided for 895, at a cost of £435,334. Moreover, British white officials are given four months' leave clear in England, on full salary, after each year of residential service, while French officials receive six months' leave after twenty months' service, on half pay.

On the other hand it will be remembered that a large part of the early development of French West Africa was carried out under a military régime, and many public works were executed under the superintendence of non-commissioned officers of Engineer Corps, whose rates of pay and conditions of service would not compare in actual cost with those of the foremen and artizans engaged in England and sent out for similar works in the British Colonies.

Under the head of "Health and Sanitation," Monsieur Baillaud admits that "... the service is much more complete than in our Colonies." He notices that there were 149 doctors provided for in the estimates of the British West African Colonies in 1905, as against 49 in the French, and the British expenditure under this head was stated at £135,572, as against only £50,857 in the French budget.

In "*La Politique Indigene de l'Angleterre en Afrique Occidentale*" (which is the summary of an extensive report not yet published), Monsieur Baillaud discourses upon the general results of Great Britain's occupation of West Africa. He begins by considering the paradoxical fact that "... a large part of West Africa has been occupied by England almost—so to speak—in spite of herself." He says that our West African possessions were secured to us mainly by the treaties of British trading companies, by the efforts of some determined officials, and perhaps also by our fear from time to time of incursions by other European powers. At the same time he recognises the debt that France owes to the British explorers and traders who first explored and partly opened up trade routes into the countries along the Senegal and Niger rivers, now under French dominion.

In this second pamphlet, Monsieur Baillaud gives a further series of comparisons, and has much to say on the subject of our policy towards the native. He is warm in his praises of the work of Governors like Sir William McGregor and Sir Frederick Lugard, and their policy of governing through the hereditary chiefs. At the same time he anticipates that difficulties may be experienced in the future, when there may be some dissatisfaction with the present form

of Legislative Council among the educated natives, who are likely to demand with each succeeding year a greater interest in the government of their country. This eventuality, he thinks, can never occur in this shape under the semi-military rule of France. This reliance on military rule, we may remark, seems far removed from an administrative ideal; and it may be doubted whether even the French system can keep permanently under repression the desire, which is bound in the long run to result from education and civilisation, to have a voice in the management of affairs. When that desire manifests itself the French system will lack the safety valve afforded by our Legislative and Native Councils.

In conclusion the author points to the necessity of greater unity of policy between European powers, especially in their attitude towards the native, and to the importance of modifying that policy as change of circumstances require. We may observe that a beginning has been made in this direction. The British and French Governments have arranged to communicate with one another as to any native questions which possess a common interest. He has a note of warning on the subject of the "Mohammedan peril." Islam, he argues, has over-ruled ancient tribal beliefs in a great part of the Western Soudan, and is an influence to be reckoned with even at the Coast, and it may some day form an instrument of revolt in the hands of discontented agitators. It might be replied that when Mohammedanism is associated with British systems of administration and civilisation it becomes a force making for tranquillity and industry.

There are many other points in Monsieur Baillaud's work which are worthy of notice. As a comparative study of French and English methods (in—as he remarks—the only country in the world where such a comparison is possible) it is unique, and we hope that the full report, of which the article under review is only a summary, may before long be published *in extenso*.

A VIRGIN TROPICAL FOREST IN EAST AFRICA.

THE Colonial Office has issued a Report (Colonial Reports—Miscellaneous, No. 41) by Mr. D. E. Hutchins on the Kenia Forest in the East African Protectorate, which is of exceptional interest. Mr. Hutchins estimates the total value of this forest at no less than £23,000,000, and considers that the difficulties of transport are not sufficiently serious to hinder its profitable exploitation.

The cedar tree which abounds in this forest is of the largest and finest type in the world, and no doubt will before long be a valuable asset: it is the kind which is used for pencils. But the most valuable tree is the camphor, a tree of extraordinary durability. Mr. Hutchins recommends that one anna per cubic foot shall be charged by the Government for the more valuable trees, and half an anna for the others.

At a time when the end of the United States' timber supply is said to be in sight, and prices are ever going upwards, it may fairly be expected that the forest will soon begin to make its mark as a valuable asset. The following extracts will show its character:—

“ General Description.

“The Kenia Forest is situated under the equator; the equator passes somewhere about mid-way through its northern half. The Kenia Forest extends in a belt some 287 miles long and eight miles broad entirely round the slopes of Mount Kenia. I compute the area of timber forest approximately at about one million acres, of which I have seen the southern half, or 500,000 acres. This forest is entirely extra-tropical in climate and character. It belongs to the dense evergreen class of forest commonly seen at high altitudes in the tropics. It is, in fact, the yellow-wood forest of South Africa with a larger number of trees to the acre and a large average size of tree. It is further enhanced in value, compared to the South African forest, by the addition of cedar (*Juniperus procera*) in the drier forest

and of Ibean camphor in the wetter forest. Everywhere, however, it preserves its general likeness to the indigenous forest of South Africa. The same forest which occurs at sea level (or near it) on the southern coast of Cape Colony; at 3,000 feet in Natal; and between 4,000 and 6,000 feet in the Transvaal, is seen between 6,000 and 9,000 feet on the slopes of Kenia and in British East Africa generally. Going towards the equator the number of species increases. This is not an advantage, but it is not a great disadvantage, as there is a general resemblance to one another among the Kenia hardwoods, and they are not excessively hard, as is the case in tropical forests. The indigenous yellow-wood forest of South Africa has been worked profitably for 200 years. Its total area in Cape Colony is under 500,000 acres.

"The best forest I saw was in the Embu country, on the southeastern slopes of Kenia. I understand that this fine forest is continued northward along the eastern slopes, where occurs the heaviest rainfall. It was through the Embu forest that a linear sample area was taken, right through the belt of forest. This Embu forest is the finest I have seen of its class; so close and dense is it that on entering the forest at noon it takes some minutes for the eye to become accustomed to the gloom, and one can walk about in this forest hatless at mid-day without inconvenience. The covert is generally good, and the trees lofty, while the soil is entirely clear of undergrowth, and covered with a carpet of dead leaves and humus. This clean forest soil I have seen nowhere else in the Protectorate. As soon as the best forest is past, undergrowth again becomes apparent.

"In the lower forest the number and variety of the trees is greater, but their stature less.

"In the upper forest, the trees suffer from the excessive wet, and are at first smaller with a larger proportion of diseased trees and a lesser number of species. Higher up, the number of species declines further, and most of the trees look unhealthy, being covered with moss and lichen. In places the moss and lichen are phenomenal. If there were a railway to Kenia the moss might be exported to South Africa. Considerable quantities of moss are now imported to South Africa from Europe. The moss is used for packing fruit trees and other purposes. Above the timber forest is the bamboo zone. Here at first there is timber interspersed with the bamboo (*Arundinaria alpina*). Then the timber becomes less and the growth of bamboo denser, until at about 8,500 feet the timber practically ceases. From here, up to the base of the cliffs and rocks of the snowy peak of Kenia, stretches a zone of dense, generally unbroken, bamboo.

"In Cape Colony forest similar to that in Kenia has been worked profitably for 200 years. It has been worked consecutively

for the last quarter of a century. It will be useful, therefore, to note that the stocking in the eastern forests of Cape Colony is estimated to amount now to an average of 1,200 cubic feet. In the Knysna forests, where the stock of exploitable timber is approaching exhaustion, the quantity of timber marked for felling has averaged 400 cubic feet per acre. The highest maximum recorded for small areas of virgin forest at the Cape and in Natal has been 10,000 cubic feet. Small areas, equal or surpassing these figures, could no doubt be found in the Kenia forest.

"The price of timber as it stands in the Cape forests has been valued at an average of 2'4d. per cubic foot; the best of it, stinkwood and snezewood, sells at 1s., "wagonwood" (certain hardwoods) at 4d., yellow-wood at 3d., and ironwood at 1d. per cubic foot. The rates vary in different forests, but these may be taken as average figures. Inferior timber in diseased trees is sold at half price, and timber in inaccessible localities at reduced rates. 2'4d. per cubic foot is probably the correct average figure. On the basis of an average value of 2'4d. per cubic foot, the timber in the Kenia forests is worth 2,300 cubic feet by 2'4d. = £23 per acre; and on the half million acres of forest in Southern Kenia, £11,500,000.

"Total Value of the Kenia Timber.

"The northern half of Kenia was not visited by me. Viewed from a distance one can see that the forest belt is continuous. The timber in it may be worth more or less than that in the southern part of the belt. In support of the view that it is worth more is the probability that it is drier and carries more cedar. It is in the portion of the Embu country not reached by me that native reports place the very best of the forest. On the other hand the width of the belt may be less if the climate is somewhat drier, as seems possible; or again, it may be broader on account of the absence of the forest-destroying Kikuyu.

"If we assume that the northern forest is, on the whole, equal to the southern forest, that would give a total of £23,000,000 as the total value of the timber in the Kenia forest.

"It is, of course, easy to reduce this figure if, with the distance from the coast, 2'4d. per cubic foot be considered too high.

"A railway from Mount Kenia via Fort Hall to the Uganda Railway at Nairobi would involve the construction of about 90 miles of railway. This would have easy gradients, but it would pass over comparatively dry and thinly-inhabited country. If a feasible track for a railway could be found from Kikuyu, on the Uganda Railway, along the foot of the Aberdare Range, it would traverse the remains of the once fine Aberdare Forest and the whole of the country occupied by the industrious Kikuyu, a people whose numbers are

estimated now roughly at $1\frac{1}{2}$ millions, and who are rapidly increasing in numbers. The extraordinary development of native traffic that has occurred on some of the Indian railways will be remembered. As the crow flies, the distance by this route would be only 68 miles (Military Map 94—A). A railway along this route would act as a direct feeder in labour and provisions to the Kenia Forest, until local supplies were forthcoming in the equally fertile Kenia country. Before long there would probably be developed sufficient native traffic to pay interest on this line apart from the timber traffic. No part of the Uganda Railway, after it leaves the coast, traverses country so thickly populated as this. Lastly, this railway would be of the utmost importance to the scheme (discussed in my report on the forests of the Protectorate) for establishing a zone of white settlers along the base of the forest country between the forest and the natives. The timber in the Kenia Forest has been valued, assuming that a cubic foot be worth 2·4*d.* on an average, at £23,000,000. In view of these figures the cost of making a railway to Kenia becomes insignificant, and the forest affords a ready guarantee for the interest on the cost of making a railway.

“An alternative scheme to the railway would be to float the Kenia timber down the Tana River. This would involve some 200 miles of railway, of tramway, or operations required to render the Tana River floatable.

“For a distance of 340 miles from the coast there appears no difficulty in floating timber down the Tana River. I have the opinion of a competent engineer, who has seen this portion of the Tana River, that a floating scheme is quite practicable. I find, by experiment with the Kenia timbers, that all the common timber will, with the exception of black iron-wood, float in water when thoroughly air-dried; most of them float easily.

“At elevations varying from 6,000 to 8,000 feet the climate, though equatorial, is naturally temperate and healthy at all times of the year. During the ten days that I was encamped in the centre of the best forest on the southern side, temperatures were remarkably equable and pleasant—never rising above 70° nor sinking below 45°—a typically pleasant and invigorating extra-tropical climate. Outside the forest the temperatures are naturally less equable. There are bouts of sunshine wherein the shade temperature will go up to 80° Fahrenheit, while above 8,000 feet radiation frosts are observable on grass.

“It has been my fate to witness the success or failure of a host of industrial enterprises in South Africa and India, particularly mines. At the back of these enterprises lay the climatic factor, generally neglected at the outset, and often scantily recognised at the conclusion. It is safe to say that had the gold of the Rand occurred in the low veld there would have been no Johannesburg. In an

enterprise such as the working of the Kenia Forest, where not only European enterprise but European labour has to be employed, it is important to note exactly how far the climate is not only healthy, but suitable for European labour. On the next range of mountains, the Aberdare, separated only by 60 miles of plain from Kenia, is quite a successful small saw-mill run by the Italian Mission. Here there are five European mechanics from Northern Italy. All skilled labour at the mill is done by these men. They turn out excellent work, they all looked in robust health, and at my visit assured me they enjoyed the best of health.

"The pleasantest and most gorgeous climates are sometimes unhealthy. This is not the case in the Kenia Forest country. Fevers are unknown; I did not see or feel a mosquito during the whole of my stay, and never felt better in my life. Fever is unknown amongst either Europeans or natives. A roaring camp fire is an enjoyable luxury throughout the year. During the wet season camp life would be less pleasant and perhaps not healthy. In so fertile and rich a country, but withal damp, I should recommend the erection of substantial buildings of rough stone from the outset. With very cheap unskilled labour at hand, and stone in nearly every gully, such rough stone buildings are not costly. Iron buildings should be avoided as costly and unsuited to the climate. They are unwholesome in their heat by day and cold by night. During spells of damp, misty weather there is no reserve of warmth in an iron building, which is consequently damp and unhealthy. For the same reason an iron building is not even well suited for simply storage purposes, and should be entirely discarded. Iron should not be employed even for roofing. Excellent shingles can be made out of cedar, either split or sawn. Yellow-wood shingles have been used, but cedar is preferable. A shingle roof is cool by day and warm by night; and, though it looks infinitely better than corrugated iron, costs less.

"The general climatic effect of forest on water supply has been much discussed, and has, in recent years, been denied by a certain class of observers. It has been held that, although the water-holding power of humus and the forest soil was incontrovertible, the action of forest in increasing the rainfall was inappreciable. The only experimental proof sufficiently long continued to be of much value comes from Europe. These results will be found summarised in the recently published new edition of Dr. Schlich's classical *Manual of Forestry*, Vol. I. Reference should also be made to the review of the whole subject given in Dr. Hann's *Meteorology*. In Marsh's "*Man and Nature*" there is a critical review of a number of cases where, in warm climates the cutting down of forest has been followed by the loss of the water flowing from the forest, and in certain cases the water has been recovered by re-establishing the forest. On the

other hand, there is a class of forest, in certain extreme climates, which exhausts more water than it conserves. This is the case with the Eucalypt Forest of Australia, which has in consequence been destroyed over enormous areas by ringbarking.

"Without going into too much detail, it may be stated, that in every forest there is a water-conserving and a water-exhausting action; and it depends on circumstances—mainly climatic—which of these actions shall predominate. In the case of Eucalypt Forests in South Africa or in Australia we have rapid-growing trees making enormous demands on sub-soil moisture for their vegetative process. At the same time they are usually of a sparse open character giving free access to the bright sun and drying air of that climate. The forest has little or no action in checking evaporation at the surface of the soil, and all available sub-soil moisture is sucked up and dispersed into the arid atmosphere. This class of forest can stand long periods of drought in which the soil is practically quite dry. This forest makes little or no humus.

"The converse of this is the dense evergreen forest with a rich layer of humus, growing in a damp climate where there is little drain on sub-soil moisture. When, from any cause, the forest is slow-growing, and the vegetative process thus slow, the water conserving action is at a maximum. This is the case with the dense evergreen forest of South Africa; and, as I have already pointed out, the upland forest of the Protectorate is simply the northern extension of the South African forest. The water-conserving power of the indigenous forest of South Africa has long been recognised. Streams of water dry up when it is removed, and when roads are opened through this forest a broad belt has to be cut, or the road will remain wet and impossible to keep in good repair.

"The Kenia Forest represents all the conditions required for a good water-conserving area. It stands on the track of the endless procession of cloud borne from the Indian Ocean by the easterly winds which blow throughout the year; and it is of the class of forest which conserves sub-soil moisture the most, and exhausts it the least. The forest is rich in humus and decaying vegetation. It is the result of many experiments that humus is able to conserve and hold two-thirds its bulk and between two and three times its weight of water. What this means over so large an area as Kenia will readily be appreciated."

CANADA'S PURCHASING POWERS IN RELATION TO BRITISH WEST INDIAN PRODUCE.

IN an article published in *The Fortnightly Review*, for the month of July last, entitled "The Problem of the West Indies," the statement is made that the purchasing and consuming power of Canada is not sufficient now, and cannot for many years be sufficient to cope with the producing power of the West Indies. The term West Indies as used in the article refers to the British West Indies.

The following is a quotation from the article referred to :—

"The suggestion that Canada and the West Indies should conclude some such arrangement (a treaty of commercial reciprocity) is by no means a novel one, but there are serious objections to be urged against it. The purchasing and consuming power of Canada is not sufficient now, and cannot for many years be sufficient to cope with the producing power of the West Indies; and until the Dominion is in a position to take the whole of the Colonies' agricultural exports, the dread of precipitating a tariff war with the United States—a war which would spell complete ruin to the West Indies—causes many of the most thoughtful men who have been called upon to consider the proposal to deprecate the policy of Canadian reciprocity."

There is a good deal of misapprehension as to the quantities and value of Southern or tropical products imported into Canada annually and at the present date.

The following table prepared from the Board of Trade's Statistical Abstract for the year 1905, gives the value of Imports into Canada of products that can be grown or manufactured in the British West Indies. The years taken are 1898 and 1905, the latter being the latest year for which statistics are available. The year 1898 is selected, because it was shortly before that date that the

Canadian Government instituted the preferential tariff in favour of certain products originating from British possessions :—

Article.	1898. £	1905. £
Coffee	97,798	131,928
Cotton (raw and waste)	839,296	1,241,402
Fruit (green)	337,775	611,629
Rice	73,843	114,381
Hides and Skins (other than fur) Horns and Pelts	740,010	1,077,258
Salts	67,314	82,034
Sugar (except Maple)	1,080,455	2,034,502
Molasses	121,319	226,286
Tobacco (unmanufactured)	218,759	523,347
Tobacco (manufactured) including cigars, cigarettes and snuff	45,200	122,156
TOTALS	£3,621,769	£6,134,923

Increase in seven years £2,513,154.

The actual value of the Imports into Canada from the British West Indies for the same years was	1898. £148,823	1905. £1,545,367
Increase in seven years	£1,396,544.	

The value of Imports into Canada from the West Indies <i>other than British</i> was	1898. £84,174	1905. £137,291
--	------------------	-------------------

If the value of the total Imports into Canada from the British West Indies for 1905, viz. : £1,545,367 be deducted from the total value of Southern products imported into Canada during that year, viz. : £6,134,923, there will be a balance of £4,589,556, which may be taken to be, roughly speaking, the value of such products imported into Canada during 1905, from sources other than the British West Indies.

As already stated, in the year 1905, the total value of Canadian imports of produce which could be exported from the British West Indies was £6,134,923, and with the exception of the value of a certain quantity of green fruit, other than tropical, this estimate may be taken to be fairly correct.

The total value of all Exports from the British West Indies to all countries, including bullion and specie, for the year 1905 was £9,969,722. In this amount is included the value of exports from British Guiana, British Honduras and Bermuda. The value of the total exports during that year to the United Kingdom was £2,905,573, that to other countries was £7,064,149, and comparing this latter figure with £6,134,923, the total importations into Canada

of what may be described as West Indian products, there is a balance of £929,226, which may be taken as representing the value of West Indian exports which in 1905 could not be purchased by Canada. On the other hand, however, it has been impossible with the statistics at my disposal to ascertain how much of the total amount of West Indian exports was bullion and specie. During the year 1905 the value of raw gold and diamonds exported from British Guiana was £352,031. This amount should be deducted from the £929,226 mentioned above. Nor has it been possible for me to estimate how much of the total value of exports from the West Indies was a re-exportation of imported goods, and therefore no part of the domestic and other produce of the various Colonies. Again, it has not been possible for me to state the value of rum imported into Canada from the West Indies. This article is not named in the Statistical Abstract Tables.

It is interesting to note that in 1905 the total quantity of sugar exported by the British West Indies was cwts. 5,000,715. Of this cwts. 1,209,029 was exported to the United Kingdom, leaving a balance of cwts. 3,791,686 exported to other countries.

The Canadian exportation of sugar (other than maple) during 1905 was cwts. 3,712,595. These statistics would appear to indicate that in 1905 the Canadian market was capable of purchasing practically the whole of the sugar exported by the British West Indies to countries other than to the United Kingdom.

The above figures may be accepted as a rough estimate of the capabilities of Canada in 1905 to purchase and consume the bulk of products that could be exported from the British West Indies. Canada's capabilities in that respect have increased since 1905 and are growing daily, while the powers of the British West Indies to increase the output of domestic produce is by no means in the same ratio. To take advantage of the Canadian demands, the Colonies in the West Indies would have to extend considerably the output of cotton, rice and tobacco.

EYRE HUTSON.

RUBBER CULTIVATION IN CEYLON.

THE Ceylon Government has prepared for the use of the Emigrants' Information Office an account of the position and prospects of the rubber industry in the Colony. It is primarily intended for the benefit of persons in the United Kingdom who may think of settling in Ceylon, but will interest others who are concerned with this industry.

The account states that the cultivation of rubber-yielding plants (chiefly of the Para variety, or *Hevea Brasiliensis*) has attracted much attention in Ceylon during the past few years, and it is now estimated that there are from 115,000 to 120,000 acres planted with Para (mainly), Castilloa, Ceara or the Landolphia vine—against about 390,000 acres under tea; 34,000 planted with cacao, and about 680,000 acres under the cocoanut palm, the last mentioned chiefly in plantations and gardens owned by natives. Although rubber trees were shown to grow well and yield profitable returns in the local Botanic Gardens well-nigh twenty years ago, and a rubber planting manual was locally published, tea occupied attention so greatly that very few planters touched rubber before 1901, up to which year 2,500 acres in all were planted; by 1904 this was increased to 11,000; early in 1905 to 25,000 acres, and then came the "rush," which has led to about 120,000 acres being planted by the middle of 1907. There has been a similar development in the Federated Malay States; while in India, Burmah, Java and Borneo (apart from East and West Africa, Mexico, &c.) a considerable start has been made in rubber planting. Some authorities hold there is now some risk of "over-production," considering the supplies of wild rubber still remaining in South and Central America and in Africa. On the other hand, the uses to which rubber can be applied have so multiplied, the demand for motor and cycle tyres so increased, and the prospect is so good of the application of rubber to paving in residential squares, and even public streets if only the price was less, that other good authorities think a profitable demand is sure to equal the supply for many years to come.

In the case of the Ceylon planter it has been demonstrated that he can begin to harvest "latex" safely, when his trees are six years old, the yield increasing annually as a rule—each tree, judiciously planted, giving from 1 to 2 lbs.; prepared rubber worth 4s. to 5s. a lb.; 150 trees, say, to an acre yielding a crop worth £30 to £60 per annum, according to age, at a cost of £7. 10s. to £10; while the capital outlay on a plantation under favourable circumstances, for the first six years, including cost of land, should not exceed £30 per acre in all. In this way there is the possibility of all expenditure being got back by the close of the eighth year. Such is the result of actual experience in a small way up to date; for the total Ceylon annual exports have hitherto only been rising slowly from 2,792 lbs. in 1898 to 77,212 lbs. in 1904; but rising to 168,547 lbs. in 1905, 327,000 lbs. in 1906, and probably over 650,000 lbs., or say 300 tons, for 1907. When it is realised that the world's consumption of rubber is about 65,000 tons per annum, it will be seen that even if we add 600 tons for the Malay States' export this year, the total of both is only a drop in the bucket, now and probably for some years to come. The risks before the Ceylon planter have reference to disease in his trees (especially where large areas are rapidly planted), to a possible insufficiency of labour and occasional unfavourable climatic conditions. It must be remembered, too, that in tropical cultivation it is so often the "unexpected" that happens. Ceylon has had its great warnings in the past in the complete failure of its coffee-growing industry through a deadly fungus; and of cinchona, through too rapid planting, over production and lowering of price to an unprofitable limit. But cinchona barks only yielded a "medicine," the demand for which was necessarily very limited. The case of "rubber" in the markets of the world is very different; and canker and other troubles incidental to all planting have already been successfully dealt with, the scientific staff of the Peradeniya Botanical Gardens being ready to aid the Ceylon planter, as they have already done most successfully.

To young men with some capital, and still more to larger capitalists who can safely take some risk, there is undoubtedly still scope for investment in Ceylon, although suitable and easily accessible land for rubber planting is every year getting scarcer, and, from competition, dearer. Still, if experiments now being made in certain new districts prove a success, there may be considerable additions to the available land. Crown land is usually put up at 15 rupees an acre, and often rises at auction to 50, and even 60 or more rupees per acre, *i.e.*, to £4. Economically laid out, £20 to £30 more per acre should suffice to bring a plantation into bearing in six or seven years; and then if each 1 lb. of rubber only costs one shilling to produce, the investor can reckon for

himself the margin, even if the present price of rubber falls very considerably. To young men who wish to become rubber planters in Ceylon, the best advice is that they should, through a London or Colombo mercantile house or an ex-Ceylon resident (retired Civil Servant or Colonist), get an introduction to reliable, hardworking Ceylon estate managers, who would take them as pupils to be trained in return each for a fee (50 or more guineas, perhaps) and cost of board. During the period of training—1 to 1½ years—the young planter-capitalist can be on the look out for a block of land to purchase at the first convenient opportunity, and on which he can go to work on his own account when he feels himself qualified to do so. Or he may be able to enter into an advantageous partnership; or possibly he may prefer to take shares in a promising planting concern, he himself getting employment as a paid assistant or young manager after his training has been completed. No one can speculate with absolute safety on what the “rubber” developments may be in Ceylon during the next half-a-dozen years; but that there should be room for further profitable investment of capital, and scope for more young men of the right stamp—not afraid of work, well-educated, temperate, athletic—is very reasonable to anticipate.

STAMPS (*continued.*)

SOME particulars as to the manufacture of the paper on which stamps are printed may be of interest to our readers. It is machine made, and watermarked by means of a private dandyroll, the cost of which in the case of the Crown Colonies has been defrayed by them in proportion to the amount of paper used by each.

The dandyroll is of the shape of a drum, about 6 inches in diameter and equal in length to the width of the paper. It is made of brass gauze and the emblems (which in the case of the Crown Colonies are C. A. and the Crown) are punched with steel dies out of sheet of brass, sewn on at intervals with fine brass wire. The paper is made from cuttings of Irish longcloth which is first reduced to its original condition before it was woven. The dandyroll passes over the pulp as soon as it has settled into the form of paper, and before the drying begins, and the local pressure of the above mentioned emblems marks the paper.

The dandyroll is kept locked up by an Inspector appointed by the Inland Revenue Department, except when it is actually in use. The paper made each day is counted by him and any made in excess of the order is retained in his custody until another order reaches the mills.

The paper is then sent to the Inspector at the Stamp Manufacturers' Works, and duly counted out to them as required in exchange for a receipt.

It is at this point that some of the paper is treated with the solution which produces the so-called chalky appearance. This is done to paper required for stamps printed in doubly fugitive ink, but not to that on which singly fugitive ink is used. The reason is that in the latter case this additional precaution is not required, as stamps printed in this ink are only intended to be proof against attempts to clean off cancellations applied by means of proper obliterating ink. It will thus be seen that stamps which are supposed by some people to differ only in respect of the presence or absence of a chalky surface differ also in the character of the ink employed for printing them. A chalky surface will never be found on a stamp which is not at

least partly printed in green, lilac or black, these being the double fugitive colours, and not always in these cases, and a practised eye is required to detect which ink has been employed. An example of this is to be found in the recent change to singly fugitive ink of the stamps of the Federated Malay States. The 4 and 10 cents. stamps are now printed in singly fugitive ink, and one printing of the 20 and 50 cents. stamps was made in similar ink, which has however again been abandoned in favour of doubly fugitive ink, and consequently chalk-surfaced paper for these two values.

The printing plates are "proved" on ordinary coloured paper without watermark, for no white paper is allowed on the works. The making ready occupies a considerable amount of time as the slightest inequality in the plate has to be compensated by "underlaying" and "overlaying." Underlaying is the insertion of paper between the printing plate and iron back and overlaying is the insertion of paper on the "drum" which carries the sheets of paper on to the printing plate.

The next difficulty to be overcome is the mixing of the colour or ink, so as to match the pattern stamp exactly. The trials have to be made on paper of the same kind as that which will be used for the stamps, as the slightest variation of the character of the paper affects the colour of the stamp. The printed sheets of stamps are eventually counted out to the firm for perforation. This is done by machines with a large number of accurately placed needles, each of which fits exactly into a bed, and it may easily be imagined that breakage of the needles is far from a rare occurrence. Indeed, a staff of workmen is perpetually attending to this one branch of the business.

The last process is the examination for flaws and for final counting. The quickness of the trained eye in detecting the slightest defects is most astonishing. An untrained eye may search long for the defect for which a sheet has been condemned. Of course one defect in a sheet of 240 or 120 stamps does not condemn the whole sheet. If it is one of 240 stamps only the quarter in which the offending stamp occurs is sacrificed, the remainder of the sheet being then divided into sheets of 60 stamps. Thus original sheets of stamps may be found to contain sometimes 240 and sometimes 60 stamps. The condemned sheets are destroyed by fire in the presence of the Inspector, who has to show that the sheets so destroyed, together with those passed by him, make up the total given out for the order.

A question that is often asked by philatelists is why many of the Colonies use $\frac{1}{2}$ d., 1d. and $2\frac{1}{2}$ d. stamps printed in colours other than those prescribed by the Postal Union Convention of Washington. It has been raised as recently as April of this year in *Gibbons' Stamp Weekly*. The answer may have been gathered from the last number of this Journal, but it may be worth while to give it more explicitly.

Until recently it was thought wiser to print stamps of all values in doubly fugitive ink, and unless coloured paper is used (the artistic effect of which is not quite satisfactory, the resulting colour not being very clear), part of each stamp must then be printed either in purple, black or green. The last-named colour suited the $\frac{1}{2}$ d. duty, but the only way in which the red and blue colours could be introduced in the other two values was on the labels at the top and bottom of each stamp, the body of which was printed in doubly fugitive purple. This is still done in a few cases, but the Rome Postal Union Convention has made it obligatory for the prescribed colours to be followed as from 1st October, and the change will, we believe, be made as early as possible.

Another point which is of considerable interest to stamp collectors will be found in the provision of the Rome Convention that stamps of all values which are valid for the prepayment of postage on correspondence sent from one country of the Postal Union to another must, as from 1st October, bear their values in Arabic numerals. This, if strictly carried out, will involve a new issue of stamps in all cases in which the values are expressed in words. The first Colony to take definite action in this matter is Ceylon, where, however, the change will not take effect until March of next year, when five and six cents. stamps of the new pattern may be expected. The expense of complying strictly with this regulation will be considerable and will fall heavily upon the smaller Colonies, and the new plates will therefore only be made as opportunities occur.

A record of the principal changes in Colonial stamps will, we believe, be found useful, and we intend to give details of the changes which are made by the Colonies so far as they come to our knowledge.

1d. and $2\frac{1}{2}$ d. stamps in the Postal Union colours have lately been supplied to ST. KITTS and the $\frac{1}{2}$ d. value will follow suit when more of that value are required.

ST. LUCIA has ordered $\frac{1}{2}$ d., 1d. and $2\frac{1}{2}$ d. stamps in the Postal Union colours.

$2\frac{1}{2}$ d. stamps printed in two colours are being supplied to the TRANSVAAL for the last time. In future they will be printed in all blue. The number of 1d. stamps required annually by the Transvaal is so large that a fresh 240 set plate is being prepared for use with the existing plate, thus enabling the stamps to be supplied in sheets of 480.

Several corrections have been made in the Arms of MAURITIUS, necessitating a change in the existing issue of stamps in the early future.

Owing to alterations in connection with the local currency of the STRAITS SETTLEMENTS and the FEDERATED MALAY STATES the 3 cents. stamp will in both cases take the place of the 4 cents. stamp as the international equivalent of 10 centimes. It will therefore be printed in all red, and the 4 cents. Straits Settlements stamp will be in lilac, and that of the Federated Malay States will remain black and red as at present.

HONGKONG has ordered a stamp of a new value, i.e., 6 cents. and CYPRUS one of 5 paras. The latter is, we think, the lowest value used by any of the Colonies, as 40 paras make up 1 piastre, the international equivalent of 1d.

$\frac{1}{2}$ d. TRINIDAD stamps may shortly be expected in singly fugitive ink.

The 8 cents. FEDERATED MALAY STATES stamps will in future be printed in all blue.

MONTSERRAT has recently been supplied with 1d. and 5s. stamps on chalk surfaced paper with all-over watermark.

MAURITIUS 3 and 50 cents. stamps of the existing design, but on chalk surfaced all-over watermark paper are on order.

Two new Revenue stamps have been supplied to SEYCHELLES. They are of the existing revenue type, and the values are 50 cents. in lilac and sage green and Rs. 2.50 in green and black. Both are on chalk surfaced paper with all-over watermark.

The last supply of $\frac{1}{2}$ d. and 1d. N. NIGERIA stamps in two colours has just been despatched. In future these values, and also the 2 $\frac{1}{2}$ d. value will be printed in the Postal Union colours.

It has been decided that the GRENADA postage and revenue stamps for 3d., 6d., 1s., 2s., 5s. and 10s. shall in future bear the Colony's badge, instead of, as hitherto, the King's head, and they will be surface printed with doubly fugitive inks, instead of copper plated.

BUSINESS NOTES.

Floating Docks.

A floating dock, ordered by the Trinidad Dock and Engineering Company, was sent on its way to Trinidad in July, and arrived safely, and as there is a growing demand for these contrivances, which in many places are more convenient than slipways, some particulars may be useful. The Trinidad dock has a lifting capacity of 4,000 tons, and an overall length of 365 feet. It consists of three independent units, each with its own pumping machinery. At the trial the two end sections were lowered, both having their points inwards, until deep enough to draw the ends, which had been previously fitted with timber blockings, under the floating centre section. The two sets of pumps fitted to the outer sections were then started, and the pontoons lifted until the decks of these sections were above the water and the underside of the centre section had been raised about 7 ft. 6 ins. above the decks of the end sections. The whole of the lifting operation was successfully carried out in fifty-five minutes. The dock was left in this position twenty hours without any change being observable in the flotation line. The valves were then opened and the dock lowered until the centre section was again afloat, when the end sections were raised and turned; the sections were then riveted together for the voyage to Trinidad. At a further trial the S.S. "Nembe," drawing 11 ft. 3 ins. of water, and having a dead weight of 3,100 tons, was satisfactorily docked. The dock was lowered until there was a depth of 13 ft. over the keel blocks when the vessel was warped over the centre of the dock, and the latter raised until the keel of the vessel rested on the keel blocks; the whole of the pumps were then started, and after 70 minutes' continuous pumping the vessel and dock were lifted until the deck of the latter was 3 ins. above water; the time thus occupied in lifting the vessel being less than the time contemplated by the contract for a vessel of this weight.

The contract price for this dock was £55,000.

The Company are to be congratulated on the perseverance which they have shown in the matter. They have obtained a certain

guarantee of interest from the Government—never an easy thing to do under any circumstances—but we trust that they will reap the fruits of their energy to an extent which will make the agreement a matter of form. From the graphic description given by the *Port of Spain Gazette* of the formal opening we gather that both the Company and the Government are resolved that the dock shall be a success, and that there shall be no chance of Trinidad being a “*statio malefida carinis*.”

The large floating dock at Forcados has been very successful, and it has been decided to provide a small one, lifting 400 tons, at Lagos, instead of completing the slipway. The cost will, it is anticipated, be about £12,500.

The Trinidad Coaling Company, in view of the facilities which will be afforded for repairs by the floating dock, have provided hulks and tugs to supply coal, water and other supplies promptly. They possess wireless telegraphic stations at Port of Spain and Tobago, and vessels equipped with the apparatus can have supplies got ready against their arrival.

Tanjong Pagar Tug.

The Tanjong Pagar Dock Board have given a striking instance of vigour and enterprise by building for themselves a tug and salvage steamer, which is the most powerful of her class in the East. The length over all is 128 feet, breadth moulded 25 feet, depth moulded 13 feet. The hull is built of steel throughout. There are two sets of triple expansion surface condensing engines developing about 1,100 I.H.P.

Mosquito Netting.

In a circular letter recently addressed to all Colonial Governments on the subject of wire gauze for excluding mosquitoes, the opinions of the principal medical officers were invited as to the size of mesh most suitable for use in tropical climates. The replies received show different views on the point, the mesh recommended varying as much as from 14 to 24 to the inch; but mostly they favour the use of a mesh of either 16 or 20 to the inch. While it is held that the former mesh is sufficiently fine to exclude the dangerous mosquito—the anopheles—the latter mesh appears to be necessary if the exclusion of all mosquitoes, sandflies, &c., is desired. The larger mesh, however, finds much favour owing to the better ventilation it affords.

Recent quotations for gauze of either 16 or 20 mesh are as follows:—

Brass wire gauze, 36 inches wide ... 3d. per sq. ft.

Tin wire gauze „ „ ... 1½d. „

Tin wire (tinned steel) is apt to rust quickly, and the brass is much more durable.

If these gauzes are not available, a cheap and effective substitute when the wind is not too strong, is to use varnished mosquito net, which lasts well if the varnishing is done when the net is quite dry. A mixture of petroleum and a strong lather of soap has been found efficacious in keeping off insects when no means of exclusion are procurable.

Ammonia Refrigerating Machines.

Information about these machines is so often desired that we have obtained the following recommendations as to the type to be adopted:—

1. The machine should preferably work with a two stage compression in order that the difficulties of the tropical climate may be best overcome. The motive power should preferably be a steam engine driving on to the same crank shaft as the compressor, side by side (the tandem position compressor being driven by tailrod of steam cylinders is to be avoided except in the case of duplex machines). Any other drive, belt driven, direct or geared may, however, be employed, as best suiting the requirements of the Colony.

2. The ammonia condenser should be of the surface evaporative type, with circulating pump to keep the coils well covered with water. Refrigerating machines require a large quantity of water for their condensers, and this type is exceedingly economical of water. The coil surface should be large—certainly not less than 70 to 80 square feet per ton ice making capacity per 24 hours.

3. The area of the ammonia refrigerator coils should be the same as that of the ammonia condenser.

4. *Price* (approx.). Price is governed by ice making capacity. It may be taken roughly that for tropical work, the price would be about £300 to £350 per ton ice making per 24 hours (exclusive of steam engine and boiler or other motive power).

For work in temperate climates it would be about £200.

A liberal estimate of power required for working such plants would be 7 to 8 HP. per ton I.M. per 24 hours (tropical).

For large plants about 5 to 6 HP. (tropical) (say above 10 ton I.M. size).

For *Cold Storage Work*. It may be taken that one ton I.M. capacity per 24 hours will look after 10,000 cubic feet of *well insulated* chambers, when working day and night continuously.

5. *Cost of Working.*—Plants are worked in tropical climates at 5/- to 6/- per ton I.M. capacity per 24 hours including all full labour and water. These figures of course vary with the cost of these commodities, but ought not to be greatly exceeded.

Lime-Burning.

A convenient kiln for this purpose will often save a government much expense, and in the West Indies and other places where sugar is grown it may be used for the making of "temper" lime, which is used very largely in the manufacture of sugar. The kilns used are of two sorts, one in which the calcium carbonate is in contact with the fuel, and one in which the products of combustion alone come into contact with the limestone, the resulting lime being of much better quality in the latter case. The fuel to be used may be of poor quality. The most economical kiln is continuous, but this is only suitable when a large output is wanted, say 20-25 tons per day. For a small output a discontinuous kiln, yielding about 50 tons per day, known as the "bottle" type, is suitable. It is built of ordinary stock brick and is lined at the lower zone with firebrick, and any ordinary builder can erect it, often without any imported materials, if provided with a plan.

Patent Fuels.

The new fuel "coalite" is attracting a good deal of attention, and if it comes up to expectation as a steam-raiser will be very useful to the Colonies. The existing patent fuels, of which "Crown Preserved" is the favourite, are used by some governments. The caloric of these fuels is a little less than that of the best Welsh steam coal—say 7,300/7,400 as against 7,500/7,700; but, on the other hand, coal deteriorates quickly in hot climates and being friable often makes in use about 40 per cent. of small. The patent fuels lose nothing in weight, being solids, practically unaffected by atmospheric influences. There is no particular difference between the prices of coal and the patent fuels. For "coalite" a higher caloric value is claimed than is possessed by coal, but this is on the ground, not that it possesses more heat units, but because more of its calorific value is on combustion converted into sensible heat. This result, however, appears to have been obtained from an ordinary domestic grate, and much further experience is required for industrial purposes.

Testing Petroleum.

An enquiry has been received whether apparatus can be obtained for testing the flashing point of petroleum. A suitable apparatus is Pensky-Martin's Flash Point Apparatus, list price £5. 5s. 0d. A book of directions is obtainable.

Sprinkling Disinfectant.

In Egypt and some of the Colonies there is a demand for an apparatus for sprinkling disinfectant, consisting of a cistern to be carried on the back, a pump to be worked by the right hand, and a nozzle and spray to be held in the left. It is used to destroy vermin in public buildings. It is made in France, and costs about 30s., and makers in this country might think about producing an article of the same sort.

Root-clearing.

Enquiries are occasionally made as to machines for removing the roots of trees, an operation which of course greatly improves the ground for agricultural purposes. In this country it is usually done by manual labour, gunpowder being sometimes used, but in a new country a more effective plan is desirable. Small scrub may be rolled down with a heavy roller and burnt. Trees are removed in Australia by a machine known as the "Forest Devil," a sort of capstan with block and tackle. There are two varieties, one hand, the other horse-power. There is also a hydraulic stump extractor, the cylinder of which, on the top of a tripod, is raised by the action of the pump and brings up the root: and an extractor worked mechanically with ratchet and hand. An American hand extractor is well spoken of, which is said to have a pulling strain of 20 tons, and costs about £10. In Canada a machine is made which raises the stump by means of a 3-in. double screw running through a metal cap supported by the legs; prices (without the wood-work) about \$57 to \$62 according to length.

Preserving Steel Sleepers.

We have seen an expert opinion that a pickling process would not help sleepers which have begun to rust, but the reverse, as it would be impossible to get rid of the acid. If compressed air is available, a wire brush fixed in an air drill or a sand blast can be used; the latter would be the more effective. A sand blast outfit would cost about £125, exclusive of the cost of a wooden hut in which the operation must be conducted, and the compressor, which would be about £160 (if belt driven). Both tanks should be used for coating sleepers and it would be better to warm them before letting in the liquor. One tank should be put higher than the other, so that pumping is only required in one direction.

Salt soil is the one thing that steel (or any iron) sleepers will not stand, and wood is probably preferable on such lengths.

Roofing Materials for Hot Climates.

This is a very important requisite, and there are many articles on the market, but it is doubtful whether any one possesses all the desiderata. The material should be waterproof, a non-conductor of

heat, light in weight, unbreakable, non-inflammable; it should not harbour insects or foul the rain-water, and should be cheap, easily fixed and durable.

Galvanized corrugated iron sheeting possesses all these qualifications except that of keeping out heat; where it is used a large air space should therefore be provided by a ceiling allowing a free circulation of air. It oxidises quickly near the sea and is hardly suitable in such a position; but generally speaking it is the best material in point of simplicity, cheapness and durability.

Tiles, of which there are some special varieties, such as "Broomhall" and "Kohler," are satisfactory generally, but are expensive and liable to be broken.

Tilestone is a kind of calcareous cement, made in the form of a powder and applied by mixing with water in the usual way. It is applied as a coating to ordinary roofing materials such as boarding, corrugated galvanized iron sheeting, or thatch. It forms a smooth and clean surface that offers no harbour for insects, is non-combustible, requires no skilled labour for its application, and a roof of either boarding or corrugated iron sheeting covered with Tilestonite is moderate as to weight and cost. It is claimed by the makers to be thoroughly waterproof and a non-conductor of heat. Of its durability we are unable to speak. Some buildings on the West African Government Railways were experimentally covered with Tilestonite and favourable reports were received of its capability for keeping out the heat.

Willesden canvas is light, unbreakable, easily fixed, and when painted offers a clean waterproof surface. It has, however, very little power in resisting heat, is inflammable and unless frequently painted soon deteriorates. On this account, although of moderate cost in the first instance, it cannot be considered a very cheap material. Its durability depends entirely upon the composition of the bedding and paint, and upon the care with which it is laid. It should be well bedded in a coat of thick white lead, and afterwards painted with three coats of good white lead paint without driers or adulterants. If this is done and it is kept periodically painted it may be made to last some considerable time.

McIlwraith's Broomloan Roofing Canvas is a strong unprepared canvas, and what has been said above with reference to the Willesden Canvas applies to this material. It is somewhat cheaper than Willesden Canvas in its first cost, but as it takes more paint to bed and cover the ultimate cost may be taken to be about the same.

McIlwraith's Prepared Flexible Roofing Canvas, No. 53, is a canvas of moderate substance, completely imbedded in a composition of oxidized oil and some pigment—apparently ochre—and is largely used for the roofing of railway carriages; it is very flexible, so does not readily crack. All that is necessary to preserve it is one bedding

coat of thick white lead to stop all joints and cracks in the boarding and two coats of white lead after laying. The remarks as to Willeeden Canvas apply to this. It is somewhat more expensive than the last two materials and requires more skill in laying, but it can be laid in less time. It is made in widths up to 10 ft. 6 ins.

Compressed Cork consists of small fragments of cork compressed together to form a slab—made in various thicknesses from $\frac{3}{4}$ in. to $2\frac{1}{2}$ ins.—and is applied by bedding it in cement on thin boarding and rendering the surface with a thin coat of Keene's or other suitable cement. This forms a covering impervious to water and with considerable power of excluding heat. It has a smooth clean surface, the cork slabs are not easily broken, and although in themselves combustible, used as above described, they could not be set on fire from the outside. It is rather expensive.

Asbestile is entirely of a mineral nature, being composed of Asbestos fibre and Silicate of Lime compressed into sheets—usually $\frac{3}{16}$ in. thick, and for roofing purposes secured to battens or boarding with copper clips and nails. This is a new material which appears to be waterproof, it is a non-conductor of heat—so far as so thin a material can be—is light, not easily broken, non-combustible, will not harbour insects, presents a clean surface for the collection of rain-water, and is moderate as to cost. With regard to its durability we have no data upon which to form an opinion—except that a material which will resist the action of water and heat may be presumed to be durable. It is said to have stood well in positions exposed to very heavy rains. It is also made in sheets $\frac{3}{16}$ in. thick. This thickness will still better keep out heat and is stronger, but it is somewhat expensive.

Uralite is a Russian invention. It is composed of the same mineral matter as Asbestile and is made of the same thickness, $\frac{3}{16}$ in. It is a new manufacture in this country. To render it perfectly waterproof it requires to be dressed with boiled linseed oil and a little red and white lead after fixing. It is about the same price as Asbestile.

Calmon's Asbestos Slate is also similar to Asbestile. It is made in sheets 40 ins. square and from $\frac{1}{8}$ in. to $\frac{1}{2}$ in. in thickness. For roofing purposes $\frac{1}{8}$ in. and $\frac{1}{4}$ in. are mainly used. It possesses much the same properties as Asbestile. It is somewhat cheaper than Asbestile or Uralite.

John's Asbestos Roofing is another application of Asbestos to roofing purposes and is an American invention and manufacture. It consists of a canvas foundation saturated with a waterproofing material and covered on both sides with a very thin sheet of Asbestos felt. It is laid on boarding, to which it is secured by nails and the laps cemented. It is perfectly waterproof, light and clean. It is claimed to be proof against "burning sparks and cinders," but if large fragments of burning matter fell upon it there would be great

risk of the Asbestos blistering and the waterproof composition—which is of a bituminous nature—taking fire.

Wire-wove Waterproof Roofing consists of waterproofed paper boards made upon a foundation of fine steel wire gauze, and for roofing purposes painted and sanded. It is used by nailing it to the rafters, and cross battens fixed to take the horizontal joints, the vertical joints being covered with wood fillets and the horizontal joints simply lapped. This roofing is very light and inexpensive, it has a clean neat appearance, and has been largely used for bungalows, cricket pavilions, &c. It is claimed to be “non-inflammable,” but this is hardly correct, it burns readily, it has no heat-resisting properties, and considering the high winds of the tropics there would be great risk of its being stripped off unless laid on boarding. Its durability would no doubt depend upon its being repainted at frequent intervals.

Asphalted Felt has long been in use as a covering for buildings of a rough and temporary nature. Laid on boarding it forms one of the cheapest roofing materials that can be found, and if tarred and sanded occasionally, it is fairly durable. An objection to it is that it fouls the rain-water, but if the pipes are plugged or removed till the roof has been well washed the water is drinkable.

It is perfectly waterproof, light, unbreakable, and easily fixed, but is, of course, inflammable, and has very little heat-resisting power. It is more fit for out-buildings than for dwellings.

Slag Wool and Silicate Cotton are two names for one material made from iron slag by converting it while in a molten condition into a mass of fibres by means of a blast of air or steam. It is the best non-conductor of heat known and is very largely used in buildings for cold storage. For this purpose it is usually applied loose packed between the boarding of the partitions. It is also made into slabs between galvanized iron wire netting 1 in., 1½ ins. or 2 ins. thick. In this form it might be used for roofing by laying slabs, say 1½ ins. thick on ½ in. match boarding and covering all with galvanized corrugated iron sheeting. This form of roof would be very cool and possess all the qualities required, except that it would be rather expensive.

Expanded Metal is very largely used instead of fir lathing for ceilings and partitions on account of its fireproof qualities. It is also used as a bond for concrete in floors and other fire-proof constructions. It might be used for roofing purposes as lathing secured to 3 ins. by 1½ ins. battens spaced 12 ins. apart nailed on ½ in. match boarding, thus securing a 3 ins. air space for ventilation. The lathing would have to be plastered with ordinary lime and hair plaster, two coats, and floated with Keene's cement.

This would make a cool roofing, be perfectly fire and water-proof, clean and moderate in cost, but somewhat heavy.

"Colonial Roofing," consists of one, two, or three thicknesses (1, 2 and 3 ply) of paper saturated with a bituminous substance and sanded on both sides. It requires to be laid on boarding to which it can be nailed, the joints being cemented. It is perfectly waterproof, and it is claimed that it does not taint water collected on it. It appears to be of a durable nature, but a time test alone can determine this. It is inexpensive, is very light and unbreakable, and can readily be fixed by unskilled labourers. It softens slightly under heat, and is highly inflammable.

For the guidance of persons who desire to compare the cost of these materials, a table is annexed giving an estimate of the weight and cost F.O.B. of a sufficient quantity to cover 100 square feet; but the prices are continually varying and must not be accepted as correct for the present date.

DESCRIPTION.	Weight in lbs.	Price of Materials, F.O.B. at Liverpool.
		£ s. d.
Galvanised Corrugated Iron Sheeting, with double side lap and 6 ins. end lap, 10 ins. by 3 ins., No. 24 S.W.G.	165	0 17 6
Do. do do. do. No. 22, S.W.G.	200	1 2 0
Bangor Slates, 20 ins. by 10 ins., 3 ins. lap	640	1 9 3
Broomhall Company's Tiles	800	1 6 0
Kohler's Tiles	700	2 8 0
Tilestonite $\frac{1}{2}$ in. thick on Galvanised Corrugated Iron Sheeting, No. 26 S.W.G.	560	1 17 0
Do. 1 in. thick on $\frac{3}{4}$ in. boarding	280	1 4 6
Willesden Canvas, D.D. quality on $\frac{3}{4}$ in. boarding, with four coats of paint	230	1 12 4
McIlwraith's Broomloan Roofing Canvas on $\frac{3}{4}$ in. boarding with four coats of paint	230	1 12 4
McIlwraith's Prepared Flexible Canvas on $\frac{3}{4}$ in. boarding, with three coats of paint	270	2 5 0
Compressed Cork, $\frac{1}{2}$ in. thick, bedded in cement on $\frac{3}{4}$ in. match boarding and rendered with $\frac{1}{2}$ in. of Keene's cement	470	2 12 6
Asbestile, $\frac{3}{8}$ in. thick, in squares 20 ins. by 20 ins. on battens, with 3 ins. lap	90	1 14 0
Do. $\frac{1}{2}$ in. thick do. do. do. do.	180	3 6 6
Uralite, $\frac{1}{2}$ in. thick, in squares 2 ft. 4 ins. by 2 ft. 4 ins. on battens, with 4 ins. lap	88	1 16 0
Calmon's Asbestos Slate, $\frac{3}{8}$ in. thick, in squares 40 ins. by 40 ins. on battens, with 3 $\frac{1}{2}$ ins. lap	78	1 12 5
Do. $\frac{1}{2}$ in. thick do. do. do. do.	112	2 19 0
John's Asbestos Roofing on $\frac{3}{4}$ in. boarding	270	1 8 9
Wire-wave Waterproof Roofing, $\frac{3}{8}$ in. thick, sheets 4 ft. by 3 ft., with 4 ins. end lap	72	1 2 4
Compoboard, $\frac{3}{8}$ in. thick	150	1 5 0
Asphalted Felt on $\frac{3}{4}$ in. boarding, tarred	283	0 17 0
Slag Wool in $1\frac{1}{2}$ in. thick slabs on $\frac{3}{4}$ in. match boarding, covered with Galvanised Corrugated Iron Sheeting, No. 24 S.W.G.	465	3 9 0
Expanded metal $\frac{3}{8}$ in. mesh, No. 24 gauge on 3 ins. by $1\frac{1}{2}$ ins. battens nailed over $\frac{1}{2}$ in. match boarding, coated with lime and hair plaster and rendered with Keene's cement	760	1 11 6
Colonial Roofing on $\frac{3}{4}$ in. boarding (3 ply)	284	1 11 0

These particulars do not include nails or screws for fixing except when otherwise stated.

Preserving Papers.

The Secretary of State recently obtained the advice of Dr. T. E. Thorpe, C.B., F.R.S., Principal Chemist of the Government Laboratories, as to the best methods of preserving books and documents from the injury caused by insect and animal pests in tropical climates. We reproduce Dr. Thorpe's letter, which has been communicated to the tropical Colonies in a circular despatch :—

“ GOVERNMENT LABORATORY,
“ CLEMENT'S INN PASSAGE,
“ STRAND, LONDON, W.C.,
“ 25th March, 1907.

“ Sir,

“ With reference to your letter of the 19th ultimo, I have the honour to inform you that records as to the results of anything like systematic study of the efficacy of insecticides other than those applied in connection with field, garden and vineyard operations, are most meagre.

“ In 1888 the British Consul at Swatow called attention to the frequent injury to books which occurred in China, and quoted a remedy which he stated was quite effectual in preventing such ravages. The recipe which he gave for this preparation is as follows, viz.:—Corrosive Sublimate 5 drachms, Creosote 60 drops, and Rectified Spirit 2 lbs.

“ This is an alcoholic solution—methylated spirit or rectified spirit would equally serve—containing approximately 2 per cent. of mercuric chloride and one-half per cent. of creosote. The directions for use were :—Apply with a brush in the joint of the book between every six or seven pages, and in binding add a little of the solution to the glue used, whilst to protect the cover from cockroaches, apply to the cover a thin, clear spirit varnish.

“ Such a preparation I should expect to prove satisfactory ; and it is noteworthy that among the replies received to the enquiry of the Governor of the Bahamas, decided approval is expressed of a preparation of ‘ Corrosive Sublimate, Carbolic Acid and Methylated Spirit,’ which is very similar to that given by the Consul at Swatow.

“ For the preparation and use of such a solution the following instructions may be given :—Dissolve 5 grams. of corrosive sublimate (mercuric chloride) and 60 drops of wood creosote in two pints of rectified spirit (or methylated spirit).

“ In binding books, a little of the solution should be added to the paste and glue used, and the liquid should be applied with a brush to the back of the sewn book before it is fixed in the covers, to the inside of the leather or cloth, and to both sides of the millboard used in preparation of the covers.

“ For the preservation of books that are already bound, the liquid should be applied with a fine brush to the joint of the book between each ‘ sheet ’ of which the volume is composed, and as far as possible to the sewn back of the book inside the cover. In both cases there can be no objection to the application of a thin spirit varnish to the finished covers in accordance with the recommendation already quoted.

“ With regard to the treatment of books and papers for the destruction of insect pests with which they may be already infested, the evidence available is in favour of carbon disulphide. This appears to be effective and it has the merit of spontaneously volatilising even at ordinary temperatures with of course increasing readiness at tropical heat. If an entire room is to be treated, the articles should be lightly disposed so that the carbon disulphide vapour may reach everything and all parts, *i.e.*, books should be taken from shelves, stood on edge and half opened ; bundles of papers should be untied, and opened out as much as possible ; book-cases should, if possible, be moved from the walls, &c., &c. Finally, all fire-places, doors, windows, keyholes, cracks and crevices in connection with doors and windows should be closed by being pasted over and then, before finally closing it up, liquid carbon disulphide should be placed in open vessels in various parts of the room, which should then remain closed for at least twelve hours. When the room is again opened it must be remembered that carbon disulphide vapour forms, like coal-gas, an explosive mixture with air, and no light must be brought near until doors and windows have been opened for some time and all smell of carbon disulphide has disappeared.

“ For operations on a smaller scale, no better arrangement can be suggested than an equivalent of the zinc-lined box mentioned as being used in Bermuda. Probably the following would be found more convenient than an actual box :—Prepare a base of the dimensions required, say 5 ft. by 3 ft., of metal, *e.g.*, galvanised iron plate or of wood covered with lead, having just within the border a gutter say one inch deep which, when filled, with water is designed to act as a water seal. A cover should be provided of a convenient height, say 3 ft., and of such length and breadth that when placed upon the base it shall fit into the water-seal gutter. This cover might be of light metal, like galvanized iron plate, or be made in the form of a light iron-work frame fitted with air-tight glass panels, and where it was desired to fully utilize the space within the small chamber thus formed, shelves could be provided by a light metal stand.

“ Placing now, for a chamber 5 by 3 by 3 feet, a breakfast saucer half filled with liquid carbon disulphide on the base of the chamber, the articles to be treated would be lightly disposed around and above it, and the cover then lifted into position and so kept for at least

twenty-four hours, care being taken that the channel is kept full of water so as to preserve the water seal.

"In all cases the inflammable character of carbon disulphide vapour should be borne in mind and no light be brought near where this substance is in use.

"As a general protective of books, papers, &c., no better substance than naphthalene can be recommended. This substance can be placed in bookcases, presses, cupboards, boxes, &c., without injury to the books or papers and has the advantage of being a solid which volatilises but slowly, and so needs to be replenished only at comparatively long intervals.

"I have, &c.,

"T. E. THORPE.

"The Under Secretary of State,

"Colonial Office,

"Whitehall, S.W."

MEDICAL NOTES.

The Sleeping Sickness Conference.

At the invitation of the British Government, an International Conference was recently held in London to consider the question of Sleeping Sickness. The sittings lasted from June 17th to June 24th, and the Governments represented were those of Great Britain, France, Germany, Italy, Portugal, the Congo Free State and the Soudan. The British representatives were Lord Fitzmaurice, Sir Walter Foster, M.P., Sir Patrick Manson, K.C.M.G., Professor Rose Bradford, Mr. E. A. W. Clarke, of the Foreign Office, and Mr. H. J. Read, of the Colonial Office. The delegates were not empowered to prepare an actual International Convention, and the results of their labours accordingly took the form of a report, which will, it is hoped, form the basis of a definite agreement to be drawn up at a future conference. Resolutions were passed in favour of the establishment of a Central Bureau in London, to work in close touch with local Bureaux to be established by the countries participating; and of the preparation by the Central Bureau of pamphlets recording the present stage of our knowledge on the subject of the disease, and of an official chart indicating its geographical distribution, as well as the distribution of the flies which transmit or are suspected of transmitting the disease. A general report was drawn up, the main points in which are summarised below:—

Sleeping sickness is produced by the *Trypanosoma Gambiense*, and its transmission is due to the *Glossina palpalis* or Tsetse fly. It is probably also transmitted by other species of *Glossina*, but there is no evidence that it can be transmitted in any region free from the *Glossina*.

Steps should be taken to disseminate among medical officers and missionaries in the districts affected or threatened a knowledge of the symptoms of sleeping sickness in its early stages.

The removal of infected persons to districts at present immune should be prevented as far as possible.

The authorities of neighbouring territories should keep one another fully informed of all facts of importance in connection with the disease.

Each administration should communicate to the Central Bureau an account of the results of the measures which it adopts, in order that all the administrations may profit by the experience gained.

Treatment by atoxyl produces great amelioration of the disease, if not an absolute cure, and it should be extended as far as possible. In some cases patients can be removed to districts which are free from *Glossina*, and where consequently there is no risk of other persons being infected from them.

European settlements should as far as possible be established in districts free from *Glossina*.

Trees and undergrowth on the banks of rivers in infested districts should be cleared so as to remove the ordinary breeding places of the *Glossina*. Dwelling places should be protected by means of wire gauze, which will also be valuable as a protection against the malarial mosquito.

A systematic programme of research work into the life-history of the *Trypanosoma* and the *Glossina*, the possibility of the former being transmitted by other insects, and of animals, domestic or wild, serving as intermediate hosts, should be undertaken; and the study of the effect of treatment by atoxyl, and other suggested remedies should be continued.

The Conference will re-assemble on the 1st of November next, when it is hoped that the conclusion of a definite agreement may be possible.

The above particulars are taken from an interesting article by Professor R. Blanchard, one of the French delegates, which appeared in the *Semaine Médicale* of July 3rd, and has been reprinted in pamphlet form. The magnitude of the problem to be solved is graphically stated by M. Blanchard in the following passage:—

“At the moment when the partition of Africa has been accomplished, when its pacification has been achieved, when its geographical data have been adequately established, and when consequently colonization might proceed unfettered, a mere fly and a wretched microbe threaten to render useless the efforts accomplished by the colonising nations. The unforeseen intervention of these two creatures, and the terrible epidemic which results from it, are imperilling the definitive establishment of the white race in the new territories which it has conquered at the cost of so much blood and money.”

It is a legitimate source of satisfaction that the British Government should have taken the lead in this arduous and honourable campaign.

Beri-beri.

An important addition to the series of reports that have been published from time to time in connection with the outbreaks of beri-beri in the public institutions in the Malay Peninsula is the preliminary report by Dr. W. Fletcher. So far the results obtained in such experiments have varied, and on close investigation fallacies can usually be detected.

Careful inquiries into all the factors concerned in these outbreaks are essential to the study of the ætiology of the disease.

The three main hypotheses are (1) that the place is infected; (2) that infection spreads from man to man directly or indirectly; and (3) that the cause of the disease is contained in the diet.

Dr. Fletcher's results are in favour of the view that the cause of the disease is contained in rice which has been husked without preliminary boiling, so-called "uncured" rice.

The report states that :—

"During the year 1905 an epidemic of beri-beri broke out in the Kuala Lumpur Lunatic Asylum. Commencing in February it reached its height in July and August, declining somewhat towards the end of December.

"Out of 219 lunatics treated in the asylum during the year, 94 persons were affected, of whom 27 succumbed to the disease.

"The chief constituent of the rations supplied to the inmates of the asylum was uncured (Siamese) rice, and in view of the fact pointed out by Dr. Braddon that beri-beri occurs chiefly amongst communities with whom such rice is the staple article of diet, it was decided, with the sanction of Government, to place half the lunatics on cured (Indian) rice.

"The Government readily gave their consent, and the experiment was commenced on the 5th December, 1905.

"Amongst 120 patients on uncured rice there were 43 cases of beri-beri (two admitted with the disease) and 18 deaths.

"Amongst 123 patients on cured rice there were two cases of beri-beri, and these both had the disease on admission.

"Ten lunatics actually suffering from beri-beri were put on a diet of cured rice, and all recovered.

"Of 26 patients suffering from beri-beri who were not put on a cured rice diet 18 died.

"None of the 10 lunatics suffering from beri-beri who were placed on a diet of cured rice had a relapse.

"Of the 26 patients suffering from beri-beri who were not transferred to a cured rice diet 16 died during the first attack, and the remaining 10 all developed beri-beri again with the exception of two, who were discharged, being no longer insane. The latter have been lost sight of, and whether either of them subsequently relapsed is unknown.

"Four lunatics who had been on a diet of cured rice for more than five months, and were apparently healthy, were transferred to a diet of uncured rice. Two of these patients developed beri-beri within three months.

"Dr. Fletcher observes that at the commencement of the experiment the opinion was held by himself that rice was neither directly nor indirectly the cause of beri-beri. It was fully expected that the patients on Bengal rice would suffer from beri-beri to the same extent as those who remained on the Siamese variety, and that the result of the experiment would be a refutation of the rice theory. With this in view precautions were taken to provide separate cooking utensils, plates, &c., for each set of patients, in order that the upholders of the rice theory might not be able to point to any possibility of contamination of the Bengal rice with the poison which is supposed to be present in uncured rice.

"Contrary to expectation the result of the experiment, as far as it goes, is to prove the truth of Dr. Braddon's contention that uncured rice is the cause of beri-beri. It remains to be proved whether the cause of the disease amongst the eaters of uncured rice is a poison contained in the rice, or whether there is something essential to the human economy which is supplied by the cured rice whilst it is absent in the uncured.

"Takaki and the Japanese School still hold that a deficiency of proteids in the diet is the cause of beri-beri. As yet it has, unfortunately, not been possible to obtain analysis of the two kinds of rice; but when this is done it will probably be found that the cured rice contains a larger quantity of proteid matter than the uncured. If this be the case the deficiency of proteid matter in the diet may be the actual cause of the disease, or what is more likely the lack of nutritive matter in the rice may induce a condition in the patient which renders him an easy prey to some external agency, bacterial or protozoal, which is the actual cause of beri-beri."

The Government of the Straits Settlements has issued a comprehensive report on the Sanitary Condition of Singapore by Professor W. J. Simpson, M.D., F.R.C.P. The report, which is illustrated by a number of plans and photographs, embodies proposals for the improvement of housing conditions, of the water supply, and of the sewerage system, with a view to the reduction of the death rate, which has continued to be abnormally high.

A somewhat similar report on the sanitation of Colombo, by Dr. A. J. Chambers, M.D., F.R.C.S., Registrar of the Ceylon Medical College, has been issued by the Ceylon Government.

A report on the sanitation of Nairobi and other townships in British East Africa, by Mr. G. B. Williams, A.M.I.C.E., has been issued. He points out that a refuse destructor is not so easily worked in such places as in England, where over 60 per cent. of the refuse is half-burnt cinders, breeze and ashes, containing considerable caloric value. The climate is suitable for Europeans, and malaria is not common, but may become so unless some of the marshes are drained. The defects of Nairobi, which has sprung from nothing to a population of 14,000 in seven years, are largely due to the rapid growth and the haphazard arrangements. Mr. Williams recommends the removal of the Indian bazaar to another place, and the placing of the new Government offices in a park of about 130 acres.

A correspondent writes that "Yerba Maté" or Paraguayan Tea deserves to be more widely known and used among Europeans residents in the tropics and elsewhere. It affords a pleasant and stimulating beverage, without the astringent and acid qualities of the Eastern herb. Medicinally it is known for its mild laxative properties, and is infinitely better than China or Indian tea for persons whose internal machinery is not of the strongest, especially where, as in West Africa, for example, food is often indifferent, cooking worse, and fresh vegetables scarce.

The tea is the dried leaf of *Ilex Paraguayensis*, a plant extensively cultivated in Brazil and Paraguay. It is to the gaucho of the Argentine pampas what the Kola nut is to the West African negro, and is universally used in South America. The gaucho sucks his maté with a tube from a gourd, but cultivated folk brew it just as ordinary tea, and drink it with milk and sugar, and although perhaps it is an acquired taste, it very soon becomes a habit.

Whether Paraguayan tea has properties which serve as a prophylactic against malaria is not certain, but among the lower class peoples living along the creeks and swamps of the Parana and Uruguay rivers, all maté drinkers, malaria is not anything like as prevalent as it might be expected to be.

Paraguayan tea can be obtained in London at about the same price as good China tea.

RAILWAY NOTES.

THE Report of the Central South African Railways for 1906 shows a revenue of £4,782,049, a decrease of £582,570 from the previous year. The open mileage was 2,158, and 406 miles were under construction during the year. Provision for depreciation was made for the first time. The working expenditure was £2,878,713. The workshops are being improved with a view to building rolling stock more largely, and sleeper plantations—mostly red ironbark—are being extended. The percentages of tonnage from the ports were: Cape, 20·91; Natal, 29·79; Lourenço Marques, 49·30.

The General Manager (Mr. T. R. Price) observes that:—

“The serious loss of revenue to each of the Administrations, as the result of the diminution in through goods traffic and the reductions in rates, in the case of the—

C.S.A.R.	...	...	...	...	£532,903
C.G.R.	...	...	...	...	81,522
N.G.R.	...	...	...	...	202,090
C.F.L.M.	...	...	...	...	27,910

Or a total of £844,425

serves to emphasise not only the extent to which the welfare of the coast Colonies is bound up in the prosperity of the interior Colonies, but still more the urgent necessity for reviewing the whole position in the light of altered conditions, with the object of taking measures calculated to lead to the filling in of the interior Colonies with a white population, so as to place the position of the maritime as well as the inland Colonies on a permanently stable foundation.”

The pace has perhaps been too fast. Since the war the railway mileage has increased by nearly 95 per cent., and when the lines now under construction are open the increase will be brought up to 131 per cent.

The Federated Malay States Railways report for 1906, printed at the Government Printing Office at Kuala Lumpur, is excellently

got up and contains many interesting illustrations, the last being a set showing "train derailed by collision with a wild elephant," and "the elephant that caused the trouble." Both parties appear to have suffered badly, and while the elephant sacrificed its life it had good reason to be satisfied with the effect on the train. This incident, however, happened so far back as 1894, and we presume has not been repeated. The mileage now open is 428 miles 67 chains, besides sidings. The capital account for open lines is \$41,275,005; the revenue for the year, \$4,774,124, and the working expenses, \$2,991,762; but of this \$516,744 were spent in relaying certain sections with heavier rails. On the Johore State Railway 110 miles of jungle had been cleared. Mr. C. E. Spooner, the General Manager, observes that: "At the present moment the Federated Malay States Railways have the heaviest engines and rails and the longest passenger carriages to be found on any metre gauge railways in the world, and I can confidently state that this departure has in every way proved successful."

In the Federated Malay States the cost of wood fuel per engine mile in 1906 was 13·99 cents, or 3·9d. The corresponding figure for coal in West Africa was 5½d. to 7d. On the Uganda Railway the cost is 2·44d. per mile for wood fuel.

Tubular iron telegraph poles were replaced by old 46½ lb. rails for a distance of 89 miles.

The passenger traffic between Hong Kong and Canton by steamer is about 2,250 each way per day, and the fare varies from 35 to 60 cents. The railway could not charge less than 60 cents, and this rate would not pay if adopted generally. The principle of varying the rates per mile according to outside competition is much questioned, but it is a common one, and convenient unless pushed to unreasonable limits. Railways have the inducement of speed and superior convenience, but third and fourth class passengers, upon whom the success of the line depends, will pay little extra for these advantages.

In Lagos the whole of the traffic on the railway is penalised by water competition up to the 60 mile point.

The Ceylon railways made in 1905 a profit of 5·86 per cent. on the expenditure, and as about half of that expenditure appears to have been paid off, the pleasing figure of 11·35 represents the profit on the outstanding capital. In every year from 1862 to 1905, with the exception of the first eight years and 1894, there was, even in

years of depression, after payment of working expenses and interest and allowing for the sinking fund, a balance from the receipts, and the aggregate of these balances is no less than Rs. 39,560,509—more than half the whole capital expenditure. The position was practically maintained in 1906. These figures speak for themselves, and bring out not only the very successful financial results of the Ceylon Government Railway as a whole, but also the great support it has given to the general revenue of the Colony, and may perhaps be taken as additional evidence of the importance of developing and fostering in every reasonable way an undertaking so important to the Colony.

Two sessional papers have been published in Ceylon on landslips and washaways on the railways. It is considered that any line necessitating cuttings through such a fissured and treacherous formation as exists in the hill districts of Ceylon must be liable to interruptions by “rock-slips,” and that nothing can be done to prevent such occurrences entirely, but that the condition of the adjoining hills should be carefully watched with a view to minimising the possibilities of accidents. As to washaways, it is pointed out that it is extremely difficult to gauge the extent of bridge and culvert accommodation required, and it is only after experience of floods that the proper waterworks can be decided on. During the last north-east monsoon no less than twenty-nine slips, washaways and floods occurred on the Northern Line between Kurunegala and Pallai. Fifty-one additional openings for waterways were recommended.

General experience shows that any tropical line which is built with due regard to economy is liable to such mishaps. It is practically impossible to foresee at what points the weight of water in flood time will soak the embankment to a dangerous extent, and if an opening were made at every place where this event seems possible, the cost of construction would be greatly increased. But careful watching is of course essential to prevent accidents.

We see from the following extract that a railway report may contain valuable sociological material: “Under soap there has been a noteworthy increase of 69 tons, which may perhaps indicate a growing feeling after a higher level of existence.” (Lagos Railway Report).

REVIEWS AND NOTICES.

Canada (painted by T. MOWER MARTIN described by W. CAMPBELL.
A. and C. Black, 20s. net.)

THIS is one of the publishers' "Beautiful Books" series and is charmingly illustrated by 77 pictures in colour of well-known Canadian places and typical scenes. There is a delicate suggestiveness in these illustrations which recalls old impressions to those who have travelled in Canada, and with those who have not will stimulate the desire to do so. Mr. Campbell's description of the beauties of Canada is written with unflagging spirit and will compare favourably, we think, with any of the many glowing accounts which have been penned since the construction of the Canadian Pacific Railway. He does not, however, by any means confine himself to the point of view of the passer through pleasant places, but comments on the character and promise of the Dominion with the special knowledge of a Canadian. Before all the potential wealth of the country he puts, as the most hopeful factor, the promise of a type of personality of uncommon force of character. There is undoubtedly an earnestness in the utterances of press, platform and pulpit in Canada which bespeaks high ideals and a keen feeling of responsibility. Mr. Campbell believes that the welfare of Canada depends mostly on the growth of the rural population. "Commerce," he contends, "is all right in its place; but it must be kept in its place. Mining as an industry may be a great asset in the wealth of a country, but it does not make for the best citizenship in either workmen or owner." Canada will certainly shine with the sterling virtues of an agricultural population, which will go on increasing till the west is studded with great towns. Of the advance of Manitoba, Mr. Campbell quotes the following vigorous lines from the pen of a Canadian poetess:

"Softly the shadows of prairie-land wheat
Ripple and riot adown to her feet,
Onward and onward, her fertile expanse
Shakes as the tide of her children advance;
Onward, and soon on her welcoming soil,
Cities shall palpitate, myriads toil."

Twentieth Century Impressions of Ceylon. (Edited by ARNOLD WRIGHT. *Lloyd's Greater Britain Publishing Co. Ltd.*).

This splendid volume is both a scholarly account of the history and character of Ceylon and an up-to-date directory of its public and commercial men. It is extraordinarily complete from every point of view, and many able and willing hands have been engaged on its 916 pages. For general interest we would pick out the description by Mr. Arunachalam of the races, religion, languages, castes and customs of the island.

Ceylon.

A very full review of the progress of the Colony from 1904 to 1907 has been issued by Sir Henry Blake. He explains that, owing to a practice of treating large sums in the accounts as recoverable advances, when in fact they were not recoverable but had been spent, a surplus had been shown which was far from being a real one. At the end of 1904 it was ascertained that the true surplus was about Rs. 1,000,000, while the supposed surplus at the end of 1903 was put at Rs. 4,500,000. The case illustrates in a striking manner the confusion which results from a loose method of dealing with expenditure, and Sir H. Blake is to be congratulated on the vigour with which he took the matter in hand. The result of the disclosures was that the works schemes had to be reconsidered. A clear account is given of the present projects. There is an interesting chapter on the use and abuse of opium, the import duty on which of Rs. 2 per pound has been doubled this year. A feature which might well be envied in some other Colonies is that the salaries of the public service have been raised from 10 to 15 per cent. In conclusion, Sir H. Blake expresses his obligations to the Legislative Council in terms which it is a pleasure to read: "In all my experience of Legislative Assemblies I have never known one more free from acerbity, more courteous in debate, more careful in the consideration of the business before it, or more instinct with that capacity for compromise within reasonable bounds without which no deliberative assembly can satisfactorily discharge its duties."

Colonial Laws and Courts (reprinted from "Burge's Commentaries on Colonial and Foreign Laws," edited by A. WOOD RENTON and G. G. PHILLIMORE. *Sweet and Maxwell*).

This valuable account of the legal systems in the different parts of the Empire has been brought up to date by the editors with the assistance of a large number of Colonial lawyers. The care taken to include recent changes is evidenced in the introductory statement

by the references to the substitution, which has only just been agreed to, of Roman-Dutch law as an alternative subject to English real property law in the Bar examinations, to the amalgamation of Lagos and Southern Nigeria, and to the Anglo-French New Hebrides convention as an example of extra territorial jurisdiction.

Cession of a place by one Power to another does not affect its laws and customs, and many parts of the Empire have accordingly retained the imprints of previous possession. Thus Roman-Dutch, French, Spanish, Italian and Ottoman systems are all to be found in force in our possessions, and have held their ground on the whole with remarkable success. The origin and present position of these jurisdictions are stated fully and carefully. The task is easier where the places dealt with possess British systems, but great pains have everywhere been taken to analyse the statutes and instruments relating to the systems of law and the constitution of courts. It is almost hypercritical to remark that Ashanti is not, as stated on page 263, part of the Gold Coast Colony. It is a separate territory, although administered under the government of the Gold Coast Colony.

The Ancient Ruins of Rhodesia. (By R. N. HALL and W. G. NEAL. *Methuen & Co.*, 10/6 net).

Great Zimbabwe. (R. N. HALL. *Methuen & Co.*, 21s. net).

These volumes have reached second editions. The interest which Mr. Bent's researches aroused in the Mashonaland ruins has been kept fully alive, and no doubt much discussion on the origin and meaning of these prehistoric works has yet to come. There is perhaps no place where the mystery of monuments creates a deeper curiosity. Here as in some other countries the ruins are the sole record of a speechless past, but here is added the secret of an immense population, the name and origin of which are unknown, as their exodus is inexplicable. The riddle can only be solved by comparison with the results of investigations elsewhere, and it would be idle to dogmatise at present, but Messrs. Hall and Neal's works will have an abiding value for their careful and attractive statement of the character and condition of the works.

The Pocket Guide to the West Indies. By ALGERNON E. ASPINALL. *Stanford*, 6/-.)

This handbook, the author of which is the Secretary of the West India Committee, will be of the greatest value to the increasing number of English and American tourists who visit the West Indian Colonies. Besides the practical information as to the steamship routes, fares, hotel accommodation and prices, etc., indispensable to

a work of this character, it contains in a compact and readable form notes on the complicated and romantic history of the various Colonies, and information with regard to their present financial and commercial position and natural resources. There are a number of well-selected illustrations, mainly from photographs taken by the author, and a complete set of excellently printed maps, including a reproduction of a quaint "Topographical Description and Admeasurement of the Yland of Barbados," originally published in 1673. Visitors to the West Indies will find Mr. Aspinall's book invaluable, and even those who are denied the opportunity of visiting them will find that it well repays perusal.

Victoria.

A parliamentary paper has been compiled by Mr. T. G. Watson, Clerk of the Legislative Assembly, entitled "The first fifty years of responsible government in Victoria," and contains a succinct retrospect and a well condensed summary of the present position. The total private wealth in the Colony is put at £313,851,000, at which figure the Colony ranks third in the world in accumulated wealth per caput. The statistics indicate a wide and increasing diffusion of this wealth. It is mentioned that in recent years lines on the standard gauge of 5 ft. 3 ins. have been opened at an outlay of less than £1,450 per mile, and the Parliament of Victoria is no doubt entitled to great credit for the investigations and exertions which have made this result possible.

Trinidad Oilfields.

The Government of Trinidad has published an interesting report by Mr. Cunningham Craig on the Central and Northern Anticline in the Western District, in continuation of his previous report on the Southern Anticline. Mr. Cunningham Craig examines in detail the question of the origin of the famous "Pitch Lake," and gives an elaborate description, illustrated by a map, of the geological structure of the whole district, with an account of the numerous indications of oil occurring in it. He considers that the prospects of oil production throughout a large part of the area appear distinctly good.

The Surveys of British Africa. (Second Annual Report of the Colonial Survey Committee). *Colonial Reports, Annual Series.* No. 532. Price 3s. 1d.

This Report contains an account, illustrated by maps and photographs of the work done under the direction of the Colonial Survey

Committee during the year 1906-7. This Committee is only concerned with the surveys so far as Imperial interests are concerned, the Colonies having their own survey departments. The geodetic triangulation of the Cape Colony and Natal was completed in 1892, and that of the Transvaal and the Orange River Colony, commenced in 1903, is now practically finished. Topographical maps of these Colonies and of the Orange River Colony are being produced by the Committee. No proper topographical maps exist of the Transvaal, and we do not find that any are being produced. At the beginning of the Report the work of the past year is summarised as follows :—

Topographical Surveys.—A total area of about 49,000 square miles has been topographically surveyed in the field, as under :—

Orange River Colony	...	...	8,000 sq. miles.
Cape Colony	...	...	17,000 „ „
East Africa...	...	...	2,400 „ „
Uganda	...	...	250 „ „
Gold Coast (includes work previously in hand)	...	...	16,000 „ „
S. Nigeria (partial)...	...	...	5,000 „ „

Longitude Expedition.—The results of the Nigeria Longitude Expedition have been computed ; their accuracy is very satisfactory.

Geodetic Triangulation.—The British South Africa Company has completed the measurement of the meridian 30° E. of Greenwich as far north as a point within 70 miles of Lake Tanganyika.

Geographical Explorations have been proceeding in the Anglo-Egyptian Sudan.

Cadralstal Surveys have been in progress in the Anglo-Egyptian Sudan, Gold Coast, Uganda, and East Africa. In the last Protectorate an area of 870,267 acres was surveyed during the year. In the Sudan 578,000 acres have been surveyed during the year.

Boundary Commissions.—Two Commissions have been, and are still, at work along the W. frontier of Uganda, and the N. frontier of Northern Nigeria, respectively.

Maps Published.—General Maps have been published of British Central Africa, the Gold Coast and Northern Territories, and the Gambia.

Boundary maps have been published of the Anglo-Portuguese (Zambesi) frontier, and the Anglo-German (Niger-Cameroon) frontier south of the Cross River ; provisional sheets have been printed of the Anglo-German frontier east of Lake Victoria.

The following topographical sheets have been published :—

Orange River Colony (military edition) ...	...	5
The Cape Colony ...	...	6
East Africa...	...	1
Gold Coast ...	...	2
Africa $\frac{1}{1000000}$ series ...	...	10
„ $\frac{1}{250000}$ compilations ...	...	21

Inspection.—An independent inspection of the Survey Departments of East Africa and Uganda was made during the year.

Arrangements have been made for a class of civil and military officers in colonial employment to assemble each year at Southampton about the end of May, to enable them to make traverse and reconnaissance sketches of the routes in their districts.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ASHTON, T.	22 Oct., '07	HALL, T. L.	1 Jan., '08
ASH, W. R.	25 Nov., '07	HART-DAVIS, C. H. ...	28 Dec., '07
BONNYMAN, Capt. F. J. C.	16 Oct., '07	HUNTER, C. H., I.S.O. ...	18 Nov., '07
BUDGE, Lieut. A. K. ...	6 Oct., '07	Sports Club, St. James'	
BALSTONE, A.	6 Oct., '07	Square, S.W.	
BERINGER, Dr. F. J. A.	22 Nov., '07	IRVINE, Maj. R. A. ...	2 Dec., '07
BLY, W. A.	25 Nov., '07	KELK, Rev. W. H. ...	28 Nov., '07
COGILL, F.	13 Nov., '07	KEYWORTH, Capt. R. D	24 Sept., '07
CRAGGS, G. H.	5 Dec., '07	MACDOWELL, Sergt.	17 Dec., '07
CARTHEW, Lt. T. W. C. ...	1 Oct., '07	B.H.L.	
COLLINS, E. V.	18 Nov., '07	MONTGOMERY, Dr. H. B. S.	25 Nov., '07
CARTER, Lt.-Col. C. H. P.		MATHIESON, Corp. G. V.	
C.M.G.	6 Oct., '07	McKELLAR, F. L. ...	12 Nov., '07
CLARKE, Marcus		NASH, G. W.	7 Jan., '08
DEACON, T.	2 Oct., '07	OPIE, G.	5 Dec. '07
DAVIS, F.	7 Dec., '07	ORAM, Miss J.	14 Oct., '07
ELDRED, Dr. A. G.	6 Oct., '07	OLIVER, Lt. G. B. ...	8 Oct., '07
ELKAN, Lt. C. J.	6 Feb., '08	PACKWOOD, G. H. ...	8 Oct., '07
Junior Naval and		PHILBRICK, A. J. ...	14 Oct., '07
Military Club, 96, Pic-		POPE, P. N.	18 Nov., '07
cadilly, W.		PHILLIPS, Sergt. J. ...	5 Nov. '07
FISHER, H.	26 Sept., '07	PALK, D.	25 Nov., '07
GRANNUM, R. C.	29 Sept., '07	PEER, F. J.	5 Nov., '07
GUGGISBERG, Maj. F. G.		PARKER, W.	9 Jan., '08
GRAINGER, F.	1 Dec., '07	QUARTEY, R. E.	31 Oct., '07
HAY, Lieut. G. W.	13 Oct., '07	ROSE, Capt. R. A. de B.	25 Sept., '07
LANGLEY-HUNT, Dr. E.,	8 Oct., '07	ROSS, A. C. J.	22 Nov., '07
C.M.G.		REANEY, C. T.	11 Dec., '07
HOBBS, H. J.	21 Dec., '07	RICHARDSON, Sergt. J. C.	15 Dec., '07
HOUGHTON, W. J.	5 Nov., '07	RALPH, Dr. C. H. D. ...	29 Dec., '07

GOLD COAST—continued.

SAICH, Sergt. H. C. ...	7 Dec., '07	UNDERHILL, Lt. C. F. ...	24 Oct., '07
SYMONDS, Capt. C. B. O.		WHEATLEY, L. H. ...	25 Sept., '07
SHELLEY, Lt. E. V. M. ...	1 Nov., '07	WILLIAMSON, A. ...	5 Nov., '07
SODEN, Capt. G. W. C. ...	5 Nov., '07	YOUTHED, L. H. ...	7 Dec., '07
TWITCHEN, Sergt., G. W.	14 Oct., '07		

SIERRA LEONE.

ADDISON, W. ...	28 Oct., '07	JACKSON-MOORE, Dr. J.	16 Oct., '07
BOULTON, C. H. ...	25 Sept., '07	JOHNSON, E. O. ...	9 Dec., '07
BARKER, E. G. ...	5 Nov., '07	LEMESURIER, Maj. F. N.	22 Nov., '07
COMBER, J. R. W. ...	25 Sept., '07	MAXWELL, Dr. J. C. ...	13 Nov., '07
DAWSON, Dr. J. B. H. ...	25 Sept., '07	MAY, W. E. ...	28 Sept., '07
DU BOULAY, E. ...	29 Sept., '07	MORGAN, W. ...	1 Dec., '07
EVELYN, E. E. ...	12 Nov., '07	POOL, J. ...	31 Jan., '08
GOUGH, F. H. ...	25 Sept., '07	REID, J. M. ...	25 Nov., '07
GREENWAY, J. J. K. ...	16 Oct., '07	SWAINSON, J. ...	7 Oct., '07
GOODWIN, Lt. H. ...	22 Dec., '07	SUPPLE, Lt. W. H. ...	15 Dec., '07
GILL, Lt. R. H. ...	22 Oct., '07	c/o Sir C. R. McGregor,	
HEARN, R. W. ...	1 Dec., '07	Bart. & Co., 25, Charles	
HUDSON, A. ...	16 Dec., '07	Street, S.W.	
HEARN, W. A. ...	28 Oct., '07	WILDING, O. ...	29 Sept., '07

GAMBIA.

ALIX, Miss M. ...	20 Oct., '07	PRYCE, H. L. ...	2 Nov., '07
BRACKEN, T. B. ...	12 Oct., '07	PUCKERING, W. ...	4 Oct., '07
HOOD, Dr. T. ...	23 Sept., '07	SPROSTON, Lt. H. F. ...	11 Nov., '07
HART, T. W. ...	17 Nov., '07	SANGSTER, G. H. ...	2 Nov., '07
HOPKINSON, Dr. E. ...		STONE, Sergt. G. ...	16 Dec., '07
D.S.O. ...	2 Nov., '07	TOWNSEND, W. R. ...	30 Oct., '07
KINGDON, D. ...	10 Oct., '07	VAUGHAN, E. ...	27 Oct., '07
McCALLUM, J. K. ...	12 Nov., '07		

SOUTHERN NIGERIA.

ADAMS, Lt. G. S. C. ...	5 Dec., '07	BROWNE, Dr. A. J. A. ...	10 Oct., '07
AINSLIE, M. ...	6 Oct., '07	BROUNGER, S. G. ...	3 Nov., '07
ASTON, J. ...	14 Oct., '07	BAILEY, W. ...	15 Dec., '07
ANSON, Hon. F. C. M. ...	4 Oct., '07	COX, P. ...	30 Oct., '07
BLAIR, Capt. A. H. ...	22 Dec., '07	Royal Societies Club,	
Sports Club, St.		S. James' Street, S.W.	
James' Square, S.W.		CLINCH, F. A. ...	18 Nov., '07
BONHAM SMITH, R. ...	22 Dec., '07	COCHRANE, W. G. ...	4 Oct., '07
BLY, J. E. ...	28 Nov., '07	CHILD, Lt. H. A., R.N.	12 Nov., '07
BAKER, T. W. ...	14 Oct., '07	CUMMINS, E. O. ...	16 Nov., '07
BAILEY, J. ...	14 Oct., '07	COAST, P. J. ...	13 Nov., '07
BERGERSEN, S. H. ...	14 Oct., '07	CROFT, T. ...	
c/o Messrs. H. S. King		CULLEN, G. ...	22 Dec., '07
& Co., 9, Pall Mall,		CARLEY, W. J. ...	22 Dec., '07
S.W.		DALLIN, T. ...	29 Nov., '07
BRAMISH, Capt. W. E. ...	30 Sept., '07	DELVES-CLOUGH, H. ...	14 Oct., '07
BAXTER, Sergt. A. ...	25 Nov., '07	DAVIE, T. S. ...	

SOUTHERN NIGERIA—*continued.*

EGERTON, Sir W., K.C.M.G. ...	9 Oct., '07	MOULE, Lt. L. H. D. ...	22 Sept., '07
ELGEE, Capt. C. H. ...	20 Sept., '07	NEWMAN, D. A. ...	27 Sept., '07
EVANS, A. ...	12 Nov., '07	NORTON, Lt. A. E. ...	5 Nov., '07
ELLIS, Lt. A. J. ...	25 Nov., '07	NICOL, A. L. J. ...	3 Dec., '07
ELLIS, Dr. H. R. ...	7 Dec., '07	NICOLL, Sir W. ...	13 Dec., '07
ECCLES, F. D. ...	9 Nov., '07	ORPEN, R. T. ...	15 Dec., '07
FERGUSON, C. A. ...	24 Oct., '07	OWEN, O. G. ...	12 Oct., '07
FOWLER, F. D. ...	6 Oct., '07	O'SHAUGHNESSY, Capt. J. J. F., Blenheim Club, St. James' Sq., S.W. ...	23 Oct., '07
FINCH, B. G. ...	15 Oct., '07	O'DEA, Dr. M. E. ...	22 Oct., '07
FITZPATRICK, M. ...	4 Jan., '08	PARKIN, A. W. ...	5 Nov., '07
FOSTER, E. W. ...	26 Jan., '08	PLOWRIGHT, J. T. ...	
FRANCIS, Sergt. C. A. ...	28 Nov., '07	S. Nig. Govt. s.y. "Ivy." c/o J. S. White & Co., East Cowes, I. of Wight	
FINNEY, F. J. ...	11 Jan., '08	PRYCE, H. F. ...	5 Nov., '07
FIRMIN, C. H. ...	28 Sept., '07	PINKETT, F. P. ...	14 Oct., '07
GALLINI, A. M. D. ...	26 Oct., '07	PURVIS, T. H. ...	30 Oct., '07
GREENWAY, J. A. ...	6 Dec., '07	RUDKIN, Capt. W. C. E.	8 Oct., '07
GREWER, Miss J. ...	29 Oct., '07	Army & Navy Club, Pall Mall, S.W. ...	
GRAY, Dr. St. G. ...	6 Oct., '07	RICHARDS, W. H. ...	8 Oct., '07
GILCHRIST, A. M. ...	15 Dec., '07	ROGERS, Dr. W. ...	5 Nov., '07
Sports Club, St. James' Square, S.W. ...		ROBERTS, R. A. ...	5 Dec., '07
GLADSTONE, H. S. ...	29 Sept., '07	ROUTH, Capt. R. L. ...	5 Jan., '08
GOODWIN, Sergt. H. H. ...	22 Oct., '07	ROSS, R. J. B. ...	12 Nov., '07
HELME, H. L. ...	9 Nov., '07	ROSS, W. A. ...	8 Dec., '07
HEATHCOTE, Capt. C. E. ...	24 Sept., '07	RALSTON, W. ...	22 Dec., '07
HUGHES, Lt. R. H. W. ...	10 Oct., '07	ROWLAND, S. ...	22 Nov., '07
HULTON, Lt. H. H. ...	13 Nov., '07	STEVENS, E. G. ...	4 Oct., '07
HARGROVE, R. ...	5 Nov., '07	SHERSTON, Lt. S. A. ...	
HAZELL, J. T. ...	14 Oct., '07	SMITH, H. H. ...	6 Oct., '07
HAWTAYNE, W. H. ...	12 Oct., '07	SHEFFIELD, Capt. G. N. ...	28 Oct., '07
ISHERWOOD, J. ...	14 Oct., '07	SPEED, E. A. ...	16 Oct., '07
JOHNSTON, J. ...	17 Dec., '07	SANKEY, S. L. ...	5 Nov., '07
KELLY, Sir H. G. ...	9 Dec., '07	SMITH, S. ...	30 Oct., '07
KEMPTHORNE, W. M. ...	9 Nov., '07	SAYERS, G. W. ...	20 Oct., '07
LESLIE, J. C. ...	6 Oct., '07	TURNER, A. E. ...	5 Nov., '07
LAWRENCE, Capt. C. T. ...	8 Oct., '07	TYSON, D. ...	
LUCAS, H. R. ...	22 Dec., '07	TAYLOR, V. B. ...	9 Nov., '07
MONEY, Lt. R. ...	7 Dec., '07	UNIACKE, E. W. P. ...	
MIDDLETON, J. ...	6 Oct., '07	WATT, J. ...	25 Nov., '07
MOORHOUSE, Lt. - Col. H.C. ...	24 Sept., '07	WADLEY, H. ...	25 Nov., '07
MACCULLOCH, Capt. B. D.	15 Oct., '07	WELD, O. J. W. ...	26 Jan., '08
Cavalry Club, Picca- dilly, W. ...		WILLIAMS, Lt. R. C. ...	26 Oct., '07
MEIKLEJOHN, Lt. J. R. C. ...	6 Oct., '07	WILLIAMS, J. L. ...	21 Dec., '07
MACDONALD, Dr. P. H. ...	22 Oct., '07	WALMISLEY-DRESSER, Lt. H. J. ...	22 Oct., '07
MOORE, Comm. H. G. R.N.R. S. Nig. Govt. s.y. "Ivy." c/o Messrs. J. S. White & Co., East Cowes, Isle of Wight		WATERSPOON, W. ...	26 Oct., '07

NORTHERN NIGERIA.

AUSTIN, Sergt. R. ...	25 Oct., '07	HOWARD, Hon. O. ...	16 Oct., '07
BYFIELD, B. D. ...	14 Oct., '07	HIGGINS, A. ...	20 Oct., '07
BIGGS, Capt., N. W. ...	5 Oct., '07	JOHNSON, H. W. ...	8 Oct., '07
BLAKISON - HOUSTON, Lieut. J. ...	28 Oct., '07	JARDINE, Miss E. L. ...	14 Oct., '07
BREMNER, Lieut. J. ...	10 Oct., '07	JOHNS, Capt. L. M. ...	
BRACKENBURY, Capt. E. A. c/o Messrs. Way & Co., Billiter Buildings, Billiter St., E.C.	15 Nov., '07	KING, Sergt. G. C. W. ...	11 Jan., '08
BRADSHAW, Capt. H. B. United Services Club, Dublin.	6 Oct., '07	KEMPTHORNE, Capt. H. W.	22 Dec., '07
BRUCE, Capt. R. W. V.	1 Dec., '07	LARMORE, Major H. D., C.M.G. ...	16 Oct., '07
BERESFORD, M. H. de la Poer ...	22 Nov., '07	LAFONE, Capt. A. M. ...	24 Oct., '07
CHAMBERS, W. G. F. ...	1 Nov., '07	LIDDARD, M. L. ...	7 Nov., '07
CLARKE, Miss J. A. ...	8 Oct., '07	LANGWORTHY, Lieut. H. W. Junior United Service Club, Charles Street, S.W.	24 Oct., '07
COVEY, A. ...	27 Dec., '07	MARQUIS, F. A. ...	12 Oct., '07
United Sports Club, Whitehall Court, S.W.		MOISER, Dr. B. ...	5 Dec., '07
CHAPMAN, Lieut. P. ...	16 Oct., '07	MCDERMOTT, F. H. ...	21 Jan., '08
CHAPMAN, H. J. ...	25 Nov., '07	MACKENZIE, Capt. J., V.C. ...	22 Oct., '07
CHARTRES, J. ...	12 Dec., '07	MATTHEWS, Capt. H. de C. ...	13 Nov., '07
DWYER, Dr. P. M. ...	2 Oct., '07	MCGAHEY, Dr. K. ...	15 Nov., '07
Royal Societies Club, St. James' Street, S.W.		McKINNEY, Dr. H. G. ...	11 Dec., '07
EDWARDES, H. S. W. ...	27 Nov., '07	Thatched House Club, St. James' Street, S.W.	
EASTERBROOK, Sergt. F. W. ...	24 Sept., '07	MACLAVERTY, Lieut., C.F.S. ...	29 Sept., '07
ELLIS, Sergt. H. ...	29 Sept., '07	MILLER, Sergt. J. ...	1 Nov., '07
FRANCIS, A. C. ...	25 Dec., '07	NOOTT, Sergt. P. G. ...	3 Nov., '07
FALCONER, J. D. ...		NEVILL, G. W. H. ...	27 Sept., '07
c/o Imperial Institute, Kensington, S.W.		OLIVER, Sergt. T. E. ...	17 Nov., '07
FLETCHER, Lieut. R. S.	12 Nov., '07	ORMSBY, G. ...	18 Dec., '07
FRASER, W. K. ...	20 Oct., '07	PIRIE, G. J. ...	22 Nov., '07
GOLD, C. ...	29 Sept., '07	PARODI, E. V. ...	12 Nov., '07
GLENTWORTH, J. ...	28 Sept., '07	c/o of Messrs. Way & Co., Billiter Buildings, Billiter Street, E.C.	
GALE, F. B. ...	20 Jan., '08	PRICE, Capt. J. F. N. ...	24 Oct., '07
GREENE, Capt. A. D., D.S.O. ...	16 Oct., '07	ROSS, Lieut. A. L. ...	10 Oct., '07
HOLLINGWORTH, J. ...	11 Nov., '07	ROBINSON, Sergt. S. T. ...	28 Oct., '07
HOPKINSON, Capt. J. H., D.S.O. ...	27 Sept., '07	ROBERTS, Capt., I. D'E.	24 Sept., '07
HASTINGS, A. C. G. ...	4 Oct., '07	RICKETTS, F. R. R. ...	17 Nov., '07
St. Stephen's Club, S.W.		SWANN, Dr. A. J. T. ...	14 Jan., '08
HOLDING, Sergt. H. W.	18 Oct., '07	STRICKLAND, Lieut.-Col. E. P., D.S.O. ...	18 Oct., '07
HARRY, Sergt. L. ...	12 Dec., '07	Junior Naval and Mili- tary Club, 96, Picca- dilly, W.	
HOWELL, Lieut. H. G. ...	11 Nov., '07	STANLEY, Hon. E. J. ...	19 Oct., '07
		STUDHOLME, W. ...	

NORTHERN NIGERIA—continued.

SHARPE, Major, W. S.		WHITE, Lieut. E. E. ...	16 Oct., '07
C.M.G. ...	20 Oct., '07	WHITING, H. J....	25 Nov., '07
Junior Naval and Military Club, 96, Piccadilly, W.		WEBSTER, Sergt. G. N.	8 Dec., '07
		WOOLLEY, H. M. ...	
SWAIN, Sergt. J. W. ...	5 Nov., '07	WINTERSON, E. ...	27 Nov., '07
SCIORTINO, J. C. P. ...	7 Dec., '07	WHITE, Capt. I. H. G....	7 Nov., '07
UTTERSON, Capt. H. U.	5 Nov., '07	WHYTE, Dr. G. T. ...	1 Nov., '07
UNAICKE, Capt. A. G.,		WATSON, C. E. S. ...	13 Nov., '07
D.S.O. ...	23 Oct., '07	WATKINS, Sergt. J. ...	1 Oct., '07
VINCENT, J. W. ...		WIGRAM, Lieut. C. C. ...	5 Nov., '07
WATSON, J. W. ...		WALLACE, W., C.M.G. ...	12 Nov., '07

BRITISH CENTRAL AFRICA.

BINNIE, T. I. ...	2 Nov., '07	OCKENDEN, C. O. ...	11 Dec., '07
COLVILLE, E. O. ...	6 Dec., '07	SHARPE, Sir A., K.C.M.G.,	
CASSON, J. C. ...		C.B. ...	2 Apr., '08
DAVEY, Dr. J. B. ...	22 Feb., '08	WHITE, E. C. ...	30 Oct., '07
FYSON, P. W. ...	26 Oct., '07	WILKINS, C. ...	22 Dec., '07
MCDONALD, H. C. ...	2 Dec., '07		

BRITISH EAST AFRICA.

AINSWORTH, J., C.M.G. ...	27 Oct., '07	LAW, J. C. ...	27 Nov., '07
AINSWORTH, J. B. ...	27 Oct., '07	MAYCOCK, Capt. F. W. B.	11 Oct., '07
ARCHER, G. F. ...	10 Nov., '07	MUIR, G. J. ...	27 Dec., '07
BUSH, A. G. ...	27 Nov., '07	MAPLES, Capt. W. E. ...	30 Nov., '07
BYRNES, F. M. A. ...	27 Dec., '07	PARTINGTON, H. B. ...	10 Nov., '07
BONHAN-CARTER, A. T.	30 Nov., '07	POWTER, G. E. ...	30 Nov., '07
BRADNEY, G. P. ...	27 Oct., '07	RIGBY, W. ...	27 Oct., '07
BAILEY, Capt. J. H. ...	27 Nov., '07	SANDERSON, S. ...	27 Oct., '07
CORBETT, R. E. F. ...	27 Dec., '07	STORDY, R. J. ...	28 Jan., '08
CAMPBELL, C. H. ...	27 Oct., '07	TATE, H. R. ...	27 Jan., '08
CRESSWELL, G. H. ...	7 Dec., '07	WARING, E. L. ...	27 Nov., '07
CREIGHTON, J. K. ...	27 Nov., '07	WIGGINS, Dr. C. A. ...	27 Oct., '07
EWART, R. M. ...	27 Nov., '07	WALKER, Major H. A. ...	23 Nov., '07
FLETCHER, D. A. ...	12 Oct., '07	WILSON, Capt. W. ...	27 Dec., '07
GOSLING, S. B. ...	7 Dec., '07		
HENDERSON, Dr. F. ...	27 Jan., '08		
HINDE, S. L. ...	30 Oct., '07		
JACKSON, F. J., C.B.,			
C.M.G. ...	31 Oct., '07	COOPER, L. ...	27 Oct., '07
KIRWAN, D. F. ...	27 Nov., '07	COOPER, A. S. ...	9 Nov., '07
LEYS, Dr. N. ...	31 Dec., '07	GALLAGHER, M. ...	27 Nov., '07
		WARDLE, T. ...	27 Oct., '07

UGANDA RAILWAY.

COOPER, L. ...	27 Oct., '07
COOPER, A. S. ...	9 Nov., '07
GALLAGHER, M. ...	27 Nov., '07
WARDLE, T. ...	27 Oct., '07

UGANDA.

BAGSHAW, Dr. A. G. ...	11 June, '08	IREMONGER, F. M. ...	27 Dec., '07
BOOTY, A. E. ...	30 Nov., '07	JERVOISE, G. P....	30 Nov., '07
CLIFFORD, S. ...	27 Oct., '07	PHILLIPS, Capt. J. N. ...	11 Nov., '07
FRASER, L. R. ...	30 Nov., '07	REYME-COLE, Capt. W. E.	14 Nov., '07
FITZPATRICK, F. H. ...	27 Dec., '07	RIGBY, Major P. G. ...	27 Dec., '07
GILBERT, J. St. J. ...	22 Nov., '07	c/o Messrs. Cox & Co.,	
HODGES, Dr. A. D. P. ...	30 Nov., '07	16, Charing Cross, S.W.	

UGANDA—continued.

SETH-SMITH, L. M. ...	31 Dec., '07	TYRRELL, Lieut., C. H. ...	27 Nov., '07
TOMKINS, S. C. ...	14 Nov., '07	c/o Messrs. Grindlay	
TREFFRY, Major E. ...	30 Nov., '07	& Co., 54, Parliament	
Arthur's Club, St.		Street, S.W.	
James St., S.W.		WINCKLER, H. E.	

SOMALILAND.

CARTER, Capt. H. A.,		HIGGINS, E. S. ...	20 Nov., '07
V.C. ...	30 Nov., '07	c/o Messrs. H. S. King	
CORDEAUX, Capt. H.E.S.,		& Co., 9, Pall Mall,	
C.B., C.M.G., c/o		S.W.	
Messrs. Grindlay & Co.,		MILLARD, T. ...	8 Jan., '08
54, Parliament Street,		POWELL, H. T. ...	13 Nov., '07
S.W.		QUIRKE, Capt. M. J. ...	8 Feb., '08
GIBB, Sergt. A. ...	25 Oct., '07	RANSFORD, Lieut. F. M.	15 Feb., '08
HORNBY, Lt.-Col. M. L.	20 Nov., '07		

TRANSVAAL.

AUSTIN, R. G. L. ...	30 Nov., '07	GOURLAY, H. P. ...	20 Jan., '08
ANDERSON, J. ...	26 Oct., '07	GRAVES, Miss M. A. ...	16 Dec., '07
ANDERSON, W. S. ...	26 Nov., '07	GREENFIELD, A....	12 Nov., '07
ADAM, J....		GODDARD, J. E. ...	30 Oct., '07
ALEXANDER, T. O. ...	20 Jan., '08	HERSCHELL, A. J. ...	9 Nov., '07
BROOK, J. W. E. ...	12 Jan., '08	HOPPER, Miss B. L. ...	31 Oct., '07
BINDON, G. H. ...	25 Oct., '07	HARTOPP, W. E. C. C. ...	5 Nov., '07
BINDON, Mrs. S. ...	25 Oct., '07	HORSFALL, L. A. ...	6 Nov., '07
BIRD, F. W. ...	20 Jan., '08	IKIN, R. M. ...	27 Dec., '07
BRADFORD, Mrs. F. E. ...	20 Jan., '08	ISON, T. E. G. ...	31 Oct., '07
BUCKLAND, Miss B. M....	20 Jan., '08	KELLAR, J. ...	31 Oct., '07
BIRD, S. J. ...	21 Dec., '07	KEY, H. A. ...	21 Oct., '07
BUSH, Dr. J. G....	27 Nov., '07	LANGLEY, C. E. ...	22 Oct., '07
BULLER, A. H. T. ...	12 Nov., '07	LENDRUM, S. J. ...	31 Oct., '07
BOLTON, J. ...	31 Oct., '07	LEWIS, S. H. ...	9 Nov., '07
CLOUGH, A. F. ...	18 Jan., '08	LANGTON, E. G....	20 Nov., '07
CONACHER, Dr. P. ...	22 Nov., '07	LIVINGSTONE, Miss M. J.	20 Jan., '08
CRAWFORD, J. C. ...	20 Nov., '07	MEADLEY, F. W. ...	5 Feb., '08
CHAPMAN, L. T....	30 Nov., '07	MARSH, J. C. ...	31 Oct., '07
COX, P. ...	15 Nov., '07	MATTHEWS, Miss D. G. S.	30 Nov., '07
CRANE, G. W. ...	23 Nov., '07	MACINTYRE, W. D. ...	2 Dec., '07
CLARKE, Miss E. ...	20 Jan., '08	MARSH, L. A. ...	25 Oct., '07
CLAYTON, Miss E. M. J.	20 Jan., '08	MACKENZIE, A. B. ...	31 Oct., '07
DOUGLAS, E. C. ...	31 Dec., '07	MAHONY, C. ...	28 Oct., '07
DONNE, Miss A. M. ...	20 Jan., '08	NASH, C. J. ...	25 Nov., '07
DEWEES, H. J. ...	2 Dec., '07	O'CONNOR, P. M. ...	30 Jan., '08
DOUGLASS, E. W. ...	28 Oct., '07	O'CONNOR, Miss D. W....	2 Jan., '08
DUNCAN, Miss M. F. ...	21 Oct., '07	O'CONNOR, Mrs. M. ...	2 Jan., '08
DAVISON, C. G. ...	31 Oct., '07	O'LEARY, J. ...	29 Nov., '07
DAVISON, W. A. ...	30 Dec., '07	POWELL, A. G. ...	24 Jan., '08
FLANAGAN, J. J. ...	13 Nov., '07	PAGAN, Miss H. O. ...	29 Oct., '07
FYVIE, W. ...	28 Nov., '07	PYE, F. J. ...	25 Oct., '07
GRULLOUD, W. A. ...	31 Dec., '07	QUINN, J. F. ...	28 Oct., '07

TRANSVAAL—continued.

RODWELL, A. T....	...	31 Dec., '07	WILSON, Miss C. E.	...	31 Oct., '07
ROWE, H. J. ...	...	19 Nov., '07	WILSON, J. ...	...	31 Oct., '07
STEVENS, H. E. ...	...	23 Oct., '07	WATKINS, O. F. ...	...	21 Oct., '07
SCULLY, V. M. R.	...	12 Nov., '07	WHYTE, J. C. ...	...	20 Dec., '07
STOURTON, R. ...	...	25 Oct., '07	WILSON, H. ...	...	30 Nov., '07
SAVAGE, Miss A. D.	...	12 Nov., '07	WILTER, B. A. ...	...	30 Nov., '07
SUTTON, G. G. ...	...	14 Dec., '07	WHEELER, J. F.	...	31 Dec., '07
STRANGE, W. L....	...	26 Feb., '08	WHITESIDE, A. F.	...	31 Dec., '07
SAVAGE, W. C. ...	...	7 Nov., '07	WILSON, Miss A.	...	20 Jan., '08
THOMAS, R. E. ...	...	30 Nov., '07	WITHERS, Miss J. M.	...	31 Dec., '07
VOORENDYK, J. ...	...	31 Oct., '07	YORK, R....	...	3 Dec., '07
WOLFE, H. ...	...	24 Oct., '07			

ORANGE RIVER COLONY.

BURGE, A. A. ...	...	31 Oct., '07	HODGE, A. ...	...	30 Nov., '07
BARNES, R. T. R.	...	31 Oct., '07	HOWLETT, D. M.	...	31 Oct., '07
BRADY, J. D. ...	...	11 Feb., '08	IRONSIDE, J. ...	...	21 Dec., '07
BOOTH, J. ...	...	31 Jan., '08	JOHNSON, P. V. ...	...	17 Jan., '08
CUMMING, G. S. ...	...	30 Nov., '07	KENDRICK, T. M.	...	30 Nov., '07
CARTER, A. M. ...	...	31 Oct., '07	LIFEBORE, R. ...	...	5 Nov., '07
DAWSON, Miss H. M.	...	18 Dec., '07	MACDONALD, W.	...	31 Oct., '07
FARLEIGH, R. ...	...	21 Dec., '07	NINIERS, T. J. ...	...	31 Oct., '07
FITZPATRICK, J.	...	31 Oct., '07	SMITH, J. M. ...	...	8 Nov., '07
GIBSON, R. ...	...	31 Oct., '07	WALTMAN, J. ...	...	31 Oct., '07
GUST, A. ...	...	21 Dec., '07	WILLIAMS, J. A.	...	31 Oct., '07
HALLEY, R. H. ...	...	2 Dec., '07			

CENTRAL SOUTH AFRICAN RAILWAYS.

ARGO, A. ...	...	31 Oct., '07	LODGE, A. ...	...	31 Oct., '07
BAKER, A. H. S.	...	31 Oct., '07	LOWRIE, H. H. ...	...	31 Oct., '07
BOSWORTH, A. ...	...	31 Oct., '07	LEESON, W. ...	...	30 Nov., '07
BOTTON, T. E. ...	...	28 Oct., '07	MORGAN, T. C. ...	...	30 Nov., '07
CRICHTON, R. ...	...	7 Nov., '07	MORGAN, H. L. ...	...	8 Nov., '07
DOWNING, A. G. G.	...	31 Oct., '07	MACKENZIE, A. T.	...	5 Nov., '07
EMSLIE, J. C. ...	...	31 Oct., '07	MAYO, G. ...	...	30 Oct., '07
EMSLIE, G. ...	...	31 Oct., '07	MELLER, Miss K. M.	...	13 Dec., '07
EMERY, E. ...	...	16 Nov., '07	MOWATT, A. J. W.	...	30 Nov., '07
EVANS, W. ...	...	31 Oct., '07	NEILSON, T. ...	...	31 Oct., '07
ELVERSON, T. ...	...	29 Nov., '07	OSWELL, J. ...	...	30 Nov., '07
ELLIS, O. H. ...	...	31 Dec., '07	ROSS, A. E. ...	...	31 Jan., '08
FORD, T. G. ...	...	31 Dec., '07	REYNOLDS, J. H.	...	31 Oct., '07
FYFE, S. ...	...	10 Nov., '07	RANIE, R. H. ...	...	31 Oct., '07
GWILLIAM, R. ...	...	30 Nov., '07	REDDELL, F. ...	...	31 Oct., '07
GARLAND, J. ...	...	31 Oct., '07	ROBERTSON, G. ...	...	11 Nov., '07
HUESTON, A. ...	...	9 Nov., '07	SHERRATT, S. E.	...	5 Feb., '08
HICKLING, R. C.	...	9 Nov., '07	SOUTHALL, A. ...	...	31 Oct., '07
HAIG, L. J. ...	...	30 Nov., '07	STEPHENS, H. T. P.	...	14 Nov., '07
HOFFMANN, J. W. F.	...	19 Nov., '07	TAYLOR, H. ...	...	6 Nov., '07
JONES, T. ...	...	31 Oct., '07	WILSON, J. A. ...	...	13 Dec., '07
JONES, A. E. ...	...	30 Oct., '07	WILLIAMS, E. H.	...	30 Nov., '07
KEELING, A. E. ...	...	31 Oct., '07	WAKELIN, W. H.	...	30 Nov., '07
KENNEDY, B. T. F.	...	30 Nov., '07	WATSON, S. D. ...	...	30 Nov., '07
LINFORD, F. T. ...	...	13 Dec., '07	YORKER, Miss M. E.	...	31 Jan., '08

SOUTH AFRICAN CONSTABULARY.

ANDERSON, J. ...	31 Oct., '07	HUNTER, E. ...	11 Dec., '07
ARMITAGE, A. ...	31 Oct., '07	HAMILTON, G. D. ...	14 Jan., '08
ALLAN, A. ...	30 Nov., '07	HANNANT, F. G. ...	30 Nov., '07
ALLAWAY, G. ...	30 Nov., '07	HARLING, H. ...	10 Jan., '08
ALDRIDGE, T. ...	2 Jan., '08	HALL, E. ...	31 Dec., '07
AUBIN, H. F. ...	3 Jan., '08	JESSOP, A. ...	31 Oct., '07
BERRY, G. ...	5 Jan., '08	JAMES, E. V. ...	11 Nov., '07
BANCROFT, T. ...	7 Dec., '07	JEFFREY, A. W. ...	15 Dec., '07
BRYAN, A. F. ...	16 Nov., '07	JOHNSON, G. ...	14 Jan., '08
BARFIELD, C. ...	16 Nov., '07	JONES, L. C. ...	14 Jan., '08
BROWNE, A. E. ...	5 Nov., '07	JORDAN, J. H. ...	31 Dec., '07
BROWNE, J. A. ...	31 Oct., '07	KNOX, J. A. J. ...	30 Nov., '07
BURLEIGH, R. F. ...	31 Oct., '07	KITSON, Capt. P. H. ...	7 Nov., '07
BEDINGHAM, A. E. ...	27 Oct., '07	LEVINGE, C. ...	4 Jan., '08
BRINKWORTH, R. L. ...	28 Oct., '07	LENDRUM, G. W. ...	27 Jan., '08
CUMBER, A. ...	31 Oct., '07	MCKEON, W. H. ...	27 Jan., '08
CAPEL, A. E., D.S.O. ...	7 Dec., '07	MACAULEY, T. R. ...	25 Jan., '08
COLLINGWOOD, F. J. ...	31 Oct., '07	MCCARTHUR, K. K. ...	31 Dec., '07
CRAY, J. ...	31 Oct., '07	MYERS, C. ...	8 Dec., '07
CONNELL, A. H. ...	31 Oct., '07	MORGAN, R. G. ...	30 Nov., '07
CALDWELL, H. G. ...	31 Oct., '07	MORTON, D. ...	3 Nov., '07
COMRIE, J. M. ...	31 Oct., '07	MORRISON, W. ...	7 Nov., '07
CRONE, J. S. ...	16 Nov., '07	MACPHERSON, W. R. ...	2 Dec., '07
CAHILL, W. J. ...	23 Nov., '07	MURRAY, A. E. ...	31 Oct., '07
COOPER G. J. ...	7 Dec., '07	MURRAY, E. ...	31 Oct., '07
CUDLEY, F. J. ...	1 Dec., '07	NEWMHAM, C. ...	8 Nov., '07
CARTWRIGHT, F. ...	12 Dec., '07	NEWCOMBE, A. W. ...	31 Dec., '07
COX, T. ...	14 Jan., '08	PHILLIPS, C. ...	4 Nov., '07
DAWSON, M. ...	27 Jan., '08	POOLE, A. H. ...	31 Oct., '07
DAUNCEY, T. F. T. ...		PITTS, H. J. ...	31 Oct., '07
DENNISTON, F. ...	31 Dec., '07	PRICE, P. ...	14 Jan., '08
DOBINSON, A. ...	3 Nov., '07	PELL, F. ...	27 Jan., '08
DOWNING, W. ...	16 Nov., '07	RUMBLE, A. J. ...	16 Nov., '07
DAWSON, E. ...	16 Nov., '07	ROBERTS, C. D. ...	22 Oct., '07
DEAKIN, J. K. ...	30 Nov., '07	ROBERTSON, D. ...	19 Dec., '07
DALZELL, G. ...	30 Nov., '07	ROBINSON, T. ...	19 Jan., '08
FALCONER, J. ...	30 Nov., '07	REYNOLDS, R. ...	10 Jan., '08
FORBES, W. J. ...	21 Oct., '07	SHEARER, J. C. ...	
FRENCH, A. ...	31 Oct., '07	STEVENS, A. J. ...	31 Dec., '07
FAIRBAIRN, J. T. ...	31 Oct., '07	STEVENS, L. H. ...	2 Jan., '08
GREEN, G. H. ...	16 Nov., '07	SYRETT, S. G. ...	19 Dec., '07
GARSDIE, A. ...	18 Nov., '07	SMITH, J. ...	9 Nov., '07
GRAY, W. H. ...	31 Oct., '07	SPILSBURY, A. J. ...	17 Nov., '07
GATEHOUSE, E. T. ...	7 Dec., '07	SUTTON, E. ...	30 Nov., '07
GAYWOOD, H. ...	2 Jan., '08	STROUTS, R. F. ...	7 Dec., '07
GOLDSTEIN, L. ...		SOLOMON, A. C. ...	31 Oct., '07
GARDE, C. R. ...	5 Nov., '07	SLATTER, A. A. ...	6 Dec., '07
HAMMOND, A. H. ...	29 Nov., '07	STEVENS, A. ...	31 Oct., '07
HIPWELL, G. ...	31 Oct., '07	SURFT, G. ...	31 Oct., '07
HIGINBOTTOM, J. ...	11 Nov., '07	THOMAS, R. A. ...	9 Nov., '07

SOUTH AFRICAN CONSTABULARY—*continued.*

TULLOCH, J. ...	10 Jan., '08	WOODWARD, H. H. H.	4 Nov., '07
WHITE, F. H. ...	30 Nov., '07	WETHERHEAD, A. E. ...	10 Nov., '07
WARTON, S. ...	15 Nov., '07	WARREN, F. W. ...	14 Dec., '07
WATSON, H. O. ...	10 Nov., '07	WATTS, A. ...	19 Jan., '07

BASUTOLAND.

MANSEL, W. DU P. ...	21 Jan., '07
----------------------	--------------

BECHUANALAND.

BUTLER, E. B. ...	7 Nov., '07	WILLIAMS, M. ...	2 Dec., '07
-------------------	-------------	------------------	-------------

SWAZILAND.

DUTTON, E. G. ...	30 Nov., '07	SHERIDAN, H. ...	30 Nov., '07
-------------------	--------------	------------------	--------------

JAMAICA.

ALLEWOOD, Dr. J. A. ...	10 Oct., '07	GRANT, C. DE M. ...	23 Nov., '07
BRADBURY, P. J. O'L. ...	7 Nov., '07	KERR, C. G. C. ...	5 Dec., '07
BOVILL, C. W. K. ...	22 Nov., '07	MOSELEY, Dr. C. A. ...	15 Nov., '07
BROWN, W. F. ...	25 Oct., '07	MANTON, C. C. ...	30 Nov., '07
COSTA, Dr. J. ...	20 Oct., '07	REED, F. E. ...	14 Dec., '07
COX, E. F. H. ...	19 Apr., '08	SHACKLETON, Dr. F. S. ...	3 Jan., '08
CLARKE, Sir F. ...	3 Mar., '08	SOLOMON, M. C. ...	22 Nov., '07
CASTLE, Dr. C. W. M. ...	22 Nov., '07	SMITH, J. A. G. ...	10 Jan., '08
DODD, J. H. ...	3 Dec., '07	WILSON, E. ...	23 Dec., '07
FOOTE, C. S. ...	31 Dec., '07		

ST. KITTS, NEVIS.

RODGER, Capt. A. ...	31 Dec., '08
----------------------	--------------

DOMINICA.

JARVIS, L. H. ...	2 June, '08
-------------------	-------------

TRINIDAD.

BUSHE, R. G. ...	29 Oct., '07	LESLIE, W. ...	19 Nov., '07
CADMAN, J. ...	29 Oct., '07	LOVELACE, L. H. ...	15 Oct., '07
COOMBS, W. H. ...	13 Nov., '07	LITTLEPAGE, B. B. ...	21 Nov., '07
CAMPBELL, W. A. ...	26 Nov., '07	MONCKTON, C. C. F. ...	
DARWENT, E. N. ...	25 Dec., '07	MACGILLIVRAY, J. W. ...	9 Oct., '07
EAKIN, J. W. ...	15 Nov., '07	MARWOOD, H. R. ...	1 Oct., '07
FLOOD, Miss M. ...	29 Oct., '07	NORTHCOTE, Sir E. A. ...	24 Dec., '07
FLYNN, P. P. ...	24 Nov., '07	PERCY, G. R. ...	24 Nov., '07
HANCOCK, H. H. ...	14 Dec., '07	REID, Dr. C. B. ...	12 Nov., '07
HAMMOND, S. B. B. ...	9 Dec., '07	SWAN, R. A. ...	
JACKSON, Sir H. M., K.C.M.G. ...		THOMPSON, T. A. ...	27 Oct., '07
KEATING, W. ...	8 Dec., '07	WRIGHTSON, W. C.M.G.	29 Oct., '07

BRITISH GUIANA.

BOOTH, J. R. ...	19 Nov., '07	GWYTHER, Ven. Arch. A.	26 July, '08
BUGLE, C. ...	21 Dec., '07	HEMERY, P. ...	17 Feb., '08
BOVELL, Sir H. A. ...	31 Jan., '08	LOVELUCK, E. ...	26 Oct., '07
DE FREITAS, G. B. ...	29 Dec., '07	MILLER, Rev. J. ...	31 Oct., '07
DORNFORD, L. ...	9 Dec., '07	MCGILL, Rev. J. W. ...	21 Mar., '08
ENGLISH, E. W. F. ...	26 Oct., '07	MASKELL, T. A. L. ...	10 Jan., '08
FERGUSON, Dr. J. E. A.	24 May, '08	SPENCE, R. O. H. ...	8 Nov., '07
GODFREY, Dr. J. E. ...	15 Dec., '07	WALLACE, Rev. J. D. ...	26 Oct., '07
GAINFORD, B. ...	5 Jan., '08		

FIJI.

FRANCIS, Col. C. A. ...	21 Oct., '07	MAJOR, C. ...	25 Mar., '08
-------------------------	--------------	---------------	--------------

BRITISH HONDURAS.

GANN, Dr. T. W. F. ...	27 Dec., '07	WYATT, R. ...	2 Jan., '08
REES DAVIES, C. ...	15 Dec., '07	WINTER, Dr. W. C. P. ...	31 Oct., '07

CYPRUS.

CORHAM, C. D., C.M.G. ...	28 Oct., '07	WICHELL, R. L. N. ...	5 Dec., '07
DAY, G. A. ...	3 Nov., '07		

BAHAMAS.

JOHNSTONE, R. S. ...	18 Nov., '07
----------------------	--------------

GRENADA.

OTWAY, H. A. ...	5 Nov., '07	ONGLEY, P. A. ...	9 Dec., '07
O'NEALL, Dr. R. D. ...	9 Dec., '07	RICE, C. N. ...	5 Nov., '07

ANTIGUA.

COOKE, Dr. J. H. ...	24 Dec., '07
----------------------	--------------

ST. VINCENT.

CAMERON, E. J., C.M.G. ...	9 Dec., '07
----------------------------	-------------

BARBADOS.

CHANDLER, W. H. ...	9 July, '08	RODEN, R. B. ...	29 Oct., '07
---------------------	-------------	------------------	--------------

ST. LUCIA.

BRANCH, Dr. S. ...	29 Oct., '07	CORE, P. C. Eng. ...	9 Nov., '07
--------------------	--------------	----------------------	-------------

LEEWARD ISLANDS.

HOLME, H. F. ...	20 Apl., '07
------------------	--------------

MAURITIUS.

ACTON, W. E. ...	21 Nov., '07	EDWARDS, C. H. ...	26 June, '08
BAIBEAU, Dr. L. G. ...	30 Mar., '08	McIRVINE, W. ...	12 Nov., '07
BILSBORROW CANON J. R.	25 June, '08	POUGUET, E. D. ...	25 June, '08
BROWN, R. M. ...	25 July, '08	TOUREAU, A. R. ...	30 Jan., '08
DYKES, A. J. ...	25 Feb., '08	WHEATLEY, Rev. Canon	
EYRE, T. W. ...	31 Jan., '08	G. ...	22 May, '08

HONG KONG.

BIRD, R. E. V. ...	3 Feb., '08	KENDALL, W. ...	22 Dec., '07
COTTON, J. T. ...	18 June, '08	LANGLEY, A. C. ...	9 Jan., '08
DUNN, S. T. ...	19 Nov., '07	MACDONALD, J. ...	30 Apl., '08
FRANKLIN, A. C. ...	19 Nov., '07	MARTIN, T. H. ...	30 Jan., '08
GALE, C. H. ...	19 Mar., '08	ORME, G. N. ...	31 July, '08
GIBSON, A. ...	10 Dec., '07	O'SULLIVAN, P. ...	22 Dec., '08
GOURLEY, H. M. ...	3 May, '08	O'SULLIVAN, M. ...	22 Dec., '07
HART, E. F. ...	9 Apl., '08	PEARSE, Dr. W. W. ...	2 Feb., '08
IRVING, E. A. ...	2 Apl., '07	ROSS, J. ...	7 May, '08
JONES, P. N. H. ...	30 Nov., '07	ROBERTSON, W. ...	8 Dec., '08
JOHNSON, E. A. ...	19 Mar., '08	WOOD, D. ...	9 Dec., '08
JOHNSTON, L. A. M. ...	22 Mar., '08	WAKEMAN, G. H. ...	1 Apl., '08
JAMES, B. ...	10 Apl., '08	WOOD, J. R. ...	19 Mar., '08
JAFFE, D. ...	9 Apl., '08		

STRAITS SETTLEMENTS.

ANTHONISZ, J. O. ...	31 Jan., '08	MUIR, H. ...	31 Mar., '08
BROOKE, G. E. ...	17 Aug., '08	McNAIR, Messrs. M. J.	20 Nov., '07
BAUGH, C. ...	12 Nov., '08	McARTHUR, M. S. H. ...	26 Dec., '07
BACON, E. ...	28 July, '08	NUNN, B. ...	20 Feb., '08
BARNES, W. D. ...	7 Dec., '07	RIDLEY, H. M. ...	21 Jan., '08
DICK, J. W. ...	13 Nov., '07	SCOTT, R. ...	10 Nov., '07
FREER, Dr. G. D. ...	8 Dec., '07	SHILLCOCK, F. ...	29 Apr., '08
FANE, J. ...	20 June, '08	SHEPPARD, W. S. ...	13 Sept., '01
FARRER, R. J. ...	30 May, '08	WHITEHEAD, C. B. ...	8 June, '08
GORDON, J. ...	25 Mar., '08	WILSON, G. G. ...	16 Feb., '08
HARPER, J. C. ...	11 Mar., '08		
IZARD, Rev. H. C. ...	31 Dec., '07		
KINDER, F. T. ...	21 Mar., '08		
LUCY, S. R. ...	23 Dec., '07		
MURRAY, A. ...	31 Mar., '08		
MURRELL, H. J. ...	18 Feb., '08		

TANJONG PAGAR DOCK.

PAXTON, W. ...	
THOMPSON, G. ...	31 Dec., '07
WATT, J. ...	9 Nov., '07

PAHANG.

BLATHERWICK, T. C. ...	24 Dec., '07	KENNEDY, H. A. ...	1 Mar., '08
GRAY, N. T. ...	1 Aug., '08	MARSHALL, F. L. ...	21 July, '08

NEGRI SEMBILAN.

CAMPBELL, D. G. ...	21 Apr., '08	HUGHES, G. E. E. ...	27 Aug., '08
COX, F. B. S. ...	1 Dec., '07	WARD, A. E. C. ...	

SELANGOR.

BYRNE, H. E. ...	18 Aug., '08	REYNE, S. B. R....	16 Feb., '08
CLAYTON, T. W....	3 June, '08	SHAW, G. E. ...	11 Aug., '08
FORD, T. A. ...	15 Jan., '08	SANGUINETTI, W. R. ...	30 Sept., '08
LOTT, W. E. ...	25 Oct., '08	TRAVERS, Dr. E. A. O....	25 May, '08
MCCLELLAND, F. A. S....	9 Feb., '08	VALPY, G. C. ...	27 July, '08
MCLEAN, L. ...	1 Apl., '08	VON DONOP, L. B. ...	31 Dec., '07
MOULLIN, H. R. ...	7 Dec., '07	WARD, J. F. ...	3 June, '08
RIDGES, H. C. ...	2 Mar., '08		

PERAK.

ALEXANDER, C. S. ...	27 Jan., '08	MACKENZIE, W. H. ...	3 Oct., '08
ALLEN, M. A. V. ...	9 Feb., '08	POTTER, H. J. D. ...	4 Apr., '08
FOX, Dr. S. C. G. ...	8 May, '08	ROSS, W. ...	24 Dec., '07
HOUGHTON, M. ...	4 July, '08	ROBINSON, C. S. ...	24 Apl., '08
HARRISON, C. W. ...	18 Nov., '07	SIBBALD, S. K. ...	24 June, '08
KENDALL, N. ...	25 Apl., '08	WELD, F. J. ...	2 July, '08
McKENZIE, F. N. ...	16 Dec., '07		

FEDERATED MALAY STATES.

BODGER, W. ...	2 Dec., '07	MARKS, OLIVER... ..	30 Apl., '08
BARNARD, B. H. F. ...	29 Nov., '07	MACDONALD, F. J. ...	15 Oct., '08
BROWN, J. ...	8 July, '08	NEAL, G. F. ...	11 May, '08
BLACKMORE, W. H. ...	21 Dec., '07	OPENSHAW, F. D. B. ...	30 June, '08
BARRY, G. Ll. J. ...	28 Aug., '08	RAE, J. N. ...	7 Oct., '08
CHAPMAN, W. T. ...	5 Jan., '08	RICHARD, H. J. ...	22 July, '07
CRICHTON, R. ...	26 Jan., '08	SCRIVENER, J. B. ...	28 Oct., '07
CAMPBELL, A. ...	14 June, '08	STAPLETON, F. C. ...	25 Apl., '08
DENNYS, F. O. B. ...	23 July, '08	STEVENS, E. G. ...	30 June, '08
ENGLISH, F. H. ...	24 Apl., '08	TAYLOR, F. E. ...	16 Jan., '08
FURNIVALL, H. ...	20 Feb., '08	TRUMP, J. ...	11 Jan., '08
FORBES, G. C. ...	14 Nov., '07	TAYLOR, Sir W. F., K.C.M.G. ...	10 Feb., '08
FONSECA, A. H. de R. ...	28 Sept., '08	WILLIAMS, W. H. ...	19 June, '08
HENSHAW, P. H. ...	25 Mar., '08		
LEICESTER, Dr. G. F. ...	25 Nov., '07		

CEYLON.

BROHIER, A. P. ...	18 Aug., '08	FESTING, R. A. G. ...	22 July, '08
BROWNING, K. C. ...	15 Nov., '07	FLETCHER, W. W. POLE	31 Dec., '07
BAKER, F. S. ...	22 May, '08	FOX, H. O. ...	20 Jan., '08
CHURCHILL, A. F. ...	19 Mar., '08	FERNANDO, Dr. H. M. ...	16 Nov., '07
COOPER, F. A., C.M.G. ...	20 Jan., '08	FRASER, J. H. ...	13 May, '08
CARBERT, W. H. B. ...	14 Apl., '08	GRAY, A. P. ...	19 Oct., '07
CLAYTON, A. G. ...	24 Oct., '07	GARWOOD, R. E. ...	5 Nov., '07
DENHAM, E. B. ...	22 May, '08	GREENE, G. P. ...	21 Oct., '07
DIXON, J. W. ...	4 Nov., '07	GRENIER, Dr. F. ...	13 Mar., '08
DAVEY, W. C. D. ...	2 May, '08	HORSBURGH, B. ...	20 Mar., '08
DOWBIGGIN, H. L. ...	2 Nov., '07	HANDY, F. ...	19 Oct., '07
DAWSON, A. H. G. ...	17 Mar., '08	HILLS, F. J. ...	5 Nov., '07

CEYLON—*continued.*

HYDE, G. H. M. ...	8 Aug., '08	RAWLINSON, H. G. ...	5 May, '08
LASCELLES, A. G. ...	29 Feb., '08	STILL, J. ...	31 Dec., '07
LEWIS, F. ...	30 Nov., '07	SYMES, S. H. ...	4 Nov., '07
LUND, C. W. ...	24 Oct., '07	SPENCE, J. B. ...	29 Jan., '08
LEAK, J. H. ...	21 Apl., '08	STURGESS, G. W. ...	18 Mar., '08
LOVETT, H. J. ...	2 Apl., '08	SPEAR, Dr. A. E. ...	9 Dec., '07
McMATH, J. ...	30 Nov., '07	TILLEKERATNE, Dr. C. J. ...	16 Jan., '08
McQUILLAN, P. ...	5 Nov., '07	THORNHILL, W. J. ...	12 Feb., '08
MURTY, J. O. K. ...	31 Dec., '07	TOMALIN, H. F. ...	23 Mar., '08
NICOLLE, H. C. ...	3 Apl., '08	THAINE, R. N. ...	25 Mar., '08
PARK, J. H. N. ...	14 Nov., '07	THORPE, W. G. ...	12 May, '08
PINTO, M. S., c/o Messrs. T. Cook & Sons, Lud- gate Circus, E.C. ...	18 Nov., '07	THORNHILL, H. ...	31 Dec., '07
PASCOE, S. H. ...	5 Mar., '08	UNSWORTH, W. G. ...	10 Nov., '07
ROOSMALECOQ, E. ...	7 Dec., '07	VIGORS, C. T. D. ...	26 Mar., '07
ROSEMARY, D. ...	13 Nov., '07	WADDELL, G. ...	24 Oct., '07
		WANDT, H. L. ...	21 Oct., '07

THE COLONIAL OFFICE JOURNAL.

VOL. I.

JANUARY, 1908.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE *Morning Post*, in a recent article, invested this JOURNAL with an official character, and remarked that "every subject is discussed from the old official standpoint." Two instances are given to bear out this statement. One is that we have observed that "many persons will share Lord Elgin's feeling of regret that the old term Colony, with its classical and historical associations, should be displaced, but some mark of differentiation was called for." We are unable ourselves to detect in this observation the hall-mark of confirmed officialdom. The other instance is that "Newfoundland, somehow, has been forgotten altogether in the first two numbers." We deplore the omission, but it seems curious that it should be cited as an instance of discussion from the "official standpoint."

The plain fact is that we have no intention of venturing upon the field of diplomatic controversy, and this for the very reason that it is not our object to undertake the task of voicing official views. We leave to such papers as the *Morning Post*—which is distinguished by the consistent attention which it pays to colonial questions and the abundant information which it collects—the arena of polemical politics. But there is a great field of enquiry where there is, in strictness, no official opinion. In such matters it is useful to

CEYLON—continued.

HYDE, G. H. M. ...	8 Aug., '08	RAWLINSON, H. G. ...	5 May, '08
LASCELLES, A. G. ...	29 Feb., '08	STILL, J. ...	31 Dec., '07
LEWIS, F. ...	30 Nov., '07	SYMES, S. H. ...	4 Nov., '07
LUND, C. W. ...	24 Oct., '07	SPENCE, J. B. ...	29 Jan., '08
LEAK, J. H. ...	21 Apl., '08	STURGESS, G. W. ...	18 Mar., '08
LOVETT, H. J. ...	2 Apl., '08	SPEAR, Dr. A. E. ...	9 Dec., '07
McMATH, J. ...	30 Nov., '07	TILLEKERATNE, Dr. C. J. ...	16 Jan., '08
McQUILLAN, P. ...	5 Nov., '07	THORNHILL, W. J. ...	12 Feb., '08
MURTY, J. O. K. ...	31 Dec., '07	TOMALIN, H. F. ...	23 Mar., '08
NICOLLE, H. C. ...	3 Apl., '08	THAINE, R. N. ...	25 Mar., '08
PARK, J. H. N. ...	14 Nov., '07	THORPE, W. G. ...	12 May, '08
PINTO, M. S., c/o Messrs.		THORNHILL, H. ...	31 Dec., '07
T. Cook & Sons, Lud-		UNSWORTH, W. G. ...	10 Nov., '07
gate Circus, E.C. ...	18 Nov., '07	VIGORS, C. T. D. ...	26 Mar., '07
PASCOE, S. H. ...	5 Mar., '08	WADDELL, G. ...	24 Oct., '07
ROOSMALECOCK, E. ...	7 Dec., '07	WANDT, H. L. ...	21 Oct., '07
ROSEMAY, D. ...	13 Nov., '07		

THE COLONIAL OFFICE JOURNAL.

VOL. I.

JANUARY, 1908.

NO. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE *Morning Post*, in a recent article, invested this JOURNAL with an official character, and remarked that "every subject is discussed from the old official standpoint." Two instances are given to bear out this statement. One is that we have observed that "many persons will share Lord Elgin's feeling of regret that the old term Colony, with its classical and historical associations, should be displaced, but some mark of differentiation was called for." We are unable ourselves to detect in this observation the hall-mark of confirmed officialdom. The other instance is that "Newfoundland, somehow, has been forgotten altogether in the first two numbers." We deplore the omission, but it seems curious that it should be cited as an instance of discussion from the "official standpoint."

The plain fact is that we have no intention of venturing upon the field of diplomatic controversy, and this for the very reason that it is not our object to undertake the task of voicing official views. We leave to such papers as the *Morning Post*—which is distinguished by the consistent attention which it pays to colonial questions and the abundant information which it collects—the arena of polemical politics. But there is a great field of enquiry where there is, in strictness, no official opinion. In such matters it is useful to

collect data and compare views. There is no fixed form of thought which can be identified with an official way of looking at things.

We remarked in our last number on the increasing emigration to Australia, and we see that Mr. Deakin states that the Commonwealth Government are anxious to encourage it. The first requirement is land which can be offered to settlers. If the States will find the land, the Federal Government offers to bear the expense of bringing people to it. The difficulty is that the States, in order to do this, are confronted with the necessity of buying back at £3 or £4 an acre land which at no very distant date was sold at £1. We understand, however, that a considerable emigration to Australia from these shores is now going on, though the movement is not received with unqualified favour in all quarters in the Commonwealth.

The anti-Asiatic riots which have occurred in Vancouver have caused serious embarrassment to the Canadian Government, but do not seem likely to bring about a change in its general policy. It is in connection with Japan that the chief difficulty arises. When Great Britain in 1894 and 1895 concluded conventions with Japan, whereby the subjects of each power were to have full liberty to enter the territories of the other power, and the most favoured nation arrangement as regards customs duties was adopted, Canada and the other self-governing dominions were, as usual, left to decide for themselves whether they would adhere to the conventions or not. Canada in the first instance decided not to do so; but in 1906 she changed her policy, from motives which are easily intelligible. Her trade with Japan is at present small, but it is sure to grow, and it can be conducted in a convenient way. In the autumn the railways on the eastward side are congested with the carriage of grain to Europe. On the westward side the lines are comparatively idle, and it is obviously the right policy to encourage a traffic in that direction.

At bottom these racial questions depend largely on economic considerations, and views as to the expediency or in expediency of introducing Asiatic labour will vary according to the material interests at stake at a given moment. So long as the Asiatic will do work which no one else can or will do, he will be welcomed and encouraged. Thus Trinidad, Jamaica, and British Guiana take from British India nearly 10,000 coolies a year, about half of whom settle permanently in those Colonies; and though their introduction has been made the subject of some criticism, on the ground that it displaces West Indian labour, it is accepted on the whole as a

necessary measure. But as soon as the Asiatic enters the field against white labour of any kind, the agitation against him begins, and develops in accordance with the growth of the competition. Ultimately it becomes a question whether the economic advantage to the employer is great enough to be set against the social and political consequences of the displacement of white labour. Frequently it would be difficult to prove that white labour is to any great extent really displaced; but, even if there is no actual displacement, the abundance of cheap labour may result in a lowering of the general standard of remuneration; and in any case public opinion is governed very largely by appearances, and the presence of fairly large numbers of Asiatics is taken to prove that they are ousting Europeans.

There is, of course, another ground of objection to the Asiatic, based upon the conviction that a European race should preserve its individual character, its own ideas of civilisation, and its standard of living, and the fear that all these things are imperilled by the influx of a race alien in sentiment and traditions, which a white population can never hope to assimilate. Considerations such as these would justify the sacrifice of many material advantages. But there seems to be a tendency to exaggerate both the proximity and the extent of the danger, just as the alien question in England, which, for all its importance, is nothing more than a local question affecting certain districts of London, Manchester, and Leeds, has been magnified by lively imagination into a national peril.

There is obviously a considerable awakening going on in the Asiatic countries, and the new vigour makes itself felt in many ways in our Eastern possessions. But there are no signs that the movement will take the form, within any reasonable time, of such wholesale emigration to other countries as was foreboded by Dr. Pearson. The Englishman, however, who preaches patience and moderation to the Colonial must recognise that the value of his advice is discounted by the fact that he is himself as yet exempt from this particular danger. We publish a letter in which this and other aspects of the question are discussed in direct terms and with considerable animation.

The circumstances under which the Cape Parliament has been dissolved are of exceptional interest from the point of view of constitutional practice. The defection of one member of the Upper House from the side of the Government to that of the Opposition

resulted in the two parties in the Legislative Council being equal in number. But as the Chairman of Committees was a supporter of the Government, the Opposition, when the Council went into Committee, were in a majority of one. Advantage was taken of this circumstance to prevent any progress being made in Committee with the Appropriation Bill, which had passed through all its stages in the Lower House, and had been read a second time in the Council. In the full Council, after three abortive attempts to secure progress with the Bill in Committee, the following resolution was adopted by the President's casting vote :—

“That this Council, while not abandoning its abstract claim to reject a Money Bill when it feels itself warranted by the public necessities in resorting to so extreme a measure, is of opinion that under the present circumstances of the Colony the further progress of the Appropriation Bill should no longer be delayed.”

This resolution, however, brought about no alteration in the tactics pursued in Committee, and the President ruled that the resolution of the Council could not in any way bind the Committee. An attempt was then made to suspend the Standing Orders so as to dispense with the necessity of any Committee stage before the third reading, but this was defeated by the Opposition, with the exception of one member, withdrawing from the Council and leaving it without the necessary quorum. Finally the Prime Minister announced that he would advise dissolution as soon as the indispensable supplies had been granted.

We do not propose to comment upon these proceedings in so far as they involve questions of party politics. But this practical assertion of the power of an Upper House to block the Appropriation Bill while the Government continues to command the support of a majority in the Lower House is an incident of the highest constitutional importance. It is a somewhat remarkable circumstance that the Lower House took no steps to question the propriety of the proceedings in the Legislative Council, or to assert its special privilege in financial matters. The Upper House in the Cape is, of course, elective ; but its powers in money matters have hitherto been regarded as subject to the same restrictions as those of the House of Lords.

In Queensland also a constitutional situation of great interest has arisen. Mr. Kidston, the Premier, introduced legislation of a character too advanced to meet the views of the Upper House, the members of which are nominated for life by the Governor. The

Premier, therefore, asked the Governor to nominate sufficient additional members to give him a majority in the Legislative Council. The Governor did not feel able to accept the advice of his Prime Minister, and the Ministry accordingly resigned. A fresh Ministry was formed under the leadership of Mr. Philp, but immediately met with defeat in the Lower House. The Prime Minister asked for a dissolution, which the Governor decided to grant, although the Opposition had refused to grant supply, even to tide over the period before the results of the general election would be known; but his decision has proved highly distasteful to the majority of the representative chamber, Mr. Kidston going so far as to compare it to the action of the Czar in dissolving the Duma. There can, however, be no doubt that it is not merely the right, but the duty, of the Governor to use his own judgment with regard to the two questions at issue in this case, viz., the nomination of members of the Upper House and the granting of a dissolution. The wisdom of a particular decision may be called in question, but the Governor's personal responsibility is clear, and he cannot avoid it.

The elections in the Orange River Colony have resulted, as was anticipated, in an overwhelming majority for the Orangia Unie party. The Constitutionalists gained their only successes in Bloemfontein, where they won four out of the five seats, and very narrowly missed winning the fifth. The new Cabinet, under the leadership of Mr. Abraham Fischer, includes two of the generals who fought against the British forces in the late war, and the position of Generals De Wet and Herzog as Ministers of the Crown in the Orange River Colony affords a close parallel to that of Generals Botha and Smuts in the Transvaal. The Cabinet is completed by the inclusion of Mr. Wessels, a former member of the Orange Free State executive, and Mr. Ramsbottom, who was defeated in one of the Bloemfontein constituencies, and for whom, it is understood, a seat will be found when the election of a Speaker causes a vacancy.

All who have experience of the administration of tropical dependencies must view with an interest not unmixed with astonishment the most recent political developments in the Philippines. After nine years of American rule, the inhabitants are now to enjoy the benefits of a popularly elected legislature, the elections for which took place in August. This appears to be the natural corollary of the policy which has already provided the Philippines with some six hundred elected municipalities; but it indicates an astonishing faith in the suitability of American institutions to all sorts and conditions of

men. Mr. Alleyne Ireland published some time ago some very adverse criticisms on American methods of administration in the Philippines, as compared with British methods in the Eastern Colonies; and Mr. Sydney Brooks, writing in the *Westminster Gazette*, affirms that the American government of the islands has proved a disastrous failure, and that at the present time the prevailing desire in the United States is to find some means of escape from the irksome responsibilities which were undertaken after the Spanish-American war. It is perhaps in this desire that the true motive for the establishment of "Home Rule for the Philippines" is to be found.

The subject of extraterritorial rights is, as remarked in the article which we publish, of considerable interest to the colonies, and we may note here that the Hague Conference decided, by a majority of 36 votes to 2, to include in the Convention questions of this interpretation and application. The two dissentients were Great Britain and France. No doubt diplomatic and consular privileges are often delicate matters, but if it is permissible to take a disinterested view of the matter, it would seem that the subject requires a tribunal, and that the Hague Conference may find an important field of work in dealing with it. Where treaties exist, the Convention will not prejudice them.

Remarkable evidence of the progress of the cotton industry in the West Indies is afforded by a report made to the Colonial Office by the Imperial Commissioner of Agriculture for the West Indies. The value of the lint and seed exported from the West Indies for the five and a half years which ended on June 30th, 1907, was £374,486, and of this sum £167,664 represents the value of the exports during the last six months of the period. Efforts have been concentrated on the production of a long staple Sea Island cotton which commands a high price and a ready market, and as special climatic conditions are required for the production of cotton of this type, the West Indies stand in less danger from competition than countries where ordinary American cotton is grown. The excellence of the West Indian seed is sufficiently shown by the fact that the growers in Florida have this year made use of it for planting purposes. The success of the new industry is mainly due to the effort of the Imperial Department of Agriculture and the hearty co-operation of the British Cotton Growing Association, whilst the West Indian planters and small proprietors have shown a commendable readiness to adapt themselves to new circumstances by undertaking the cultivation of a product comparatively unfamiliar to them.

In West Africa the object of the experimental work which is being carried on is to improve the standard of cotton by establishing a hybrid which will flourish in the climate and at the same time suit the Lancashire trade. The native varieties are hardy, but give a small yield; the American give a good yield, but do not satisfactorily resist the changes of weather, the torrential rains, and the attacks of insects. Egyptian cottons have invariably failed. Native varieties are being used as the female parent, as they are acclimatised, and promising results have been obtained. The Lagos cotton this year has been found very satisfactory in working, and the demand exceeded the supply.

A recent handbook (price 6d.), issued by the Emigrants' Information Office, on the Nyasaland Protectorate contains some useful notes by Mr. S. Simpson, the cotton expert, on the cultivation of cotton, coffee, fibres, and other tropical products. Mr. Simpson's previous "Report on the Cotton Growing Industry" is obtainable from the Colonial Office, and will be found by growers to contain much valuable advice.

The 1907 report of the Botanical Department of Trinidad, by Mr. J. H. Hart, F.L.S., is a remarkable record of valuable work and real progress. We notice especially that a strain of tobacco has been obtained by experiment which unites the vitality of the Virginian with the leaf character and flavour of the best Sumatra and Cuban kinds, and which grows well in Trinidad soil. Four shillings a pound was offered for the best quality produced, and a profit per acre of £15. 12s. 6d. was obtained. This very encouraging result may well be recommended to planters who are discouraged by sugar prospects. The seedless orange is now established on some orange stock in the nurseries. All other standard tropical produce has been cultivated and investigated. We recommend the report to the attention of tropical planters in all parts.

The article which we publish by Mr. Parkinson on the mineral resources of Southern Nigeria deals with a subject which is particularly interesting at present in view of the formation of the British Colonial Petroleum Corporation and the report that the Admiralty intend to introduce oil as a fuel on men-of-war. We notice that the *Daily Express* observes that "Government experts who have visited the territory are convinced that before long Nigeria will be one of the greatest oil-producing regions in the world," and statements have appeared that the Admiralty have been influenced by this belief. We do not know that the facts quite

warrant these conclusions, but there is no doubt a promising field for prospectors. A bituminous deposit near the Tano river on the Gold Coast has recently been explored with promising results.

A Return has been presented to the House of Commons giving particulars of all Steamship Subsidies for Foreign and Colonial Services chargeable to the Exchequer of the United Kingdom (House of Commons Sessional Paper No. 359). The largest item which appears is the subsidy of £340,000 per annum (to be reduced from February 1st to £305,000) paid to the Peninsular and Oriental Steam Navigation Co. for the India, China, and Australia mail services. The Cunard Company receives £68,000 per annum for the New York service, and the Canadian Pacific Railway Company £60,000 for the Hong Kong service via Canada. All these are postal services, and the amounts payable are in part made up by Indian and Colonial contributions. The special subsidy to the Cunard Company in respect of the *Lusitania* and *Mauretania* is charged to Navy Funds, and will ultimately amount to £150,000 per annum. Only three subsidies are chargeable to the Vote for Colonial Services, and all these are connected with the West Indies. Messrs. Elder, Dempster and Co. receive £39,500 for the Jamaica service, of which Jamaica pays £19,500. The Royal Mail Co. were paid at the rate of £17,500 for the Intercolonial Service, one-half of this being made up by contributions from the Colonies. But a new contract has now been signed under which the company will receive £25,000 per annum, of which the Colonies contribute £12,500. Lastly, Messrs. Pickford and Black receive £27,000 per annum for the service between Canada and the West Indies, one-half of this being paid by Canada and one-half by the Imperial Government.

The question of marine insurance is an important one for the colonial governments which import goods from this country. The practice is very varied, some colonies following the Imperial rule of not insuring anything, while others either insure everything or insure in particular cases. If the transactions are on a large scale, there is much to be said in favour of the policy of taking the risk; in the long run the presumption is that the colony will gain, by saving premiums, more than it will lose by marine losses; of course, if this were not the case, the insurance companies could not carry on their business at a profit. But this policy is very seldom accepted. The inconvenience of one serious loss would be so great that colonial governments are reluctant to face it. The charges for insurance are individually small, and in many cases practically negligible; that in the aggregate they may amount to considerable

sums is a consideration which does not come prominently forward. Further, the practice of allotting a specified sum to the requirements of each department has much to do with the matter; the indenting officer, by directing insurance, secures that he will get compensation if marine damage occurs; without this another vote might be necessary. The suggestion readily arises that a colonial government might insure itself by establishing a fund and keeping an account; and if some governments could agree to combine together, the risk of any great liability would be lessened, and perhaps some economy in administration effected if a common fund were instituted.

In some cases the colonial government solves the question by taking upon itself the smaller risks, while protecting itself by insurance against heavy losses. One plan is to direct insurance of all indents over £1,000 or some such sum, but it is better to take the cargo rather than the indent on the basis of the system; there might be in the same ship several consignments of comparatively small value individually, but of a considerable aggregate. This plan is also simpler, as the value of goods is, of course, better known at the time of shipment than at the time of indenting.

The despatch from Lord Northcote, enclosing the Commonwealth Navigation Bill, which has recently been presented to Parliament (Cd. 3,826, price 7d.), affords pleasant testimony to the useful results of the Conference which was held in London in the spring. "My Prime Minister," writes the Governor-General, "advises me that it affords much pleasure to the Government to express concurrence in the view that the result of the Conference proves the value of such meetings for the free and full discussion of complicated and important subjects."

A "concession" has lately been given to the "British Somaliland Fibre and Development Company," and as this means of developing new territories is being used with some frequency, it may be of interest to give the leading particulars. The concession is in the form of an agreement between the Crown Agents, acting for the Somaliland Government and the concessionaires, and gives the right of cultivating and manufacturing fibre over a specified district in Somaliland of about 10,000 square miles for 25 years. The Company is to pay £250 a year rent for the first eight years, and afterwards £500, and is to spend at least £5,000 a year on the property. A sum of £24,000 is to be paid into a special account in such a way that it will be secured for the cultivation of fibre and the necessary operations. Any grazing

warrant these conclusions, but there is no doubt a promising field for prospectors. A bituminous deposit near the Tano river on the Gold Coast has recently been explored with promising results.

A Return has been presented to the House of Commons giving particulars of all Steamship Subsidies for Foreign and Colonial Services chargeable to the Exchequer of the United Kingdom (House of Commons Sessional Paper No. 359). The largest item which appears is the subsidy of £340,000 per annum (to be reduced from February 1st to £305,000) paid to the Peninsular and Oriental Steam Navigation Co. for the India, China, and Australia mail services. The Cunard Company receives £68,000 per annum for the New York service, and the Canadian Pacific Railway Company £60,000 for the Hong Kong service via Canada. All these are postal services, and the amounts payable are in part made up by Indian and Colonial contributions. The special subsidy to the Cunard Company in respect of the *Lusitania* and *Mauretania* is charged to Navy Funds, and will ultimately amount to £150,000 per annum. Only three subsidies are chargeable to the Vote for Colonial Services, and all these are connected with the West Indies. Messrs. Elder, Dempster and Co. receive £39,500 for the Jamaica service, of which Jamaica pays £19,500. The Royal Mail Co. were paid at the rate of £17,500 for the Intercolonial Service, one-half of this being made up by contributions from the Colonies. But a new contract has now been signed under which the company will receive £25,000 per annum, of which the Colonies contribute £12,500. Lastly, Messrs. Pickford and Black receive £27,000 per annum for the service between Canada and the West Indies, one-half of this being paid by Canada and one-half by the Imperial Government.

The question of marine insurance is an important one for the colonial governments which import goods from this country. The practice is very varied, some colonies following the Imperial rule of not insuring anything, while others either insure everything or insure in particular cases. If the transactions are on a large scale, there is much to be said in favour of the policy of taking the risk; in the long run the presumption is that the colony will gain, by saving premiums, more than it will lose by marine losses; of course, if this were not the case, the insurance companies could not carry on their business at a profit. But this policy is very seldom accepted. The inconvenience of one serious loss would be so great that colonial governments are reluctant to face it. The charges for insurance are individually small, and in many cases practically negligible; that in the aggregate they may amount to considerable

sums is a consideration which does not come prominently forward. Further, the practice of allotting a specified sum to the requirements of each department has much to do with the matter; the indenting officer, by directing insurance, secures that he will get compensation if marine damage occurs; without this another vote might be necessary. The suggestion readily arises that a colonial government might insure itself by establishing a fund and keeping an account; and if some governments could agree to combine together, the risk of any great liability would be lessened, and perhaps some economy in administration effected if a common fund were instituted.

In some cases the colonial government solves the question by taking upon itself the smaller risks, while protecting itself by insurance against heavy losses. One plan is to direct insurance of all indents over £1,000 or some such sum, but it is better to take the cargo rather than the indent on the basis of the system; there might be in the same ship several consignments of comparatively small value individually, but of a considerable aggregate. This plan is also simpler, as the value of goods is, of course, better known at the time of shipment than at the time of indenting.

The despatch from Lord Northcote, enclosing the Commonwealth Navigation Bill, which has recently been presented to Parliament (Cd. 3,826, price 7d.), affords pleasant testimony to the useful results of the Conference which was held in London in the spring. "My Prime Minister," writes the Governor-General, "advises me that it affords much pleasure to the Government to express concurrence in the view that the result of the Conference proves the value of such meetings for the free and full discussion of complicated and important subjects."

A "concession" has lately been given to the "British Somaliland Fibre and Development Company," and as this means of developing new territories is being used with some frequency, it may be of interest to give the leading particulars. The concession is in the form of an agreement between the Crown Agents, acting for the Somaliland Government and the concessionaires, and gives the right of cultivating and manufacturing fibre over a specified district in Somaliland of about 10,000 square miles for 25 years. The Company is to pay £250 a year rent for the first eight years, and afterwards £500, and is to spend at least £5,000 a year on the property. A sum of £24,000 is to be paid into a special account in such a way that it will be secured for the cultivation of fibre and the necessary operations. Any grazing

rights of natives are to be respected. No similar right is to be granted in the district in question for 15 years. The capital of the company is £150,000.

The number of periodicals issued for the benefit of stamp collectors is astonishing to those who have not taken up this hobby, and the points which they notice are often extraordinarily minute. We notice, for instance, a statement that a stamp which is perforated at the sides with a number of perforations slightly different from what is usual may be worth £40 or more. On the other hand, these papers contain many historical and geographical notices, and in that way have some educational value. We notice in one of these an account of the Falkland Islands, in which it is remarked that the group is "honest and well executed." It is not clear whether the islands or the stamps are referred to.

The scheme of Colonial Office reorganisation, to which we referred in our last number, has been fully set out by the Secretary of State in a despatch addressed to the Governors of the self-governing colonies, published as a White Paper. The change is a great one, and necessitates an entire re-casting of the personal arrangements. The line of division between the Dominions and the Crown Colonies will be complete. The General Department will deal with various matters common to the Crown Colonies, such as currency, banking, postal and telegraph matters, education, medical and sanitary questions, pensions, patronage, railways and concessions—a sufficiently weighty list, which opens up a large field to the principle of consolidation of subjects. The idea of bringing together all railway and concession questions is new. It is obviously convenient that this department should be blended with the legal department.

The French Minister of the Colonies recently visited London, and investigated personally the methods of carrying on the business arrangements of the Crown Colonies and Protectorates. The result of his visit has been a decision to adopt, to a considerable extent, the same methods, and it may be taken to be highly complimentary. The following passages relating to the new French scheme will be of interest :—

"M. Millès-Lacroix va créer, tout d'abord, une agence générale des colonies.

"Celle-ci, érigée en service annexe de l'administration centrale, traitera, pour le compte des colonies, et sans l'intermédiaire des directions politiques, toutes les questions d'intérêt purement local.

"Elle assurera directement l'administration des personnels locaux en congé, et l'exécution de toutes les commandes courantes de fournitures, d'approvisionnements et de travaux publics prévues aux budgets locaux, le contrôle des fournitures, le contrôle des ports.

"L'agence sera divisée en quatre sections, administration du personnel, approvisionnements généraux, travaux publics, fonds et comptabilité.

"L'agence, on le voit, est basée sur la spécialisation par affaires, et non par colonies ; c'est que certains marchés de fournitures sont souvent passés à la fois pour plusieurs colonies, et que la création d'agences distinctes, pour chaque colonie, au lieu de simplifier l'expédition des affaires la compliquerait."

The Royal Horticultural Society (Vincent Square, Westminster) will hold exhibitions of colonial fruit and vegetables, fresh and preserved, on 5th-6th March, 11th-12th June, and 26th-27th November, 1908. No fee or charge for space is made, and produce can be consigned direct to the society. These are good opportunities for informing the home market of what is produced.

In the article on Canada's purchasing powers of West Indian produce, which appeared in our last number, it should have been stated that the Canadian importation of sugar in 1905 was 3,712,595 cwts. The word "exportation" was substituted by an error in printing.

WIRELESS TELEGRAPHY IN THE EMPIRE.

IN various parts of the Empire schemes are at present being actively discussed for the installation of wireless telegraphy. The commercial practicability of the method, under certain conditions, is now fully established. It remains to be seen whether the Marconi Company can compete successfully with the cable companies for the trans-Atlantic traffic. But no feat of this kind is required to demonstrate the feasibility of connecting islands with a neighbouring mainland, linking up the members of an archipelago, and communicating with ships and lighthouses. Sufficient has been done to show, not only that these things are practicable, but also that they can be done at a cost which compares favourably with that of transmission by cable.

A brief description of the means employed may be of interest to the untechnical reader. A transmitting and a receiving station are required, and at each of these there must be a mast or some other structure supporting wires. This structure is called the aerial or antenna. A transmitter, of which there are various types, sets up powerful electrical oscillations in the wires, and these oscillations create a disturbance in the universal ether called an electric wave. This electric wave radiates in all directions, and a contrivance is used in the receiving aerial to detect them on arrival. The ordinary cable or telegraph wire is a continuous conductor, which guides the electric waves to a particular spot along a fairly definite line. Except for leakage, the waves in this case are confined more or less to this conductor, although they induce a current in any other conductor lying close by, as is often observed on a telephone, when the user hears a conversation between two other persons. Wires are also used in the new system, and to some extent may be contrived to direct the waves, and in strictness, therefore, the term "wireless telegraphy" is incorrect, and the more recently used, "radio-telegraphy," is scientifically preferable. The wires are, however, only used at the

termini or stations, and the distance between is traversed by means of an energy which must be enormously greater than that required for a continuous conductor. Broadly speaking, the energy required in the latter case is the 200th part of a horse-power; for such enterprises as are contemplated for local transmission by wireless telegraphy the energy would vary from about 1 to 50 horse power.

The energy is produced by a battery or generator worked by a steam, gas, or oil engine. Two kinds of waves can be produced. In one case, that known as "spark telegraphy," they are produced by an isolated electrical discharge, which has been compared to the crack of a whip—it sets up a powerful wave, which gradually dies down as it traverses space, and arrives at its destination in a comparatively feeble condition. In the other, a later method, known as "arc telegraphy," a continuous current is kept up, the initial wave not being so strong as in the former method, but kept up throughout, as in the oscillation of a rope caused by shaking it continuously at one end. The first is the present Marconi system, the second the Poulsen, and the waves are known as "damped" and "undamped" respectively. It is claimed for the latter that the waves so produced reach their destination in a state of greater energy than in the former system, and are, therefore, more easily recorded there, and there is a considerable body of expert opinion that the system is sound in theory, and will eventually be the most efficient in practice.

The aerial at the receiving end is the counterpart of that at the sending end. It requires a sensitive relay—called a "coherer" or "responder"—capable of being influenced by the delicate currents transformed from the impact of the electrical waves in the ether on the exposed wires. Usually this relay acts on a telephone. The waves for the purposes of communication must be of a certain length and strength. If a receiver is arranged for one kind of wave, it is not suitable for the reception of another; the two stations must be tuned together. Perfect tuning is a difficult matter to accomplish, but the difficulty may be considered to have been overcome to such an extent that the messages will not be disturbed unless the disturbing station is very near, say, within ten miles. This, however, depends on the degree of power used.

A question which has been much discussed, and which comes into the polemics of rival undertakings, is whether an instrument can be readily adjusted for the purpose of receiving a message sent by a different system; the experts differ on the point, and, as is frequently observed in the law courts, set out conclusions either way which accord with the commercial interests with which they are connected.

An impartial view is perhaps that a skilled wireless telegraphist can adjust his receiving apparatus until he reaches the right wave length for picking up the message. This may take some time, and therefore may be ineffective. But it is reasonably practicable, and the recommendation of the Select Committee in favour of adherence to the Berlin Convention may be taken to indicate the opinion that such intercommunication would often be convenient, and should be encouraged. The convenience, for instance, of making all signal stations available for communication with the ships of all countries is very great, and any country which does not secure it would drive traffic away. On the other hand, "tapping" is likely to be resorted to on critical occasions, and in this respect the wireless systems do not offer the secrecy of the submarine cables; in any case, however, this is not a matter which greatly affects the colonial schemes, and it is open to use codes or cyphers when desirable.

The theory now most in favour is that the waves do not pass through intervening heights, but skim along the ground as they would along a conductor, the earth, in fact, acting to some extent as one. On this theory it would seem possible that such an obstacle as a thick forest would impede the course of the waves, and experience in Trinidad has shown that this interference actually occurs, and is a serious matter. There is an installation at Calcutta which sends messages for a hundred miles across thick jungle, and probably the impediment is not very great over comparatively short distances.

But there is a marked difference between the effects of land and sea on transmission. Land is more difficult to cross than water. Changes are constantly going on in the atmosphere due to sunlight, radio-active matter in the soil, and cosmical action; these changes affect the electrical waves, and over considerable distances the variations are considerable. This is the reason why transmitters of large power will sometimes fail to cover distances which, under different atmospheric conditions, are within the range of low power instruments. The atmospheric changes are called "ionisations," and the process which interferes with transmission "absorption." These influences are greater on land than on sea, and the practical conclusion is that transmission is more sure and cheap on sea than on land. This is as it should be, as, of course, submarine cables are very much more expensive and more difficult to protect and repair than land wires. It may be added that "ionisation" is greater in sunlight than in darkness, and therefore signals sent at night are stronger than those sent by day.

On the vital question of expense it is difficult to attempt any exact statement. The expense varies with the power applied and the contrivances used. Roughly speaking, a 3-h.-p. installation of two stations can be put up for £1,000; the range with this power would be from 200 to 300 miles. For such a distance as 1,000 miles it

would hardly be safe to have less than 50 h.-p., and the expense of this would be £10,000 at least. There are at least five companies which could provide installations for the latter distance—the Marconi, the Amalgamated Radio-Telegraph Company (continuing the Poulsen and De Forest systems), the Lodge-Muirhead Syndicate, the Gesellschaft für drahtlose Telegraphie (Telefunken), and the National Signalling Company of America (Fessenden system).

The Lodge-Muirhead Syndicate supplied the materials for an installation between Trinidad and Tobago for about £700, the oil engines were 3 h.-p., and attempts to signal between Tobago and Port of Spain (across a range of wooded hills rising to 3,000 feet) were unsuccessful; but since the removal of the Trinidad station to North Post communication with Tobago has been maintained with ease and complete regularity, and messages have on some occasions been received from and transmitted to vessels at much greater distances. The syndicate, in addition to the charge made for materials, asks for a royalty of £250 a year for each station. For such comparatively short distances the charges made by the different companies do not, as we understand, greatly differ; but, as the distances increase, the charges rapidly mount up, and the differences in the estimates or offers show an extraordinary range. The scheme for establishing wireless telegraphy throughout the West Indies differs so widely in the matter of cost that it was hardly possible to avoid the conclusion that the system, on a large scale, was still largely in the experimental stage, and that the prudent course was to defer any such large undertakings until experience had brought out further improvements and given more precise results. A substantial step, however, seems likely to be taken in the desired direction without involving direct government intervention, as the West India and Panama Telegraph Company have offered to establish wireless telegraphy between Trinidad and British Guiana, without any increase in the subsidies which they receive for their cable service. Possibly, in anticipation of a general system in the West Indies, communication may be established in special cases, such as between St. Kitts and Nevis and between Antigua and Montserrat. We hear also of projects for wireless telegraphy between Fiji and islands of the South Pacific, and it is probable that stations will eventually be established which will act as feeders to the Pacific cable.

To turn to the example of other departments. The War Office have experimented with various systems, and have lately favoured the Lodge-Muirhead. The apparatus sent out to South Africa and Somaliland were lamentable failures. This was owing to the dryness of the earth, and to the fact that in the system adopted the earth forms an important element. Dry land is a bad and variable conductor, and therefore moisture is essential to a good earth. The sea

is much better as a conductor, and this is one of the reasons why it is a more suitable place for wireless telegraphy. Direct connection with earth tends to increase the effective range, and is therefore suitable for long distance transmission across wide spaces over sea, but it detracts from close tuning owing to variations in the prevailing conditions.

The Admiralty have fitted up almost every commissioned ship. They have paid, we believe, £20,000 to the Marconi Company for their patent rights, and £5,000 a year, but have modified the system. They seem to have been very successful, as for quite a long time back their ships have kept up communication from Gibraltar to England.

The German company, which is an amalgamation of the systems of Professor Slaby and Professor Brauer and of all the German firms engaged in the industry, have done a great amount of work, many hundreds of installations having been put up by them. Their price for a complete station up to 100 km. (62 miles) over-sea is low (£300, without any royalty); but it is doubtful whether for enterprises of greater magnitude their terms would be as favourable as those obtainable in England.

In America, the De Forest Company earned much reputation by their installation of the steamship chartered by the *Times* during the Russo-Japanese war. On one day 2,000 words were sent across 180 miles of sea at a mean speed of 30 words a minute; the feat was so remarkable and disturbing that both belligerents took steps to stop the practice.

We can now make some attempt to compare the cost of a wireless installation with that of a submarine cable. The cost of a cable may be roughly put for general purposes at £200 a mile, or £4,000 for a distance of twenty miles. The cost of protected shore ends, a tank for conveyance, shipment from England, and laying the cable (this assuming that a ship is available) may be estimated at £1,000. If the government have no suitable ship for laying, a considerable sum must be added for this service; the cost may be estimated at £4 per mile. On the other hand, the first cost of wireless installation for such a distance may fairly be put at about £1,000. Coming to the question of maintenance, the cost of keeping up a submarine cable varies, of course, very much according to the kind of bed on which it is laid; round the British coast it comes to £5 per mile per annum, and a reasonable allowance for the above case could not be less than £100. The upkeep of the wireless apparatus would be a small matter, but the royalty payable could not be put at less than £200, and might be considerably more. The wages of the operators should be much the same eventually under both systems; in either case a trained expert is required to supervise, but at present a higher salary would have to be given for a wireless expert. It has been stated that a skilled telegraph expert could be trained for

wireless telegraphy in a fortnight, but one or two months would usually be required.

The result from this point of view is very substantially in favour of the wireless system. But it must be remembered that this system is, at present, very much slower than cable communication, and much more liable, ordinarily speaking, to delays. Furthermore, a cable can transmit and receive simultaneously, and this the wireless cannot do. If, therefore, there is traffic enough to occupy a considerable part of the day, the larger revenue which a cable can earn will more than counterbalance the heavier initial expenditure. This, however, unfortunately, is not the case with which a colonial government has usually to deal. The problem is practically in all cases one of communication in places where the business is neither large nor urgent. A considerable growth in these undertakings may therefore be anticipated as soon as colonial governments can ascertain, with some approach to precision, their cost and efficiency.

Favourable evidence of actual working, under conditions of the kind contemplated in this article, is afforded by the Trinidad annual report for 1906-7, recently published. Mr. W. M. Gordon, the Acting Colonial Secretary, writes as follows:—

“The wireless telegraph system between Trinidad and Tobago, opened to the public in the beginning of the year 1906, continued to afford satisfaction. The total cost of the installation, which is duplicated, was £1,865, and the total estimated cost of the working during the year 1907-8 was £943, of which salaries of operators, messengers, and clerks absorb £681, and maintenance, repairs, oil, spares, &c., £262. The substance of the public news telegrams is transmitted daily to Tobago, and increasing use is being made of the system for private and official telegrams.

“The total number of wireless telegrams transmitted to and from between Trinidad and Tobago during this its first year's working was 407, besides daily news telegrams. Communications with ships of war lying in harbour at Barbados and Grenada were also held, and several telegrams exchanged with other vessels within a radius of 250 miles from Trinidad.”

The Trinidad installation is on the same principle as that established between Burmah and the Andaman Islands, which, we understand, has now been working for two years without a breakdown; but in the latter case the horse-power used is only one-half—a striking proof of efficiency.

The consideration of the comparatively modest undertakings which we are referring to should not be affected, either one way or the other, by the example of great and ambitious enterprises. Not only the daily press but also some technical papers have given publication lately to sensational and exaggerated statements, which can only

result in disappointment and the public disrepute of the idea. Thus it was stated that on the 18th October last 14,000 words were transmitted across the Atlantic. This was absurd, and certainly did not proceed from the Marconi Company, which is avowedly content at present with 500 words a day. The speed of transmission appears to be very low as compared with that of submarine cables, and there is reason to believe that the repetitions on account of inaccuracies are numerous. These are vital matters, and it can be hardly gainsaid that transmission over great distances is still in the experimental stage, and that much more will have to be done before serious competition begins with the cables. But for short distances we conclude that the system has reached the commercial stage. What is now wanted is that the various companies should settle more or less definitely what their terms are to be. They should, in fact, establish themselves on an ordinary business footing. They must be prepared to give some sort of a guarantee; governments will not, as a rule, embark on a new thing of this sort without some substantial assurance that they will get their money's worth, and a reasonable form of guarantee could, no doubt, be arrived at, probably on the principle of the royalty being conditional on results. It is generally wasting time to ask for a monopoly or exclusive rights. When these points are recognised, we may look for considerable developments.

JURISDICTION BEYOND THE REALM.

Nationality, including Naturalisation and English Law on the High Seas and beyond the Realm. By Sir FRANCIS PIGGOTT, Chief Justice of Hong Kong. (2 vols., *Clowes & Sons*, £3 net.)

Exterritoriality, the Law relating to Consular Jurisdiction and to Residence in Oriental Countries. By THE SAME. New edition. (*Butterworth & Co.*)

THE ancient law of England knew but of one territory—that which was within the body of a county. All beyond that was the high sea. The common law did not step beyond the low-water mark. Every offence had to be tried within the county in which it was committed, and if no county was concerned, there could be no jury and no trial in the usual way. But from time immemorial the ships of the nation had dealt in more or less summary fashion with crimes committed at sea near the coasts or at the mouths of rivers. This was the foundation of the modern Admiralty jurisdiction, now based on specific legislation and involving many difficult questions. The subject of this jurisdiction is of particular interest to the colonies, because the extraterritorial cases with which they are concerned are, relatively speaking, more numerous and important than those which arise in the neighbourhood of Great Britain. But the colonial jurisdictions are limited to their respective territories, as those of the English counties were, and, therefore, all these matters, whenever legislation is required, must, generally speaking, be dealt with by the home Parliament.

The limitation of this proposition is due to a decision of the Judicial Committee of the Privy Council given in 1906 (*Attorney-General of Canada v. Cain and Gilhula*). A Canadian statute empowered the Dominion Government in certain circumstances to return an alien immigrant to the country whence he came, an operation clearly involving the exercise of a restraint outside the territorial limits of Canada. The Judicial Committee held that the

Crown itself undoubtedly held, by virtue of the rights inherent in sovereignty, the power to deport an alien immigrant to his country of origin; that this power might be delegated by the Imperial Government to the Government of the Dominion, and that such delegation did in fact take place when the Royal assent was given to the Canadian statutes above-mentioned. It would appear from this decision that it is possible for a Colonial Act which is *ultra vires* to be made *intra vires* by the Royal assent; but any such case would be very exceptional, as a Colonial Act which is clearly *ultra vires* would almost certainly be disallowed on that ground.

In the reign of Henry VIII. the jurisdiction of the Admiral was transferred by statute to a territorial court. This statute has been succeeded by a number enacting that offences committed on the high sea or abroad are to be tried in the same way as if they had been committed on land. The memory of the old county jurisdiction is kept alive by the variation contained in some of these Acts, that the offence shall be deemed to have been committed in the county of Middlesex—a curious instance of the legal fiction when applied, as under the Slave Trade Act of 1873, to an offence which might have been committed in the Indian Ocean; but, as usual, there was a practical reason for the fiction, viz. that troublesome questions might otherwise arise of jurisdiction when the act is begun in one place and completed in another.

From the beginning there has been an obvious distinction between the waters near the coast and the high seas. Every great nation has exercised the right of protecting its territory and revenue by patrolling the coasts. But there is some difficulty in reconciling this right, involving as it does the seizure of foreign vessels, with the principle that the seas are the highways of all nations. We can safely start with the principle that a State can protect itself by operations within a reasonable distance from its shores. But there is no general agreement as to what this distance should be, and, in fact, the reasonableness varies according to situation and purposes. In the Hovering Acts, which have been passed for the protection of the Customs Revenue, the distance is declared to be three leagues in the case of ships belonging to British subjects, or on which half the persons on board are British subjects, and one in the case of foreign ships. But in this and similar cases there is a specific purpose in view, and the machinery of the Acts is limited to it; it is a different matter when the question is that of the general application of jurisdiction to waters. Of old international jurists had propounded a theory of territorial waters, and the favourite range was three miles, and this academical principle had materialised to some extent by the three-mile limit being adopted in some treaties: e.g. England and France in 1786 agreed not to carry on hostilities, when at war with any third party, within cannon-shot or three miles of the coast of

the other. But the *Franconia* case showed that these cases did not amount to applying the whole body of our general law to a foreign ship passing within that limit, and that legislation was necessary for that purpose. The result was the Territorial Waters Act, 1878, which created the territorial waters throughout the Empire. But these waters are not thereby included in the King's dominions, and acts which are not offences when committed by foreigners outside these dominions, as in the case of the Explosive Substances Act, 1883, are not offences when committed within the zone.

It is old law that "an arm or branch of the sea which lies within the *fauces terræ*, where a man may reasonably discern between sea and shore, is, or at least may be, within the body of a county" (Hale, *De Jure Maris*). The limitation was that you should be able to see from side to side, but the conception has grown greatly in recent times. Now we have the "headland doctrine," under which a line can be drawn between two distant headlands. Thus in the United States Delaware Bay was held to be American territory, though sixty miles from cape to cape. Such waters are more than "territorial" in the above sense—they are part of the realm. Here the foreigner has no right to come in, and he may be forbidden or subjected to regulations just as if he were on the land. The ordinary law of the country applies. Obviously it is a difficult matter to say how far the doctrine can be stretched. It is primarily and principally a question of topographical configuration—a wide angle is inadmissible; the arms of the land should to a substantial extent embrace the waters. Thus the excellent maxim, "*res ipsa loquitur*," is mostly to be relied on; but the geographical considerations may be strengthened by evidence of long actual exercise of dominion.

A matter which concerns several colonies is that of the ownership of part of the bed of the sea, as in the case of oyster, pearl, and coral fisheries. The right is acquired by occupation. When the fisheries are close to land, there is no difficulty in extending the sovereignty of the place to the fisheries, but delicate questions might arise if a foreigner took possession of a fishery which is near to land, but not continuous from it.

Beyond any territorial limits the King may acquire jurisdiction by treaty, and such acquisition has taken two shapes. In the one case the King has had surrendered to him the exercise of jurisdiction over his own subjects in a foreign country; in the other a special relation is set up by the two Sovereigns by which one is placed under the protection of the other, and in this case the jurisdiction acquired may extend to natives and to foreigners. The colonial service is little concerned with cases of the first kind, but questions over those of the second occur wherever protectorates are established. Broadly speaking, the doctrine now prevails that the somewhat

general terms in which the right to protect is given by treaties with the chief of uncivilised races include or imply the power to levy taxes, administer justice, and to do all things which are necessary for the good government of the country. But this position was only gradually arrived at, as the responsibility of the protecting power became greater and more inevitable.

We make these brief remarks on a subject which has many aspects, and admits of great detail, in view of the recent appearance of Sir Francis Piggott's works on "Nationality" and "Exterritoriality" (new edition). Sir Francis Piggott, then Procureur and Advocate-General in Mauritius, did valuable work by his laborious and careful collection of all the Imperial legislation applicable to the colonies (1902). This work brings together, in a way never attempted before, all the statutes both of general and special application, in two not over bulky volumes, in which the colonial lawyer will readily find the text which he requires. In the volumes under review the Chief Justice of Hong-Kong has dealt with a subject which is practically outside the range of ordinary law text-books, but of great interest to administrators and colonial lawyers. In the two volumes of "Nationality" he deals with the extra-territorial law affecting British ships and subjects, discussing fully such points as jurisdiction in territorial waters, sea fishery legislation, offences committed abroad, naturalisation, &c. In the work on "Exterritoriality" he treats of the delegated exercise of foreign jurisdiction, the Foreign Jurisdiction Act and Acts applied under it, consular courts, and domicile. The style is everywhere clear, and the reasoning fully set out. A reader who takes an interest in the scientific handling of these important questions will certainly be pleasurably impressed with these volumes.

NATIVE AFFAIRS IN NATAL.

THE Report of the Natal Native Affairs Commission was certain, in view of the native rebellion which took place in that colony in 1906, to be a document of great interest. But its value is enhanced by the fact that the Commissioners have not hesitated to discuss the fundamental problems underlying the administration of native affairs by a white community, and have drawn conclusions which, if sound, are applicable to a much wider area than that of Natal, or even of South Africa. The report is a lengthy document, and we shall only attempt here to summarise and illustrate those parts of it which are of most general interest.

In their general survey of the results of native administration the Commissioners are more frankly pessimistic than any outside critic would probably have presumed to be.

“As nothing is to be gained by reticence, the opinion is here expressed that the chasm between the races has been broadening for years, and that the attitude of the natives is now one of distance and distrust. In their inexact and unreflective way they attribute all their troubles to the Government, which they believe either originates or permits or sanctions all that has changed their life from the simplicity of the past to the uncertain conditions of the present. Reasoning as they do, they see the hand of Government in the high rents and labour demanded by landlords; the various taxes they have to pay; the numerous passes or permits they have to be provided with; the restrictive, unfamiliar, and unknown laws they have to submit to; the compulsory service they have to render upon public works; and the disintegration of their tribal and family systems. These are amongst their most prominent complaints, and will be more specifically dealt with later.

“Notwithstanding that their obligations, both public and private, have, to some extent, been increased during the recent past, their present ability to meet them has been considerably lessened by the loss of their cattle by disease, their crops by locusts, by a growing

neglect of cultivation, especially by the women, and by a general reduction in wages and openings for employment."

They find the condition and temper of the natives in Zululand to be in marked contrast to that which exists generally throughout Natal; and they attribute this circumstance "solely to the fact that they have been left more to themselves, and have not been suffering from the exactions of landlords." But even in certain districts of Zululand the natives are "apprehensive about the alienation of their lands for European occupation, a policy which undoubtedly contains the germs of unrest." The Commissioners accordingly recommend the reservation of a larger area of Zululand for the expanding native population and "the closer settlement and more beneficial use of the native reserves, both in Natal and Zululand."

"To sum up, we have not satisfied any of the various classes which go to form the native section of the community. The exempted native believes that, while asking for bread, he has been given a stone, by being denied the full privileges of the European; the Christian, or educated, native wants more education, fixity of land tenure on Mission Reserves, and suitable avenues for the employment of his children; the half-caste frets because his cry to be freed from native law and be legally classified with his European ancestor has been persistently ignored, and, as a contrast to these strivings for improvement, there is the kraal native, representing the great mass of the population, who simply desires to be left alone, preferably under the sway of his chief, to live his own life of sensual stagnation."

The effects of intertribal rivalry can no longer be relied upon, now that the old system of native society has been largely disintegrated, to prevent concerted action against government, and a positive, instead of a negative, policy is urgently required. "What is to be the destiny of this Colony, with its overwhelming native population? Noted for their fecundity and virility, they will not die out or succumb to ordinary adversity, and, as we can neither assimilate nor destroy them, political forethought and common sense alike call for a settlement of the question on a broad, enlightened, and permanent basis." It must be made clear that the predominance of the white race will be secured at all hazards, and that no attempt, overt or covert, to destroy it will be tolerated. But the prestige of the white man has been impaired by the adoption of a system which leaves him the minimum of opportunity for the exercise of his personal qualities. "With a people accustomed to, and comprehending no other than, personal rule it is essential that the magnetic and powerful influence of human condescension and sympathy should not be ignored as indispensable to their successful control. Putting law in the place of sympathy has had the natural effect of inhibiting and neutralising their con-

fidence." "The administration of Native Affairs must, if it is to be successful, have a self-contained constitution of its own, based on the autocratic principle of control." Under the system of Responsible Government this principle has been less regarded than it was under the Crown Colony régime. In particular, the "movability of ruling officers" passes the comprehension and excites the apprehension of the natives. "They understand why the Governor, as representative of the Sovereign, should be changed, but it fills them with astonishment that ministers should come and go without apparent reason." Nor is a minister thus subject to displacement likely to become the author of a bold constructive policy. "Faced by the many problems of this interminable question, the ordinary minister, with his uncertain tenure of office, is satisfied if he tides over difficulties and maintains the *status quo*, and he is thus under difficulties from the commencement." "Is it to be wondered at then," the Commissioners ask, "that the more intelligent and reflective among the natives so frequently drew comparisons between the consideration and treatment shown them in the pre-Responsible Government days, when the personal factor had away, and what it is to-day, when this element has practically been eliminated altogether?" Stress is also laid upon the evil of over-legislation. Since 1893 no fewer than 48 enactments specially applicable to natives have been passed, while another 13 failed to become law; and this state of affairs justifies the complaints of natives that they are ignorant of the laws which they are expected to obey.

The Commissioners make some interesting reflections on the causes of the native rising of 1906:—

"Although the discovery of the causes of the late Rebellion is not within the scope of this inquiry, it may be permitted to say that they were both material and psychological. It was primarily a revolt against restrictive conditions, assisted by a natural desire, common enough, as history shows, amongst subject races, to return to their own mode of tribal and family life. All their views of government, its acts and omissions, benefits and defects, are largely coloured and shaped by the feudalistic traditions of their lives, which, by preventing the development of self-reliance and individual character, have taught them to regard their rulers as the only and natural sources of power, punishment, reward, and welfare. This explains why their attitude towards the government has been one of alternating expectation and despair. The belief that the conditions they were finding intolerable were attributable in one way or another to government action or inaction explains why so little injury was done to private property during the late disturbances. Looking upon government as the maker and enforcer of laws, the imposer

and collector of taxes, the fountain of all authority, with its officers everywhere, they wonder why their family system is permitted to crumble to pieces, and their daughters go astray; why they are compelled, through the courts, to pay heavy rents and usurious interest; to submit to the overbearing conduct of the police, and to laws they were ignorant of, and in the making of which they had no voice. Yet all the time we were flattering ourselves that, by giving them peace, a stable government, and a pure judiciary, we were doing our whole duty to and by them. We never stopped to think that our system had become too impersonal for the masses, or to see the pathos in a simple people looking for fatherly advice and assistance from a purely judicial officer, or longing to consult an exalted and virtually inaccessible minister. The head of the Native Department has never been approachable by the multitude, while to the chiefs he was accessible only to a limited extent, and in accordance with certain formalities. We live and move and think on different planes, and to make them contented and satisfied with our rule, our methods must be less artificial and complicated, and nearer the compass of their understanding."

In its constructive recommendations the report is not less interesting than in the criticism of existing conditions. The establishment of a Native Council or Advisory Board on Native Affairs, consisting of four official and three unofficial members, nominated by the Governor-in-Council, is recommended; and it is proposed that legislation specially affecting the natives should be prepared by this council and subsequently presented to Parliament for ratification. The Commission further recommend the appointment of at least four executive officers of high rank, to be styled Native Commissioners, who are to be charged with the administration of native affairs throughout the colony. They should have no judicial functions, but should exercise a supervisory power of the magistrate in their administrative work. The number of magistrates requires to be increased. Native chiefs should be treated more as peace officers; their jurisdiction should be made territorial rather than personal; and they should receive formal letters of appointment, and should be formally installed by the Native Commissioner. The Governor's powers as Supreme Chief should be enlarged and more clearly defined; and the office of Minister for Native Affairs should be invariably held by the Prime Minister. It will be seen that all these recommendations are based upon the principle of emphasising the dignity and responsibility attaching to official position, and strengthening the system of personal rule.

We cannot give more than the briefest summary of the other recommendations of the Commission. They would make the attainment of exemption from native law somewhat easier and more

certain for civilised and educated natives; and the majority favour the election, by exempted natives, of from one to three members of Parliament, "such members to be selected by ballot from European candidates, nominated by the Governor-in-Council." They observe that "not one of the many educated and exempted natives, who expressed themselves very strongly upon the question of direct parliamentary representation, suggested that one of their own race should be their member."

The Commission find the extent to which natives are indebted to Europeans and Asiatics to be a serious and growing evil; and they recommend that interest at a higher rate than 15 per cent. per annum should not be recoverable, and that the courts should have power to enquire into all the circumstances of a loan. Where a loan is made to secure labour, the contract should be enforceable by civil process only, and not under the Masters and Servants Act.

They consider that the imposition of the Poll Tax was a mistake, and that taxation on natives should be revised or consolidated in the form of a single Hut Tax, a method of taxation which is well understood, and involves no difficulty in collection. Simultaneously with this change they would abolish the system of compulsory labour, and as the nature of that system in Natal is often misunderstood and misrepresented, their observations on the subject may be quoted at some length:—

"It is in force only in the Locations in Natal and the Reserves in Zululand. Chiefs are requisitioned to supply men according to the size of their tribes, and the number in service averages about 3,000, on an engagement of six months' duration. This apparently large number is employed in the maintenance of nearly 6,000 miles of roads in Natal and Zululand, and constitutes about 15 per cent. of the total number of young men in Natal Locations alone. They receive an ample ration of maize meal, are provided with tents and huts, and receive a wage of 20s. a month. There is no proper system of rotation or limitation of calls, much being left in the way of selection to the whim, caprice, and partiality of the chief and his indunas, who are known to call out the same men over and over again, while favourites and those who bribe them (often substantially) escape altogether. A shorter period than six months would, in itself, have gone far to diminish the dislike to the service. The Native and Public Works Departments and the magistrates might long ago have concerted some simple rules by which the system could have been stripped of some of its most objectionable features. For instance, no one should have been liable to be called out for more than two or three periods of service, and the wages for each subsequent enrolment should have been raised; young raw lads should be paid at a lower rate than men; and those who could prove a reasonable amount

of private service should have been exempted from one or more periods of public employment, or, possibly, altogether.

"Although the work on the roads is intensely unpopular, mainly because of its compulsory nature, the personal aspect of the question is, perhaps, not the most important, the labourers being well treated, and receiving a fair wage, much higher than is ordinarily paid by farmers to their tenant-servants, about which, by the way, there is no outcry, except on the part of the natives concerned. In its public aspect it furnishes a contributing factor against the proper occupation of the Locations, it being asserted that, so strong is the dislike to the service, many refrain from living there, in order to escape, even when Hut Rent has to be paid elsewhere. The closer settlement of the Locations being one of the prominent features of the policy proposed herein, anything that militates against giving this its full effect should be removed.

"In addition to all that has been specially advanced against it, there remains the full force of modern public opinion, which is strongly opposed to the constraint of labour in any form, and it is accordingly urged that Government should without loss of time devise some satisfactory substitute for procuring labour for public works. This can, it is suggested, be done in two ways: (1) Through the proposed public labour bureau, with or without private recruiters or contractors; or (2) arranging through or with the Location Chiefs to recruit men for public works, remunerating them by a capitation bounty. Market rate of wages would have to be paid, and the contract should be on the monthly basis. Contracts for sectional maintenance and repairs would necessarily enter into the consideration of any change of system.

"Its abolition should not be merely effected on paper, but be publicly promulgated and explained throughout the Locations as part of the proposed scheme, if adopted, of re-adjusting Location taxation, by consolidating the dues within those districts, raising the Hut Tax to the higher scale, and abrogating the Poll and modifying the Dog Tax. It is important that its withdrawal should be effected concurrently with the change in taxation. The cancellation or even abridgment of the powers now vested in the Supreme Chief to call out natives in times of emergency or for service in the public weal forms no part of this proposal. That question has been well considered, and those powers should remain unaltered."

The whole of the Report supplies much food for thought. The Natal Government have taken time to consider it, and declined to make any statement of their policy during the last Parliamentary session.

THE MINERAL RESOURCES OF SOUTHERN NIGERIA.

By JOHN PARKINSON, *late Principal, Mineral Survey.*

BEFORE attempting to form an estimate of the mineral resources of Southern Nigeria, or, indeed, of any comparatively unknown country, some idea of the geological structure, and, therefore, of the geological history, should be obtained, because such knowledge may, on the one hand, limit any area of probable economic importance to a certain definite district or, on the other, may extend it with fair likelihood of success to an adjacent area, which so far had shown no indications of value.

In this connection the importance of negative evidence is apt to be overlooked. No one should regard a reconnaissance as fruitless because such exploratory work fails to discover valuable occurrences of minerals, for it may be the means of preventing a greater expenditure upon futile search, and at any rate will collect information of much geological value.

In Southern Nigeria we find as the most important geological factor a platform of various crystalline rocks, gneisses, schists, granites, and the like, on the surface of which all later sediments have been deposited, and on the subterranean contours of which their thicknesses at any given point depend.

This basement platform appears at the surface on either side of the Protectorate. On the east it extends from Kamerun territory over the international frontier, and forms the rounded masses and outlying spurs of the Oban Hills, reaching the Cross River, in British territory, as far as is known only at Ikorana.

The available information suggests that the border of the crystalline rocks passes through or near Abokam, on the Upper Cross River, and, stretching northwards, follows roughly and at some distance the eastern bank of the Aweyong River. Thence it passes out of Southern Nigerian territory, and joins the crystalline rocks on the southern bank of the Benue.

Proceeding westwards, our knowledge fails for lack of exploration, but, as far as is known, gneisses are next found on the Niger in lat. $7^{\circ} 19' N.$, and, although the boundary to the west requires much additional work before it is adequately defined, it may be considered without great error as passing a short distance to the north of the Afuge Hills and of Ifon, a few miles to the south of Ondo and Abeokuta, and thence as turning westward paralld to the sea to enter Dahomey territory.

Speaking broadly, there is a great gap in age between these gneisses and granites and the succeeding sediments of Cretaceous time (roughly corresponding in age to the British chalk).

This second chapter, probably volume would be a better word, in the geological history can be read amongst the thin-bedded limestones, shales, and sandstones deposited against the southern, western and northern edges of the Oban Hills, thence extending up the Aweyong, and stretching through Abakalliki and the Edda Hills near Afikpo, probably far towards the Niger.

Much additional mapping and exploration must be accomplished before we can piece together the geography of this long past time, but I think there can be no doubt that the Cretaceous sediments were deposited in a deep gulf, which lay between the headland of the Oban Hills on the east and the rocky, possibly island-studded coast of the Central Province and Lagos on the west.

Approaching the latter shore, the depth of the Cretaceous sea gradually decreased, and the sediments thinned out against the higher contours. The Cretaceous period closed, and again we find an interruption in the history, for the next deposits (doubtless of Tertiary age) appear to be those containing the lignite of the Asaba and Ibusa district, with which certain lignite-bearing beds near Moroko, south of Abeokuta, should probably be included.

This series was followed by the sands and shales of the Lagos Province, now impregnated with bitumen, and these again by the red sands and clays which form the surface soil of Lagos, Benin, Asaba, and Calabar.

The lignite and bitumen-bearing beds were doubtless fresh-water or estuarine deposits, for in them are found traces of leaves and plants, and also shells which inhabit brackish or shallow sea-water.

The deposits of economic importance to Southern Nigeria at the present time centre in the lignite of Asaba and Moroko and the bitumen deposits of Lagos, and it is, in my opinion, of considerable importance further to investigate this area by means of deep boreholes in order to arrive at some definite conclusions in regard to the solid as distinct from the surface geology.

In 1905-6 these bituminous sands were examined with a shallow drill, and enough information was obtained to show that these

The Mineral Resources of Southern Nigeria. 235

deposits are of such a character as to justify the further exploration suggested.

Near Moroko and Mafuoko the border of crystalline rocks is not far removed from beds producing lignite and bitumen respectively ; and correlating, as one is sorely tempted to do, the lignite of Moroko with that of Ibusa, one is fain to think of a sheet of carbonaceous material extending below the bituminous beds, and to look to the former for the origin of the latter.* On the other hand, judging by analogy with other bituminous and petroliferous districts on the western side of Africa, it is perhaps more probable that the source is in beds of Cretaceous age.

Doubtless the basement platform on which any and all of these various sediments were deposited was not a flat but a hummocky surface, so that the total thickness of the covering mantle and probably the value of the same may vary from point to point.

Samples of lignite forwarded to the Imperial Institute, as a result of the survey investigations at Ibusa and Okpanam in 1905, have been examined ; while during the present year the survey under Mr. Kitson has been engaged in continuing the work in this district. The seams previously studied ranged from $9\frac{1}{2}$ ft. in thickness downwards. The average calorific value is † 5,747 cal.; the evaporative power from and at 212° Fahr. per lb. is 10.73, as compared with 12.55, the average value obtained from four lignites from the States.

The average amount of moisture is probably between 11 and 12 per cent.

Trials carried out on launch and stationary engines gave on the whole promising results, due consideration being given to the fact that the lignite was burned in furnaces that were not specially designed for this class of fuel.

The importance of a cheap fuel to such a dependency as Southern Nigeria in the process of being actively developed is obvious enough, especially if it be remembered that the Protectorate coal bill for 1905 was £15,990. The lignite outcrops are some nine miles only from the Niger, which is navigable for vessels of light draught throughout the year, so that the expenses of transport cannot seriously hamper the economical distribution of fuel to the stations of the Marine and the Department of Public Works.

The manner of occurrence of the bitumen of the Lagos Province is of interest and importance. It does not appear to be original to

* See "Petroleum and its Products," by Sir Boverton Redwood, vol. i., pp. 105 and 189.

† Taken from Col. Rep. Miscell. No. 33, Southern Nigeria, p. 18. No. 4 of the table there given should be omitted ; the specimen was apparently obtained from the surface, and its exact locality is unknown.

the sands and shales in which it is now found, but to have been derived from an external source, and to have impregnated the beds in degrees varying with their capacity, *i.e.*, a coarse sand contains more bitumen than a fine sand, and the latter than a shale. Overlying these bitumen-bearing beds comes a group of red sands and sandy clays, constituting an overburden, and concealing the underlying series except where dissected by streams. In such instances part of the bituminous series has been cut through, and the viscous bitumen has travelled along the dip of the beds, and oozed out to form tarry masses along the banks of the stream. These are the so-called "outcrops," and consist of material naturally far purer than the bituminous sands from which they were derived.

It may be noted in passing that the Lekki and adjacent lagoons of the Lagos Province form a most valuable series of waterways adjacent to the bitumen field, so that the cost of transport is in favour of the successful working of these propositions.

The bituminous beds have been traced by the Survey from the western side of Epe to the north of Aiyé (south of Ondo) a distance of nearly 60 miles, and there seems no reason to suppose that they do not extend further both to east and west of that area.

The location of fresh "outcrops" of bitumen in this thickly forested and swampy country may be looked upon as practically fortuitous, and it is upon the drill that reliance should be placed to extend the areas within which it is already known that the beds are near the surface.

When the bitumen-bearing strata are overlain to great depth by other beds, better conditions for the accumulation of bituminous products may exist, with less oxidation.

With the exception of some beds of sandstone, suitable for building purposes, and some galena, which is found to the south of Abakalliki, the Cretaceous beds have so far yielded nothing of importance.

To this the salt said to occur a day and a half's march to the westward of Afikpo, and also on the eastern bank of the Aweyong River, a little to the north of the latitude of the Moya Creek, may prove a possible exception. The occurrence of galena and salt in the basin of the Benue indicates a considerable extension for these beds.

It is to be regretted that up to the present no limestones have been found sufficiently pure and extensive to be suitable for burning on a large scale; the Cretaceous beds having been apparently deposited in shallow waters unsuitable for the extensive formation of this rock.

The lead occurring in the Enyiba country, a few miles to the south of Abakalliki, occupies a fissure trending approximately south and north, or directly across the strike of the shales.

The vein was traced at intervals for a distance of some miles, and in places the galena was found to be associated with blende (sulphide of zinc) and iron oxides, mostly chalybite. The old workings of the Ezhis at Enyiba show the vein to be some 6 ft. wide, the sulphide being altered to the carbonate and sulphate of lead near the surface.

The value of this galena depends largely on the content of silver, details of which have not been published, although many samples were forwarded home. I think 5 or 6 ozs. per ton of ore is an approximate figure.

The minerals of economic importance found in connection with crystalline rocks are monazite and cassiterite, both from alluvial deposits near the Oban Hills. The former is a phosphate of cerium, lanthanum, didymum, and thorium—of value for its content of thorium.

The monazite is associated principally with the finer grained acid gneisses, *i.e.*, those containing a fairly high silica percentage, the cassiterite with the geologically younger granites and pegmatites. As in other localities where cassiterite is found, tourmaline is an accessory mineral, particularly here, of the pegmatites. The detailed work of the Survey showed that the gravels in the neighbourhood of Ibum, which so far have proved the best for this mineral, afford concentrates up to $10\frac{1}{2}$ lbs. per cub. yd. (taken as equal to 3,000 lbs.), and averaging about 4 lbs. per cub. yd.

Analyses carried out by the chemical department at the Imperial Institute gave about 4 per cent. of thorium in the concentrates, the monazite itself containing from 5 to 6 per cent.* Small quantities of ilmenite, zircon, and garnet are included in the concentrates. So far monazite has not been found in the parent rock.

The Akwa Ibami district on the south-western side of the Oban Hills has yielded, from the sands and gravels of small streams, tin concentrates averaging some 3 lbs. per ton. Mineralogically it is interesting to note the association of columbite, a niobate and tantalite of Fe and Mn, with the cassiterite.

Putting aside the Iyangita, which seemingly does not contain sufficient tin for profitable exploitation, dredging is impossible in the district. The best concentrates so far obtained were derived from the gravels of a group of small streams, almost waterless in the dry season and together forming the headwaters of one of the tributaries of the Iyangita.

In this locality the impounding of sufficient water to wash a large quantity of "dirt" would probably be an undertaking of considerable difficulty, and consequent expense.

* *Vide* Colonial Reports above referred to.

The monazite district near Ibum is well watered, the grade of the stream beds being such as to make many of the tributaries torrential in character; though on either the upper or lower reaches we find meandering streams with occasionally considerable deposits of alluvium on each bank.

The gravels of the Ukpou River appear to contain sufficient monazite to warrant further investigation in detail.

During the last four or five years the rainfall of Southern Nigeria near the coast has been approximately 130 inches, by far the greater part of which was concentrated into the months between May and October. During this wet season the impounding of water would proceed, and should, if the site of the dam were carefully selected, present no insuperable difficulties.

In regard to transport the lower and middle reaches of the Ukpou are navigable during the wet season, though in the swollen state of the river the journey is not easy, while the overland route consists of a three days' march along a rough and hilly bush path to 'Nsan, from which town an excellent road has been made to Calabar.

It should be remembered that in such a country as Southern Nigeria, geographical and mineralogical work is rendered exceptionally difficult by the denseness of the bush, and the work of the Mineral Survey has to be conducted in practically unmapped country. For the investigation and location of economic minerals in this type of country the value of a sketch survey can hardly be over-estimated.

No open eminence can be gained from which the course of a river may be traced and the tributaries connected by eye to the main stream; information must be laboriously acquired, a process far longer and more tedious than might be imagined.

It should be remarked, in conclusion, that excellent granite has been found, and was worked by the Department of Public Works, a short distance above Uwet, on the Calabar River. No works requiring so substantial a stone are at present under construction, and the opening up of the quarry has been discontinued. The site selected was on the Calabar River with sufficient depth of water for barges to draw up to the quarry floor, and an uninterrupted river passage to Calabar.

My friend and late colleague in Nigeria, Mr. L. H. L. Huddart, M.A., A.R.S.M., Assoc. Mem. Inst.C.E., has kindly twice read through the MS. of this paper. I am greatly indebted to him for his readily given help, and many suggestions incorporated in the preceding pages.

CANADA AND OLD AGE PENSIONS.

THERE are many questions of domestic politics in which the home Government can learn much from the experience of the self-governing dominions. The Imperial Parliament recently ordered the report of the Commonwealth Commission on Old Age Pensions to be reprinted for the benefit of English politicians.* In this matter, as in many others, Canada has shown herself more conservative and less adventurous than Australia. Valuable light is thrown upon the Canadian attitude by a pamphlet, printed by order of the Canadian Senate, containing the text of a draft bill providing for the establishment of a system of old age annuities, together with speeches delivered on the subject in the Senate by Sir Richard Cartwright, Messrs. McMullen, Ross, Ferguson, and Sullivan. The draft Bill merely provides for the establishment of Government annuities upon lines similar to those of our English Post Office system, and the only clause of an exceptional character in it is one which provides that the property and interest in a Government annuity "shall be exempt from the operation of any law relating to bankruptcy or insolvency, and shall not be seized or levied upon by or under the process of any court whatever." Sir Richard Cartwright explained that in his opinion the main essentials of any Government scheme must be absolute security as an investment, and absolute freedom from forfeiture. To realise the latter it would be necessary to provide that an intermission of payments should not involve forfeiture of benefits, an opportunity being allowed for resumption under easy conditions. But Sir Richard Cartwright was emphatic in dissociating himself from any advocacy of old age pensions, except in the form of an insurance scheme. And he considered that such a scheme ought to be self-supporting, though the draft Bill contained a clause which would enable any deficiency in the "annuities fund" to be made good out of the public revenue. His condemnation of any old age pension scheme conferring benefits

* See COLONIAL OFFICE JOURNAL, No. 1, p. 70.

which are not merely the actuarial equivalents of contributions was based upon familiar arguments. "My own impression is," he said, "that, in a great many cases, such a scheme would be found to encourage extravagance, and the result would be that the thrifty, industrious working man would find himself compelled ultimately to bear the burden of his less industrious, and possibly dissolute, companion." This argument, which is so rapidly losing ground in England, appears to appeal with greater force to Canadians because it is felt that the opportunities for advancement in the Dominion are so abundant that destitution or poverty must necessarily be the results of misconduct. This optimistic view is reflected in nearly all the speeches. "Fortunately for us in Canada," says Sir Richard "I think I am justified in saying, and I think the experience of my colleagues here and elsewhere will bear me out, there is very little risk of any hardworking, industrious, able-bodied man not being able to make an adequate provision for his old age, if only an opportunity be given to him." Mr. McMullen speaks in the same strain. "We have here every opportunity for every industrious man to make headway in life, and lay by a percentage of his earnings. Under such conditions, old age pensions are not necessary. No man in Canada has to live from hand to mouth, as is the case in other countries where the labourer is often unable to make provision twenty-four hours ahead for his family. It will be many years before anything of that kind is likely to be witnessed in Canada." These quotations illustrate the manner in which opinions and arguments are tempered by local conditions. No one says these things any longer in England. Not even the most stalwart of conservatives, or the most orthodox of poor-law theorists, would venture to put the case against old age pensions so strongly. England is one of the "other countries" whose position Mr. McMullen contrasts unfavourably with that of Canada. But the debate produced one speaker who was less confident of the complete well-being of the Dominion. Mr. Donald Ferguson, in an eloquent speech, gave a clear and interesting review of the old age pensions schemes in actual operation in Germany, in Denmark, in Australia (New South Wales and Victoria), and in New Zealand; and of those which had been put forward from time to time at home; he urged that the time was ripe for Canada to follow the examples set elsewhere.

"In Canada to-day," he said, "we are making millionaires and multi-millionaires. Our wealth is accumulating as fast, perhaps, as that of any country under the sun. The strides we are making are known to all within the range of my voice; but I say, and say without fear of successful contradiction, that at this time, when the progress of the country is so great and undoubted, the wage-earner, notwithstanding a reasonable increase in wages, is not in

a better position than he was ten years ago, when wages were at least twenty per cent. less than they are now. The expense of living has been going up, and the consequence is that to-day the wage-earners of Canada find it as hard or harder to make ends meet than years ago when the times were less favourable and wages lower than they are just now.

“Hence I conclude that conditions in England, our own observations in Canada, and indeed universal experience, show that in these days when money breeds money, and capital has such a great inherent advantage, no state can begin too early to safeguard the interests of those who are working for wages in the service of wealth.”

Mr Ferguson proposed the initiation of a scheme under which pensions should be payable twenty or thirty years hence, and he held firmly to the principle that the wage-earners should be required to contribute, regarding the contrary opinion of the English labour-party as a heresy. Mr. Ferguson's policy would probably be regarded as reactionary in Australia; in England it would be characterised by many as timid; but in Canada it is evidently in advance of public opinion, and the grounds of that opinion are to be found in the conviction expressed by Sir Richard Cartwright in closing the debate. “It is our happy position that in Canada there is as yet no submerged tenth, and I may add it will be our own fault as a nation if for many a day and many a generation a submerged tenth should come into existence in Canada.”

This position may be compared with the trend of thought in Australia. Here also there is no submerged tenth. The question is not one of abject poverty, but of the decent workman. It is he who thinks most of the future, and agitates for a provision for it. The demand for old age pensions is in fact influential where the average standard of living is high, and where the worker learns to appreciate the comforts of life. But a state of rapid commercial expansion, which familiarises public opinion with examples of brilliant successes and obscures the failures, is not favourable to the idea. Evidently the movement will have no place for the present on the American continent.

THE LAND QUESTION IN BRITISH EAST AFRICA.

THERE has been some correspondence in the press lately on the subject of emigration to British East Africa, and the complaint has been made that settlement on the land is greatly impeded by the long delay which attends the grant of titles. It cannot be denied that the delay is a fact, and that improvement in this respect is a matter of the first consequence. The difficulty is the slow progress of the survey. The lands in question are to a large extent, unlike those in the West African Colonies, without private owners, and the Crown exercises the right of making grants and concessions. On the West Coast the Crown in places will give a purchaser a certificate of ownership, but the title really proceeds in the first instance from a native owner, and all that the Crown does is to ratify the transaction on certain conditions. The purchaser can therefore obtain a preliminary title at once in the usual way by bargain with the owner, and generally he can satisfy himself that the acquisition will meet the requirements of the law. The precise boundaries of the property may be left over for subsequent settlement when the Government certificate is to be granted. The fact which underlies this procedure is that practically all the land has an owner. In British East Africa this is not the case. Great territories are practically unoccupied and unclaimed, and the only sort of title must be got from the Government. But in disposing of this estate the Government is confronted with the necessity of marking it out on the ground, and is without the substantial assistance afforded by existing boundaries and well-established rights.

A survey is therefore of paramount importance, and this fact has been recognised ever since the administration of the Protectorate was taken over. The object is to encourage the occupation of land by *bonâ fide* white settlers. The highlands of the Protectorate are undoubtedly suitable for a European. They begin 267 miles from the coast and extend along the Uganda Railway for some 300 miles.

They contain enormous runs of excellent grazing and agricultural land, but the most convenient land has been taken up, and the intending settler must now go some distance from the railway. The climate is good, and the children of European parents thrive in it. Settlers must have enough money to provide themselves with the substantial houses required to stand equatorial sun and rain, and to take up at least 300 or 400 acres. For these purposes and ordinary comforts a settler should, it is considered, have at least a capital of £500. The price of agricultural land in the highlands varies from 2s. 8d. to 5s. 6d. per acre freehold, and 20s. per 100 acres leasehold; grazing land costs half the above figures freehold, and half an anna per acre leasehold. A settler can obtain a homestead of 160 acres, on certain conditions as to cultivation, without payment till the end of three years, and then payment may be spread over 16 years. These terms offer great attractions in such a situation, and the next requirement is the preparation of the land for occupation by a survey. It is not unreasonable to anticipate that the cost of doing this will be trifling when compared with the sums spent on public works and administration.

The case has been put strongly and clearly by Major E. H. Hills, who has drawn up a scheme for the work required. He recommends an increase of staff for the topographical and cadastral work, and also a simplification of procedure which seems eminently practical and which we set out in his own words:—

“ Apart from the understaffing, several other causes of delay may be noted. First and perhaps foremost among these must be put the fact that the unsound practice has been followed of selling blocks of land as containing a certain specified number of acres instead of as marked out upon the ground. Suppose a farmer wishes to acquire a farm of 640 acres. It is of no vital importance to him whether the area is 650 or 630 or even 610 acres; what is important is that he should have his ground plainly marked out by boundary posts and that the definite deed, conveying the land to him, should be delivered with the minimum of delay. When this is done he is in a position to fence his land, should he so desire, or if he wishes to dispose of it he can cut it up or transfer it as a whole. Should the purchaser be of such an exacting nature that he wants precisely the 640 acres, neither more nor less, then it is clearly his business to get it surveyed on his own behalf and at his own expense. To demand that a small establishment should undertake the survey of isolated patches of land, situated all over the country, executed with such a degree of precision that the plans show the exact acreage is setting it an almost impossible task, and, in any case, one that could not be accomplished without a staff entirely out of the present question. Yet this is precisely the demand that has been made upon the Survey and Land

Office in the past. To remedy this state of affairs is not difficult. The actual wording of the deeds contains no explicit or implied guarantee of the acreage, and to prevent any misunderstanding it is only necessary that steps should be taken to bring home clearly to the intending purchaser that it is land included between certain boundary marks that he is buying, and that the acreage is only mentioned as a guide and not as a guarantee of the quantity of land lying inside the marks. It would further be well that a note should be either added to the deed or attached on a separate slip to the effect that the acreage is only provisional, and that the rent or assessment will be revised when the final survey is carried over the ground."

We believe that the matter is being taken in hand, and that the result will be that titles will be expeditiously dealt with. It would not take long to overtake the arrears. The process will not only provide good titles to buyers, but will prevent the irregular acquisition of land by mere occupation and lapse of time.

Another requirement pointed out recently by Col. Owen Thomas, is an organisation for the handling of produce. A new country must find out what its possible markets are, and arrange the machinery for supplying them. We may mention, by way of illustration, that Somaliland buys maize from London.

Considerations of health and sport will tempt men to the highlands, the wonderful plateaux which at a height of from 5,000 to 9,000 feet extend without break. It is likely enough, however, that the tropical coast belt would give the most remunerative results. Rubber, fibre, and cotton can be cultivated in this region, and it has the great advantage over the West Coast that stock flourish. This combination of climatic resources is an element of great strength and justifies the belief in the coming prosperity of British East Africa.

STAMPS (*continued*).

On page 65 of this JOURNAL we referred to the fraudulent manipulation of the values of stamps, the main portions of which are printed in the same colours, *i.e.* green or purple (the doubly fugitive colours). It is only fair to acknowledge the valuable services which have been rendered to the colonies by Stanley Gibbons Ltd., Mr. H. L. Ewen, and other stamp dealers, who have brought many cases of manipulation to the notice of the authorities. It is a considerable safeguard to the colonial revenues that so close a scrutiny is being constantly applied by philatelists to stamps, and it may be confidently asserted that without their aid it would be possible for frauds to escape detection for a considerable time.

As long as extensive series of stamps are printed in one colour and differ only in the name of the colony and the value, it is impossible absolutely to prevent this form of fraud, but it might be limited by the same colours being used for the same duties in all colonies using such stamps. If one colony uses a tablet printed in red for a £1 stamp and another a similar tablet for a 1s. stamp, it is easy to see that one can be substituted for the other to the great detriment of the revenues of the colony using the £1 stamp.

The adoption of the same colours for the same values will not, however, by itself, prevent manipulation within each colony's series, and this is indeed the form of fraud which has been frequently perpetrated of late.

A heroic remedy has been proposed, *i.e.* that all colonial stamps should be of different designs, but the author of this suggestion can hardly have calculated the cost, which might—but at the same time might not—be defrayed by the increased sale to collectors. There are simpler ways of dealing with the matter, and we may be in a position to discuss definite schemes in a future number.

GOLD COAST 2d. stamps will shortly be supplied in the existing colours, but on unsurfaced paper. The 1d. stamps are about to be printed from a new single colour printing plate.

ST. LUCIA $\frac{1}{2}$ d., 1d., and $2\frac{1}{2}$ d. stamps, printed in single Postal Union colours on unsurfaced paper, were despatched early in October.

CAYMAN ISLANDS stamps will in future bear the words "Postage and Revenue," instead of only "Postage." $\frac{1}{2}$ d. and 1d. stamps of this kind have recently been supplied, but there has been no change of colour or paper. Two new values, *i.e.* 3d. and 10s., will be issued shortly, and a change of the colours of the other stamps of the series is under consideration. No change, of course, will be made in the $2\frac{1}{2}$ d. value.

The Government of NATAL has decided to adopt doubly fugitive ink for all its larger-sized stamps, *i.e.* from 5s. upwards, as soon as a further supply is required. The colours will in future be as follows:—

Value.			Border.			Centre.
5s.	...	...	D.F. purple	...	...	Carmine.
10s.	...	...	"	...	...	Chocolate.
£1	...	...	"	...	...	Blue.
£1 10s.	...	...	"	...	...	Brown.
£5	...	...	D.F. green	...	...	Black.
£10	...	...	"	...	...	Brown.
£20	...	...	"	...	...	Violet.

It follows that all the above stamps will be printed on the specially surfaced paper.

6d. DOMINICA stamps have been despatched, printed on surfaced and multiple watermarked paper.

NORTHERN NIGERIA has received a supply of 2d. and 5d. stamps printed on similar paper.

The Government of MAURITIUS keeps a supply of stamps with blank duty tablets, the value being inserted locally. The colours of these stamps are doubly fugitive black, green on blue paper, or purple on red paper. The green stamp has now been supplied on the surfaced multiple watermarked paper.

In spite of all we have said we notice that the philatelic press is continually reporting wrongly the paper on which stamps are printed, *e.g.* a new printing of British Honduras stamps on ordinary paper has been reported, whereas since all the stamps have been printed hitherto in doubly fugitive ink the paper had of course been surfaced. The 1d. Gibraltar has also been reported on surfaced paper as recently as last month, in spite of the clear statement contained in our October number.

We have received Messrs. Stanley Gibbons' 1908 Catalogue of Foreign Stamps (2/6 net). The illustrations might be found suggestive to officials who are contemplating special designs.

REVIEWS AND NOTICES.

Over-Sea Britain. A Descriptive Record of the Geography, the Historical, Ethnological, and Political Development and the Economic Resources of the Empire. The Nearer Empire (the Mediterranean, British Africa, and British America). By E. F. KNIGHT. (*John Murray, 6s.*)

THIS is a handsome volume, the production of which at so low a price as six shillings reflects credit upon the publisher. It is Mr. Knight's intention to deal in a second volume with the British Possessions in Asia and Oceania. It is perhaps unfortunate that the author did not decide to confine his treatment of the subject within somewhat narrower limits. It will readily be realised that it is a physical impossibility to deal adequately, within the compass of little more than three hundred pages, with the formidable list of subjects which Mr. Knight enumerates in his title, especially when the phrase "British Africa" is interpreted as including Egypt and the Soudan. As a piece of descriptive geography, Mr. Knight's book possesses the merits which readers of "Where Three Empires meet" will expect from him, and there is probably no other volume which deals with this aspect of the subject at once so concisely and so readably. The historical side of the work is, however, necessarily sketchy, and it would have been well if Mr. Knight had devoted more space to the "political development" of the territories with which he deals. A book of this character, as Mr. Knight acknowledges in his preface, inevitably loses some of its value from the rapid changes which are taking place throughout the Empire. We notice a good many passages which must already be regarded as out of date, but upon the whole a high standard of accuracy is maintained. In these matters a general survey in literary form cannot compete with a year-book, and if, as we hope will be the case, Mr. Knight's volume commands a circulation which justifies a second edition, he will no doubt be able to make further improvements in what is already a readable and convenient text-book.

A Woman's Trek from the Cape to Cairo. By MARY HALL.
(Methuen & Co., 16s. net.)

Miss Mary Hall, by her journey from the Cape to Cairo, has accomplished a feat which would have been remarkable in a man a few years ago, and the possibility of which testifies to the great advance which has taken place in the dark territories. No little discomfort and even danger must have been met, but it is not the least merit of the book that no parade is made of these things, the lady's experiences being set out with a lightness and simplicity which give the impression that she thoroughly enjoyed the tour. The narrative begins with the landing at Chinde, and gives the detail of travel from there through the great lakes, the Nyasa, the Tanganyika, the Victoria, and the Albert, and down the Nile to Khartoum. Most readers will, we think, be surprised to find how widely the influence of civilisation has spread in British Central Africa and Nyasaland. Miss Hall on one occasion admits that her heart failed a little, this being when she saw on Lake Albert "the small craft which was to be my home by day for more than a week, for it was merely a large rowing boat carrying a sail." Any lady who repeats Miss Hall's feat may look for more comfortable conditions at this point, as a steamer for the lake is to be ordered.

Indiarubber and its Manufacture, with Chapters on Gutta-percha and Balata. By H. L. TERRY, F.I.C. (Archibald Constable & Co., 6s. net.)

The largest rubber plantations in the world are those of Ceylon and the Straits Settlements. But the largest supplies are still from the natural forests of tropical America, and planters and investors are much concerned with the question whether there are great natural stores which are easily movable and not yet drawn upon. The quinine plantations, especially those of the Dutch colonies, practically killed the old South American business, but it would be by no means safe to draw the inference that plantation rubber will triumph in the same way. The plantation quinine was the same article as the South American, and could be produced at a lower cost. The plantation rubber, on the other hand, is on the whole inferior to the natural rubber. It is probable that improved methods of collection and coagulation will alter this, and a great amount of investigation is going on with this object. Rubber varies greatly in kind and quality, and expert study on the spot is desirable; we notice that British Guiana contemplates an appointment for this purpose, and it is to be hoped that the industry will grow in the West Indies. Meantime it can only be said that at present plantation rubber is only a very small

part of the supply, and that, speaking generally, it can be sold at a profitable price. The great natural forests are under the disadvantage of being difficult of access and remote from skilled labour and convenient means of transport.

There seems to be little ground for apprehension that any artificial substitute can be put into competition with the real article. But a vast amount of compounding goes on, not merely for cheapness, but for special purposes; so much so that the rubber itself becomes a comparatively small matter, and has been ironically defined to be "an elastic material for binding together chalk and other minerals in the manufacture of certain goods." The facility with which rubber can be mixed with other things leads to its employment in an astonishing range of modern articles; a large number of mechanical goods, for instance, such as valves, buffers, washers, and belting are made of rubber hardened by vulcanisation to the point desired between pliability and rigidity.

A striking case of the increase in the use of rubber-compounded articles is that of the Wood-Milne heel pads, which, it is said, have reached a yearly output of 20 million pairs. Sometimes, of course, the compounding is carried too far, and in particular waterproofings have got a bad name in consequence of excessive cheapening. Some of the vulcanised proofings which are "guaranteed to stand all climates" are poor stuff when exposed to severe climatic conditions. Proofed tarpaulins used on tropical railways have been known to be short-lived and unsatisfactory, and the heavy oil which is frequently added to the rubber is sufficient to account for the failures, oil being a notorious enemy to rubber.

All these developments are a good augury for plantation prospects, and stimulate the interest of the general reader in the subject. Mr. Terry's book appeals to both classes. It is written with admirable clearness and with the unmistakable touch of the practical man. It reviews the modes of production and treatment, the chemical and physical properties, and manufacturing uses and applications.

A paper entitled "Fifty Years of Responsible Government in Tasmania," by Mr. E. C. Nowell, I.S.O., has been presented to both Houses of the Tasmanian Parliament. The material progress of Tasmania in this period is shown by remarkable figures, and the belief is expressed that her resources, "if strenuously developed, should, in the next fifty years or less, make Tasmania, for its size, one of the greatest wealth producers in the world." The writer states that federation has not yet proved satisfactory to the State. It is a common feature in the history of political combinations that local interests complain of neglect or ill-treatment, and dissatisfaction

on this ground with federation will find expression until a stronger sentiment of union is fostered by a longer common history and a more developed feeling of national pride.

We welcome the appearance of a "Handbook to St. Vincent," edited by Mr. R. M. Anderson, and suggested by the success of the cotton industry, which "gives such promise of a return of prosperity" to the island. In addition to the great beauties of the place, the large number of neolithic instruments supply an attraction to the intelligent tourist; they are often beautifully finished and always genuine, as the labourers of to-day could not make them. Agriculturally, St. Vincent is most celebrated for its arrowroot, which is the best in the world. Unfortunately, this pure and digestible article has a rather high retail price, and cornflour and other starches extracted from cereals by the caustic soda and fermentation processes are sold cheaper and used largely by an indiscriminating public.

BUSINESS NOTES.

Gas Producers.

Gas producers for power purposes are rapidly displacing small steam engines, and their convenience and economy recommend them for use in the colonies. Producer gas is obtained from a mass of incandescent carbon, in the form of coal or the like combustible matter, through which a supply of air, or steam and air, is forced. Solid carbon, when burnt, has an affinity for oxygen, and combined with it forms carbon dioxide, which is the product of complete combustion, and of no value in a gas engine; but if the gas is forced through a further mass of incandescent carbon, it is converted into carbonic monoxide, which, when fed with oxygen, will burn. In the "suction" gas producer the vapour from heated water is drawn into the generator with a quantity of air at each suction stroke of the engine. The essential parts of this producer are a water heater, a generator, a cooler, and an expansion box. No gasholder is required, as no gas can get away from the generator and connections. The management is easy, and there is the great advantage over a steam engine that there are no pipes and boilers to clean.

Suction producer plants are quite commonly made up to 200 B.H.P., but the smaller sizes such as 8 or 20 B.H.P. are most frequently met with. A plant of the smaller size, consisting of producer and engine, can be obtained for about £11 per B.H.P., whether the plant is intended to work with anthracite or coke. For larger plants such as 100 B.H.P. to 200 B.H.P. the price would be somewhat less, say about £10 per B.H.P.

Suction producers are usually constructed to work either with anthracite or coke, but in the latter case they require slightly larger grates and the consumption of fuel is a little more. With a plant of almost any size, large or small, it is possible to obtain 1 B.H.P. with a consumption of anthracite of 1.1 lb. per hour, or 1.3 lb. of coke per hour; these figures in each case include the fuel used for keeping the fires banked up in the producer all night in accordance with the usual practice. These figures for fuel consumption are only about a

third or a quarter of the corresponding figures for steam engine plant, since not only are internal combustion engines as a class of higher efficiency than steam engines, but the standby losses of a producer are trifling when compared with those of a steam boiler.

The consumption of water for cleansing the gas and supplying the necessary small quantity of steam should not be more than 2 gallons per B.H.P. at full load when using anthracite or 3 gallons when using coke.

It has been stated that, if a 20 B.H.P. plant were arranged to start at the beginning of the week with its producer empty and to run on full load for 10 hours each day, banking the fires at night, as usual, the consumption of anthracite peas in one week would be about half a ton. The consumption of water under the same conditions would be from 2,000 to 3,000 gallons per week.

A useful little handbook (at 1/- net) on the subject of gas producers has been published by Percival Marshall & Co.

Sometimes a nuisance is created in the locality where a gas plant has been created by the discharge from the blow-off or exhaust pipes before and after starting the engines. To prevent this, a gas purifier should be used. This in shape resembles an ordinary box with a lid, containing grids fitted with a purifying medium through which the gas is forced. Soft grey lime, slaked, may be used as the medium, but does not last long; oxide of iron will last from one to two months, and is approximately of the same cost. The oxide should be packed in as lightly as possible, as otherwise it takes a long time to blow the gas through. The price of such a purifier, f.o.b., is £14.

Telephones.

The following notes have reference to questions which are asked from time to time by colonial superintendents. The "Sinclair" pattern of insulator is believed to be decidedly the best; the Indian form of field insulator is cheaper, but not so satisfactory. For the lines, phosphor bronze (40 lbs.) is considerably cheaper than copper wire (100 lbs.), and may be used over moderate distances, except along the coast, where its life is decidedly shorter. The 100-lb. copper wire is superior from every point of view to the 40-lb. phosphor except in the matter of cost; it has greater tensile strength and less resistance.

Where telephone wires have to cross overhead tramway trolley lines or high tension lines, it is desirable that the wires should be brought down and placed underground where the crossing is made, with proper protection from lightning. In some cases this is not practicable, and then it is advisable to have fuses on either side of the crossing. These should fuse at 3 or 5 amperes.

As an alternative to the use of fuses, which are a cause of trouble after thunderstorms, a wire net cradle can be slung across the telephone wires and well earthed.

The type of cable used should be the air space paper insulated, lead covered and armoured cable, laid direct in the ground at sufficient depth to prevent risk of damage during road repairs. Every 200 or 300 yards, or at more frequent intervals where necessary, there should be a brick chamber, entered by a manhole with iron cover, large enough for a man to work in, when making a joint or connection, or when applying the dry air pump. The chamber should be drained to the nearest rainfall outlet, or, where this is not possible, made watertight. The cable joints should be made with lead sleeves, and should be impervious to wet. Connection to subscribers en route should be made from these chambers by means of similar cable containing the number of parts required in the house.

Recent prices of armoured telephone cable are as follows :—

102 prs.	£588 per mile.
52 „	355 „

The prices, however, fluctuate very much owing to the state of the copper market ; in 1905 these cables cost £419 and £262 respectively.

Manhole covers cost for footways £1. 10s. to £2. 10s. each according to size, and for roadway, where there is heavy traffic, £8. 10s.

A dry air pump, with desiccator, mounted on a truck, costs £5.

Rope.

As large quantities of rope are exported to the colonies, it may be useful to mention that in the trade rope is sold by weight in coils of 120 fathoms, and it is usual in giving an order to state the number of coils required. The weight varies according to the size circum, and this depends on the number of yarns. Tables are obtainable showing the particulars ; thus, of white manilla rope :—

Size circum.	Yarns in rope.	Weight per coil of 120 fathoms.	Minimum breaking strain.
3 ins.	75 (25 thread)	1 cwt. 3 qrs. 20 lbs.	4 tons.

The size of rope is always indicated by its circumference and not by its diameter ; ignorance of this practice often leads to confusion.

A yarn or strand can be dyed as a means of identification. The present price of white manilla rope of a reliable type is about 50s. per cwt.

Motor Cars.

The distance between the wheels from side to side is usually greater than with ordinary vehicles. In many colonial roads these latter form grooves with ridges just beyond ; the ridges are generally hard and stony, and the tyres get cut badly. It would be an improvement for such places if makers were to adjust the gauge to that of ordinary traffic.

Makers should bear in mind that celluloid cases for accumulators are not durable in the tropics.

Induction coils should be specially manufactured for the tropics, as otherwise there is a danger of the insulating material melting when the current passes.

Muntz Metal.

A complaint has been received from a colony of the failure of Muntz metal as a sheathing for ships' bottoms. In one case it appears to have perished after eighteen months' immersion. The name originated with the first manufacturers of an alloy of copper and zinc, which, when subjected to the action of sea-water, exfoliates, so that barnacles come off with each exfoliation. The patent of Messrs. Muntz has expired, and the name is now in general use for sheets intended for the above purpose. The composition is usually copper, 62 per cent. ; zinc, 38 per cent. The sheets should be bedded on felt and Stockholm tar. If this is done, and the nails are of the same composition, voltaic action will proceed uniformly in the presence of sea-water ; otherwise, there is danger of the zinc being prematurely removed by electrolysis, and of the remaining metal becoming brittle. Brown paper and varnish are sometimes substituted for felt and tar for the sake of cheapness, but are not effective.

Coal tar and pitch. A report has been received that blast-furnace tar compares favourably with the gas-house quality generally supplied ; it costs about 1s. 6d. per barrel less.

A patent bed called the " Handy-Cosy " has been brought out which can be folded into dimensions of 3 ft. 4 ins. by 8 ins. by 6 ins., and weighs 28 lbs. The frame is of light steel tubing, and the mattress is made of rot-proof canvas. It is strong and quickly fixed, and can be obtained from Messrs. Way & Co., Billiter Street, for 45s.

It is worth while occasionally to notice what sort of cargo is carried by a representative steamer between England and a colony. A recent arrival from Jamaica (the *Port Henderson*) shows that the exports from that place are very varied in character. There were about 8,000 cases of oranges ; then come various timbers, satinwood, lignum vitæ, ebony, mahogany ; barrels of extract of logwood ; bags of pimento, coffee, cocoa, tea, cocoanuts ; cases of honey and tortoise-shell ; barrels of wax, copper, sarsaparilla ; puncheons of rum ; and of course bananas—23,250 bunches.

The Gold Coast Government recently sent to England 8½ tons of selected cocoa, on behalf of native planters, to see whether a better price could be obtained than by local sale. The prices realised averaged 67s. 8d. per cwt., being 2s. 8d. per cwt. above the current market price, and the experiment was therefore, as the Governor has observed in his address to the Legislative Council, thoroughly successful. The cocoa was sent to the Produce Brokers' Company, Liverpool, and sold at public auction.

There are a quarter of a million goats in Cyprus. These could be shipped probably at 5s. f.o.b. If any colony could take a shipload, this is the place to go to. Sheep skins could be supplied at a low rate, and manufacturers requiring them would do well to obtain them from Cyprus. No doubt the island government would lend its assistance.

RAILWAY NOTES.

A RETURN has been presented to the House of Commons containing full particulars as to the ownership and length of railways "in British Protectorates, leased territories, and colonies (other than the Transvaal and Orange River Colony) not possessing responsible government," together with details of their original cost, the revenue received, and the working expenses incurred since their first construction. The average cost of construction has been about £7,500 per mile. A study of the figures given shows that it is the Eastern colonies and protectorates which are conspicuous for the successful and profitable working of their railways. During forty-one years the Ceylon Government Railways have yielded a profit on working of Rs.84,416,000, interest charges during the same period reaching a total of Rs.32,244,000. The Federated Malay States Railways have since 1885 yielded a net profit of \$13,491,687, while, as the whole cost of their construction has been met from the current revenue of the States, they are burdened with no debt charges. The fifteen miles of railway owned by the Straits Settlements Government have also been constructed out of revenue, and the enterprise yields a good profit. Of the West African railways, the Gold Coast shows the most satisfactory financial results, while on the opposite side of the Continent the rapid increase in the traffic and revenue of the Uganda Railway is remarkable. (In 1903-4 there was a loss on working of £60,100; in 1904-5 a profit of £2,600; in 1905-6 a profit of £56,600; and in 1906-7 a profit of £76,000.) In the West Indies the Trinidad Government Railway alone shows particularly successful results. The Jamaica Railway yields a substantial profit over working expenses, but is hampered by a very heavy debt charge. This undertaking has had a particularly chequered history, having twice been taken over by the Colonial Government from private companies, upon terms which have proved very burdensome to the Colonial Treasury. The general impression produced by the return is distinctly favourable to the ownership and management of railways by Government.

In all the cases where a railway has been constructed in these colonies by a private company, the Government has had to come to its assistance with a subsidy or to take over the line. It is noteworthy that the Malta railway did not pay expenses so long as it was run by a company, but has shown a substantial surplus ever since the Government took it over.

We notice that the colonies were not asked, and that the returns only state in a few cases the gauges of the railways. The figures in such a compilation would be much more instructive if the gauges and weight of rails were given.

A considerable quantity of permanent way material was sent out promptly for the Northern Nigerian Railway, and was conveyed expeditiously by the ocean steamers. Unfortunately the river, instead of reaching its maximum flood by the middle of September, for some reason or other elected to remain at its minimum. It is hoped that such an irregularity will not occur when the railway is busy ; but the contingency has to be reckoned with, and the dredger will no doubt find plenty of work to do. This time the difficulties were successfully surmounted, and rails for about thirteen miles were got up ; but the flood next year will have to carry some 40,000 tons of permanent way material, and it is to be hoped that the river will be on its best behaviour. Some complaints, we believe, have been made by merchants that the Government demands on the steamers seriously interfered with their business, but the railways will eventually more than make up for any inconvenience of this kind.

It has been decided to establish a ferry at the Niger Railway crossing at Jebba, at an estimated cost of £25,000.

The clearing of the Niger and the construction of railways at a navigable point will help enormously to open up the immense Nigerian territories to the ordinary trader, who has hitherto found that the river is practically barred to the outsiders. Physical difficulties keep out the small man, and encourage the formation of strong bodies which monopolise the facilities. The best help which the Government under such circumstances can give to the public is to remove the difficulty and multiply the facilities.

It is announced that the French Government have decided to construct the last section of the railway from Konakry to the Niger. The cost is estimated at 30,000,000 frs., and the work is to be completed in 1910.

The Lagos Railway report for 1906 shows that the total capital expenditure had been £1,230,939, equal to £10,000 per mile to Ibadan. The average cost per mile will, however, be materially reduced by the extensions now in progress. The wharf, at which a terminal charge is made of 2s. 6d. per ton, appears to be remunerative. The revenue of the railway increased from £72,649 in 1905 to £84,663. A considerably larger revenue is anticipated for 1908, but, taking into account the sinking fund, which hardly is a proper charge against railway revenue, the loss on the undertaking will, it is estimated, be almost £19,000. The railhead crossed the Northern Nigerian boundary on 13th December.

The Uganda Railway report for 1906-7 states that the sportsmen and tourists who were reported to be coming in large numbers did not appear. But there was a large increase of second-class passengers, and this is very encouraging, as it represents farmers and traders who have mostly come to stay. Altogether 609,461 passengers were carried in the year, as against 542,461 in the previous year—very good progress, but some of it is due to reduced fares. The total traffic is steadily increasing. There was a net profit on the year's working of Rs.1,151,458.

A paper published by the Ceylon Government contains some interesting correspondence on the subject of the proposed establishment of through railway communication between Ceylon and Southern India. The lines of the South Indian Railway Company are to be extended across the Paumben Channel to the extreme end of the island of Rameswaram, while the Ceylon Government has decided to undertake a survey with a view to the extension of the Government railway for some sixty miles to the island of Mannar. This will leave a gap between the two systems of only twenty-one miles, which is almost entirely occupied by the reef known as Adam's Bridge. The construction of a viaduct over this reef has been contemplated; but the cost (which Mr. Priestley, the agent of the South Indian Railway Company, estimates at 300 lakhs of rupees) must be regarded as prohibitive, for the present at any rate. As an alternative, Mr. Priestley suggested a "wagon ferry," the cost of which, including the provision of three car ferries, and the necessary terminal piers and protective works, he estimated at 28 lakhs. The gauge of the Ceylon Northern Railway is 5 ft. 6 ins., while that of the South Indian Railway is 3 ft. 3½ ins., so that, if this scheme were carried out, it would be necessary to tranship the bodies of the cars from the bogie trucks which carry them, which Mr. Priestley proposed to do by means of the Ramsay system. Messrs. Gregory, Eyles, and Waring, in reporting upon these proposals, considered the estimates of cost to be unduly low. They were

of opinion that a larger and stronger type of steamer than that proposed would be necessary if cars, with their heavy underframes and bogies, were to be carried across a stretch of sea where rough weather was to be expected; and that the cost of the harbour works which it would be necessary to provide on the Ceylon side had been greatly under-estimated. They were also opposed on principle to the suggested transshipment arrangements. "Special mechanical arrangements dealing with a break of gauge," they state in their report, "are always undesirable, and have been abandoned in the great majority of cases where they have been tried." Lastly, they pointed out that the receipts to be anticipated from the coolie traffic were insufficient to justify the proposed outlay, while the amount of goods traffic which could be attracted was quite uncertain, no attempt having been made even to frame an estimate of it. In these circumstances it is not surprising that it should have been decided to postpone for the present the consideration of this part of the scheme, and to rest content with the extensions of the two railway systems, and the provision of regular communication over the intervening strait; but this will not preclude the adoption of one or other of the more ambitious alternatives suggested—a wagon ferry or a viaduct—should the traffic appear likely to justify it.

The railway which is being constructed by the Shire Highlands Railway Company in Nyasaland will, when completed to Blantyre, be a useful link in the route between the producing area and markets in Europe; but it will be only a link, and so short that it is difficult to anticipate any great economic effect from it at first. There will be a certain saving in transit between Blantyre and Port Herald, where the bridge over the Shire River is completed, but any great extension of planting operations can hardly be looked for until the line is carried southwards from Port Herald to at least the head of navigation, which may for practicable purposes be taken as Villa Bodge.

The construction of the Cyprus Railway is now practically completed. The expenditure has been about £119,000, and the cost of construction per mile, including sufficient rolling stock and stations, £1,940. This cost is little more than that of the Egyptian Delta Light Railways, which are principally laid on the roads in a dead flat country, and have a much greater mileage. The traffic returns, however, are poor, and the conservative methods of the peasantry are clearly a great impediment. We understand that a pier at Larnaca is contemplated, and it would certainly be very useful; but this will not help the railway, in fact will operate

the other way. It does not seem likely that the railway will succeed in converting Famagusta into the leading port of the island, and the case is an instance of the importance of fully recognising established commercial habits when fixing the base of a railway.

The difficulties which are being met with in the construction of the Beacon Hill tunnel on the Kowloon-Canton Railway are a good illustration of the uncertainties of engineering. It was anticipated that some clay and shale would be found, but no sign of them has appeared yet; the material is so unyielding that it appears to defy hammer, pick, and ammunition alike, and it is reported that in a granite tunnel three times more material could be dislodged for the same amount of ammunition. A hard dry stone may be much more easily cleared than a wet tough substance. The tunnel is making as much water as will fill a six-inch pipe continually at each end; that represents a very heavy downpour for men to work under, and fast progress cannot be expected.

It appears to be sometimes considered that a bridge can be relied upon until it shows increased deflection under rolling loads; but this is not the case. Bridgework fails by the wasting by corrosion resulting in the overstrain of some detail, and such a wasting may be far advanced without giving any warning by increase of deflection under test. It is necessary that every structure should be periodically examined for any of the usual evidences of failure or overstrain in its details.

The Prussian State Railways some time ago were anxious to equip certain stations on the Rhine with efficient coal-tips, and invited competition for the designs. The result has been the adoption of tips constructed to deal with trucks of up to 40 tons capacity with end or bottom doors, adaptable to the state of the tide, and with shoots attached for sliding the coal into the hold gently. The approach of each tip is provided with an electrical turntable, fitted with weighing machine, to enable the gross and tare weight of each truck to be taken, and the distribution of the empty trucks to be effected over the shunting sidings without the use of locomotives for the empties. The arrangements, we understand, have been found very satisfactory.

Steps are being taken to advertise the attractions of the Uganda Railway more freely. A French and a German edition of the guide are contemplated, and 40,000 copies of a booklet similar to that on

Rhodesia. Posters for railway stations may be brought out. In these matters artistic style is one of the first considerations, and no doubt an effort will be made to make the productions attractive to the eye.

The Renard train manufactured by the Daimler Motor Company has come in for a good deal of attention as an effort to provide something like railway accommodation without rails. The engine used is a four-cylinder, 75 h.-p. The weight of the motor is 3 tons 2 cwt.; front wheels with solid rubber tyres, back wheels with steel tyres. The carriages have six wheels; the driving wheels have steel tyres, the trailing wheels rubber tyres; weight of trailers for goods—tare 2 tons, load 4 tons; tare of passenger carriages holding 26, 2 tons 14 cwt. Four trailers is the number recommended. The train is stated to be able to go up a 1 in $5\frac{1}{2}$ gradient, and to go round a radius of 14 feet. Petrol consumption is about $4\frac{1}{2}$ miles to the gallon. The flexibility of the train is remarkable; each car follows precisely the car in front of it, except at a high speed when there is considerable oscillation. A first class road is probably necessary for it. The cost of the train with three trailers is £3,200. It is a complicated machine to look after, the number of parts requiring attention being considerable; but it might be remunerative where there are good roads in various directions which it could take successively.

A colonial government has raised specifically the question how it can satisfy itself that railway construction work which is being carried out under the direct instructions of consulting engineers is being efficiently, expeditiously, and economically carried out. It is clear that the officer under whose charge the works will eventually be placed should have every opportunity of becoming thoroughly acquainted with what is being done. He should, therefore, have the opportunity of expressing his opinion on the works during their construction, and he should report his views freely to the Governor. It would seem particularly important that this officer, who is usually called the General Manager, should satisfy himself about all matters directly affecting the subsequent working of the line, such as station and goods accommodation, the housing of the working staff, the quantity and design of rolling stock, &c.; and, therefore, he should be consulted about these matters. Much, of course, depends on the personality of the officers employed in the two positions of General Manager and Resident Engineer, and friction is likely to arise if there is any aggressiveness or undue susceptibility on either side; but if they work well together, the arrangement secures the union of technical knowledge of construction work with experience of local

conditions and requirements. We understand that any representations or criticisms made by the General Manager in regard to construction should be made to the Colonial Government and not to the Resident Engineer.

It should be understood that, while the Resident Engineer works under the Consulting Engineer in purely technical matters, he is under the direction and as fully the servant of the Colonial Government as the General Manager, or any of his staff. He is responsible in all matters, except technical ones, to the Government. His letters to the Consulting Engineer should pass under flying seal through the General Manager and the Colonial Secretary's office, and he should also report periodically to the Government direct on the cost and progress of the work, and whenever unforeseen circumstances renders a material increase of cost inevitable.

MEDICAL NOTES.

Malta Fever.

THE discovery of the true cause of Malta Fever is one of the most valuable recent results of medical research. We extract the following paragraphs from the recently published Report on Malta for 1906-7 (Colonial Reports, Annual Series, No. 535, price 2½d.) :—

“The number of cases of Mediterranean fever reported was 883, with 80 deaths, as against 1,606 cases, with 138 deaths in 1905-6. The decrease in the number of cases reported was, therefore, 723, or 45 per cent.

“While the total decrease in the number of cases reported is 723, the decrease in the number of cases reported among the civil population was only 108, or about 15 per cent. of the total decrease, the remainder of the decrease (85 per cent.) occurring in the naval and military population. These figures furnish the clearest proof—if proof were needed—that goats’ milk is the principal agent in spreading Mediterranean fever. The use of goats’ milk has been absolutely prohibited by the Naval and Military Authorities, with the result indicated above. The civil population, in spite of the warnings of the Government, conveyed to them by means of leaflets printed in the vernacular, continue to use goats’ milk, without even taking the precaution of boiling it. This is, in the main, due to ignorance and a tenacious adherence to old ideas and beliefs; but it is surprising to find educated people wilfully shutting their eyes to a fact that has been so clearly demonstrated.

“The Mediterranean Fever Commission have now concluded their investigations and have issued the Fifth, Sixth, and Seventh Parts of their Reports.

“The results of the researches of the Commission have been summed up by Colonel D. Bruce, O.B., F.R.S., Royal Army Medical Corps, in a short pamphlet published this year; and after briefly referring to the experiments conducted with a view to ascertaining how the micro-organism enters the human body, he states that the

results of the experiments pointed to the conclusion that the most probable way in which the micrococcus entered the body was 'by the alimentary canal, and, therefore, by some infected food or drink.'

"Then came the discovery that 10 per cent. of the goats in Malta were actually excreting the micrococcus in their milk, and a flood of light was at once thrown on the subject. To quote Colonel Bruce's own words :—

" 'Here, then, at last has been discovered a mode of infection which explains many of the curious features in the epidemiology of Malta fever—the irregular seasonal prevalence, the number of cases which occur during the winter months, when there are no mosquitoes and little dust. It is true there are more cases in summer, and this may be explained by the temperature being more favourable for the multiplication of the micrococcus in milk that has been set aside, and to the fact that more milk and cream are used for fruit, in ice-creams, &c. It explains the liability of the officer to attack being three times as great as in the case of the private soldier, since the former consumes much more milk in various ways than the latter. It also explains the isolated epidemics which sometimes occur at any season of the year in institutions or in messes, such as that published by Dr. Johnstone in Vol. ii. of the Reports of the Commission, where a sergeants' mess was severely struck, while the men living in the vicinity escaped.'

"The consequences of prohibiting the use of goats' milk in naval and military hospitals and barracks have been mentioned above, and the Royal Society are fully justified in claiming that the results achieved by the Commission are highly satisfactory."

The full text of the proceedings of the first International Conference on Sleeping Sickness, held in London last June, has now been published and presented to Parliament (Cd. 3,778, price 6d.). An account of the Conference was given in the October number of the COLONIAL OFFICE JOURNAL (p. 178).

The annual report on Jamaica, for 1906-7, contains an interesting account of the manner in which the emergency arising from the earthquake of last January was dealt with at the Kingston Hospital. The following extract will show that great credit is due to the medical staff for the manner in which they met the occasion.

"The most noteworthy events which occurred at the Kingston Hospital last year were concentrated in the few weeks following the

14th January. The Superintending Medical Officer reports that when he entered the hospital shortly after the earthquake the whole quadrangle and the spaces between the female wards were crowded to overflowing with wounded people. 'The patients,' he states, 'were lying with clothes partially torn off by falling masonry and many of them soaked in blood. The wounds were not ordinary wounds, clean made, like those to be dealt with after an action, but wounds made by the grinding and falling of masonry.' The male wards had been shaken and the wounded refused to enter them. The plaster at the top of many of the female wards was loosened and fell in many places. The partly finished new operating theatre was wrecked when it was most needed, and the X-ray apparatus ordered previously had not yet arrived. The number of patients for whom provision is made on the Estimates is 214. The number on the night of January 14th was 624. In the first instance patients were to a great extent laid out in the open air, tents not being obtainable for several days, but fortunately the weather remained remarkably fine. The female wards were occupied, and the piazzas surrounding them afforded excellent accommodation, as did also the covered ways between the wards. Many, however, had to lie out in the open, and many had to be operated on where they lay. It is a matter for congratulation, therefore, that the efforts of the medical staff, reinforced by medical officers from outside, and of the nurses, assisted by volunteers, were rewarded with results as successful as those shown by the returns of the institution. The total number of patients injured by the earthquake dealt with between the 14th of January and the 31st of March was 499, exclusive of a large number of cases treated for minor injuries of which no record was kept. Between the 14th and the 15th of January there were thirty-eight deaths, and between the 16th and 17th sixteen, but many of these cases had been brought to the hospital in a moribund condition. Of the 445 cases operated on 28 died. Seven of these deaths were caused by tetanus—a small proportion, considering the nature of the injuries and the conditions under which they were treated."

"The failure of the ordinary sources of supply demanded extraordinary organization for the provision of food, drugs, and medical appliances, but the difficulty was successfully overcome with the aid of volunteers drawn not only from the neighbourhood, but also from across the sea."

A conference was recently held at the Colonial Office to discuss the prevalence of ankylostomiasis in the West Indies. This disease is caused by the presence in the intestine of a small worm, the "*ankylostoma duodenale*." This worm produces vast numbers of ova, which do not however develop in the intestine, but only after being passed out

with the excreta into suitable conditions of temperature and moisture. The worm finds its way into the intestine either through the skin, or by contamination of the food or water. Persons exposed to continual re-infection suffer from increasing debility, which may have fatal results.

In British Guiana, under the able direction of Dr. Godfrey, active measures have been taken for the eradication of the disease. The steps taken comprise the prevention of the contamination of the soil by the erection on estates of suitable latrines, and the treatment of sufferers with one of the well-known specifics, such as thymol or beta-naphthol.

It is understood that the United States Government have adopted similar measures in Puerto Rico, with gratifying results, and steps are being taken to obtain a report on the subject. The question is one of considerable importance, in view of the great loss of labour which the disease entails. It is especially prevalent among the Indian coolie labourers, of whom, it is said, 75 per cent. are infected before their embarkation for the Colonies. The treatment of coolies during the voyage from Calcutta to the West Indies has recently been undertaken, but the results are not yet fully known.

It is worth noting that ankylostomiasis is prevalent in Germany, and also in the Cornish mines, where it was introduced, it is believed, from South Africa.

ASIATIC IMMIGRATION.

A LETTER TO THE EDITORS.

THE colour question, and particularly that form of it which is concerned with the immigration on a large scale of the coloured races into countries other than the home of their birth, is an embarrassment from which Great Britain, considered simply as a member of the European community of nations, enjoys a happy exemption. But as an imperial power, with possessions extending over every quarter of the globe, Great Britain finds that the question is one which interests her very closely and directly. At the present moment it is, in one form or another, a burning question in Australia, in Canada, in South Africa, and to a lesser extent in the West Indies. Here in England, if anywhere, it should be possible for sane views and reasoned judgment to be formed upon a question the consideration of which is too often vitiated by passion, prejudice, and jealousy. We have adequate sources of information; we are sufficiently concerned to take a lively interest in the problem; we are sufficiently distant to be impartial. But in practice English opinion on the subject rarely rises above the level of a vague or rather Pharisaic sentiment; and anticipations of the future are generally confined to a faith, not based on reason, that with the spread in distant latitudes of the spirit of humanity and toleration at present characteristic of the British Isles, the difficulties of the colour question will be happily and permanently solved. Recently, by a combination of curious accidents, one isolated and by no means characteristic form of the problem became the subject of acute political controversy at home. I have no desire to raise the ghost of the Chinese labour controversy, now fortunately moribund. But I may be allowed to illustrate, from certain incidents in that controversy, the general want of system and logic which characterises English thought, or perhaps I should say English utterance, upon this type of question. The opponents of Chinese labour maintained that the Chinaman was a man and a brother, and ought to be treated

as such. They also maintained that he was addicted to all manner of crimes and vices, infected with all manner of diseases, a peril to life and health, and—worst of all—to property, a loathsome and almost inhuman creature, unfitted for introduction into any decent and highly civilised population, such as that of the Witwatersrand. The advocates of Chinese labour retorted that the Chinaman was peaceful, law-abiding, thrifty and industrious, possessed in fact of all the virtues that go to make a good citizen and a useful member of society; and they added that ample precautions were being taken to ensure that he should not become a citizen or a member of society at all. It is only at special seasons, usually coincident with a general election, that opinion can continue to subsist at this high altitude and in so rarefied an atmosphere. But English opinion on the colour question, as it presents itself, for example, in Australia and in Canada, if less picturesque, is not much more profound. It is characterised as a rule by an inability to understand why the white Colonial should exhibit such an antipathy towards the coloured races, an antipathy which it commonly ascribes to a blind race-prejudice due to want of education, or to climate, or perhaps to the absence of a leisured class. It is, indeed, neither unnatural nor discreditable that English sympathy should incline towards the coloured races. England was after all the protagonist in the matter of negro emancipation; she has come nearer, in her West Indian Colonies, to solving the colour question once for all than any other white race ever has, and her method of doing it has been to sweep away all restrictions and establish full and complete race equality; she is to-day engaged in a sincere if ineffective protest against the iniquities under which the black population in the Congo Free State is suffering; and she was the first European power to signify, by the conclusion of the alliance with Japan, that she was prepared to admit a coloured Asiatic power into close association upon a complete footing of equality. But we are apt to forget that since we paid £20,000,000—a ridiculously inadequate sum—to complete the work of negro emancipation, our humane and advanced sentiments on the colour question have cost us little. We have done our magnanimity on the cheap. It is easy to maintain with impassioned argument the equality of white and black or yellow, so long as the black man and the yellow man have not become your neighbours and competitors. It is easy, and it is by no means disagreeable; for the advocacy of lofty sentiments is warming to the inner man. The Aborigines Protection Society and the League of Universal Brotherhood can extend the hand of fellowship to the coloured man, undeterred by fear lest he should propose to their daughters, or offer to perform their work for a lower salary. But to the white Colonist these two contingencies are very real possibilities, and it is ultimately upon them that the whole colour question turns. I do not mean to suggest that these are the

only obstacles to a complete understanding and sympathy between the races. To begin with, there is a vague semi-instinctive dislike, springing from an acute sense of difference. I think that any candid person will admit that, on first contact with persons of colour, he has been conscious of this feeling and has had to make a deliberate effort to overcome it. I imagine that a white cat, which had never seen a cat that was not white, would have a similar feeling when it met a black cat, or a tortoise-shell cat, for the first time. In fact I believe myself to have detected clear traces of this sentiment on the part of an English tabby, of conventional temperament, when first introduced to a Manx cat. But familiarity breeds tolerance, and this sentiment can easily be eliminated. There remain the two tangible grounds of objection to the coloured immigrant which I have indicated—the objection to him as a son-in-law, and as an industrial competitor—and they suggest the two divisions into which any discussion of the question naturally falls. The one aspect of it is social; the other economic.

With the former, though it is, of course, by far the more far-reaching, I shall deal here shortly. It is not the immediate subject of my letter, and I propose to say only so much as seems necessary to indicate my general attitude towards the race question. In my opinion, a community cannot be satisfactorily constituted, if there exist side by side in it two races which do not intermarry. In many parts of the world, and especially in its tropical areas, this state of affairs is already in existence, and, for the present at any rate, cannot well be remedied. But when it does not exist, it appears to me to be the rashest of social experiments to bring it about. If therefore the influx of a coloured population into a community predominantly white is to be encouraged, if my starting principle is right, the inter-marriage of the two races must also be encouraged. It cannot be questioned that such inter-marriage is generally regarded by white, and especially by Anglo-Saxon, populations with strong repugnance. I believe that the grounds of that repugnance are largely exaggerated, and that by degrees it will tend to diminish. In particular, I believe that the common statement, that the half-caste inherits the faults of both parents and the virtues of neither, is wholly fallacious. What does happen is that a race is produced which finds its social position ambiguous, and which has no environment to which it can easily and naturally adapt itself; and the reason why this happens is that the moral, intellectual, and social standards of the two races, as a whole, are still far apart, if not actually divergent in direction. If, by a gradual educational process, those standards can be assimilated to one another, then the objection to mixed marriages will disappear, and it is possible that a composite race, endowed with fresh vitality and strength of character, will arise. But even if this optimistic view be accepted, until that assimilation

of standards takes place, a mixed marriage is an almost unmixed evil, and a white community is fully justified in taking what measures it can to protect itself. But although a good deal is heard of the cry of "the purity of the race" in connection with the White Australia question, and with the recent anti-Asiatic riots in British Columbia, I do not believe it to be the root of the objection entertained by the Canadian or the Australian to the coloured immigrant. To him it is primarily in its economic aspect that the Asiatic immigration question presents itself, and it is with this aspect that I am primarily concerned. Briefly and boldly expressed, the objection of the white man to the Asiatic immigrant is his objection to a man who is prepared to work for a lower wage than he is himself. And, in passing, I may observe that the objection entertained in South Africa to the British Indian is closely analogous; it is the objection of the white trader to a competitor who cuts prices. In each case, a hundred other reasons are alleged, but the real motive is the economic one. The real objection to the Asiatic is not that he is insanitary in his habits, insincere in his devotion to the empire, addicted to opium smoking and violent crime, unchivalrous towards the female sex, but simply that he is industrious and thrifty. Is this objection reasonable? The question cannot be answered without a consideration of the different views which it is possible to take of the moral and social value of work. The normal English view appears to be that work is a thing desirable in itself and for its own sake, a thing which it is at once unreasonable and unrighteous not to search for, and welcome when found. The Tariff Reformer pictures to himself as his ideal a society in which there shall be work for all, not a society in which there shall be an adequate income for all, and work for none; and so strong is the force of theory that in a world straining beneath the burden of over-work, the promise of more work still exercises a mysterious attraction. It is commonly for others rather than ourselves that we desire this boon. But it would be a mistake to suppose that there is anything insincere or hypocritical in the theory. The Industrial Freedom League—if it still exists—burns with a quite genuine moral indignation against the man who only lays 600 bricks a day, when he might, by straining every nerve from sunrise to sunset, lay 750. And, on the same principle, the attitude of the manual worker towards the idle rich is less one of envy, or of enmity inspired by a sense of injustice, than one of moral disapproval. Summed up in a sentence, the European creed is that work is a thing which it is wrong for other people not to appreciate. Possibly we owe a debt of gratitude to the African race for having revealed to us that this is not the only possible creed. The negro does not consider that work is a good thing either for himself or for other people. He believes it to be an evil, and often an unnecessary one. He avoids work

himself; he expects others to avoid it. And, being by nature charitable and sympathetic, he feels no indignation against those who avoid it with success. At most, he envies their talent or good fortune. He frankly regrets the garden of Eden, and could view the prospect of a return to it without fear of boredom. He has never interpreted the primal curse, "In the sweat of thy brow shalt thou eat bread," as a blessing in disguise. This habit of mind is a very amiable trait in the African race, and, if only it proves as enduring as it is at present widespread, it justifies us in entertaining the belief that that race has something to contribute towards the ideas of the future.

But it is not, I think, to be regarded as a fundamental racial characteristic. It is partly the result of climatic conditions and economic environment, in the West Indies it is largely an inheritance from the days of slavery, an institution which accords indifferently with the doctrine of the "dignity of labour." Nor is it an attitude which is unchangeable; when, as for example in Barbados, the negro is subjected to conditions involving a severe industrial competition, he takes to work more naturally and pursues it with greater assiduity. But, generally speaking, it is a point of view characteristically African; and if it were only African immigration which Canada and Australia had to fear, the economic objection to it would never have arisen. The white population of South Africa entertain no objection to coloured labour. It cries aloud for more of it, and racks its brains for means to induce or compel the black man to do more work than he chooses. But the attitude of the Asiatic towards work is not that of the African. So different is it, in fact, that in the West Indies it has been found convenient to call in the old world in order to redress the balance of the new. The employer of labour is not content with a workman who works only when the spirit moves him; who responds to intimidation by taking a holiday; and to whom even the offer of high wages is but a slender inducement to the performance of an uncongenial task. What he desires is a person from whom he can exact an unreasoning and unreasonable continuity of industry; a human being who approximates as nearly as possible to a machine; who never ceases to work except when some part of him is out of order; whose activities are never interrupted by moods or sentiments or caprices; who is obsessed by an inveterate and automatic habit of labour. He finds the nearest approach to what he desires in the Asiatic, and this is why the Asiatic is brought to labour under indentures in our West Indian Colonies, where there is already a negro population amply sufficient for all requirements, if its particular temperament did not stand in the way. It is sometimes said that this indentured immigration is unjustifiable, and has the effect of taking the bread out of the

mouths of the negro population. The charge is untrue, for the Asiatic immigrant is imported to do work which the negro cannot be persuaded to do, and which, if he were not imported, would be left undone. If the attitude of the Asiatic towards work is not that of the African, neither is it that of the European. I do not know what his theory may be; his mind is a sealed book; but in practice he would almost appear to approach work, not as a thing undesirable, or as a thing desirable only for others, but as a thing desirable for himself. It is here that he comes into conflict with the white man. He will work extravagantly long hours for extravagantly small pay, and the bulk of that pay he will save instead of spending. Bearing this in mind, it is easy to understand why the real objection to the Asiatic should be that he is industrious and thrifty. In estimating the force of that objection, as it is felt in Australia, it is important to remember that Australia has framed for herself a far more definite ideal of national well-being than England has. The conception of prosperity which finds most expression in England is that of a condition of affairs in which the Board of Trade returns expand in geometrical progression. Nothing else really matters. Wealth may be accumulated in few and for the most part in worthy hands. Energies which might be devoted to the work of production may be wasted in the humiliating task of circumventing trade rivals. The discomforts and uglinesses of life may be multiplied. Social differences may be widened, with their inevitable consequences of promoting ill-feeling between classes and impairing our national solidarity. Industries which have their root in oppression and suffering may spring up and flourish. It is no matter. So long as our imports and exports increase, all must be for the best in the best of all possible Englands. This is not the Australian point of view. In Australia a systematic policy has been pursued, which aims at establishing a community in which inordinate wealth and extreme poverty shall be alike unknown, the one being eliminated by a system of taxation deliberately designed to break up great properties, the other by a system of legislation which prevents the exploitation of the worker. The central principle of the whole system is the maintenance of wages in every industry at a level, which will enable the worker to enjoy reasonable comfort without excessive toil. It is the principle of trades unionism raised to the level of a national policy. Australia does not desire the introduction of industries which depend for their prosperity on the existence of a class driven by competition to accept wages which render the maintenance of a decent standard of life impossible. She does not accept the sweating system as something which is inevitable, because it would cost so much to put it down, or because state regulation is so hampering to private enterprise. She does not tremble before

the threat that capital will forsake the country if labour is accorded its due. Whatever party may be in power she adheres steadily to her principle that the well-being of the many is more important than the wealth of the few, and that it can be secured only by insistence on the maintenance of conditions of labour which are not prejudicial to the health, the comfort, the intelligence or the independence of the worker. How far Australia is prepared to carry that principle is shown by the provision in the new Tariff Bill for an excise duty penalizing local industries, which fail to reach the approved standard as regards wages, hours and conditions of labour. To this principle the Asiatic, with his capacity for labour over-developed, his desire for comfort, for amusement, and for luxury hopelessly atrophied, is a deadly enemy. He must be excluded, even though the Government of India may protest against injustice to our fellow subjects, and the Government of Japan against insult to an allied nation, until such time as he shall have learned to do less work and to demand more wages. The aboriginal population of Australia offers no obstacle to the realisation of this ideal; for the Australian aborigines belong to a little group of peoples (in which the Indians of North and South America, and the Malays may be included), which work with such reluctance and such incompetence, that it is not worth anyone's while to make them work at all. But there are many who, while sympathising to some extent with the ideal, consider that Australia has pushed it to unreasonable lengths at any rate in so far as the sugar plantations of Queensland are concerned. They defend Kanaka labour on the ground which I indicated as being the proper defence for indentured Indian labour in the West Indies--viz., that if the Kanaka is not admitted, the work will not be done at all, because the white man cannot perform in the tropics the manual labour required on a sugar plantation. But the Australian is not prepared to believe that things cannot be done, until he has at any rate tried to do them. He is at present testing the possibility of white labour on the Queensland plantations, and he is greasing the wheels of the experiment with a bounty of £3 a ton on sugar which is the product of white labour. The experiment may fail; but it is an experiment worth making; and in estimating its chances of success or failure it may be useful to look beyond the limits of Australia. In the Transvaal it is said to be impossible for white men to perform unskilled labour in the gold mines. Yet in Western Australia and in the United States precisely similar work is regularly performed by white men under climatic conditions certainly not more favourable. The impossibility in the Transvaal is not an impossibility inherent in the nature of the work: it is the impossibility of the white man and the black man working side by side at the same work on an equal footing. Were there no coloured labour available in South

Africa, the work would long since have been undertaken by white men. If coloured labour be eliminated from Queensland, a similar result may follow. In any case, I repeat, the experiment is worth making.

Canada has not as yet found nearly so definite an idea of a "national minimum" as Australia. The country is developing so rapidly that it is still easy for a man to pass from the ranks of the wage earners to those of the employers and landowners, and hence the necessity of protecting the wage earner has not presented itself as the first consideration in national policy. Had it done so, the Canadian Government would inevitably have been more cautious in concluding its agreement with Japan. And there are other circumstances which differentiate Canada from Australia. There is not the same concentration of the bulk of the population in a few large cities, and principally for that reason, trades unionism is less developed, and the influence of labour on politics is far weaker. For this reason in Canada, as compared with Australia, the race argument against Asiatic immigration is proportionately stronger, and the economic argument proportionately weaker. But the instinct of self-preservation is strong in the working classes of Canada, and the Asiatic immigration danger is sure to result in a rapid crystallization of opinion. Even our English theory that labour, like everything else, should be bought in the cheapest market, would not survive the menace of an influx of cheap Asiatic labour for six months. Our various political parties would abandon their cherished theories and vie with one another in their anxiety to propose a policy of exclusion not less vigorous than that adopted by Australia. In the interests of our political intelligence, it is perhaps unfortunate that we are protected from this danger. But, whether by climate or other causes, for the time being protected we are; and so long as the protection lasts, the colonial attitude is likely to remain distasteful to many Englishmen—so much so, that they think the Canadians at any rate must be Americans in disguise. There are some whose distress is based upon abstract principles. They hold that all men are free and equal, and have an inalienable right to work too long for inadequate wages. There are others who are more severely practical. Australia, they point out, is an ill-developed country, with vast unoccupied areas, and a population increasing, but slowly. British Columbia has mighty undeveloped resources, and the land cries aloud for labour. Let in the industrious Asiatic, and the wilderness will blossom like the rose, and import or export returns "swell wisely." They forget that these advantages can be bought too dearly. "The place where a great city stands is not the place of stretch'd wharves, docks, manufactures, deposits of produce merely. . . . Nor the place of the tallest and costliest buildings, or shops selling goods from the rest of the earth. . . . Nor the place of the most numerous

population." It is far better that the so-called economic development of a country should be extended than that it should proceed upon a wrong system, and no system is ultimately so disastrous to a nation as that which depends on cheap labour.

It is possible that the characteristics of the Asiatic which make him so undesirable as an immigrant—his thrift and industry—may in time undergo modification or disappear. I have already suggested that the social objections to Asiatic immigration are not necessarily so permanent as they are generally considered to be. And I suggested also, when referring to the negro, that the different attitude adopted towards work by different races was a result rather of environment than of immutable racial characteristics. For this reason I do not despair of the reformation of the Asiatic. He may yet learn to become a good trades unionist, and when he is, there will no longer be any economic reason for excluding him. But I am dealing with the immediate present, and in so doing I have no hesitation in affirming that in the interest of all parties concerned, the exclusion of Asiatics from communities which are predominantly white should so far as possible be vigorously maintained.

ISHMAEL.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

GOLD COAST.

ANDREWS, M. S. ...	12 Apr., '08	GORDON, Capt. W. F. L.	18 Jan., '08
ANDERSON, F. ...	29 Feb., '08	GUGGISBERG, Maj. F. G.,	
BECK, G. ...	27 Jan., '08	c/o Messrs. Cox & Co.,	
BRANDFORD-GRIFFITH,		16, Charing Cross, S. W.	
Sir W. ...	1 Apr., '08	HALL, T. L. ...	1 Jan., '08
BERKELEY, H. M. H. ...	10 May '08	HART DAVIS, C. H. ...	28 Feb., '08
BARKER, Dr. G. L. ...		HAMER, A. G. ...	29 Dec., '07
BRANCH, H. C. ...	30 Jan., '08	HAYNES, W. C. ...	18 Jan., '08
Sports Club, St.		HEATON, J. W. ...	18 Jan., '08
James's Square, W.		HIGGINS, J. J. ...	5 Jan., '08
CLARIDGE, Dr. W. W. ...		HOLMES, H. G. ...	
CLARKE, R. A. ...		JACKSON, R. J. ...	4 Jan., '08
CLARKE, Maj. H. C. S. ...	4 Apr., '08	JACKSON, F. W. F. ...	6 Mar., '08
CURLING, C. N. ...	12 May, '08	JARDINE, J. ...	15 Apr., '08
COULDREY, A. C. ...	24 Feb., '08	JENSEN, O. J. L. ...	
CHERRY, J. W. ...	20 Feb., '08	KELK, Rev. W. HASTINGS	29 Feb., '08
DEEKS, Miss A. M. ...		LORENA, Dr. A. C. ...	11 Jan., '08
ELIOT, E. C. ...	18 Mar., '08	LAST, W. ...	10 Feb., '08
EMERY, J. C. ...	10 Feb., '08	LETHBRIDGE, W. G. ...	5 Jan., '08
ELKAN, C. J. ...	6 Feb., '08	LEES, Capt. W. E. ...	23 Mar., '08
Junior Naval and		LLOYD, A. G. ...	8 Mar., '08
Military Club, 96, Pic-		MADDOCK, J. H. ...	
dilly, W.		M'MULLIN, A. J. F. ...	15 Mar., '08
FLETCHER, H. ...	11 Jan., '08	MEE, G. H. ...	2 Feb., '08
FELGATE, D. L. N. M. ...	27 Jan., '08	MIGEOD, F. W. H. ...	6 Mar., '08
FISHER, H. D. ...	7 Feb., '08	MUSS, L. J. ...	28 Jan., '08
FINLAY, A. A. C. ...	8 Mar., '08	NASH, G. W. ...	7 Jan., '08
FFOULKES, A. ...		NASH, S. D. ...	28 Jan., '08
GRIFFITH, G. R. ...	24 Feb., '08	OMMANNEY, Capt. G. P.	11 Jan., '08

GOLD COAST—*continued.*

PALMER, Dr. H. T. ...	27 Jan., '08	THORNE, G. H. ...	5 Jan., '08
PHILLIPS, J. ...	21 Feb., '08	TARRANT, H. S. ...	10 Feb., '08
PAMPLIN GREEN, Maj. T. A. ...	...	TIERNEN, B. ...	10 Feb., '08
POOLE, G. A. E. ...	...	TOBIT, Dr. P. M. ...	17 Feb., '08
RALPH, Dr. C. H. D. ...	29 Dec., '07	TIGHE, Dr. A. B. ...	9 Mar., '08
REECE, E. B. ...	4 Feb., '08	TIPLADY, C. E. ...	...
ROBERTSON, W. C. F. ...	22 Apr., '08	VAN EDEN W. ...	13 Mar., '08
RODGER, Sir J., K.C.M.G.	3 Mar., '08	WYPER, J. ...	5 Jan., '08
RATTRAY, W. ...	17 Feb., '08	WADE, Dr. W. M. ...	2 Feb., '08
SALE-HILL, A. R. S. ...	...	WALDRON, Dr. D. H. R.	17 Feb., '08
SMITH, W. E. ...	15 Mar., '08	WARDEN, Capt. E. O. ...	17 Feb., '08
SCOVELL, Capt. A. M. ...	2 Mar., '08	WILLIS, M. H. S. ...	8 Mar., '08
STOKES, R. G. ...	5 Jan., '08	WHITE, A. ...	15 Mar., '08

SIERRA LEONE.

ARBUCKLE, Dr. H. E. ...	18 Jan., '08	NEWMAN, G. H. ...	25 Mar., '08
BETTINGTON, Dr. R. A. ...	25 Jan., '08	OSWELL, W. ST. J. ...	20 Mar., '08
BURROWS, Dr. D. ...	17 Apr., '08	OWEN, J. W. ...	5 Jan., '08
FAIRCLOUGH, Maj. E. D. H., C.M.G., D.S.O. ...	15 Mar., '08	POOL, J. ...	29 Mar., '08
FARRAR, A. ...	3 Mar., '08	PACKARD, E. T. ...	...
JENKINS, E. D. ...	11 Jan., '08	STEVENSON, A. W. ...	24 Feb., '08
MOORBY, L. ...	11 Jan., '08	WARD, Dr. J. F. ...	18 Jan., '08
MEGETT, A. ...	2 Feb., '08	WARD, H. ...	11 Jan., '08
		WARREN, Maj. H. J. ...	...

GAMBIA.

DENTON, Sir G., K.C.M.G.		HASTINGS, Capt. W. C. N.	
FRANKLIN, Dr. J. C. ...	23 Feb., '08	D.S.O. ...	12 Feb., '08

SOUTHERN NIGERIA.

ALLEN, A. E. ...	14 Jan., '08	CROSS, Dr. J. ...	18 Jan., '08
ADAMS, J. W. ...	18 Jan., '08	CRAWFORD, W. E. B. C.	17 Feb., '08
ALEXANDER, C. W. ...	20 Mar., '08	COTTON, J. C. ...	10 Feb., '08
ASHTON, Dr. D. A. ...	3 Mar., '08	CALDWELL, Dr. T. C. ...	...
BROWNE, C. W. ...	...	COCKRANE, F. S. ...	18 Mar., '08
BARKER, F. DAY ...	15 Mar., '08	DROUYN, R. L. ...	15 Mar., '08
BICKEL, W. H. ...	17 Feb., '08	DUNCOMBE, H. F. ...	19 Mar., '08
BOVELL, T. H. M. ...	18 Jan., '08	Constitutional Club, Northumberland Avenue, W.C.	
BIRTWISTLE, C. A. ...	5 Jan., '08	DENE, H. ...	24 Feb., '08
BAILEY, Dr. J. C. M. ...	17 Feb., '08	DAWSON, E. B. ...	11 Jan., '08
BROWN, G. A. ...	20 Feb., '08	DODD, H. ...	11 Jan., '08
BLAIR, Capt., A. H. ...	27 Dec., '07		
CASEY, J. ...	...	
COUZENS, H. ...	8 Mar., '08		

SOUTHERN NIGERIA—continued.

DOUGLAS, A. C. ...	20 Mar., '08	MARGESSON, Capt. E. C. ...	11 Jan., '08
c/o Sir C. R. McGregor, Bart. & Co., 25, Charles Street, S.W.		MOIR, Capt. J. P. ...	22 Apr., '08
DYER, J. H. ...	12 Apr., '08	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
DAVIDSON, J. ...		MACCULLOCH, Capt. B. D. ...	22 Feb., '08
c/o London & County Bank, Limited, Baysa- water, W.		Cavalry Club, Picca- dilly, W.	
DYSON, J. F. ...	11 Jan., '08	MACWHIRTER, R. C. ...	28 Jan., '08
DUNCOMBE, W. K. ...	13 Mar., '08	MCCOLL, H. ...	1 Feb., '08
c/o Royal Colonial In- stitute, Northumber- land Avenue, W.C.		MURPHY, W. ...	8 Mar., '08
FINCHAM, R. ...	29 Feb., '08	MOORS, J. ...	31 Dec., '07
FRANCEY, W. M. ...	29 Feb., '08	MASON, J. M. ...	18 Jan., '08
FARQUHAR, J. H. J. ...		MCCORKINDALE, D. ...	29 Mar., '08
FINNEY, F. J. ...	11 Jan., '08	MARSLAND, C. ...	
FOSTER, E. W. ...	26 Jan., '08	MCBRIDE, Miss A. M. ...	27 Mar., '08
FERGUSON, D. S. ...	9 Jan., '08	NEAL, Capt. H. W., D.S.O. ...	5 Jan., '08
FITZPATRICK, M. ...	4 Jan., '08	NICOLL, D. ...	8 Mar., '08
FROST, A. ...	29 Feb., '08	OSBORNE, C. ...	27 Feb., '08
GRANT, P. H. A. ...	7 Feb., '08	OTTAWAY, A. ...	
GLASIER, F. B. ...		PICKLES, Dr. J. A. ...	7 Feb., '08
HAWES, A. R. ...		PARRY, T. F. R. ...	10 Feb., '08
HOWE, W. M. ...		PATRIDGE, C. ...	29 Dec., '07
HEWITT, W. S. ...	18 Mar., '08	RAKESTROW, S. J. W. ...	18 Jan., '08
HAWKINS, J. T. ...	10 Feb., '08	ROUTH, Capt. R. L. ...	5 Jan., '08
c/o Royal Colonial In- stitute, Northumber- land Avenue, W.C.		RAIKES, R. D. M. ...	8 Mar., '08
HARRIS, H. ...	2 Feb., '08	c/o Sir C. R. McGregor, Bart. & Co., 25, Charles Street, S.W.	
HOUSTON, J. A. ...	5 Jan., '08	STATHAM, W. D. ...	2 Feb., '08
HOPKINS, Dr. F. G. ...	5 Jan., '08	SIMPSON, E. D. ...	27 Jan., '08
HACKETT, W. W. ...	8 Mar., '08	SPROSTON, S. W. ...	29 Feb., '08
HOOD, S. J. ...	20 Mar., '08	SHERSTON, S. A. ...	29 Dec., '07
HUMFREY, Capt. L. E. H. ...	4 Apr., '08	SPEED, E. A. ...	31 Dec., '07
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.		SKURRAY, J. S. ...	2 Feb., '08
HOPKINSON, G. St. L. ...	11 Jan., '08	SPITZER, R. ...	24 Feb., '08
HIVES, F. ...	7 Feb., '08	STONE, J. E. ...	
HERON, R. M. ...	15 Jan., '08	TENGELEY, P. L. ...	10 Feb., '08
United Forces Club, 117, Piccadilly, W.		TAYLOR, Dr. W. I. ...	5 Jan., '08
HELME, H. L. ...	29 Feb., '08	TYNAN, Dr. E. ...	18 Jan., '08
KELLY, Sir H. G. ...	9 Jan., '08	TYSON, D. ...	8 Jan., '08
KELLEHER, Dr. E. J. ...	17 Apr., '08	TROUSDELL, W. H. C. ...	28 Jan., '08
LAMBERT, J. A. P. ...		WIMBERLEY, H. J. A. ...	
LAYTON, R. C. ...	29 Feb., '08	WRIGHT, P. A. T. ...	
LOMAX, J. F. ...	15 Mar., '08	WINN SAMPSON, Maj. F.R. ...	8 Mar., '08
LAMPSHIRE, E. J. ...	30 Jan., '08	WILD, O. J. W. ...	26 Jan., '08
MORTON, C. E. ...	27 Jan., '08	WILLIAMS, R. G. ...	14 Jan., '08
		WHEELWRIGHT, J. C. ...	
		WALMISLEY - DRESSER, H. J. ...	17 Jan., '08

NORTHERN NIGERIA.

BARCLAY, G. N. ...	26 May, '08	MCLAY, W. J. ...	29 Feb., '08
Constitutional Club, Northumberland Avenue, W. C.		Sports Club, St. James's Square, S. W.	
BLAKISTON-HOUSTON, J.	21 Jan., '08	MORGAN-OWEN, L. I. G.	
BERESFORD, M. H. DE LA P.		MACKENZIE, Capt. J., V.C.	8 Apr., '08
COATSWORTH, J. P. ...	17 Feb., '08	Junior Naval and Military Club, 96, Pic- cadilly, W.	
CHARTRES, J. ...	31 Dec., '08	MILLIGAN, J. ...	27 Jan., '08
CROFT, W. D. ...	1 Mar., '08	MACKENZIE, Capt. E. L., D.S.O. ...	17 Feb., '08
CHAYTOR, C. A. ...		MAYNARD, J. H. ...	
CHURCHER, Capt. A. E.	11 Jan., '08	NUGENT, G. O. ...	29 Feb., '08
CRONSTEDT, M. F. ...	17 Feb., '08	Junior Constitutional Club, Albemarle St., W.	
EVANS, W. S. ...	2 Feb., '08	NORMAN, Dr. G. B. ...	11 Jan., '08
EDGEN, Maj. F. ...	15 Feb., '08	ODMAN, Capt., R. D. F.	17 Feb., '08
FISHER, J. C. ...	17 Feb., '08	United Service Club, Pall Mall, S.W.	
GALL, F. B. ...	20 Jan., '08	PYE, Capt. R. N. ...	15 Jan., '08
c/o Messrs. Way & Co., Billiter Buildings, Bil- liter Street, E.C.		PYE, Capt. F. J. ...	3 Mar., '08
GIBBS, J. T. ...	5 Jan., '08	c/o Lloyds Bank, Ltd., Sandgate.	
GWYN, C. ...	2 Feb., '08	PHILLIPS, T. B. ...	15 Mar., '08
Grosvenor Club, Picca- dilly, W.		POSTANCE, M. A. ...	2 Feb., '08
GABBETT, G. F. A. ...	28 Jan., '08	RADCLIFFE, J. ...	14 Mar., '08
c/o London & County Bank, Ltd., High St., Kensington, W.		RICHARDSON, J. F. ...	23 Jan., '08
GORDON, Capt. C. F. ...	20 Mar., '08	REYNOLDS, Lt. R. W. ...	4 Feb., '08
Junior Naval and Military Club, 96, Pic- cadilly, W.		ROWE, Capt. C. V. ...	
HEWBY, W. P. ...		c/o Messrs. Way & Co., Billiter Buildings, Bil- liter Street, E.C.	
HAMMOND, A. E. C. ...	9 Mar., '08	RIDSDALE, A. C. ...	18 Jan., '08
HALL, H. C. ...	13 Feb., '08	Grosvenor Club, Picca- dilly, W.	
HARRISSON, S. T. ...	5 Jan., '08	SLANEY, E. R. ...	28 Jan., '08
INGHAM, B. N. ...	17 Feb., '08	SWANN, Dr. A. J. T. ...	14 Jan., '08
JONES, A. W. ...	17 Feb., '08	SYME, D. ...	27 Jan., '08
JORDAN, H. E. ...	31 Dec., '08	SIMPSON, Capt. J. M. ...	9 Mar., '08
KING, G. C. W. ...	11 Jan., '08	TREMEARNE, Capt. A. J. U.	
KYRKE, H. V. V. ...	11 Mar., '08	UTTERSON, Capt. H. K.	24 Jan., '08
KITCHEN, W. ...	2 Feb., '08	VICARS, W. ...	17 Feb., '08
LLOYD-WILLIAMS, E. ...	8 Feb., '08	VINCENT, J. W. ...	24 Jan., '08
LONSDALE, Capt. P. ...	16 Mar., '08	WHITTLE, Miss S. E. ...	
LLOYD, R. A. ...	18 Jan., '08	WEBSTER, W. J. ...	29 Mar., '08
LAING, E. H. B. ...	5 Jan., '08	WOOD, J. H. ...	

NYASALAND.

BOND, G. M. ...	15 Mar., '08	PIERS, P. D. H. ...	10 Apr., '08
BROOK, Capt. W. B. ...	7 Mar., '08	SMITH, L. ...	23 Feb., '08
BARRETT, H. T. ...	10 Apr., '08	SHARPE, Sir A., K.C.M.G., C.B. ...	2 Apr., '08
DOBSON, D. D. ...	31 Mar., '08	VINCENT, P. C. Hampe	12 Feb., '08
DOBBS, R. C. ...	15 Mar., '08	WYATT, A. H. ...	15 Mar., '08
DAVEY, Dr. J. B. ...	22 Feb., '08		

BRITISH EAST AFRICA.

BENTLEY, J. ...	12 Feb., '08	PICKWOOD, H. ...	27 Jan., '08
BATTISCOMBE, E. ...	27 Mar., '08	SLATTERY, H. ...	27 Jan., '08
CLARK, P. ...	27 Feb., '08	STORDY, R. J. ...	28 Mar., '08
FREEMAN, A. W. ...		TATE, H. R. ...	27 Jan., '08
HENDERSON, Dr. F. ...	27 Jan., '08	YOUNGHUSBAND, H. ...	23 Feb., '08
MADDEN, A. ...	27 Jan., '08		
MURRAY, G. H. L. ...	27 Jan., '08		
PATERSON, J. ...	27 Apr., '08		

UGANDA RAILWAY.

WRIGHT, H. W. ...	13 Mar., '08
-------------------	--------------

UGANDA.

ALLEN, R. ...	27 Jan., '08	REYMES - COLE, Capt.	
BAGSHAW, Dr. A. G. ...	11 June, '08	W. E. ...	3 Mar., '08
BOVILL, G. W. K. ...		TALBOT-SMITH, L. ...	27 Feb., '08
COOMBS, T. ...	1 Mar., '08	TYRRELL, C. H. ...	27 Jan., '08
HANSON, B. E. ...	27 Feb., '08	c/o Messrs. Grindlay	
HODGES, Dr. A. D. P. ...	31 Jan., '08	& Co., 54, Parliament	
KNOWLES, F. A. ...	15 Mar., '08	Street, S.W.	
MITCHELL, P. ...	27 Feb., '08	TARRANT, H. M. ...	2 Mar., '08

EAST AFRICAN PROTECTORATE. BOMBAY AGENCY.

JEAFFRES ON, C. R., c/o Messrs. Grindlay & Co., 54, Parliament	
Street, S.W. ...	19 Apr., '08

SOMALILAND.

BIRD, H. J. G. ...	26 Feb., '08	CORFIELD, R. C. ...	1 Feb., '08
CORDEAUX, Capt. H. E. S.,		DANIELL, H. A. ...	9 Feb., '08
C.B., C.M.G., c/o		MILLARD, T. ...	22 Jan., '08
Messrs. Grindlay & Co.,		QUIRKE, M. J. ...	8 Feb., '08
54, Parliament Street,		RANSFORD, F. M. ...	22 Feb., '08
S.W.			

TRANSVAAL.

MEADLEY, F. W. ...	5 Feb., '08	STRANGE, W. L. ...	26 Feb., '08
O'CONNOR, P. M. ...	30 Jan., '08	YARKER, Miss M. E. ...	3 Jan., '08
POWELL, A. G. ...	24 Jan., '08		

ORANGE RIVER COLONY.

BRADY, J. B. ...	11 Feb., '08	GRANT, C. C. ...	1 Feb., '08
BOOTH, J. ...	31 Jan., '08	HODGES, A. H. ...	5 Apr., '08
DENT, C. W. ...	26 Feb., '08	MACLEAN, D. ...	8 Apr., '08
FERGUSON, C. ...	30 Apr., '08	PLUMPTRE, G. B. ...	26 Feb., '08
GRESSON, P. H. ...	26 Feb., '08	VINER-JOHNSON, P. ...	21 Jan., '08

CENTRAL SOUTH AFRICAN RAILWAYS.

ROSS, A. E. ...	31 Jan., '08	SHERRATT, S. E. ...	5 Feb., '08
-----------------	--------------	---------------------	-------------

BECHUANALAND.

HATTON, A.	30 Mar., '08
------------	-----	-----	-----	-----	-----	-----	-----	-----	--------------

BASUTOLAND.

MANSER, W. DU P.	...	21 Jan., '08	|	SIMS, J. H.	31 Mar., '08
------------------	-----	--------------	--	-------------	-----	-----	--------------

SWAZILAND.

LUSCOMBE, L.	...	29 Feb., '08	|	MARWICK, A. G.	...
c/o Exeter Bank,					
Exeter.					

JAMAICA.

ALLWOOD, Dr. J. A.	...	10 Apr., '08	|	MELLISH, C. E.	...	22 July, '08
BROWN, U. F.	...	25 Jan., '08	|	SHACKLETON, Dr. T. F.	...	5 Feb., '08
COX, S. A. G.	...	12 Apr., '08	|	SOLOMON, M. C.	...	22 May, '08
GORDON, R. A. N.	...	16 Feb., '08	|	SMITH, J. A. G.	...	10 Jan., '08

DOMINICA.

BELLOT, Dr. C. H. L.	...	31 Jan., '08	|	JARVIS, L. H.	...	2 June, '08
----------------------	-----	--------------	--	---------------	-----	-------------

TRINIDAD.

MAY, G. H.	...	24 Mar., '08	|	PERCY, G. R.	...	2 Apr., '08
PASHLEY, E. R.	...	22 Mar., '08	|	REID, Dr. C. B.	...	12 Feb., '08

BRITISH GUIANA.

BUGLE, C.	...	21 Mar., '08	|	KING, J. HAMPDEN	...	20 Jan., '08
BOVELL, Sir H. A.	...	22 Jan., '08	|	MOULDER, E. R. D.	...	1 May, '08
FERGUSON, Dr. J. E. A.	...	24 May, '08	|	MASKELL, T. A. C.	...	10 July, '08
GAINFORT, B.	...	9 Feb., '08	|	MCGILL, Rev. J. W.	...	21 Mar., '08
GWYTHYR, Ven. Arch. A.	...	26 July, '08	|	WEBER, O.	...	1 May, '08
HENERY, P.	...	17 Aug., '08	|	WARD, R.	...	1 May, '08

FIJI.

ARNOLD, Dr. E. G. E.	...	22 July, '08	|	FRANCIS, Col. C. A.	...
DE BOISSIERE, Dr. R. F.	...	21 Apr., '08	|	MAJOR, C.	...
					25 Mar., '08

BRITISH HONDURAS.

GARM, Dr. T. W. F.	...	27 Mar., '08	|	WINTER, Dr. W. C. P.	...	30 Apr., '08
WYATT, R.	...	3 Mar., '08	|			

GRENADA.

BRANCH, G. F.	...	22 Mar., '08	|	ONOLEY, P. A.	...	25 Jan., '08
HEELS, R.	...	18 Feb., '08	|			

BARBADOS.

CHANDLER, W. K	9 July, '08	|	LINCKLER, E. G....	...	7 Feb., '08
----------------	------	-------------	--	--------------------	-----	-------------

LEEWARD ISLANDS.

HOLME, H. F.	20 Apr., '08
--------------	-----	-----	-----	-----	-----	--------------

MONTSERRAT.

HEATH, Dr. W. G.	...	25 Jan., '08	|	JOHNSON, D.	...	3 Feb., '08
------------------	-----	--------------	--	-------------	-----	-------------

MAURITIUS.

BARBEAN, Dr. L. G.	...	30 Mar., '08	|	DYKES, A. J.	...	25 Feb., '08
BILSBORROW, Rev. Canon			|	EDWARDS, C. H....	...	26 June, '08
J. R.	...	25 June, '08	|	LAW, W.	...	30 June, '08
BROWN, R. M.	...	25 July, '08	|	TOUREAU, A. R.	...	30 Apr., '08
BEANGEARD, H. M. A.	...	11 Apr., '08	|	WHEATLEY, Rev. Canon		
CAMERON, D. C.	...		|	G.	...	22 May, '08
c/o Royal Colonial						
Institute, Northum-						
berland Avenue, W.C.						

SEYCHELLES.

LAIDLAW, Dr.
--------------	-----	-----	-----	-----	-----	-----

HONG KONG.

BIRD, R. S. O.	...	3 Feb., '08	|	JOHNSON, E. A.	...	19 Mar., '08
BARKER, Miss S. E.	...	13 Aug., '08	|	KENDALL, W.	...	22 Mar., '08
BADELEY, F. J.	...	6 July, '08	|	LANGLEY, A. C.	...	3 Jan., '08
FRANKLIN, A. C.	...	14 Mar., '08	|	(Date of leaving England)		
GALE, C. H.	...	19 Mar., '08	|	MARTIN, T. H.	...	30 Apr., '08
GOURLEY, Miss H. M.	...	3 May, '08	|	MACDONALD, J.	...	30 Apr., '08
HART, W. F.	...	9 Apr., '08	|	O'SULLIVAN, P.	...	22 Mar., '08
HUNTER, Dr. W.	...	1 Oct., '08	|	ORME, G. M.	...	31 July, '08
IRVING, E. A.	...	2 Apr., '08	|	PEARSE, Dr. W. W.	...	2 Feb., '08
JAFFE, D.	...	9 Apr., '08	|	THOMSON, Dr. J. C.	...	4 Mar., '08
JAMES, B.	...	10 Apr., '08	|	WAKENEAN, G. H.	...	1 Apr., '08
JOHNSTON, L. A. M.	...	31 Mar., '08	|	WOODS, J. R.	...	19 Mar., '08

STRAITS SETTLEMENTS.

ANTHONISZ, J. O.	...	30 Apr., '08	|	HYNDMAN-JONES,	Sir	
BACON, E.	...	28 July, '08	|	W. H.	...	24 July, '08
BROOKE, G. E.	...	17 Aug., '08	|	HARPER, J. C.	...	11 Mar., '08
BOURNE, W.	...	19 July, '08	|	IZARD, Rev. H. C.	...	3 Apr., '08
BOYER, G.	...	15 Sept., '08	|	KINDER, F. T.	...	21 Mar., '08
DICK, G. N.	...	10 May, '08	|	MURRAY, A.	...	31 Mar., '08
DAVID, P. F.	...	26 Oct., '08	|	MURRELL, H. J.	...	10 Mar., '08
EVANS, W.	...	20 Feb., '08	|	MUIR, H.	...	31 Mar., '08
FARRER, R. J.	...	30 May, '08	|	MARSHALL, W. H.	...	15 Sept., '08
FANE, J.	...	20 June, '08	|	NUNN, B.	...	20 June, '08
GORDON, J.	...	25 Mar., '08	|	PHILLIPS, C. M.	...	26 Sept., '08

STRAITS SETTLEMENTS—*continued.*

ROFFEY, J. ...	15 Sept., '08	WHITEHEAD, C. B. ...	8 June, '08
RIDLEY, H. M. ...	27 Jan., '08	WRIGHT, F. M. ...	16 May, '08
SHELLCOCK, F. ...	29 Apr., '08	TANJONG PAGAR DOCK.	
STENHOUSE, M. C. ...	31 Mar., '08		
WILSON, G. G. ...	16 Feb., '08	PARK, R. A. ...	...

PAHANG.

BLATHERWICK, T. C. ...	24 June, '08	KENNEDY, H. A. ...	1 Mar., '08
GRAY, M. T. ...	1 Aug., '08	MARSHALL, F. C. ...	21 July, '08

NEGRI SEMBILAN.

COX, F. B. S. ...	21 Apr., '08	HUGHES, G. E. E. ...	17 Aug., '08
-------------------	--------------	----------------------	--------------

SELANGOR.

BYRNE, H. E. ...	18 Aug., '08	ROBINSON, H. O. ...	24 June, '08
CLAYTON, T. W. ...	3 June, '08	RIDGES, H. C. ...	2 Mar., '08
CRAWFORD, R. A. ...	2 Nov., '08	SANGUINETTI, W. R. ...	30 Sept., '08
LOTT, W. E. ...	25 Oct., '08	SHAW, G. E. ...	11 Aug., '08
MCCLELLAND, F. A. S. ...	9 Feb., '08	TRAVERS, DR. E. A. O. ...	25 Mar., '08
MCLEAN, L. ...	1 Apr., '08	VALPY, G. C. ...	27 July, '08
REYNE, S. B. R. ...	16 Feb., '08	WARD, J. F. ...	3 June, '08

PERAK.

ALEXANDER, C. S. ...	1 Feb., '08	McKENZIE, F. M. ...	16 Apr., '08
ALLEN, M. A. V. ...	9 Feb., '08	MACKENZIE, W. H. ...	3 Oct., '08
BOWES, J. ...	5 Oct., '08	POTTER, H. J. D. ...	4 Apr., '08
BLACKSHAW, W. ...	7 Nov., '08	ROBINSON, C. S. ...	24 Apr., '08
BAILEY, D. ...	2 Sept., '08	REEVE, Miss G. R. ...	29 Nov., '08
HOUGHTON, M. ...	4 July, '08	SIBBALL, S. K. ...	25 June, '08
KENDALL, N. ...	25 Apr., '08	WELD, F. J. ...	2 July, '08

FEDERATED MALAY STATES.

BUTTERWORTH, A. W. ...	24 Sept., '08	MARKS, O. ...	30 Oct., '08
BROWN, J. ...	8 July, '08	NEAL, G. F. ...	11 May, '08
CAMPBELL, A. ...	14 June, '08	OPENSHAW, F. D. B. ...	30 June, '08
CHAPMAN, W. T. ...	29 May, '08	PARRY, G. W. J. ...	28 Aug., '08
DENNYS, F. O. B. ...	23 July, '08	RICHARDS, H. G. ...	22 July, '08
ENGLISH, F. H. ...	24 Apr., '08	RAE, J. M. ...	7 Oct., '08
EVANS, R. G. ...	30 Nov., '08	STEVENS, E. G. ...	30 June, '08
FONSECA, DR. A. H. DE R. ...	28 Sept., '08	STAPLETON, F. C. ...	25 Apr., '08
FURNIVALL, H. ...	20 Feb., '08	TAYLOR, Sir W. T.,	
HENSHAW, P. H. ...	25 Mar., '08	K.C.M.G. ...	10 Feb., '08
MACDONALD, F. J. ...	15 Oct., '08	THOMPSON, C. C. ...	23 Apr., '08

CEYLON.

BROHIER, A. P. ...	18 Apr., '08	McMATH, J. ...	31 May, '08
BAKER, C. F. S. ...	22 May, '08	NICOLLE, H. C. ...	3 Apr., '08
CARBERY, W. H. B. ...	14 Apr., '08	PASCOE, S. H. ...	5 Mar., '08
COOPER, F. A., C.M.G. ...	17 Mar., '08	PETCH, T. ...	28 Jan., '08
CHURCHILL, A. F. ...	19 Mar., '08	RAWLINSON, H. G. ...	5 May, '08
DOWBIGGIN, H. L. ...	2 May, '08	SPAAR, Dr. A. E. ...	9 June, '08
DAVEY, W. C. D. ...	2 May, '08	STURGESS, G. W. ...	4 May, '08
DENHAM, E. B. ...	22 May, '08	SPENCE, J. B. ...	29 Mar., '08
FRASER, J. H. ...	13 May, '08	STILL, J. ...	29 Feb., '08
FESTING, R. A. G. ...	26 July, '08	STEVENSON, M. ...	23 Feb., '08
GRENIER, Dr. F. ...	13 Mar., '08	TILLEKERATNE, Dr. C. J. ...	16 Mar., '08
GRINAWAY, W. C. ...	25 Mar., '08	TRANCHELL, C. L. ...	25 Aug., '08
HOWISON, J. ...	31 Oct., '08	THORPE, W. E. ...	12 May, '08
HOPKINS, C. F. ...	18 Jan., '08	THAINE, R. N. ...	29 May, '08
HYDE, G. H. M. ...	8 Aug., '08	TOMALIN, H. F. ...	23 Mar., '08
HOWBURGH, B. ...	20 Mar., '08	THORNHILL, W. J. ...	12 Feb., '08
LOVETT, H. J. ...	2 Apr., '08	VIGORS, C. T. D. ...	26 Mar., '08
LEAK, J. H. ...	21 Apr., '08	WALKER, H. ...	12 Mar., '08
LUND, C. W. ...	24 Jan., '08	WIJAYASEKERA, F. A. ...	30 Jan., '08
LASCELLES, A. G., K.C. ...	29 Feb., '08		

THE COLONIAL OFFICE JOURNAL.

VOL. I.

APRIL, 1908.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE question of Asiatic immigration attracts more and more attention, as it is bound to do, in the home press. The *Times* has urged that a Committee of the Imperial Conference should at once set about the "preliminary investigation necessary for any useful decisions." The committee, it is argued, would "at any rate make plain mutual difficulties"—a result which, we are afraid, is probable enough. To assist the committee under these embarrassing circumstances, it is suggested that "the evidence before such a commission might convince some of our most exclusive Colonies that, with a growing tide of population in the East, it will be impossible entirely to bang the door against it; it might also convince us that the unrestrained immigration of Asiatics would be fatal to our civilization and even to our race. Certain parts of our territories most suited to Orientals and least suited to our own habits might be specially reserved for Oriental immigration."

It seems very doubtful, however, whether the question is one that the Conference could settle to any material extent. It is a matter which affects the Dominions, not—for the present or for the immediate future—the United Kingdom, except in the sphere of its

foreign relations and its task of governing India. An attempt to bring pressure to bear would certainly be resented as an interference with the right of self-government, and would confirm the fears of those who see in any form of Imperial Council the danger of infringing constitutional rights. It is not one of those cases of bargaining or co-operation in which each party has a direct interest and can make terms on a business footing with the rest. This country has nothing to offer to the Dominions as an inducement to them to alter their policy, whatever it is.

Mr. Winston Churchill, fresh from his tour in East Africa, has pointed out the suitability of the tropical areas of the Protectorate for Indian immigrants, and the suggestion came at a very opportune time. The general character of the country and its geographical position are clearly convenient. It remains to be seen whether Indians will be attracted. Some efforts to obtain them for East Africa have, we believe, been unsuccessful. Many parts of India itself are sparsely populated, and there is no crying necessity for an outlet for any surplus population; if, however, there are any available emigrants East Africa could utilise them. Of course it does not follow that the Uplands of the Protectorate will be thrown open in the same way. We have no doubt that these will be effectively preserved to white men.

Mr. Winston Churchill's tour in East Africa and Uganda will be a memorable one. Such visits, as Mr. Chamberlain expressed it of his South African tour, export Downing Street to the Colonies. The value of these visual studies lies not merely in the collection of figures, but in the stimulus which they give to idea and action. The general tendency of an office at home is to deal only with the questions which come formally before it; the ability to look to the possibilities of the future comes mostly from the vividness of local experience. Mr. Churchill's admiration for the Protectorates, his tributes to the Uganda Railway, and the energy with which he has pursued since his return the subjects which came before him, all testify to the fascinations of the Empire and to the value of such visits as contributing to a wide and sympathetic outlook.

Defence comes in the first line of Imperial questions, and the discussion which is now going on in Australia with regard to the naval defence scheme is as interesting as it is important. There are two considerations which have to some extent conflicting claims. On the one hand it is desirable from the point of view of strategy that

there should be as many powerful battleships and cruisers as possible, and that the Admiralty should have the power of concentrating any of them on any point. The ultimate result of war must admittedly depend on fleet actions. Offensive action would be the keynote of our policy, and any raiders would be followed and, if possible, brought to action. These issues are not a matter of local defence. The sea commerce between Great Britain and Australia might be cut at any point, and far from the coasts, and the first essential for its preservation is a fleet which can be ordered to any point, and which would be effective in action. On the other hand, the Australians naturally look largely at the means of local protection. It is not that the landing of a large armed force is apprehended, but a raid or dash at a port is certainly possible, and would be sufficiently mortifying, to say the least. There is a sense of insecurity when the defence is remote and invisible. Therefore there is a natural desire on the part of Australians to have some scheme of naval defence which will at once show something for their money, reassure them as to their safety, and satisfy the laudable feeling of national sentiment.

It is, of course, possible to provide for both considerations. The matter of purely local defence is one for the Australians. But at the Conference of 1887 they accepted the principle that they should also share in the defence of the seas. The contribution which they then agreed to pay has not been popular, principally because the money has gone on objects which are to them not of the visible and tangible order; but no one denies that the work has to be undertaken, and we have yet to find any argument that a contribution from Australia to this object is unreasonable. The Admiralty, however, has left the question to Australia in the most open manner. "We gladly take all that you can give us," said Lord Tweedmouth at the Conference of last year, "but at the same time if you are not inclined to give us the help that we hope to have from you, we acknowledge our absolute obligation to defend the King's dominions across the seas to the best of our ability."

The controversy in Australia at the present time is as to whether it is sufficient as a beginning to provide submarines and destroyers, as has been proposed by Mr. Deakin, or whether sea-going vessels should be procured which would not only protect the ports but patrol the coasts. Obviously the more Australia does in this direction the better for Great Britain and the Empire. It is, therefore, rather bewildering to us to find that the Melbourne *Age* is attacking both Mr. Deakin and the Home Government, because Lord Tweedmouth at the recent Conference fully recognised the value of submarines and

destroyers. Surely it need not be inferred from this that the Admiralty would not be pleased to see Australia providing larger vessels. If Australia takes steps to make her coasts and commerce safe, as the *Age* appears to urge, the Sea Lords should be among the first to rejoice.

The *Morning Post*, endeavouring, as it always does, to do justice to the Colonial point of view, has, we think, done less than justice to the Admiralty in this matter in suggesting that that department has "not altogether played the game as the trusted naval advisers of the whole Empire." An illustration given is that "the Committee of Imperial Defence, deprecating the proposal to create an Australian Navy, actually suggested that the coastwise trade of Australia—said to be worth £170,000 a year—should in time of war come to a standstill in the shelter of fortified harbours of refuge." We cannot think that this is a fair rendering of the Committee's statement that "from the point of view of the protection of sea-borne commerce, it is necessary to provide a certain number of fortified harbours of refuge, where merchant shipping can, *in case of need*, seek protection from capture or molestation and remain in safety until commerce raiders reported in neighbouring waters have been dealt with by His Majesty's ships or compelled to withdraw from shortage of coal."

It is obvious that this country is at least equally interested with Australia in the security of the over-seas commerce, and it is quite certain that on any outbreak of war every effort will be made to protect it.

There never has been any difference of opinion in naval circles as to what is the best policy in this matter. It was propounded as emphatically at the Colonial Conference of 1887 as at that of 1907, that it is a mistake to provide armed vessels for purely defensive purposes—that the Imperial forces will best ensure not only the safety of floating trade, but also the immunity of coast towns from attack, by attacking the enemy wherever he is, and that absolute co-operation and unity of command are requisite for that purpose. In the face of this opinion there is no room for recrimination. We recognise, however, apart from the technical treatment of the case, the strength of national sentiment and the importance of encouraging it. If this sentiment is not satisfied unless naval weapons are provided for coast defence, which are distinctively Australia's own, this country, we imagine, will cheerfully accept her decision.

The admirable paper which Mr. A. Berriedale Keith, of the Colonial Office, read to the Royal Society of Arts (printed in the Society's Journal of 21st February) traced the steps in the development

of the autonomy of the self-governing Colonies, and explained clearly the functions of a governor, both as Colonial and Imperial officer. In the course of the discussion, the Agent-General for South Australia suggested that the officials of the Colonial Office require instruction on the principles of constitutional government. But no attempt, as Mr. Keith observed, has been made to impede constitutional development, and we do not find that any allegation is made of interference in recent times with the local affairs of the self-governing Colonies. Any proposal for such interference comes from outside.

The grant of self-government is followed by urgent appeals to meddle with it. There is always some person or some class which complains of oppression, and the Home Government are appealed to to put matters right. The answer of course is—and it has frequently been given officially—that the Home Government cannot now interfere in local matters. It would clearly destroy all confidence in the Colonies if the Home Parliament took upon itself the task of revising the decisions of Colonies to which responsible government has been granted on local questions. It might properly do so, according to a celebrated despatch from the Secretary of State in 1898, where "Imperial interests are involved," or where the measure is "so radically vicious as to reflect discredit on the Empire."

The last cases of interference with local matters were the disallowance of the Deceased Wives' Sisters Marriage Bill of New South Wales and other Colonies, and these decisions went partly on the ground that such an alteration of the Marriage Law in Australia might affect British subjects living elsewhere; in other words, that the matter was not purely local. It is practically certain that this attitude will never be adopted again. Sir Charles Dilke expressed the opinion, we think a correct one, that in what might be called constitutional issues we have arrived at calm water. The problems of the future lie in the conduct of foreign relations and in the modes of co-operation.

In commenting on Mr. Keith's paper, Sir Charles Dilke showed the wide knowledge and deep interest which are characteristic of him with regard to Colonial questions. He referred to two recent matters in which he thought the Colonial Governments had not been fully consulted. One of these was the New Hebrides Convention, in which "the Colonies were not consulted in advance in regard to the arrangement which was made." We have no pretensions to put forward any opinion on the merits of the negotiations, but we are merely correcting what seems to us to be a misapprehension of fact,

if we point out that the arrangement in question was not a concluded convention, but merely a draft expressing the recommendations of certain comparatively subordinate officials. It began, as Mr. Deakin observed at the Conference, with a "chat between two officials about evidence (as to land claims)." The "chat" enlarged itself into a draft signed by a Commission, and this document was duly sent out to Australia for consideration. It was not therefore an arrangement or convention in the formal sense, and it was sent out with the express statement that it would not be confirmed until the Home Government had had the opportunity of considering the views of the Australian Government. Mr. Deakin's point at the Conference was that the Australian Government should have been consulted during the discussion on the draft; but this is a very different thing from an allegation that the arrangement was made before the Colonies were consulted. Every effort will, we are sure, be made in future to avoid giving Australians any reason to believe that their opinions are not fully appreciated.

We may note in this connection that Sir Wilfrid Laurier has recently acknowledged in generous terms the recognition accorded to Colonial interests in the sphere of diplomacy, and has emphasized the fact that Canada, at any rate, has no quarrel with Downing Street. The assistance rendered to the Lemieux mission by Sir Claude MacDonald, and Mr. Bryce's happy remark that he regards himself as the Ambassador of Canada no less than the Ambassador of Great Britain, have done much to remove the bitterness left by old controversies.

The other case referred to by Sir Charles Dilke was the Newfoundland *modus vivendi*. It certainly seems incongruous that the Imperial Government should be paying the fines inflicted, no doubt quite correctly, on certain Newfoundland fishermen for breaches of the Colonial law. But the Imperial Government is responsible for foreign relations, and it was absolutely necessary to construct some temporary arrangement pending the formal settlement of the difficult treaty questions involved. Happily all parties have now agreed in principle that the question should be referred to the arbitration of the Hague Conference, and in the meantime the *modus vivendi* appears to have been cheerfully accepted by the fishermen of the Colony.

An interesting review of industrial and labour conditions in Canada during 1907 is given in the Dominion Labour Gazette for January. During the first nine months of the year the very favourable conditions of 1906, which had surpassed any previous year in the history of the Dominion, were continued without abatement,

although the opening of the season of activity was delayed by a late spring following upon a winter of exceptional severity. There was a continued expansion in almost every branch of trade and industry ; settlement in the north-west provinces proceeded with unexampled rapidity. There was great activity in the work of railway construction, and prices and wages, the most obvious indices of industrial activity rose substantially above the high level of 1906. With the close of the summer season, however, a certain decline became noticeable, which was primarily attributable to the growing stringency in the money markets of the world, and Canada was to some extent adversely affected by the severe financial crisis in the United States. These conditions were aggravated by a decline in the yield of grain in the north-west, and a sensible slackening in the timber industry. There was in consequence more than the normal amount of unemployment, especially in the larger centres, including Toronto, Hamilton, London, Winnipeg and Vancouver, when the season of outdoor activity came to an end. During the closing weeks of the year, however, there was a noticeable improvement in the general tone of the labour market and in industrial and commercial circles, and the outlook for 1908 was regarded as very favourable. On the whole, Canada seems to have passed through a trying period with an absence of anything like panic or serious distress, which affords satisfactory evidence of the stable foundations upon which her prosperity rests.

Perhaps the most remarkable feature of the year in Canada has been the continued increase in the tide of immigration. The total number of immigrants arriving was expected to fall but little short of 300,000, this figure representing an increase of about 31 per cent. on that for 1906. A feature of the year was the pronounced activity of immigration during the autumn months, and in view of the decline of industrial activity, to which reference has been made above, and of the great reduction of employment which the winter season always brings in Canada, the Dominion Government found it expedient to take special steps to discourage the influx of new-comers before the spring of 1908. Notices were accordingly issued extensively in Great Britain warning intending emigrants that the winter months are not suitable for emigration to Canada, and a new regulation was issued requiring immigrants arriving before February 15th to have \$50, and those arriving between that date and April 1st to have \$25 in their possession, in addition to the means requisite to convey them to their ultimate destinations in Canada, unless they can show that they are going to definite employment or to friends who will care for them. The Emigrants' Information Office has co-operated with the Canadian authorities in giving a wide publicity to these precautionary measures.

if we point out that the arrangement in question was not a concluded convention, but merely a draft expressing the recommendations of certain comparatively subordinate officials. It began, as Mr. Deakin observed at the Conference, with a "chat between two officials about evidence (as to land claims)." The "chat" enlarged itself into a draft signed by a Commission, and this document was duly sent out to Australia for consideration. It was not therefore an arrangement or convention in the formal sense, and it was sent out with the express statement that it would not be confirmed until the Home Government had had the opportunity of considering the views of the Australian Government. Mr. Deakin's point at the Conference was that the Australian Government should have been consulted during the discussion on the draft; but this is a very different thing from an allegation that the arrangement was made before the Colonies were consulted. Every effort will, we are sure, be made in future to avoid giving Australians any reason to believe that their opinions are not fully appreciated.

We may note in this connection that Sir Wilfrid Laurier has recently acknowledged in generous terms the recognition accorded to Colonial interests in the sphere of diplomacy, and has emphasized the fact that Canada, at any rate, has no quarrel with Downing Street. The assistance rendered to the Lemieux mission by Sir Claude MacDonald, and Mr. Bryce's happy remark that he regards himself as the Ambassador of Canada no less than the Ambassador of Great Britain, have done much to remove the bitterness left by old controversies.

The other case referred to by Sir Charles Dilke was the Newfoundland *modus vivendi*. It certainly seems incongruous that the Imperial Government should be paying the fines inflicted, no doubt quite correctly, on certain Newfoundland fishermen for breaches of the Colonial law. But the Imperial Government is responsible for foreign relations, and it was absolutely necessary to construct some temporary arrangement pending the formal settlement of the difficult treaty questions involved. Happily all parties have now agreed in principle that the question should be referred to the arbitration of the Hague Conference, and in the meantime the *modus vivendi* appears to have been cheerfully accepted by the fishermen of the Colony.

An interesting review of industrial and labour conditions in Canada during 1907 is given in the Dominion Labour Gazette for January. During the first nine months of the year the very favourable conditions of 1906, which had surpassed any previous year in the history of the Dominion, were continued without abatement,

although the opening of the season of activity was delayed by a late spring following upon a winter of exceptional severity. There was a continued expansion in almost every branch of trade and industry ; settlement in the north-west provinces proceeded with unexampled rapidity. There was great activity in the work of railway construction, and prices and wages, the most obvious indices of industrial activity rose substantially above the high level of 1906. With the close of the summer season, however, a certain decline became noticeable, which was primarily attributable to the growing stringency in the money markets of the world, and Canada was to some extent adversely affected by the severe financial crisis in the United States. These conditions were aggravated by a decline in the yield of grain in the north-west, and a sensible slackening in the timber industry. There was in consequence more than the normal amount of unemployment, especially in the larger centres, including Toronto, Hamilton, London, Winnipeg and Vancouver, when the season of outdoor activity came to an end. During the closing weeks of the year, however, there was a noticeable improvement in the general tone of the labour market and in industrial and commercial circles, and the outlook for 1908 was regarded as very favourable. On the whole, Canada seems to have passed through a trying period with an absence of anything like panic or serious distress, which affords satisfactory evidence of the stable foundations upon which her prosperity rests.

Perhaps the most remarkable feature of the year in Canada has been the continued increase in the tide of immigration. The total number of immigrants arriving was expected to fall but little short of 300,000, this figure representing an increase of about 31 per cent. on that for 1906. A feature of the year was the pronounced activity of immigration during the autumn months, and in view of the decline of industrial activity, to which reference has been made above, and of the great reduction of employment which the winter season always brings in Canada, the Dominion Government found it expedient to take special steps to discourage the influx of new-comers before the spring of 1908. Notices were accordingly issued extensively in Great Britain warning intending emigrants that the winter months are not suitable for emigration to Canada, and a new regulation was issued requiring immigrants arriving before February 15th to have \$50, and those arriving between that date and April 1st to have \$25 in their possession, in addition to the means requisite to convey them to their ultimate destinations in Canada, unless they can show that they are going to definite employment or to friends who will care for them. The Emigrants' Information Office has co-operated with the Canadian authorities in giving a wide publicity to these precautionary measures.

In proportion to population Canada appears now to be receiving a larger number of emigrants than any other country ; but the gross total of emigration to the United States is naturally greatly in excess of that to the Dominion. From the report of the United States Commissioner-General of Immigration it appears that, during the year ended June 30th, 1907, no less than 1,285,349 alien immigrants arrived in the country. A striking feature of the returns is the extent to which the Latin and Slavonic races now outnumber the Celtic and Teutonic among the new-comers, 76 per cent. of the total number now coming from the first-mentioned sources. Austria-Hungary sent 338,000, Italy 285,000, and Russia 258,000, while only 113,000 came from the United Kingdom ; of the huge Austrian total only 40,000 were of Germanic race. If this process continues, and present indications point rather to an increase than to an abatement of it, it will produce in course of time a sensible alteration of the American national stock. The same process is at work in Canada, but as yet the influx of alien elements has not outgrown the power of the Dominion to assimilate them. The number of emigrants to Canada from the British Isles is now larger than that to the United States, and when the much smaller total of emigration is taken into consideration, it will be realised that the proportion which the British element bears to the total is very much higher in the case of Canada than in that of the United States.

The subject of emigration recalls a Canadian case which came in December last before the Judicial Committee of the Privy Council, and which illustrated in a picturesque way how the dissensions of the Old World can be transferred to the New. The judgment sets out that—

“ In Galicia, the province from which the settlers came, the great bulk of the population is divided pretty equally between Poles, or Polaks, as they are sometimes called, and Ruthenians, or Little Russians. Held together by the strong hand of the Austrian Government, these two sections of the community have never become united or even assimilated. Strangers in race and in religion, they keep separate and aloof, each regarding the other with jealousy and dislike. ‘ For many generations,’ says the Reverend Father Philas, a witness for the plaintiffs, who was a travelling missionary in Galicia and knows ‘ the whole of it,’ ‘ there has been a struggle between the Polish and the Little Russians, and the latter have been kept down.’ The Poles to a man are Roman Catholics. The Little Russians are, as Father Philas tells us, ‘ devoted to the religion, rites, and ceremonies of the Greek Church.’ The Orthodox Greek religion is proscribed in Galicia. For fear of Russian intrigues it is not tolerated there. Adherents of the Orthodox Church, as the Ruthenians

or Little Russians originally were, are liable to be arrested and punished if they are suspected of an intention to revert to that faith. As a condition of being allowed to use their own liturgy and rites and to have their services conducted in the old Slavonic language, the Little Russians in Galicia are compelled to acknowledge the supremacy of the Pope and so to accept those points of doctrine which the Roman Church holds, and the Greek Church rejects. In other countries and other provinces which, in course of time, have been detached from the Greek Empire and have fallen under the sway of devout Roman Catholic sovereigns, something of the same sort has happened. The result has been the creation of a composite church, half Roman and half Greek—Roman to the educated priesthood, but Greek to the ignorant peasantry. Its proper style is the 'Uniate Church,' a title derived from its enforced union with Rome." When the settlers arrived in Canada "they were free. They seem to have been intoxicated with their freedom. They had come to a land, says one of them, where there was 'no must.' They had escaped from their oppressors. But the past was not forgotten. At one of the services held in the early days in a schoolhouse before the church was built, they were reminded by the officiating priest of the heavy yoke laid on them in their old country, and then the whole congregation burst into tears. They were an impressionable people, and not unlikely to be influenced in the choice of a religion, when free to choose for themselves, by sentiments of patriotism and the memory of past oppression."

They built a church, and the rest of the story turned on the question whether it could be claimed for the Orthodox Greek congregation or the Roman Catholic party. Judgment was given for the former.

In South African politics the principal event of interest has been the resignation of Dr. Jameson's ministry, and the accession to power of Mr. J. F. X. Merriman with a cabinet drawn from the South African party, and including Mr. Sauer and Mr. Malan. Dr. Jameson has succeeded in living down the stigma of the Raid, and in gaining the respect even of his political opponents. In resigning before the result of the elections for the Lower House is known, he has adopted an unusual course, but the circumstances were peculiar. It will be remembered that it was the action of the Legislative Council in blocking the Appropriation Bill which brought about the dissolution, and it is, therefore, not unnatural that the result of the elections for the Upper House should be regarded as having, on this occasion, more than their usual significance. But the main reason for Dr. Jameson's early resignation is no doubt to be found in the fact that an Inter-Colonial Conference is to assemble in April, at which

subjects of first-rate importance to South Africa will come up for discussion, and it is obviously desirable that the Ministry which will represent the Cape at that Conference should be given time and opportunity to formulate their policy beforehand, and not accede to power on the very eve of the Conference itself. The new Cape Ministry, like that of the Transvaal, while primarily Dutch, apparently numbers a considerable English element among its supporters.

The Australian Government is determined to prevent rings and trusts from doing injury to the public. A clause in the new mail contract with the Orient Company provides that if the contractors or their agents shall "be convicted of being engaged in or continuing in any combination, commercial trust, or conspiracy," in contravention of the Australian Industries Preservation Act, 1906, or any amendment of that measure, the Postmaster-General may require the mail contractors to withdraw from "such combination, commercial trust, or conspiracy," and, failing compliance within a week, may determine the contract. During the discussion in the House of Representatives, it was suggested that the Australian Courts would have no authority over a shipping ring in London. Mr. Deakin's reply was that "he believed it would be possible to provide against any serious detriment to the public of Australia by the London ring."

White labour is to be exclusively employed on the steamers, although not necessarily in the case of coaling or loading outside the limits of the Commonwealth, and no discrimination is to be shown as between unionists and non-unionists. The Australian Government may purchase the mail ships at any time as a going concern at a valuation or by arbitration. In the event of purchase the Postmaster-General would take over all the current obligations of the contractors as to engagements entered into by them in relation to the trade in which the mail ships are engaged.

The first number of the *Orient Review* has a special interest for us, as the founder of the magazine is an ex-Trinidad government scholar, and the views of a class of educated Orientals are set out with great frankness. We read that "Orientals have learnt the deep significance of a peculiarly Western dictum, that 'man is a political animal,' and not merely a fragment of the Universal Soul." The times, therefore, have passed when :—

"The East bowed low before the blast,
In patient, high disdain,
She let the legions thunder past,
And plunged in thought again."

The mind of young Asia is turning from metaphysics to constitutionalism. It is beginning to demand representative government. The editors claim the right to express boldly what they think, "even if they share the fate of Socrates and Galileo." We believe that fortunately no proceedings of this character have as yet been commenced.

It is a significant sign of a wide-spread movement that the Malay newspapers, week by week, pour out a flood of translations from Egyptian journals which are engaged in the pan-Islamic agitation. The able editor of an account of Malay Literature, published by direction of the Federated Malay States Government, observes that the feeling of vague unrest that is thrilling the Mussulman world may be exploited by political agitators to serve their own ends, but certainly cannot be due to any sudden appreciation of the merits of Turkish rule. Paralleled by corresponding movements in China, in Hindu India, and in Shiite Persia, it simply represents the awakening of certain peoples to a knowledge of the undignified part that they are playing in the politics of the time. In the Straits at least, he remarks, the pan-Islamic movement is defensive; it would not exist at all but for the fear that Malay and Moslem ideals are being menaced by the changing conditions of modern life.

We publish in this number an article by Dr. Mason, of Dominica, on "The Future of the West Indies," in which proposals for a new federal organisation of the smaller Colonies are put forward. Schemes for the federation of the West Indies are familiar to all who take an interest in those Colonies, and they have on many occasions engaged the attention of Parliament and the Press. Of the more ambitious of these projects it may generally be said that they proceed from persons who have neglected the advice of the late Lord Salisbury, to "use large scale maps," and who are misled by the use of the general appellation, "West Indies," into regarding the islands as a small and compact group, which might easily and cheaply be brought within the sphere of a single administration. It is very seldom realised that Jamaica and Barbados are separated by more than a thousand miles, and that the distances between Jamaica and Trinidad, and between Trinidad and St. Kitts are not very much less. The effect of geographical distance is increased by the comparative infrequency of opportunities of communication, and a Governor-General of the whole of the West Indian Colonies would either spend the bulk of his term of office at sea, or remain in less close touch with the outlying parts of his dominions than is the Secretary of State in Downing Street.

Dr. Mason, who has a practical knowledge of the West Indies, naturally avoids the error of putting forward impossible paper schemes of this kind, and he confines himself to the more modest proposal of a federal union of Barbados with the Windward and Leeward Islands. As the islands at present included in the Windward group were, together with Tobago, formerly administered from Barbados, this arrangement would be not altogether untried and unfamiliar; and it may be at once admitted that it would certainly promote economy and very likely the efficiency of government as well. But these are not the only considerations to be kept in view, and we are inclined to think that Dr. Mason underrates the strength of the sentiment of independence which characterises the various Colonies, each of which has special historical and social conditions which it is reluctant to jeopardize. Any successful scheme of federation or unification must in any case derive its inspiration from inside, and not from outside the Colonies affected. To mention a difficulty of another kind, a tangled skein of Imperial Acts and Orders in Council, and local Ordinances would have to be unravelled before Dr. Mason's apparently simple scheme of judicial reorganisation could be carried into effect.

The growing production of wheat in Canada lends increasing interest to the question of the value of the advantage which the farmer at home possesses in having the market close at hand. The cost of transport of grain from the great interior markets in America to the Atlantic seaboard is, taking a rough average, about 5d. a bushel, and the ocean rate to Liverpool, 2d. These figures, however, do not include the cost of moving the crop from the farm to the interior market, and this cost may be greater than that of the long distance transport. The farmer has first to cart the grain to the local railway station, and the cost of doing this varies, of course, considerably; in the United States it has been estimated at an average of about 2d. per bushel, and the transport by rail to the interior market, 5d., making the total cost of transport from the harvest field to Liverpool 1s. 2d. The distribution from Liverpool may perhaps be fairly set for general purposes against the cost of sending a home crop to market.

The comparative smallness of the ocean rate—for a distance of about 3,000 miles—is striking. From the Russian Black Sea ports the freight averages 3½d., from India 4½d., from the Argentine 5½d., from Australia 7d., and from the Pacific coast, by sailing ship, 8½d. The blessings of being an island are great.

The Southern Nigerian Government has entered into an agreement with the Nigeria Bitumen Corporation, Limited, under which it is to provide £25,000 to accelerate the drilling for oil. The quarterly payments will cease upon oil being struck and will be repayable out of the oil produced. In consideration of this assistance the royalty will be increased from 5 per cent. to $7\frac{1}{2}$ per cent. The Corporation think that they have profited by their experiments and that they have now ascertained the whereabouts of the true oil belt. It is greatly to be hoped that they will succeed.

The growth of cotton enterprise in Nigeria is reflected by the opening at Oshogbo of what is said to be the largest and most complete ginnery in the world. When running full time it will turn out 12,000 bales a year, and it is anticipated that in 1909 it will be fully occupied. The Lagos railway will shortly reach Ilorin, and it is probable that a similar ginnery will be built there.

The cocoa crop of the Gold Coast in 1907 was exceptionally large, the value being about £800,000. It will no doubt increase, and will lead to further railway construction at an early date.

In the German African Colonies 402 kilometres of railway were added in 1907, thus:—

Togoland	...	...	...	66
South-West Africa	...	...	...	148
East Africa	...	...	..	188
				<hr/> 402 <hr/>

There are about 350 kilometres under construction. The lines are being built partly by the Government and partly by private enterprise.

AUSTRALIA AND THE NEW PROTECTION.

THE proposals which Mr. Deakin has submitted to the Commonwealth Parliament under the title of the "New Protection," possess an interest by no means limited to the people of Australia; and we believe that many readers in the United Kingdom and elsewhere will be glad to have an opportunity of reading the full text of the memorandum which embodies them. They are presented as the natural corollary of the system which protects the manufactures against external competition. Among the motives of the old protection are stated to be the desire "to promote regular employment . . . to render stable the conditions of labour, and to prevent the standard of living of the employ es in these industries from being depressed to the level of foreign standards." "The 'old' Protection contented itself with making good wages possible. The 'new' Protection seeks to make them actual." "Having put the manufacturer in a position to pay good wages, it goes on to assure the public that he does pay them." Australia, then, began by protecting the manufacturer against his foreign competitor. She is now invited to advance a step further and protect the workman against his employer. Nor is this the last stage. It may become necessary to protect the consumer against a combination of employers and workmen to raise prices, and this contingency, it will be seen, is directly contemplated by the memorandum. "The establishment of machinery to prevent the undue inflation of prices" is "an essential part of the completed scheme." The details are not given; but the "Board of Trade" will investigate the prices charged, and if it finds them to be unreasonable, will report that fact to the Minister, who "will then be empowered, with the assent of Parliament, to take appropriate action." What form of action would be "appropriate" we are not told; but if we may conjecture from the analogy of the means proposed for maintaining wages, the Government would make use of the taxing weapon to enforce its view as to what constitutes fairness and reason in prices. This method is of course no

new one in Australia ; it was adopted some years ago as a means of inducing the Queensland sugar planter to employ white in preference to coloured labour ; it possesses some obvious advantages over the alternative method of the issue of express injunctions as to wages, prices, and industrial conditions ; and it appears to be capable of indefinite extension.

From the point of view of English politics, the Australian scheme is interesting in two connections. The first has reference to the fiscal controversy. The picturesque title of "the New Protection" seems likely to cling to the scheme, and will perhaps lead to its being considered almost exclusively as an adjunct to protection in the ordinary sense. The *Spectator* has already suggested that a willingness to accept it should be taken as a test to distinguish the altruistic Protectionist from those who seek only the advantage of the employing class. But it will be unfortunate if the predominant interest taken in the fiscal question is allowed to obscure the other aspect of the scheme, in which it appears simply as an extension of the system of State regulation in industrial matters, in which Australia and New Zealand have shown such a readiness to make bold experiments. Mr. Deakin's "New Protection," whatever may be the political motives which inspire it, is capable in theory, at any rate, of standing by itself, and its merits or defects can be discussed without reference to the standing issue of Free Trade *versus* Protection. At a moment when the suppression of "sweating" is an object desired by all political parties, any proposal which has that object in view is worthy of dispassionate consideration.

There has already been a statutory move in the direction aimed at. Last year the Harvester Exeise Act came into operation, under which an Exeise duty of £6 a machine (the import duty being £12) is levied unless the manufacturers give fair conditions of employment. A doubt has arisen whether the Commonwealth Legislature was within its powers in making this provision, and arrangements have been made for a test case. This is a technical difficulty, and hardly bears on the merits of the present programme, but the trial will no doubt elucidate facts and facilitate discussion.

Text of the Memorandum.

"1. Protective duties were originally imposed in order, among other things, to promote regular employment, to furnish security for the investment of capital in new as well as existing industries, to render stable the conditions of labour, and to prevent the standard of living of the employés in these industries from being depressed to the level of foreign standards. Australian rates of pay have hitherto been fixed by the bargaining of employer and employés, except where the State has intervened, by means of Wages Boards and Arbitration

Courts. The standards of these tribunals appear to have been determined on the basis of a minimum wage.

"2. The aim of the proposals about to be outlined is more ambitious. The 'old' Protection contented itself with making good wages possible. The 'new' Protection seeks to make them actual. It aims at according to the manufacturer that degree of exemption from unfair outside competition which will enable him to pay fair and reasonable wages without impairing the maintenance and extension of his industry, or its capacity to supply the local market. It does not stop here. Having put the manufacturer in a position to pay good wages, it goes on to assure the public that he does pay them. This of course involves a careful adjustment of the duties to the double purpose they are intended to serve. For that reason the proposals for the 'new' Protection include the establishment of permanent machinery for investigating and ascertaining whether the duties are really effective for these purposes. If they are, fair and reasonable wages must be paid. If they are not, the alternative is to alter the duties

"3. It has been objected that the term 'fair and reasonable,' as applied to wages, is too vague to be put into an Act of Parliament, and that some definition is required from the Legislature of the meaning to be attached to the words. As they stand, they express the intention of Parliament clearly though generally, and it is not imperative to attempt a complete definition of them in the Statute. The difficulty lies not in their interpretation, but in their application. Hence it has been deemed best to leave these words to be interpreted, whenever necessary, by a well-informed and impartial tribunal, possessing the fullest opportunity for investigation and consideration before it arrives at a decision, and also of varying that decision should occasion require.

"4. It need hardly be said that in framing proposals of this character, and providing for their appropriate application, we require to take into account the vast area, the sparse settlement, and the great distances characteristic of Australia; as well as the complexity of the industrial conditions upon which the proposals are to operate. One of the chief difficulties arises out of the fact that the manufacturing establishments of Australia include a large number of workshops, small in themselves, but engaged in a variety of operations, only some of which affect the goods which will come under the proposed duties. The policy will have to be carried out under the most diverse conditions, and must in the first instance be applied with circumspection; but the general ideal aimed at implies a minimum of official interference and control with a maximum of adaptability to the circumstances of each business. This ideal, of course, involves the utmost simplicity and elasticity in all the necessary procedure.

"5. The method by which it is intended to secure the payment of fair and reasonable wages is, as already indicated, an exercise of the taxing power. Excise duties will be imposed on certain classes of goods, which enjoy the benefit of a sufficient protection, and an exemption from the duties so imposed will then be made in favour of those in the manufacture of which fair and reasonable wages are paid. In this way, wherever effective protection is granted, its benefits will be limited to those manufacturers whose employes are allowed to share in them to this extent.

"6. The first requirement is obviously to provide machinery for the determination of the question what are fair and reasonable rates of wages. The authority to make this determination will be a tribunal, to be known as the Board of Trade, consisting of three members. These will be placed in a position of judicial independence. They will be appointed for a fixed period. They will be paid adequate salaries, and will be placed entirely out of the reach of party influence. The important and far-reaching nature of their functions will, it is thought, fully justify conferring upon them this degree of independence.

"7. This Board will be clothed with all the powers that are necessary to enable it to discharge its difficult and important functions. It will be empowered to perform its duties in any place, and at any time, that may be convenient, and the procedure in all matters before it will be made as simple and inexpensive as is possible.

"8. The varying conditions of Australia make it improbable that any single scale of wages, which would be fair and reasonable in every instance, and under every condition, throughout the Commonwealth could be determined for any industry. The Board will, therefore, be empowered to appoint, without regard for State Divisions, industrial districts, within which a certain scale shall be regarded as fair and reasonable. In this way, there will ultimately be declared, as soon as possible after the Bill is passed, for every industry affected by the proposals, and in every part of Australia, definite rates of remuneration which must be complied with in order to secure exemption from the Excise duties.

"9. The scale of wages which is to be regarded as 'fair and reasonable' having been ascertained and published, manufacturers will then be in a position to decide whether or not they will adopt it. If they wish to do so, they will at once register their factories as exempt, and accept the responsibility of paying the rates fixed. Registration will virtually amount to a definite undertaking to pay those rates, and anything in the nature of fraud or misstatement in this connexion will expose the offender to penalties. In this way, exemption can be secured with the minimum of expense and delay. To facilitate it as much as possible, provision will be made to enable

registration to be effected in the industrial district in which the factory is situated. The exemption, it may be mentioned, will be granted in respect of the factory in which the goods are produced, so that all goods manufactured in a factory which has been registered as exempt will be *ipso facto* free from Excise. These provisions will only apply to places in which four or more persons other than the family of the manufacturer are employed.

" 10. Possibly even the district scale of 'fair and reasonable' wages first determined may not remain permanently satisfactory. The cost of living, and other conditions, may change, and the Board will, therefore, be empowered to amend the standard as occasion may require. It will also have power to alter the limits of any industrial district, so as to secure that uniformity of rates shall only prevail, and shall always prevail, so far as possible, over areas in which there is uniformity of economic conditions.

" 11. The Board will also be in a position to determine, with some degree of precision, the question whether the measure of protection given to any particular industry by existing rates of duty is sufficient for the purposes that were referred to in paragraph 2 of this memorandum. Part of its duty will, therefore, be to report to the Minister on this question, and thus to afford to Parliament an opportunity of revising the scale of import duties on any class of goods, where they are proved to have fallen short of the necessities of the case.

" 12. The chief difficulty is, perhaps, to devise a simple, inexpensive, and at the same time effective, method of securing the continuous observance of fair and reasonable conditions in exempt factories. It is estimated that there are some thousands of factories in Australia which will come under this scheme. It will be readily recognised, therefore, that reliance cannot be exclusively placed on official inspection, though the Board and its authorised officers will have access, at any time, to all books and documents which contain any relevant particulars, with due safeguards against the disclosure of confidential information. The powers of the Board, in this regard, will be similar to those of the United States Inter-State Commission. In the second place, the employes in every exempt factory will be kept informed by the posting in some conspicuous place in the factory of the schedule of wages which the Board has declared to be fair and reasonable, and power given to any person or association to inform the Board of any departure from the standards. In the third place, every exempt manufacturer will be required to furnish, at regular intervals, a declaration of compliance with the requirements of the schedule. Any wilful misstatement in this declaration will be visited with punishment. Continued misconduct will expose a manufacturer to the risk of losing altogether his right to manufacture under exempt conditions.

"It is hoped that these three sets of provisions will together amply secure the maintenance of fair and reasonable conditions in all exempt factories.

"13. Further security for the maintenance of the standard wage will be afforded by the requirement that all goods manufactured in exempt factories shall bear, either an exempt stamp, or the Commonwealth Trade Mark. The presence of these marks on any goods will be *prima facie* evidence that the conditions of exemption have been complied with, and will thus enable purchasers to distinguish between goods which have been produced under standard conditions and those which have not.

"14. The burden imposed upon the Board under this Act will obviously be heavy, although there is no reason to suppose that when the system has been once placed in working order, it will be unduly heavy. Provision will, however, be made at once for relieving the Board of a good deal of detail work, and for gaining the advantage of intimate local knowledge, by empowering the Board to delegate the duty of inquiring into any matter within its cognizance to local tribunals, such as Police Magistrates or State industrial authorities. If the co-operation of the States Governments can be obtained for this purpose, there is no doubt that the control of industrial conditions throughout the Commonwealth can be made very much less expensive, more effective, and more uniform than it is at present. Although extensive powers of delegating its function of inquiry will be given to the Board, it is intended, in order to preserve uniformity, that the authoritative administration of the system shall be carefully retained in its hands.

"15. It is implied in what has been already said that if any manufacturer fails to obtain exemption for his factory, or if the exemption is revoked, all goods produced in that factory will be subject to Excise, and all the provisions of the Excise Act of 1901 will apply to the goods and to the factory in which they are produced. It will, of course, be open to any manufacturer to manufacture under those conditions if he desires to do so.

"16. So far, reference has been made only to that aspect of the proposals which is concerned with the protection of the manufacturer on the one hand, and the employes on the other. An essential part of the completed scheme, however, is the protection of the consumer by the establishment of machinery to prevent the undue inflation of prices. It is enough to say here that the Board will be charged with the duty of investigating the prices charged by protected manufacturers, and, if these are found to be unreasonable, of reporting that fact to the Minister. The Minister will then be empowered, with the assent of Parliament, to take appropriate action.

"17. These proposals, to some extent, cover the ground that is already occupied by legislation in some of the States. Every exercise

of power by the Commonwealth, in matters in which Commonwealth and States have concurrent authority, must be subject to this condition. The co-operation of the States Governments is most desirable in every aspect ; but the Commonwealth cannot ignore its obligation, so far as the Constitution allows, to secure equitable and uniform industrial conditions in all the industries which come within the range of its fiscal legislation.

“18. The proposals for requiring the maintenance of fair and reasonable conditions in protected industries are simply a corollary to the power of imposing protective duties. To restrict the powers of the Commonwealth to the mere imposition of these duties, while the conditions under which the manufacture of protected articles is carried on differ so widely in the different States, would be to permit inequality, discrimination, and discord. The ideal of the Constitution is equality and uniformity in all national matters. With that end it prohibits the imposition of taxation in such a way as to discriminate between States or parts of States. The ideal can hardly be realised if uniformity of protection is coupled with wide diversity in the conditions of manufacture. Effective and useful as State industrial laws have in many cases proved, their operation is circumscribed by State boundaries, and it can hardly be claimed for them that they either do or can secure uniformity in the conditions of manufacture throughout Australia. No authority but the Commonwealth Parliament can do this, and the attempt to do it, in the way that has been outlined, is in fullest harmony with the Federal aims and character of the Constitution.”

THE PREVENTION OF STRIKES IN THE COLONIES.

THE social and political problems which present themselves for solution in the United Kingdom are to a considerable extent reproduced in the self-governing Colonies ; and the value of Colonial experience, as a guide or a warning to statesmen at home, is being increasingly realised every day. To take two recent instances in the discussions which have taken place in England on the subject of Old Age Pensions, and on Wages Boards as a means of suppressing sweating, arguments drawn from the practical experience of New Zealand and Victoria have figured very largely. Such arguments are, it is true, never conclusive ; they rest upon nothing more than an analogy more or less exact. The conditions of a Colony, though they may be closely similar to those of the United Kingdom, are never identical with them, and the obvious differences are precisely such as materially affect the validity of an economic argument. In even the most advanced of the British Colonies we have to deal with a society which, in comparison with that of the United Kingdom, is relatively small and relatively simple, a society in which industry has attained to nothing like the degree of complexity which characterises it at home, and in which nothing like the same importance has to be attached to the force of custom and tradition. Hence, though apparently the same problem may exist in New Zealand and in England, a solution completely successful in New Zealand may in England be hopeless ; and difficulties which are insuperable in England may in New Zealand prove no more than slight hindrances. But although it is important that the limitations of the argument from analogy should be recognised, its usefulness is great and undoubted. To the English politician Colonial experience serves much the same purpose as the method of experiment does to the scientific enquirer. It supplies him with actual ascertained data by which he can supplement theoretical arguments, and enables him to study in a working model the operation of new systems and devices the introduction of which may be in contemplation at home. In comparatively young communities there is generally a much

greater readiness to experiment than in those of older growth, and in consequence expedients are put to the test of actual working which would probably never be tried at home, just because the untried is so great an object of suspicion to English statesmanship.

The contrast between the English and the Colonial attitude is nowhere more clearly apparent than in the matter of industrial disputes. In the Colonies there has been a variety of daring and far-reaching experiments. In England there has been a rigid and implacable adherence to the doctrine of *laissez faire*. At the present moment the subject is one of immediate and pressing interest. The British public has been subjected to a succession of "scares" in connection with one after another of the principal industries of the country. The railways, the ship-building and engineering industries, and the cotton industry, have all contributed their share to the general panic, the last-named having taken the palm by providing two successive sensations within a few weeks of one another, and by having postponed the settlement of the later and bigger difference until the very last moment before a struggle had become inevitable. It is true that in every case the threatened strike or lock-out has been averted, except, unhappily, in the case of the dispute in the North-eastern shipbuilding trade. But it must not on that account be supposed that there has been no injury to British trade. The machinery of modern industry and commerce is so delicately adjusted, that it is quickly and adversely affected even by the rumour of impending disputes. The constant recurrence of acute differences between masters and men, which may easily lead to open industrial war, produces a general atmosphere of distrust which is peculiarly harmful when, as at present, a period of good trade appears to be giving place to the inevitable reaction. On the injuries which would have resulted from the actual occurrence of a general strike or lock-out in any of the industries above mentioned it is unnecessary to enlarge. We have, unfortunately, ample experience in the past of their nature and significance, and they are admitted by all parties. The methods of industrial warfare, the strike and the lock-out, are an unmitigated evil with no compensating advantage. They contribute nothing to the settlement of a dispute except brute force, and the power of the purse. A settlement which is reached after a strike or lock-out might equally well have been reached before it. No new element has been introduced into it, except perhaps the exhaustion of one or other of the two parties. Both have suffered financially and have involved in similar misfortunes a number of persons quite unconnected with the dispute; for the effects of the dislocation of a great industry stretch far beyond the limits of the industry itself. And to the material injuries caused by the dispute must be added the legacy of bitterness and resentment which it leaves behind it, and which constitutes, perhaps, in some cases an even greater evil to society at large. These are

The Prevention of Strikes in the Colonies. 307

trite and obvious considerations ; but this circumstance does not seem to have made them in any way operative as a stimulus to action. The only recent piece of legislation on the subject of industrial disputes has been an Act designed to remove certain obstacles which tended to reduce the frequency of their occurrence ! There is, of course, no intention to suggest that the object of the Act was to promote trade disputes. The motive which inspired it was the desire to equalize the conditions for the two parties to such disputes, but it is none the less significant that the only possible functions of government in the matter should be regarded as those of "keeping the ring," and ensuring a fair fight. Earlier English legislation on the subject has not ventured beyond the eminently cautious expedient of empowering the Board of Trade to do what it might equally well have done without any legislation at all,—viz., to undertake the task of "conciliation," with the consent of the parties to the dispute. Before turning to the attempts which have been made in the Colonies to solve a problem which English statemanship appears to have pronounced insoluble, it may be of interest to compare the attitude of the State towards the particular kind of dispute with which we are now dealing with its attitude towards other disputes incidental to the life of an organized social community. When an industrial dispute appears to be imminent, what are the influences which, in England to-day, can be brought into play to avert it ? A disinterested mediator may, by tact and persuasive power, succeed, as Mr. Lloyd-George succeeded in the case of the railway dispute, in bringing the disputants to terms. Or the parties to the dispute may, as they did in the case of the threatened cotton strike, show themselves ready in the last resort to sacrifice something of their personal pride as well as of their personal interests, and agree upon a workable compromise. But if neither of these two things should happen, no alternative remains except a trial of strength in what approximates to open warfare. Now, in a community like that of Great Britain, which is largely industrial, disputes between private citizens as to the limits of their legal rights and mutual obligations are not more certain to occur than are disputes between employers and employed as to the conditions under which an industry shall be carried on. And when they do occur, in their effects upon society they are infinitely less far-reaching. Yet we do not leave the settlement of such civil differences to be dependent upon the reasonableness of the parties concerned or the judicious intervention of some voluntary mediator ; nor do we regard it as reasonable or tolerable that, in the absence of such pacific influences, the parties should be left to starve, or worry or intimidate one another into submission. On the contrary, we recognize, as a matter of course, that, in the interests of the community at large, peaceful means of settlement, which shall be at once certain and

final, must be provided. Is there any valid reason for refusing to recognize a similar necessity in the case of industrial disputes? At the outset it may be frankly admitted that the judicial determination of such disputes does present one serious difficulty. The matters at issue cannot as a rule be regulated by appeal to any recognized code of law or right or reason. There are no admitted principles of justice, or even of policy, which determine what wages should be paid or what hours worked in a given industry, and industrial disputes often turn upon questions still more intricate, and still less susceptible of solution by accepted and ascertainable rules. Consequently, a judicial decision will be not, as it should be, the application to a particular case of a general principle based upon enactment or long precedent, but simply an expression of the personal opinion of the judge, and that opinion may easily be the outcome of sentiment, or caprice, or eccentricity. This argument has its force, but it is a force which may be easily over-estimated. The whole history of legal institutions in England is a history of the gradual extension of the sphere of judicial activity, of the constant application to fresh material of the forms of legal procedure, and the reduction to workable rules of principles apparently too vague in content and uncertain in origin to admit of formulation. Many of the matters which the Chancery and Probate Divisions determine in the ordinary course of their day's work are, at first sight, as little susceptible of a judicial settlement as the questions which give rise to industrial disputes; yet they have succumbed to the ingenuity of lawyers. The task of the Railway Commissioners in determining what is a "fair and reasonable" railway rate is certainly not less difficult than that of a judge required to fix wages or hours; yet its performance by means of a quasi-judicial procedure is accepted as a matter of course. The fact is, that where it is obviously desirable that a question should be settled, the argument that there are no accepted principles by an appeal to which it can be settled will never be allowed to carry much weight; and it is this fact which constitutes the strongest of all arguments in favour of a judicial or quasi-judicial settlement of industrial disputes.

But to the practical Briton an ounce of experience is worth a ton of theory, and the final answer to the contention that industrial disputes cannot be settled by judicial means is the fact that in New Zealand they are; though, as we were at pains to point out earlier in this paper, it must not be lightly assumed that what can be done in New Zealand can necessarily be done in Great Britain. The New Zealand system is in fact the absolute antithesis of the British practice. In place of a policy of complete *laissez faire* we have a policy of complete State control. When the scheme was originally introduced by Mr. Pember Reeves, the Colony's present High Commissioner in London, provision was indeed made for a preliminary attempt in

every case at "conciliation," with arbitration as a last resort, in the background. But experience has shown that both parties as a rule prefer the greater certainty and finality of an arbitral award as opposed to an agreement which the parties reach voluntarily and which is not binding upon them. As to whether the New Zealand system has been a success, there are, of course, two opinions. An intermittent attack on it is waged in the columns of the *Times*, and there are many who will regard with some alarm the more far-reaching results which it is understood to have had as a means of standardising wages and industrial conditions in almost every form of employment. We observe, however, that Sir John Gorst, in his recent visit, was agreeably surprised at its good results; that he found that enterprises were not discouraged or crippled, that profits were not lowered, and that the cost of living was not increased, although wages had risen and all industrial conditions greatly improved. In any case, that it has been a success in the sense that it has proved to be a perfectly workable system admits of no doubt. The New Zealand Labour Gazette contains, month by month, the text of a number of awards covering almost every conceivable incident of an industrial dispute. Some of them might have been specially designed to answer the arguments which we have quoted above as to the impossibility of settling by judicial procedure differences in which no legal principle is involved. The judge fixes wages for time and piece work, regulates hours, determines holidays, lays down rules for the employment of apprentices, limits overtime, and prescribes the extra rate of payment to be allowed for it. With an unconscious irony he fines a workman for accepting, as well as an employer for offering, too low a rate of pay. He is in no way staggered when required to determine the singularly difficult question whether preference shall be granted to members of a trade union. Here is one decision, typical of many others, on this point: "So long as the rules of the union shall permit any person of good character to become a member of the union on payment of an entrance-fee not exceeding five shillings, upon his written application, without ballot or other election, and so to continue upon payment of subsequent contributions not exceeding sixpence per week, employers shall employ members of the union in preference to non-members, provided that there are members of the union equally competent with non-members to perform the work required to be done and ready and willing to undertake it. This clause shall not compel employers to refuse to continue to employ persons now in their employment."

To the judge of the New Zealand Arbitration Court questions like this are evidently no more thorny than are the niceties of the common law or the law of real property to a judge of the High Court at home. That they should be capable of settlement without a strike or lock-out is obviously an incalculable advantage; and

opinion in New Zealand, so far as it asks for any change in the law, appears to demand that it should be strengthened, so that its effectiveness as a means of finally determining all matters of dispute may be made more certain.

In this matter Australia has to some extent followed the example set by New Zealand, but Canada has taken rather a different line, and her experiment is of especial interest to Great Britain because it is in the nature of a compromise, and therefore more accordant with our home traditions than the logical thoroughness which characterises the Antipodes. A beginning was made, in 1903, with an Act which applied only to railway disputes, under which the Minister of Labour was empowered to appoint in the first instance a "Committee of Conciliation, Mediation, and Investigation," and subsequently, should the Committee fail to effect a settlement, a "Board of Arbitrators." In either case there were to be three members, one representing each party, and the third chosen by them, or, should they fail to agree, by the Minister. The findings and recommendations of the Board were to be embodied in a report which was to be made public, but to have no binding effect upon the parties, its effectiveness depending upon the power of public opinion to prevent a resort to extreme measures in defiance of formal recommendations put forward after full investigation by a semi-independent authority. The same principle governs the "Act to aid in the prevention and settlement of strikes and lock-outs in mines and industries connected with public utilities," passed by the Dominion Parliament in March of last year and generally known as the Lemieux Act. It provides for the appointment of Boards of Conciliation and Investigation on the lines laid down in the Railway Act above-mentioned; but it expressly prescribes that no person may act as a member of a board who has any direct pecuniary interest in the issue of a dispute referred to it. It is the duty of the Board under the Act to endeavour to bring about a settlement, and it is empowered to "make all such suggestions and do all such things as it deems right and proper for inducing the parties to come to a fair and amicable settlement of the dispute." In other words, the Board is expected to make an earnest attempt at "conciliation" before it essays the task of "arbitration." But if no settlement is reached in this manner, the Board is to make a report stating "in plain terms and avoiding as far as possible all technicalities, what, in the Board's opinion, ought or ought not to be done by the respective parties concerned." The report may be made binding upon the parties by agreement, failing which it is not binding, and can be enforced, if at all, only by the influence of public opinion; but, by a very important provision, it is made "unlawful for any employer to declare or cause a lock-out, or for any employé to go on strike, on account of any dispute prior to or during

The Prevention of Strikes in the Colonies. 311

a reference of such dispute to a Board of Conciliation and Investigation. . . . Employers and employés shall give at least thirty days' notice of any intended change affecting conditions of employment with respect to wages or hours; and in every case where a dispute has been referred to a Board, until the dispute has been finally dealt with by the Board, neither of the parties nor the employés affected shall alter the conditions of employment with respect to wages or hours, or on account of the dispute do or be concerned in doing, directly or indirectly, anything in the nature of a lock-out or strike . . . but the relationship of employer and employé shall continue uninterrupted by the dispute or anything arising out of the dispute." It will be seen that the Act provides for a systematic attempt at conciliation, and for an impartial investigation of the points at issue, the results of which are to be made public, and that it prevents any precipitate recourse to hostilities. Its limitation to "services of public utility" emphasises the fact that its motive is rather to protect the interests of the public than to render justice between the parties; but it can hardly be defended logically, for in a modern industrial state, every substantial industry performs "services of public utility," and the public interest suffers whenever it is unnecessarily interrupted. A demand for the extension of the provisions of the Act to industries at present outside its scope has already sprung up, and will probably sooner or later be satisfied.

The Lemieux Act became law on the 22nd of March, 1907. To show the manner in which it has operated, we can hardly do better than quote the summary of its results down to the close of the year, which appears in the January number of the *Dominion Labour Gazette*.

"From the enactment of the measure until the end of the year there had been thirty-one applications for Boards of Conciliation and Investigation. A number of these related to disputes in industries other than coal mines and public utilities and not therefore expressly included within the provisions of the Act, though by a special clause the machinery of the Act may be invoked in such cases should both parties concerned be agreeable to such a course. In the case of several applications of this nature the consent of both parties not having been obtained no Board was established. In the case of a number of further applications the existence of the Act exerted a conciliatory influence on negotiations between the disputants, and settlements were reported before the establishment of the Board had been effected. In twenty-two cases Boards have been established. With regard to four of these the proceedings of the Boards were unfinished at the end of December. Formal agreements were effected in eleven cases and informal settlements in five

other cases. In the case of the two remaining Boards, both of which related to differences between the same disputants, the differences remained unsettled by the investigation before the Board, and a strike occurred which continued for three months and ended in a resumption of work on lines recommended by the Board. In three cases also in which no Board was established, settlements were reported which were directly attributable to the influence of the Act, making in all nineteen disputes adjusted by virtue of the Act.

"The disputes referred under the Act during these first nine months of its operation, during the earlier portion of which period its provisions were but imperfectly known, have directly affected considerably over twenty thousand men and many millions of dollars of capital, apart from the vast interests indirectly affected, and the great public interests at stake in several instances. Of the disputes referred under the Act, fifteen related to the coal mining industry in the provinces of Nova Scotia, Alberta and British Columbia, and seven to differences between railway companies and various classes of their employés. The remaining disputes affected longshoremen in Nova Scotia and Quebec, metal miners in British Columbia and Ontario, and cotton operatives in Quebec."

For the first nine months' operation of an entirely novel piece of legislation, this must be pronounced a highly successful record; and Canada may fairly claim to have reached a half-way house on a road which the Mother-country has hitherto feared to tread at all.

THE LABOUR PARTY AND THE EMPIRE.

IN a tiny volume comprising 112 very small pages, a volume rather dear at one shilling, if the value of paper, print and binding alone be considered, Mr. Ramsay Macdonald discusses most of the fundamental problems of the British Empire from the standpoint of the British Labour Party. It is explained in the introduction that the volume is not to be taken as an authoritative statement of the policy of the party, for "the Labour Party has as yet sanctioned no Imperial policy"; but Mr. Macdonald believes that he is entitled to claim that his conclusions "are those which the Labour Party ought to adopt if it is to be consistent with the principles of its domestic politics." Whether Mr. Macdonald is or is not the most satisfactory spokesman of the party, in the sense of being a typical representative of its opinions, he possesses two very substantial qualifications for the task which he has undertaken. He is the master of a clear and vigorous literary style; and he writes with a first-hand knowledge of a good many different component parts of the Empire. It is hardly necessary to say that he deals with a number of matters which are in the highest degree controversial, and that his sympathies or antipathies are strongly, not to say pugnaciously, expressed. We shall in this notice endeavour to avoid following Mr. Macdonald into the regions of party controversy. Our aim is to emphasize a few of the general principles which he lays down, and such criticism as we shall have to offer will not be directed against his doctrines, but against what appear to us to be certain defects in his method of treatment. The most striking characteristic of the book is the thoroughgoing Imperialism which runs through it. A reader, whose eye is first caught by the dedication "To my friends called Little Englanders," may suspect that this statement is paradoxical; but a study of the succeeding chapters will satisfy him

of its justice. Mr. Macdonald finds much in the Empire to criticise and to distrust, but there is nothing in it to which he is indifferent. He will not lightly believe that it is the best of all possible Empires, but he is convinced of its immense power for good, and determined to help in making of it the best thing that can be made. The tendency with which he deals most severely is that of parochialism, whether at home or over-seas—the tendency which looks only to the local and domestic interest, and ignores the wider issues which touch every country under the British flag. It is this line of thought which has led him to what is perhaps the most daring part of his policy, which he himself christens “the policy of the Imperial standard.” He urges that the claim of each component state to manage its own affairs in its own way is pushed at present to an unreasonable extreme, and has the effect of destroying the reality of Imperial unity. He is no advocate of “interference from Downing Street”; but he claims that the British democracy has a right to make its voice heard if it believes that fundamental principles of British justice, British honour, or British administration are being transgressed by another British democracy in an over-sea dominion; and that the democracies of Canada, Australasia and South Africa of course enjoy a similar right. In concrete terms this means that Great Britain may criticise the native policy of Natal, and Australia the Irish policy of Great Britain, or the labour policy of South Africa, without affording any ground for resentment at an illegitimate interference. And he would seek to make such criticism more authoritative and more effective by bringing up such subjects before an Imperial Conference which might claim the right to enunciate general principles of policy applicable throughout the Empire. Restiveness under such criticism is, in Mr. Macdonald’s opinion, the outcome of what is really a separatist sentiment. In discussing the organisation of the Empire, he dismisses Imperial Federation as an ideal always impossible, and now obsolete, and regards the establishment of a permanent Imperial Council as impracticable. But he favours, as indicated above, Imperial Conferences exercising very extensive functions. He would like to see them attended by the Leaders of the Opposition as well as by the Premiers; but he does not seem to take sufficient account of the difficulty which would result from the increasing tendency of the group system to displace the two-party system in British democracies, nor is it clear how any State could speak with a single voice in the Councils of the Empire when represented by two hostile politicians. This section of the book, in fact, suffers seriously from the sketchy nature of the treatment. In the last of his chapters dealing with the self-governing colonies, Mr. Macdonald considers the fiscal question and pronounces emphatically against the scheme of preferential trade. We have reserved for the last the two sections of

the book in which we find it easy to criticise without trenching on party politics. The first of these is the preliminary historical sketch, which was bound, on account of the limited space available, to be inadequate. But it has other faults which were not equally inevitable. It abounds in superficial generalities, and it is written in a rhetorical style which is very ill adapted for conveying reasoned historical judgment. The other section which we find very disappointing is the short chapter entitled "The Dependencies." The sketch of the system of Indian administration which it contains is a mere caricature, and in the criticism of Crown Colony government there is nothing which can be pronounced practically helpful, though the picture of Fijian schoolchildren chanting "Bonny Dundee" is entertaining. Mr. Macdonald has expended little thought on this chapter, and we shall be sorry to think that any British party would be content to deal so lightly with some of the most difficult problems which the Imperial statesman has to face. But the book as a whole can be cordially recommended to all who seek to know how the question of the Empire is likely to present itself to the newest of our political parties.

If we may indulge in some speculation on the subject, it does not seem to us at all likely that the Labour Party will seek to disturb the constitutional rights of the Dominions, or to devise any machinery for joint legislation. When the Canadian Legislature passed a resolution in favour of home rule for Ireland, Mr. Gladstone replied in effect that this was not their business, and this attitude is fairly characteristic of the Empire at large. No doubt the influence of the party will be cast against militarism and in favour of international arbitration, and it will endeavour to promote the extension among native races of representative institutions. The party is in favour, on general grounds, of the assumption by government of increased responsibilities, and will probably be ready to support proposals for co-operation between the Home and Colonial administrations in enterprises of an industrial character.

THE STATE AS LANDLORD.

IN many parts of the Empire the State is the owner of a large portion of the land, the title being generally based on the absence of any effective occupation, and in a few cases an agreement with the natives. The problem in dealing with this property is how best to study the future interests of the State, while at the same time offering sufficient inducements to capitalists and workers to make use of the land. If the immediate present is alone considered, there is a considerable danger that this, often the most valuable asset of a Colony, will be squandered for a very small return. The history of the Crown lands in Australia illustrates the hardships which may result from a short-sighted policy. In the first half of the last century, the home authorities restricted the alienation of land by granting leases for only short periods, putting a comparatively high price (£1 an acre) on sales in fee simple, and imposing conditions with regard to the cultivation of the soil, or the maintenance of a certain number of labourers. A great demand, however, grew up for the abolition of such restrictions amongst an influential section of the Colonists, who wished, naturally enough, to convert their short leaseholds into freeholds or long leaseholds, and raised the cry of the "three F's"—fixed tenure, fixed rents, and free sales. Their views eventually triumphed in all parts of Australasia, and from 1850 onwards enormous areas of land were alienated from the Crown without any adequate return, either in the way of purchase-money or in the improvement of the lands granted. The result was that, in 1891, in New South Wales 42 million acres had been alienated in freehold, 22 millions of which were in the hands of only 677 farms, while only two per cent. of the 42 millions and one-tenth per cent. of the 22 millions were cultivated. Similar results were arrived at in the other Colonies. The consequence was that, while little or no use was made of the best part of the land, new immigrants, instead of settling in the country, were driven to the towns. The evil of this situation is now realised. Several of the Governments have been

driven to repurchase at high rates. The necessity for encouraging development of the land by agriculturists is recognised. But a dear price has to be paid for the lavishness with which the possessions of the Crown were dealt with in former years.

The first deduction from this and similar cases is that some restriction should be placed on the size of territorial holdings. It was the "latifundia" which as much as anything else contributed to the decline and fall of Imperial Rome. The owner of a vast estate is not under the inducement to cultivate that a labourer is; he will often neither do it himself, nor let others do it. He may hold up the land for speculative purposes. The general success on the other hand of the "homestead" plan points to the economic advantage of the small holding.

There appears to be four possible ways of restricting the size of holdings and securing a fair return to the State:—(1) short leases, (2) a graduated land rental or tax, (3) a tax on unimproved land, and (4) an absolute limitation of size.

We will take these points in order. In Australasia the system involves what is practically a perpetual tenancy in the occupier. Thus, it is stated in the New Zealand Official Year Book that "a very large proportion of the Crown lands are now disposed of for 999 years. The rentals are based on the assessed value of the land at the time of disposal, without increase or recurring valuations. Under this system there is a fixity of tenure practically equal to freehold, and which, like freehold, necessarily carries with it the power of sale, sub-lease, mortgage, or disposition by will. At the same time the improvements made in the soil by cultivation, &c., are secured to the tenant should he from any cause be obliged to forfeit or surrender his lease." The values placed on the Crown lands are, as a rule, low. The settler therefore, who gets a long lease, gets his land cheap and for a rent, and not purchase-money. He has then no initial outlay to face; he can use his capital to improve the land, and can even borrow money on the security of his title. "When," the above-quoted authority adds, "it is taken into consideration that, with few exceptions, the Crown lands are, in their prairie condition, incapable of profitable use, the advantage to the settler of setting free his capital to develop the capabilities of the soil, rather than having to expend it in the purchase of a freehold, is very apparent." This advantage is, of course, a very solid one. Settlers as a class are everywhere short of ready money, and it is sound policy to let them into possession on easy terms and to provide them with a title which is sufficiently certain and substantial to allow them to borrow money on it whenever the holding is of sufficient value. But the weak point in the arrangement, from the view of public policy, is that the term granted is so long that the State will get no share in the increased value which the growth and prosperity

of the Colony may bring about. The tenant is, of course, entitled to the results of any improvements which he makes himself, but there may be in addition an enhanced value due to the progress, industry and expenditure of the community. There has, as everyone is aware, been much discussion in this country as to whether it is fair and practicable to intercept, so to speak, any such added value for the benefit of the community, and there are not wanting politicians who are so incredulous as to suggest that unearned increment is a mere metaphysical abstraction, and that if it does exist the credit is due to the external communities which take the exports. But the abstraction certainly clothes itself with reality when, for instance, the State plumps down a Uganda railway in a wilderness. In this country the matter is much more delicate and complicated, and the question of the enhanced value has been mixed up with that of the taxation of ground rents—a wholly different point, inasmuch as the owner of such a rent receives a fixed sum and does not, so long as that is paid, profit by any enhancement of value. In places where a clear start is made from the first grant by the Crown, and where the Crown remains the landlord, it would be practicable to re-assess the rent at periodical intervals, and if the required grant is made with a condition to that effect no injustice would be done. On principle it is clearly fair that whatever is an equitable rent should be paid, and this can only be secured by re-valuation from time to time. On the other hand, this object must be limited by the condition that the rent of the land must be fixed for a sufficiently long period to encourage a tenant to improve the land and to enable him to get an advance of money, if the land is marketable, on his title. But this period need certainly not be 999, or even 99, years. The tenant who means to set to work at once on the land will get his profit year by year, and does not really need a long tenure at a fixed rent. The agricultural bank of the locality, or whatever lender of money may be available, does not look so much to the length of the lease as its security as to forthcoming crops and takings. The mortgagee in such circumstances is not concerned with what becomes of the land at a distant date, and would not be deterred by a condition for re-assessment which would only follow an actual improvement in the value of the property. These considerations, therefore, do not stand in the way of re-valuations at moderately long intervals. What the interval should be is a matter of judgment in each case: it should be comparatively short where the work done and produce sold is of an annually recurring character, and long in the case of plantations where the settler has a considerable time to wait before his enterprise becomes remunerative. In New Zealand small grazing runs are leased for 21 years, with a right of renewal for another 21 years at a rent of 2½ per cent. on the then value of the land. This might be taken as the minimum period.

For ordinary agricultural holdings it may be suggested that a lease of 99 years should be granted, subject to re-assessments of the rent at the end of 33 and 66 years. The tenant would then have fixity of tenure for a long period, subject only to such additions to the rent as would correspond in some degree to the greater profit which he would make in consequence of improvements in the particular locality and the general growth of population and trade. It should be borne in mind that in the Colonies the State, as a rule, plays a large part in developing the country. The common case is that of the construction of a railway, which enormously improves the land in the vicinity, besides generally increasing supplies and demands. The saving which this and other public works secure to the settler can be calculated with some precision, and the imports and exports would give a general indication of any improvement in the position. Having regard to the general lowness of rents there should be little difficulty in practice in fixing reasonable amounts from time to time.

Secondly, a graduated land tax, the principle of which corresponds to that of the death duties in this country, may be imposed to limit holdings to a reasonable size and to check speculation. Unrestricted speculation in land leads to discreditable incidents, and either the land is held up for an unconscionable time or a "boom" is engineered at inflated prices, which are followed by disappointment, depression and stagnation. It is not a good policy for the State to lend itself to such transactions, even if it receive a trifling rent in the meantime. A progressive tax, increasing in some proportion to the size of the estate, is an obvious means of discouraging larger holdings than the tenant is prepared to make use of. The expedient, however, has been rarely adopted. The only Australasian Colony in which anything of the kind exists is New Zealand. Here the ordinary land tax is 1d. in the £ of the unimproved value of the land, but estates of less than £500 value are exempt, and there is partial exemption up to £2,500: above the value of £5,000 estates pay a progressive land tax in addition to the ordinary one. This extra tax is at the rate of $\frac{1}{8}$ d. per £ for estates from £5,000 to £7,000, and $\frac{2}{8}$ d. for those from £7,000 to £9,000; the tax continues to rise till it reaches 3d. in the £, at a value of £210,000. Absentee owners, it may be mentioned, pay 50 per cent. additional tax.

At the time of the imposition of this tax there were immense quantities of land which had been alienated in freehold at very low prices and which were contributing nothing to the State. The progressive tax in such a case not merely brings in revenue, but penalises the waste of land and sends a current of industrial activity throughout the community.

The third expedient, a tax on unimproved land, may be advisable to prevent speculation and enforce the use of land in cases where the

value is too low for the progressive tax to exercise much influence. The usual rule is that occupied land is rateable, but this is interpreted to mean rateable at the value to the occupier in its existing state, and not at its selling value. In this country the agitation for a site-value rate has reference mainly to land which is supposed to be withheld from building for speculative purposes, and as some use is generally being made of the land the questions of proper uses and value are difficult; but in a comparatively undeveloped country there is a clearer line between township and country areas, and the cases where agricultural or pastoral land is being held up with a view to a prospective rise in prices are fairly obvious. The object in these cases is indisputably to reap the advantage of the general economic improvement, without doing any work to help it; on the contrary, such holdings retard development. It seems sound policy to persuade capital to take some other form of employment which will be more to the public advantage.

Fourthly, an absolute prohibition may be added to prevent estates in one hand exceeding a certain size. This consideration does not apply to tropical or semi-tropical regions, where from the nature of the climate or country the land cannot be developed by white labour, and where therefore exploitation is most effectively conducted by capitalists who deal with large areas and organise production and trade on a large scale. Even then it is usual to stipulate in Government concessions for the outlay of a certain sum of money in improvements, and the employment of a certain amount of labour. But in places where white labour is possible and should be encouraged, there may well be an absolute limit to the size of estates.

Such a country as the Uplands of East Africa affords a good opportunity for the application of these principles. The East Africa Syndicate has acquired some 320,000 acres under lease with the option of purchase, and Lord Delamere has 163,000 acres. It would not be fair after allowing these acquisitions to penalise them, but they may be used as arguments for legislation against any such cases in future. The restriction in area, the New Zealand Year Book remarks, "has been forced upon the attention of the Legislature by defects in former systems, under which one individual with means at his disposal could appropriate large areas, to the exclusion of his less wealthy fellow-settlers." The New Zealand Act defines the amount of land anyone may hold at 640 acres of first-class and 2,000 acres of second-class land. The Secretary of State, in a recent despatch, has observed that "it is not merely the question of the discreditable incidents which characterise the periods of inflated speculation known as 'land booms,' or the losses to individuals who may happen to purchase land at artificially enhanced prices. If this were all, the dangers referred to might be incurred, in view of the advantage

of attracting settlers and capital to the country, even by speculative attractions partaking of the nature of a lottery. But the evils of allowing land in a new country to be transferred freely, without any regard to the intention of the transferee to utilise within a reasonable time the resources of the land, are not confined to the period of depression and stagnation which inevitably follows a time of inflated speculation, but have a wider scope." The evils are more or less permanent. The taxation of land should be of course as light as possible on the actual cultivator, and one way of securing this is to manipulate the levies so that they will press with increasing weight on the large holders. A general division into two or three qualities of rural land may be made for the purpose, but as a rule a detailed valuation is out of the question on the ground of expense. Area is a simple basis and reduces the work of collection to an easy matter.

If the rent is low, it is reasonable to grant in the first instance a temporary occupation licence, and to require that the occupier shall improve the property within, say, five years in some stipulated way. The improvement should embrace farm buildings and all the work involved in clearing and laying out the land and providing the necessary requisites for cultivation, and a minimum value, proportionate in some way to the rent, should be specified.

THE FUTURE OF THE WEST INDIES.

IN the *Empire Review* for July, 1903, in an article on "The Needs of the West Indies," I referred to the question of Confederation, and made certain suggestions as to how it might be carried out. The chief of these was, that each Island should put aside a fixed percentage of its annual revenue for Confederate expenses, which would include the whole cost of the machinery of Government, plus a sum for defence and communications, and should be free to spend the balance of its revenue on local projects, as seemed best to the Governor, and the local Administrator and his Council. A common West Indian legal, medical, and civil service, with a proper entrance examination, such as the London Matriculation or the Senior Oxford or Cambridge Local Examination, good pay, and a pension, was also touched on. From subsequent experience I desire to modify somewhat the proposals then made, in the hope that they may assist, in some way, in the practical solution of this problem in the near future.

The first factor in the situation is, that all these Colonies, except Barbados, are under the Crown; therefore, all arrangements as to confederation can be made from Downing Street. Whether it is desirable to appoint a Commission to enquire as to the best method of confederation or not is a matter which rests with the Crown.

In the article referred to the suggestion was made that it was possible to confederate the Colonies without interfering in any way with the constitution of Barbados, and this, I still think, is the case.

The Barbadians have done very well with their constitution, and have managed their affairs well on the whole. The members of the Legislature are educated men, and are not so blind to the interests of

the Colony they represent as not to realise how much it would benefit them if Barbados were the seat of Government of the Windward and Leeward Islands. This is the first point to emphasise, viz., there should be one Governor for Barbados and the Windward and Leeward Islands (the Antilles) resident in Barbados, with a salary of £4,000 per annum, paid by each Island in proportion to its revenue. The late Sir Robert Hamilton made a similar suggestion in his able report on the Island of Dominica, which was laid before Parliament in 1894. The present arrangement of an Administrator or Commissioner in each Island, with a nominated Council representing all interests and classes, should be left untouched. The Colonial Secretary of the Antilles could also be appointed the Lieutenant-Governor of Barbados, and act while the Governor was visiting the other Islands. It should not be forgotten that when the closer union of St. Vincent and Grenada was brought forward the other day, the St. Vincent people were against it, but said they were quite willing to join Barbados.

One instance will show how confederation could benefit Barbados. It is proposed to raise the salary of the Attorney-General there from £750 to £900 per annum; this seems a large salary for Barbados to pay, but it is well known that the present officer has made more than £900 per annum by private practice; he, therefore, loses by accepting the post of Attorney-General. With confederation, the Attorney-General of the Antilles could be paid £1,000 per annum for the whole Colony, and the present Solicitor-General of Barbados could become the legal adviser of the Barbados Government at £250 per annum, with private practice. Besides this, their Governor and Colonial Secretary, and other heads of departments would cost the Barbados taxpayers less, their salaries being paid by the other Islands of the confederation, as well as Barbados. The Colonial Secretary of the Antilles, and the heads of departments would all have assistants in each Island needing them, with salaries of from £250 to £400 per annum, according to the importance of the Island. The Chief Justice of Barbados would become the Chief Justice of the Antilles, at increased pay, with a puisne judge in each Island requiring one. The Appeal Court of the West Indies would consist of three of the Chief Justices on the Bench in the Antilles, Trinidad, British Guiana, and Jamaica, while that of the Antilles would be made up of the Chief Justice and two Puisne Judges. The saving which confederation would bring to the Windward and Leeward Islands, in the salaries of high officials, would be very great; 37·7 per cent. of the revenue is spent in administration in the Leeward Islands, and the cost is 7s. 3d. per head of the population, according to the Blue Book. In a paper read at the Royal Colonial Institute two years ago, Sir Nevile Lubbock pointed out how much expense was saved these Colonies by their Governor-General being practically

resident at Downing Street. This is such a sound argument, that it effectually disposes of the question of a Governor-General for the West Indies. With a good mail service, and the telegraph, these Colonies are constantly in touch with the Colonial Office. But it would be of advantage if the Governors of the West Indian Colonies could confer annually, being attended by such members of their staffs as they need. These conferences would aim at co-operation and uniformity in the laws, and general business of the Colonies, and could be held in each Colony in turn. The facilities afforded by the new mail service, and other steamers, can be utilised in this direction. With such an arrangement the Confederate Council could consist of the four Governors of the Antilles, Trinidad, British Guiana and Jamaica, with such numbers of their staffs as they wish, the Imperial Commissioner of Agriculture for the West Indies, the General Officer commanding the troops in the West Indies, the Senior Naval Officer on the station, the Archbishop of the West Indies, the Archbishop of Port of Spain, the Federal Treasurer, and such prominent West Indians as the Secretary of State nominates from time to time. Each Colony would pay the cost of transport of its own officials, and the transport of the others could be paid from Confederate funds. The Confederate Council need not exceed 20 in number, and would dispose of the funds contributed by each Island for Confederate expenses. The President, *ex officio*, would be the Governor of the Colony where the Council meets. The nominated Councils in each Island would be able to give the Governors all the advice they require through their administrators, and there would be four Governments in the West Indies instead of six, as at present.

No one who knows the West Indies could say that they are ripe at present for representative Government, whatever they may be in the future. With a rapid mail service, landowners live in England when they can, instead of on their estates, as in the old days, and the best men are not available for local assemblies. The men whose money is in the land, and who are educated, and able to give good advice, join the West India Committee, and go to Downing Street in person. This material can be organised into a West Indian Advisory Council, if the Secretary of State requires their help.

Two things are needed to develop the West Indies besides improved government, one is capital, the other is labour. Since the Brussels Convention was entered into, capital has been coming into the West Indies, though slowly. If Canadians would wake up it would come more rapidly. There are many sound projects for Canadian capital in these Islands in hotels, electric lighting, railways, harbour works, fruit steamers, central sugar factories, cotton and sugar planting, &c. It cannot be said the present agricultural

labour is good, nor is it cheap; the negro's wants are few, and he prefers to work for himself, rather than for the white man. Where cane farming, rice farming, and cotton planting exist, the best result can be obtained from negro labour by sharing profits, not by paying wages. One of the alternatives to negro labour is the importation of indentured Indian coolies, which, though troublesome, seems to be a success in British Guiana and Trinidad. The English engineers of the harbour works at La Guayra, in Venezuela, found that their best labourers were Spaniards from the Canaries, who are white men, and require higher pay than the negroes, but are far cheaper in the end. One advantage of this class of labour is they do not settle in foreign lands, but return to their native country. Neither Chinese nor Japanese labour is wanted in the West Indies, though there is no doubt as to its cheapness and efficiency. As regards the proposal for the exchange of the West Indies for the Philippines, recently made in a London review, no British Government could consent to such an arrangement, by which they would lose heavily. The West Indian Colonies may be backward, but they do not require an arduous campaign, costing millions, to subjugate an uncivilised warlike race, such as is found in some parts of the Philippines, before they can be developed. Besides this, the people are too loyal to wish for any change of flag, however much the United States may want them to join the union. Nor have the United States the class of men available for civil service, such as are to be found serving in the West Indies for very moderate salaries, and living up to the best traditions of the English public service for honesty and straight dealing.

The question of a common tariff for the West Indies will, no doubt, be considered at the approaching Conference to discuss trade relations with Canada, which it is proposed to hold in the near future, on the initiative of the Imperial Commissioner of Agriculture for the West Indies. It is to be hoped that one result of this Conference will be a common tariff, so far as is possible, and common revenue regulations, with free trade between the Islands, a preference to British and Colonial goods, and reciprocity to those countries which give the West Indies reciprocity. The success of the present Quarantine Conference shows how useful the services of a tariff expert would be to assist this Conference at arriving at some practical result. A reference to the Colonial Office List for 1907 will show that the population of the West Indies, British Guiana, British Honduras, the Bahamas and Bermuda in 1906 was 2,078,477; the public debt was £6,937,494, the total imports were £10,229,196, and the total exports were £9,355,139; a trade worth cultivating by Canada. The best policy for the West Indies is the closest possible union with Canada, while keeping on the best terms with the United States. A Government Commissioner, travelling in Canada for the

West Indies, and one travelling in the West Indies for Canada, would be of the greatest help in promoting trade between the two countries. With the Canadian market, and with good management, the future of the West Indies is well assured, especially if good fruit steamers are built to run between the Islands and Canada, and a West Indian sugar refinery is put up in Halifax or Montreal, owned by the planters themselves and their friends, in connection with the central factories in each island. There is no German bounty-fed beet sugar in Canada, and no free imports.

G. B. MASON.

Dominica,
West Indies.

FERRO-CONCRETE FOR PUBLIC WORKS AND BUILDINGS.

By J. S. E. DE VESIAN, M.Inst. C.E., M.I.M.E.

THE Mouchel-Hennebique Ferro-Concrete construction was the first system of its kind introduced into England. Its present general recognition by the various departments of His Majesty's Government and by public bodies and corporations throughout the United Kingdom is mainly due to the untiring efforts of Mr. L. G. Mouchel. His labours for the past twelve years have had the most gratifying results. Up to the present time no less than 14,000 contracts have been carried out under the above system in England, the colonies, and other parts of the world.

There can be no doubt but that ferro-concrete will be much more extensively employed for engineering and architectural structures in the future than it has been in the past.

Ferro-concrete is a combination of first-class Portland cement concrete and steel, the steel taking up all the tensile strains, leaving those due to compression to be taken by the concrete itself. This ensures the greatest possible economy in construction, one square inch of steel in tension interesting an area of some 30 inches of concrete in compression. If concrete alone were used to take the tensile strains carried by the steel, the cost would be six times that of steel. On the other hand if steel were used to take the compression taken by the concrete in ferro-concrete, it would cost a great deal more; therefore, by using the two materials for the stresses for which they are naturally adapted, the greatest possible economy is achieved.

Generally speaking a building can be erected in ferro-concrete for from 10 per cent. to 30 per cent. less than the ordinary construction. Besides economy of first cost, ferro-concrete possesses other advantages, such as absence of necessity for painting and annual upkeep generally, increased durability, lightness, cleanliness, absolute immunity from the effects of fire; in sea works it is invaluable, as it is proof against the attack of marine insects.

It has been proved repeatedly that Portland cement is the best possible protection to steel. It effectually prevents any corrosion or damage occurring to the steel from water or surrounding atmosphere. This is one of the great factors in the Mouchel-Hennebique system.

An instance came under the writer's personal notice which proved the preservation of steel when embedded in good concrete. Some piles at Southampton were originally made too long; the tops were cut off and thrown upon the foreshore, where they remained for more than eight years, being covered and uncovered by the tides four times a day by the double tides prevailing in Southampton Water. Some of these stumps were examined by various eminent engineers, and in every case the steel was found to be perfect $\frac{1}{2}$ inch only below the cut off surface, while the bars, which had been protruding where they were cut off, were, of course, completely rotted away.

Ferro-concrete, as generally understood in the United Kingdom, means the Mouchel-Hennebique system. Not that this is the only system, but about 95 per cent. of the work in England at present in existence has been carried out under Mr. L. G. Mouchel, who invented the name "ferro-concrete" to describe his system.

As is only natural with corporations having a large public responsibility, the railway companies of England have been somewhat slow to avail themselves of its advantages, but a number of buildings and lately several railway bridges carrying their main traffic have been successfully constructed.

It would be impossible, within the limits of this paper to enumerate at any length the works that have been carried out, but the following may be taken as typical instances of structures in which ferro-concrete has been adapted.

The Alexandra Dock and Railway Company are carrying out some extensive additions to their system at Newport (Mon.), which, when finished, will make the Alexandra Dock the largest single dock in the world. In addition to the Hennebique ferro-concrete jetty in the river, it became necessary to lay a crane road 2,140 feet in length on the south side of the main dock extension, and this led to the design and execution of some particularly interesting work in ferro-concrete.

The construction of the crane road was necessarily deferred until the greater part of the dock wall had attained quay level, and the original idea was to provide for its support by building a lateral extension of the wall in mass concrete.

The alternative proposal suggested by Mr. Mouchel, and accepted by the engineers responsible for the main scheme, was to apply a continuous ferro-concrete beam with suitable supports and bracing to



NEWPORT DOCK.—CRANE ROAD. MOULDS FOR FERRO-CONCRETE STRUTS (*see page 329*).



AVONMOUTH DOCK.—TRANSIT SHEDS AND GRANARY (*see page 330*).

carry the outer rail of the crane track, the supports being in the form of ferro-concrete raking struts bearing upon one of the steps at the back of the dock wall, and the bracing consisting of ferro-concrete tie-beams anchored into the concrete of the same wall. This simple solution of the problem obviated the necessity for additional foundation work. A photograph showing the construction of the beam raking struts is given.

The inner rail of the crane road is laid on longitudinal sleepers carried by the main wall, and the outer rail of the same road is laid upon similar sleepers carried by a ferro-concrete beam 2,140 ft. long by 12 ins. wide by 24 ins. deep. The beam is supported at intervals of 10 ft. apart by raking struts of ferro-concrete 14 ins. thick by 20 ins. wide, each of these members having an extended base measuring 2 ft. 6 ins. by 3 ft., bedded on the second step of the dock wall. The horizontal tie-beams are 8 ft. long by 8 ins. wide by 12 ins. deep, the outer end of each being extended to form a knee-braced connection with the raking strut, and the inner end moulded so as to make a dove-tailed joint in the concrete of the dock wall. Moreover, the main reinforcing bars of the tie-beams were made of sufficient length to provide further anchorage into the main wall.

The struts are reinforced by longitudinal steel bars tied at frequent intervals by lateral links of steel. The continuous beam carried by the struts is monolithic with these members, and the reinforcing bars of the beam pass through them. Similarly the tie-beams are monolithic with the struts, while the reinforcement of the beams and of the knee-brace extension passes into and is anchored into the concrete of the struts. Thus the entire support of the crane road is a perfectly connected monolithic structure without a single joint. Its strength is fully equal to that of steel, and its rigidity is far superior to that of any articulated frame, while in respect of durability it stands on the same footing as the main dock wall. The outer rail of the crane road was subjected during the official trials to a total load of 144 tons, represented by two 6-ton cranes and four jacks, each carrying the load of 33 tons, the load being distributed over the length of 35 ft. 4 ins.

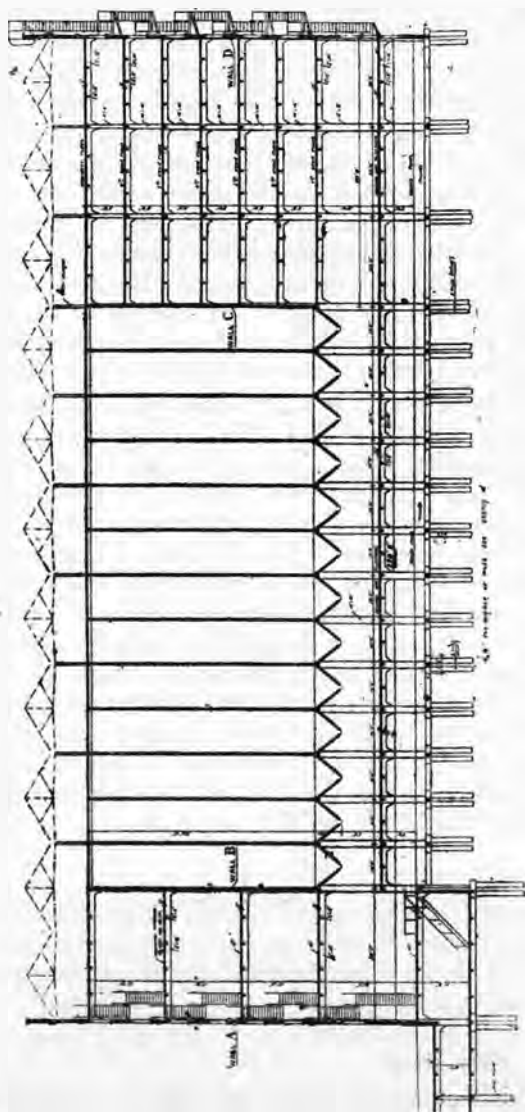
Road Viaduct.

At Waterford (Ireland) a road viaduct, constructed for the Great Southern and Western Railway, on ferro-concrete piles, was carried out at one-third of the original estimate for the same work in steel. This was stated by the engineer at a meeting in Dublin.

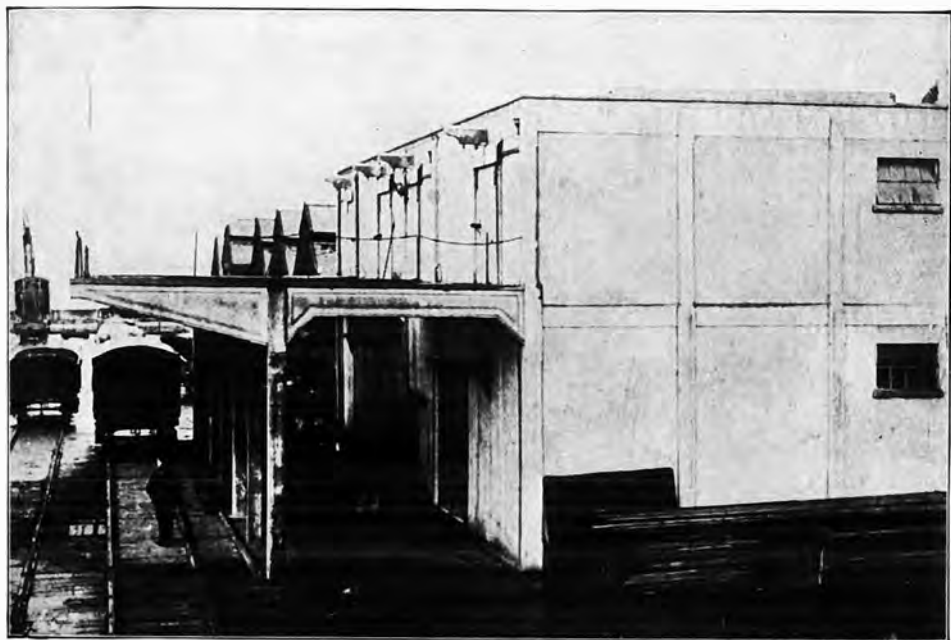
Avonmouth New Dock.

At Avonmouth, where new docks are under construction at a cost of some two and a-half millions, three most important examples of

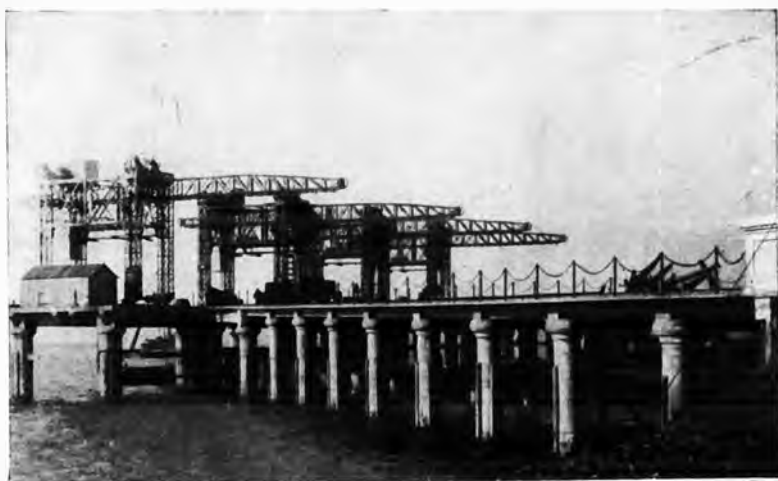
ferro-concrete construction are to be found in two transit sheds on the eastern side of the new dock, and behind these a large granary and weigh-house connected with the dock by an underground tunnel for the transport of grain. The two transit sheds are shown on the extreme right and left of the photograph, and in the centre is the large granary.



AVONMOUTH DOCK.—LONGITUDINAL SECTION OF GRANARY.



(GREAT WESTERN RAILWAY COMPANY'S WAREHOUSE AT PLYMOUTH (*see page 331*).



JETTY AT DAGENHAM ON THE RIVER THAMES (*see page 332*).



NEW BRIDGE STREET GOODS STATION, NEWCASTLE-ON-TYNE.
VIEW UNDER FIRST FLOOR (*see page 331*).



NEW BRIDGE STREET GOODS STATION, NEWCASTLE-ON-TYNE.
SOUTH AND WEST ELEVATIONS (*see page 331*).

Each transit shed is 500 ft. long by 96 ft. wide and includes two stories.

A longitudinal section of the granary is given on page 330. The building is divided into three parts: the first 60 ft. long, the second containing 78 grain silos, each 56 ft. 4 ins. high by 10 ft. square, and the third having six floors. There is a tunnel between the sheds, the foundations consisting of Hennebique piles connected longitudinally and transversely by strong beams of ferro-concrete. The sides are built of ferro-concrete columns and slabs, the columns supporting the beams upon which comes the weight of the two railway lines above.

It is now abundantly evident that any distrust which was formerly entertained by railway engineers concerning the reliability of ferro-concrete is fast vanishing. On most of the leading railways, structures built on the Mouchel-Hennebique system of ferro-concrete are now to be found, and the use of this method is being extended day by day. On the Great Western Railway half-a-dozen or more ferro-concrete goods stations and warehouses have already been built, and the Company are now busy in the erection of several ferro-concrete railway bridges, culverts, bridge foundations, and foundations for their new locomotive sheds and depôt in Bristol. A photograph of the Great Western Railway Company's warehouse at Plymouth is given.

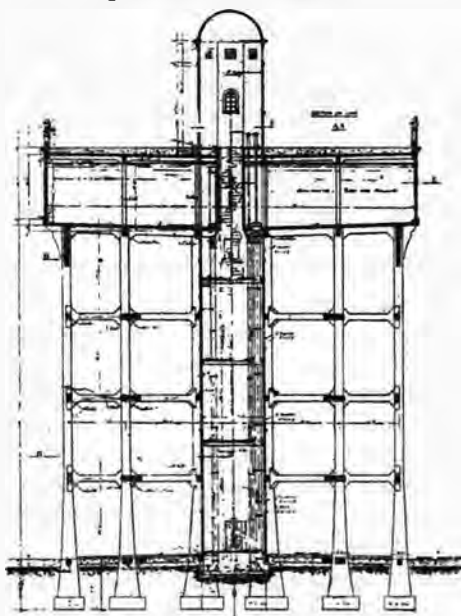
Two photographs are given, the first is a view under part of the first floor of the New Bridge Street Goods Station at Newcastle-on-Tyne, showing columns carrying 1,150 tons each, constructed for the North Eastern Railway; the second shows the south and west elevations, with the cantilever elevator hoods and platform brackets. The same company are also constructing two office buildings at Newcastle, and some important bridges and wharf work in Mouchel-Hennebique ferro-concrete.

Not only has H.M. the King adopted Hennebique ferro-concrete for some of the floors at Sandringham House, but the various departments of H.M.'s Government have also favoured the system. Ferro-concrete work has been carried out for the Admiralty at Keyham, Devonport and Portland, at Gosport, Woolwich, and other places. At the present moment the New General Post Office at Newgate Street, London, E.C., is being erected entirely of ferro-concrete. This building when completed will contain over 15 acres of flooring. This extension of the General Post Office system is an example of the enlightened policy of H.M.'s Office of Works, whose Chief Architect, Sir Henry Tanner, it is presumed has satisfied himself, after mature deliberation and collaboration with other public officials, that it is the best system to be adopted. It is estimated that by the adoption of Mr. Mouchel's system a saving of over 20 per cent. of the public money has been effected.

For quays, wharves, &c., ferro-concrete is specially adaptable. A photo is given showing a jetty on the River Thames at Dagenham, entirely constructed in Hennebique ferro-concrete.

Elevated Reservoirs.

This is a class of work where, in addition to members subject to flexure and compression, there is an outward pressure of water as well as the effects of other forces. There is an elevated reservoir built on the Hennebique system at Newton-le-Willows. The reservoir proper commences at the height of 63 ft. above ground level. It is 72 ft. in diameter inside, and holds 300,000 gallons of water. The total height to the domed top of the valve tower is 117 ft. 6 ins.

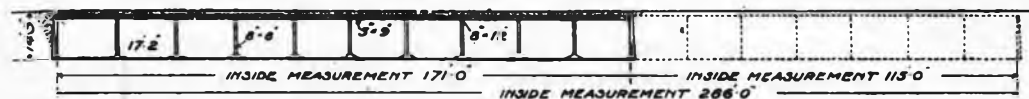


NEWTON-LE-WILLOWS.

Another interesting building is the water tower at Bourne-mouth, constructed entirely in ferro-concrete for the Corporation. It contains 15,000 gallons. The total height of the structure is 45 ft.; the diameter of the reservoir is 20 ft. 10 ins., with a height of 10 ft.; the thickness of the sides at the top part is 4 ins., at the lower part 5 ins., and at the bottom part 5 ins. The pillars are 35 ft. by 18 ins. by 18 ins.

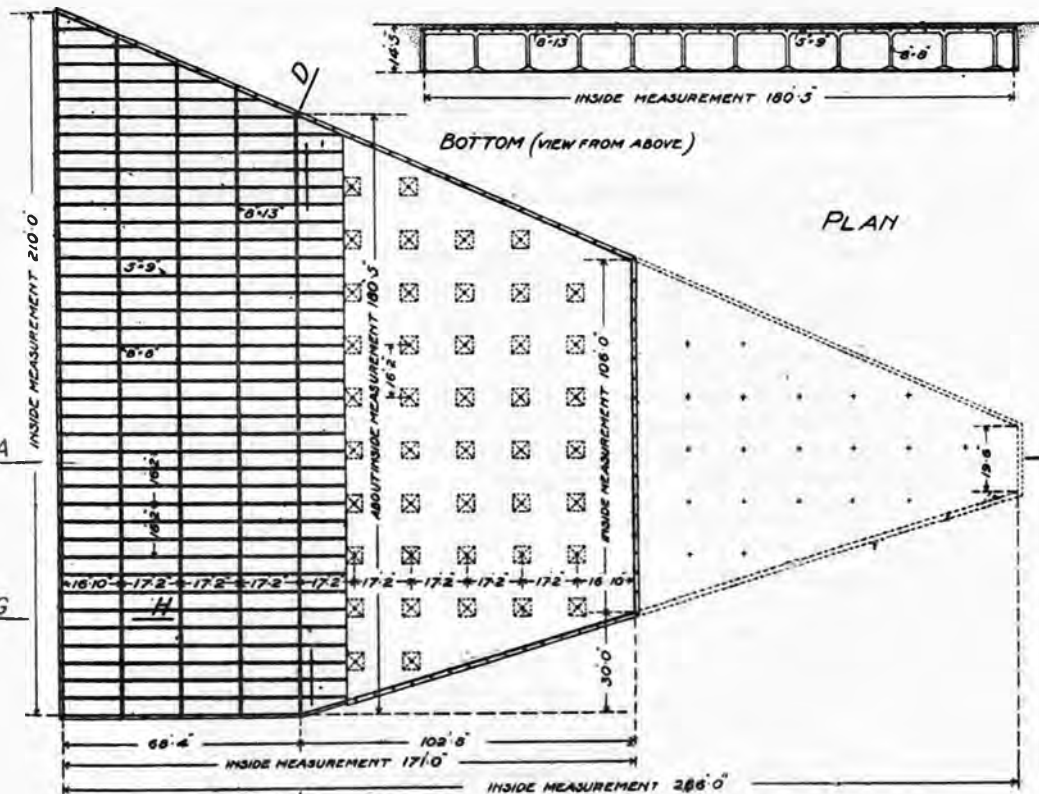
The largest ferro-concrete service reservoir hitherto constructed in this country is in connection with the Luton Corporation Waterworks. It is constructed on the Hennebique system, and when filled to normal level holds 2,000,000 gallons of water.

SECTION ON LINE A-B.

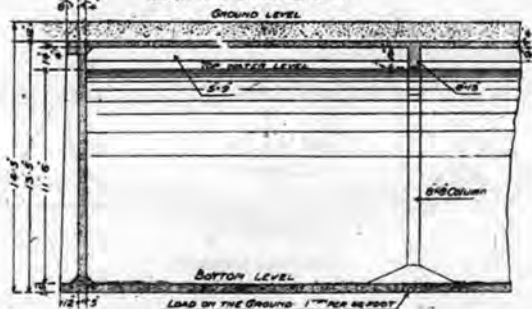


ROOF (VIEW FROM BENEATH)

SECTION ON LINE C-D.



SECTION ON LINE G-H.



The reservoir forms a five-sided polygon. From the floor to the underside of the roof beams, the height is 12 ft., the normal depth of water being 11 ft. 6 ins. The whole structure rests upon a continuous foundation slab of ferro-concrete from which are built up the walls, and some ninety columns for supporting the roof. All these columns are built to the uniform cross-section of 8 ins. square, and are provided with bases 5 ft. square, of triangular elevation, 12 ins. high.

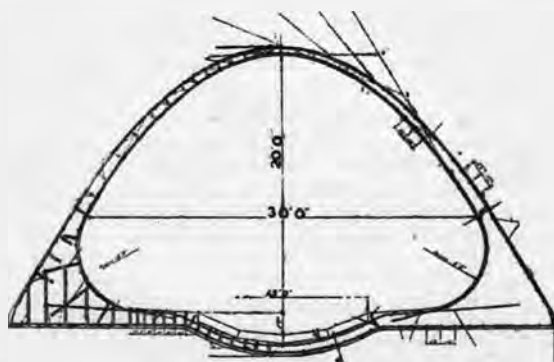
The column reinforcement is of the usual Hennebique type, comprising four vertical bars hooped in four divisions, by lateral ties, which serve the purpose of reinforcing the concrete against the swelling resulting from longitudinal compression, and thereby adding very considerably to the compressive resistance and stiffness of the members.

The walls consist of vertical slabs, 4 ins. thick at the top, and 5 ins. thick at the bottom, calculated as beams for withstanding the bending moments developed by outward pressure of the water when the reservoir is empty. A plan of the reservoir is given on the preceding page.

Culverts and Pipes.

Culverts having to sustain earth loads and pipes to resist hydraulic pressures are reinforced with longitudinal bars at regular intervals, and circumferential hoops. In one case the pressure is exerted from the outside, and in the other from the inside.

The usefulness of ferro-concrete in culvert construction is shown by the conduit recently completed in Newcastle-on-Tyne to carry the waters of the Ouseburn for a length of about 700 yards along the valley separating the city from the suburbs of Heaton and Byker. The intention of the Corporation is to fill in the valley and to use the newly made ground as the site for roads and houses. The conduit is 30 ft. wide, by 20 ft. high, and its walls are only 12 ins. thick at the



OUSEBURN CONDUIT.



CREWE BRIDGE (*see page 335*).



MILLENMILLS, RIVER THAMES (*see page 337*).

bottom, and 8 ins. thick at the crown, the reinforcement consisting of round bars placed longitudinally and circumferentially for resisting tension and compression, and stirrups for resisting shear. In spite of its apparently daring design, the tests officially made by the city engineer have proved that the work is perfectly capable of withstanding the pressure of earth which will be filled in upon the crown to the depth of about 120 ft.

Piles.

One of the most interesting uses of reinforced concrete is for the construction of ferro-concrete piles. The fact that baulk of concrete, 60 ft. to 70 ft. long with some steel rods in it, can be carried about like a piece of wood, and driven through the hardest strata is wonderful.

Bridges.

Ferro-concrete bridges, of which more than 800 have up to now been constructed, need not be discussed at length, because their essential parts are main and secondary beams, slabs, piers, and walls designed on the principles already described. Still, although the design of the separate members may appear to be a very simple thing, it is not by any means an easy task to satisfactorily design a complete bridge.

A good example of a ferro-concrete arch is shown in the photograph of the bridge designed by Mr. Mouchel for the Earl of Crewe, and erected under the supervision of the writer of this paper. The clear span is 90 ft., the rise 7 ft. 6 ins., and the total length 131 ft. 6 ins. The two arch ribs are braced liberally by cross beams, and a continuous decking slab connected with the spandril walls and the crown of the arch, the whole being of monolithic construction.

The Gorgie Road Bridge, Edinburgh, commenced at the end of August, 1907, is one of the most handsome and interesting examples of Mouchel ferro-concrete bridge work hitherto built in Great Britain.

The bridge crosses the Water of Leith on the south-western outskirts of the city, and as shown in the elevation (Fig. 1) includes a river arch of 36 ft. clear span, with open spandrils, between abutment piers and wing walls of corresponding architectural treatment.

The roadway is 20 ft. wide, with 4-ft. footpaths on either side. The curved wing walls are terminated at each end by the piers, which are extended upwards to form lamp pedestals, and in addition to the

wing walls ferro-concrete retaining walls are built for a sufficient distance along each bank of the river.

Figs. 5 and 6 are longitudinal and transverse sections, which make clear the light and elegant nature of the construction in the arch and abutments. These drawings bring into striking relief the difference between true ferro-concrete design and solid masonry, and suggest the theoretical advantages and practical economy of the former.

The bridge is designed for the safe rolling load of 30 tons.

Alum Chine Bridge, Bournemouth.

As another example of recent ferro-concrete bridges we take the elegant footbridge in course of construction over Alum Chine from the designs of Mr. W. F. Lacey, M. INST. C.E., the borough engineer of Bournemouth.

Fig. 7 is an elevation of this graceful bridge which crosses the chine in a single arch of 67 ft. clear span, and the rise of 8 ft. $4\frac{1}{2}$ in. The thickness of the arch ribs is 16 in. at the springings and only 9 in. at the crown.

The spandrels are of the open type, being formed of columns between the arch ribs and the longitudinal beams of the deck platform.

In cross section the two arch ribs and the two deck beams are braced by transverse tie beams, built monolithic with

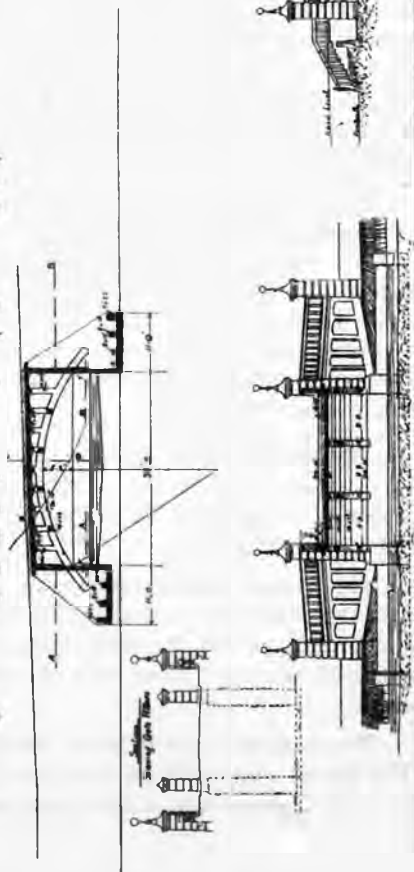


FIG. 5.—LONGITUDINAL SECTION: SECTION A B (View from beneath.)

FIG. 1.—ELEVATION.

FIG. 6.—TRANSVERSE SECTION.

(GEORGIE ROAD BRIDGE, EDINBURGH.)

the other parts of the construction, and the decking consists of a 3-in. ferro-concrete continuous slab with the cantilever projection of 11 ins. at each side upon which the parapet is supported.

The horizontal thrust of the arch is 5 tons per lineal foot, and the vertical load $2\frac{1}{2}$ tons per lineal foot of width.

These bridges were designed in accordance with the Hennebique system of ferro-concrete, the details of which were prepared in general conformity with the engineers' drawings by Messrs. L. G. Mouchel & Partners, of Westminster.

A photograph is given of the Millenium Mills, erected on the banks of the Thames, for Messrs. Vernon & Sons, of London and Liverpool, embodying the Mouchel-Hennebique system of ferro-concrete throughout. These gigantic premises occupying a frontage nearly 400 ft. long on the river side, in the neighbourhood of Victoria Dock, are approached by a ferro-concrete jetty of unique design arranged so as to accommodate barges on one side, and ocean steamers on the other. The jetty is equipped with travelling cranes of high

power. On the left hand is the granary building, having a frontage of 53 ft., a depth of 140 ft., and a height of 103 ft. 6 ins. from the ground to coping level. Next comes, a building with a frontage of 20 ft., a depth of 50 ft., with a height of 96 ft. Beneath the packing floor a tunnel passes through the building to serve the purpose of a cartway. Below the tunnel is another, termed the coal alley and communicating with the river side, whence coal is delivered by conveyors to the boiler house. The screening house is

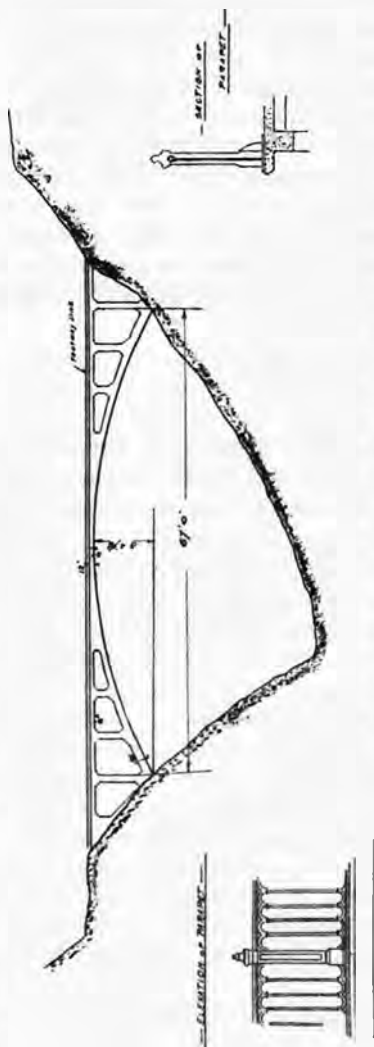


FIG. 7.—ALUM CHINE BRIDGE, Bournemouth.

66 ft. wide, 56 ft. deep, and 96 ft. high, and is a seven-story building adjoining the grain-cleaning tower, which is 120 ft. above ground level. The mill building is 124 ft. wide, 56 ft. deep, and 96 ft. high. Finally, there is the flour warehouse at the right hand, a building with a frontage of 84 ft., a depth of 120 ft., and a height of 80 ft. The buildings are founded on ferro-concrete piles driven to the average depth of 32 ft. 6 ins. below ground level.

In conclusion one cannot help quoting the remark made by an eminent F.R.I.B.A. after the works at the New G.P.O. above referred to had been fully explained to him :—" Ferro-concrete has "come to stay, and the sooner this is realised by professional men "the better for the community at large."

NOTE.—In a future paper the writer proposes to show the desirability of constructing buildings of ferro-concrete in those countries that are subject to seismic disturbances.

COLONIAL STAMPS.

IN our last issue we stated that we hoped to be in a position to discuss definite schemes for rendering impossible the manipulation of the values of stamps.

One method would be for all the Colonies which employ the Universal key-plate system to purchase a new set of duty plates for use with a new Universal key-plate, which has been made and which shows only the head of His Majesty the King in an oval frame, somewhat similar to the Transvaal key-plate. The cost of this change, however, would have been very great. The following alternative plan which is on the point of being submitted to the various Colonial Governments would involve no expenditure except in very few cases. We may be able to announce the decisions arrived at in our next issue. The scheme, which will allow of the existing plates being retained, is the adoption of single singly-fugitive colours for all stamps of less value than 3d., stamps of the value of 3d. and upwards being each printed partly in doubly fugitive ink on the following coloured papers, *i.e.*, red, yellow, blue or green. It would occupy too much space to detail the varieties thus obtainable, but it would be essential for all Colonies to agree upon the same colour for the same, or approximately the same, values. The colours chosen will be seen as the issue of stamps of the different values is announced from time to time.

Of the four coloured papers mentioned above, red, yellow and blue have been fairly frequently used in the past, but it so happens that green paper has only been used for the 25 cents. stamp of Mauritius.

We may mention that a fifth kind of paper of a buff colour has hitherto been used in the case of the five and eight cents. stamps of Mauritius, and the 4d. stamp of Trinidad, but in all probability no more of this paper will be made.

The only Colonies whose stamps so far have been, or are being, printed in accordance with this new colour scheme are Grenada, Cayman Islands, St. Helena, and the Nyasaland Protectorate, the

issues of each of them being of a description to a greater or less degree new. The details of these issues will be found below, and it will be noticed that green paper is used in the case of the 1s. and 10s. values.

Now, as green paper has been so little used, no fresh supply has been required since the introduction of the new multiple watermark, so that the paper given out for the 1s. and 10s. stamps of the above four Colonies, was of the old single watermark kind, except in the case of the 10s. stamp of the Nyasaland Protectorate, which is of a large size. It was the necessity for paper with the new watermark for this stamp which called the attention of the authorities to the fact that the other stamps were all on the old paper, which will not be used again for the printing of stamps.

Thus, the watermark of the paper will show the first "Editions" of the various stamps. The number issued of each kind of stamp will be duly announced.

Articles have appeared in recent numbers of *Truth*, and in the daily press, on the subject of the alleged unnecessary surcharging of stamps in some of the smaller Colonies. These have been copied into several Philatelic Journals, accompanied by comments more or less severe.

We are far from defending the intentionally speculative treatment of stamps, nor are we in possession of the facts of the several issues referred to, but we may suggest that the point of view of the officials who are responsible has been somewhat lost sight of.

We will take the imaginary case of a small Colony, in which it is believed that an issue of stamps of a certain value would be useful. The official preparing the order estimates the number required for local consumption, and, strictly speaking, this is all he is concerned with. But occasionally it happens that a stamp is in demand by philatelists, and the stock is rapidly exhausted.

How, then, is the postage to be prepaid by residents some distance from a post office? It is easy enough for a Londoner to say, as does *Truth*, that the letters could be marked "no stamps available," and that the money for postage could be paid at the counter, but this usually involves sending a messenger with the money and is clearly inconvenient.

In these circumstances the responsible official considers whether he has a larger stock than is immediately required, of some stamps of higher value, and he surcharges these with the values required. These stamps in their turn become valuable, but he would rightly or wrongly be greatly blamed if he refused to sell them to dealers at their new face value.

It is clear that the smaller the Colony the likelier are such cases to occur, as every stamp issued by such a Colony is bound in time to be rarer than stamps issued in larger numbers by a larger Colony.

Since our last issue a document of much interest has come into our hands. This is the Official Report of the Board appointed to consider and report on the best methods to be adopted to ensure a suitable issue of Commonwealth of Australia Postage Stamps.

The first point which we notice is, that the stamps are apparently intended to be available for postage purposes only. The use of doubly fugitive ink, therefore, does not complicate the choice between surface or electro-plate and steel-plate printing. The report is, therefore, in favour of the latter process, but it lays great stress on the necessity for the fineness and excellence of the engraving of the plates as a protection against forgery.

The report admits that the initial cost of the plates for this process will be much heavier than for surface or electro-plates, four plates being required for each value, but we do not notice any reference to the greater cost of printing the stamps by the copper-plate process. This would be fully realized by anyone who watched the process of printing. We may mention that really finely engraved plates cannot be entirely mechanically cleaned after each inking, so that it is absolutely necessary to have a skilled operative to give a final wipe by hand to each of the four plates as it revolves. Now, not only is the labour itself expensive, but the speed of revolution of the plates is limited by the dexterity of the cleaner, and the rate of production must, we should think, be enormously below that of the surface process.

Besides this, the renewals of the plates for printing so many millions of stamps as will be required will surely be a very expensive matter, for the finer the engraving the sooner will defects be perceptible.

One other point is particularly noticeable in the report. This is the high estimate of the number of stamps likely to be bought by philatelists.

The philatelic expert who appends a separate report on the subject, puts it at £40,000 worth the first year and £20,000 worth in succeeding years, and he appears to think that he is well within the mark.

The estimate appears to be based mainly on the fact that there are over 1,000,000 stamp collectors in the world, and that a limited issue of stamps of low value by New Zealand went to a considerable premium.

Now, of the 1,000,000 stamp collectors an enormous majority never buy an unused stamp, certainly none of high values, and the

number of purchasers of 20s. and 40s. stamps is strictly limited. The Australian issue is, besides, to be an unlimited one and to last for years, so that there is no hope of the premium, the probability of which was no doubt one of the principal attractions of the New Zealand issue.

BRUNEI.—It has been decided to adopt the Postal Union colours for 1 cent., 3 cents., and 8 cents. This will involve the following alterations:—

1 cent.	...	...	...	All green.
2 cents.	...	...	...	Border chocolate, centre black.
3	„	...	...	All red.
5	„	...	...	Border yellow, centre black.
8	„	...	...	All blue.

Of these, only the 1, 3 and 5 cents. values are at present on order.

CEYLON.—5 cents. Postage and Revenue Stamps, and 6 cents. Postage Stamps have been supplied with the values shown in Arabic numerals, as was stated in our issue for October, 1907. The former stamp is now printed in singly fugitive instead of doubly fugitive purple, and is on unsurfaced paper.

GOLD COAST.—1d. and 2d. stamps, referred to in our January issue, have been despatched to the Colony.

GRENADA stamps of the new “Badge” design, referred to in our October issue, have been shipped, the numbers of the 1s. and 10s. duties being respectively 25,000 and 10,000.

MALTA 2½d. stamps and DOMINICA ½d., 1d. and 2½d. stamps will, in future, be printed entirely in the Postal Union colours.

CAYMAN ISLANDS.—Stamps of the type referred to in our last issue, of the values of 2½d., 3d., 4d., 1s., 5s., and 10s., have been despatched. They are printed in accordance with the new colour scheme and (with the exception of the 2½d. value) on surfaced paper. The numbers of 1s. and 10s. stamps are 6,000 and 3,000 respectively.

EAST AFRICA and UGANDA PROTECTORATES.—10 and 50 rupees stamps have been supplied on surfaced multiple watermark paper.

MONTERRAT.—3d., 6d., 1s., 2s. and 2s. 6d. stamps have been supplied on surface multiple watermark paper.

NATAL.—2d., 4d., 5d., and 2s. 6d. stamps have been supplied on ordinary multiple watermark paper, and £1 10s. stamps on surfaced paper of the same kind. The colour of the last-named stamp was described in our January issue.

ST. HELENA will shortly issue 2½d., 4d., 6d. and 10s. Postage and Revenue Stamps printed from the old Universal key-plate. The 10s. stamps, of which 3,000 are being supplied, are on single watermark green paper, and all four stamps follow the new colour scheme.

ST. VINCENT is adding a 2d. stamp to its new copper-plate issue (arms design), the colour selected being yellow.

TURK'S ISLANDS have ordered 3d. stamps for the first time. They will be of the existing design and printed in brown on yellow paper. This is the first occasion on which coloured paper has been used for copper-plate stamps.

BRITISH CENTRAL AFRICA PROTECTORATE.—The name of this Protectorate having been changed to NYASALAND PROTECTORATE, it has been necessary to make a corresponding alteration in the stamps of the Protectorate. They will in future be printed from the two new Universal key-plates and will be the first stamps to be so printed. The stamps will not be despatched until April, and their colours will follow the Universal colour scheme. There will be one new value, i.e., ½d.; the other values ordered being 1d., 3d., 4d., 6d., 1s., 2s. 6d., 4s., 10s., £1 and £10. The new colour scheme will be followed throughout, and the 1s. stamps, of which 60,000 are being supplied, are on single watermark green paper. The last four values are of the large size, and have, in our opinion, a very fine appearance.

BERMUDA stamps of the values of ½d. and 1d., printed entirely in the Postal Union colours, have just been ordered. The 2½d. stamps will be printed entirely in blue when more are required.

It may have been observed that some stamps are printed on thicker paper than others. This is only supposed to apply to stamps printed by the steel- or copper-plate process, as it has been found that the wetting necessary in printing by this process tries the thinner paper too much. The paper referred to is about 25 per cent. thicker than the ordinary paper, and it has been inadvertently used for printing the last two issues of the large Antigua stamps.

We have received the December number of the *British Guiana Philatelic Journal*. The size, get up and quality of the contributions show the lively interest taken in Philately in British Guiana, and reflect great credit on the Society which produces it, and the membership of which numbers upwards of 50.

REVIEWS AND NOTICES.

In Australian Tropics.—By A. SEARCY, fourteen years Sub-Collector of Customs at Port Darwin, and now Clerk-Assistant of House of Assembly, South Australia. (*Kegan Paul, Trench, Trübner & Co.*, 10s. 6d. net.)

ONE of the administrative questions of the future is the use which the Australian democracy will make of the Northern Territory. In the early eighties an Australian governor propounded a scheme for converting this territory into a Crown Colony, but the time for any such step had passed, and this great tropical region must be governed by the laws and ideas of the Southern States. We can recall the time when German map-makers refused to admit the British claim to the whole of the Continent, and studiously confined the red colour to the recognised Colonies. The acts of occupation were certainly at the time of a nominal character, but step by step they increased, and the partition of New Guinea and the Southern Pacific, in effect, recognised finally the British claim.

The first real government occupation was that established by the writer of this book in 1882. Mr. Searcy was despatched by the South Australian Government to collect licence fees and Customs duties from the Malays who paid annual visits in their proas to the northern coast in quest of trapang, gourds, pearl-shell and tortoise-shell. He had also the function of preserving order and administering justice. The success with which he carried out his mission, almost single-handed, among the wild blacks and the unruly Malays, testifies to his courage and common sense, and also to the moral power of a uniform.

The description of the country will be a revelation to those who derive their ideas from the experiences of the travellers who have explored the sterile regions in the centre of Australia. It is clear that the Northern Territory contains vast areas of the most fertile tropical country. Few people will expect to hear of such big game as buffalo on the north coast; they are, of course, not indigenous,

but have increased marvellously from a small stock imported long ago. A story is told of an attempt to utilise them for transport purposes:—"A man managed to get a team of buffalo to Southport, and in due time they were hitched to a dray. A start was made, and that was the last ever seen of the man, buffalo or dray."

Port Darwin, the author says, is one of the finest harbours in Australia, a harbour into which the largest steamer afloat can enter at any state of the tide. Some day a transcontinental line will be constructed, the significance of which will be seen from the fact that Port Darwin to Calcutta, via Singapore, is only 3,450 miles, while Sydney is 6,305. Port Darwin might become one of the greatest entrepôts of trade in Australasia—perhaps the greatest—an Alexandria or Singapore of the future. But this is, of course, a mere vision, unless Asiatic immigration is permitted. Mr. Searcy has no doubts on this subject. He points out that in the Northern Territory there were recently some seventeen hundred Europeans and a few thousand Aborigines, while the islands of Java and Madura—not one-sixth the size—carried over thirty millions. "Why should not the Northern Territory carry a few millions instead of lying neglected? Let those who are responsible answer the question. It cannot for a moment be supposed that with such lands, backed up by the finest cattle and horse-breeding country in Australia, the Northern Territory is to remain dormant, and the great harbour of Port Darwin wasted."

He emphasises the fact that the territory is a veritable tropical Australia, and that the conditions, good and bad, are the same as in other portions of the tropical world, although for a tropical country it is one of the healthiest in the world. Cultivation, therefore, can only be carried out by coloured labour. That Australia is to be a white man's country is settled policy, but it remains to be seen whether this necessarily implies the exclusion of coloured labour in the tropical area. Possibly, when the working classes in the established Colonies feel that their position is secured, they will be willing that the Northern Territory shall be treated specially. Its development would undoubtedly feed their industries and afford a market for their output.

Collecting the dues naturally entailed some rough work at times, but Mr. Searcy was always equal to the occasion and could certainly give points to many heroes of romance. When the master of a proa warned him off in a contemptuous manner, "the only recourse was to show the cloven foot, so we three Customs officers leaped on board with drawn revolvers. . . The soothing influence of the revolvers was wonderfully effective." Mr. Searcy adds that, "as in duty bound, I made a full report to the authorities in Adelaide. After consulting the law officer, I received an intimation that killing on the high seas was not murder under the circumstances. The law

officers were evidently under the impression that the proas were outside the legal limit, viz., one nautical league from the shore, which was not the case." It would be interesting, from a technical point of view, to see that opinion, and we cannot say that we quite follow the point of the "legal limit," but, at any rate, the opinion had the merit, not always characteristic of law officers' judgments, of being administratively convenient.

The Chinaman has so far been a conspicuous feature in the Northern Territory, but his days are now numbered. Mr. Searcy does not disguise his admiration for him. "People may cry out against them, but the conclusion I arrived at was that it was their virtues, and not their vices, we had to fear. I say straight out that you could not find a better and more straightforward lot of business men anywhere. My experience was that a Chinese merchant's word was his bond. To give you an idea of how the Chinese merchants viewed the Customs, I have a cable in my possession from a merchant in Hong Kong, notifying that he had omitted to invoice, in some cargo sent down—two shillings' worth of washing stuff (towels). Now, you can't cable for nothing, but the Chinese merchants had realised that they had to toe the mark so far as the Customs were concerned." Of the Chinaman's business acumen there is no doubt. "I remember one of the Chinese merchants, Yet Loong by name, being in the Custom-house one day when the Pine Creek Mine was spoken of. The principal mine was being worked by an English company. Yet Loong said, 'Say, what for that man along Pine Creek—fool—what for him spend forty thousand pounds topside? Much better spend him along bottomside first time.' The Celestial just struck the keynote of so many failures caused by companies spending money on the surface instead of putting the capital into the shafts to properly test the mine."

The book is written throughout in a simple and straightforward fashion, and abounds with good stories as well as solid information. There is not a dull page in it.

Canadian Constitutional Development. By H. E. EGERTON and W. L. GRANT. (*John Murray*, 10s. 6d. net.)

This volume is primarily meant as a text-book in the modern history school at Oxford, but it should appeal to a wide class of readers who can take an interest in the unfolding of a very important case of constitutional growth. Its contents are made up of selections from the writings and speeches of the men who were concerned in the work, with short explanatory reviews, and the passage of Canada through various political crises, at the bottom of which always lay the difficulty of assimilating two races, is shown in this way with

vivid, almost dramatic effect. Through all these controversies there runs a strong view of common sense and high principle, and the general standard of political discussion will bear comparison with that of present times. There is frequently a clearness and serenity in the old time despatches which is very attractive. Nor was faith in the future lacking in the storm and stress. Thus in 1850, Lord Elgin wrote: "I have never been able to comprehend why, elastic as our constitutional system is, we should not be able, now more especially, when we have ceased to control the trade of our colonies, to render the links which bind them to the British Crown at least as lasting as those which unite the component parts of the union. . . . One thing is, however, indispensable to the success of this or any other system of colonial government. . . . You must allow the colonies to believe that, without severing the bonds which unite them to Great Britain, they may attain the degree of perfection, and of social and political development, to which organised communities of free men have a right to aspire."

Three Voyages of a Naturalist. By M. J. NICOLL, with an introduction by the EARL OF CRAWFORD. (*Messrs. Witherby & Co.*, 7s. 6d. net).

This is an account of three voyages on Lord Crawford's yacht "Valhalla," and gives graphic descriptions of many out-of-the-way islands in the South Pacific, the South Atlantic, and the Indian Ocean. The British Museum has largely benefited by Mr. Nicoll's collections, and his notes on the natural history of the islands will be of permanent value. Any one who is interested in bird and fish life will find a quarry of material here, and at the same time will enjoy the record of these delightful cruises. The descriptions of Pitcairn Island, Easter Island, and Samoa may be particularly mentioned for the general reader.

Recent Hunting Trips in British North America. (By F. C. SELOUS. *Messrs. Witherby & Co.*, 16s. net.)

No living writer, we believe, equals Mr. Selous in the clear detail with which he describes the excitement and joys of the hunter's life. From the sporting point of view it must be readily admitted that civilization has grievously spoilt the hunting grounds of Africa, where his earlier life was spent; even the lion of East Africa, who was reported not long ago to be in the habit of stopping trains and collecting tickets on the Uganda Railway, has to be searched for. But Mr. Selous has found touch again in Newfoundland and the Yukon Territory of Canada, and his record of experiences tells many a tale of moose and caribou. There is a useful chapter on equipment for cold climates.

Journal of the Society of Comparative Legislation. (New Series, Vol. VIII., Part 2. *John Murray.*)

Every legislature should supply itself with this number, which contains a review of the world's legislation in 1906. In that year, it is remarked, nearly 2,000 Acts were passed in the British Empire alone, and a general inspection of them shows how widely the communities re-adjust themselves to new ideas and changing conditions. The Australian Act directed against monopolies and dumping is singled out for special notice. Under this Act any person, who enters into a contract with intent to injure, by means of unfair competition, any Australian industry which is advantageous to the community, is punishable with a fine of £500. Unfair competition includes any commercial trust, and any competition which would probably or does in fact result in inadequate remuneration for labour, or disorganizing an industry.

Any attempt to monopolise any part of trade, to the detriment of the public, is similarly punishable. Dumping is to be considered presumably unfair, if it results in an inadequate remuneration for Australian labour, or if the sale is at an unreasonably low price.

The care of the young is a prominent feature in the year's work, legislation having been made in Victoria, Tasmania, Queensland and New Zealand, for the institution of Children's Courts and other modes of protection. Anticipating the intentions of the Home Secretary in the present session, New Zealand passed a measure dealing with habitual criminals, under which they may be imprisoned during the Governor's pleasure.

Very noteworthy is the Victorian Act, which precludes a man from disinheriting his family. This State also passed an Act for the prevention of disorderly conduct at public meetings, disturbers being made liable to a fine of £5, or one month's imprisonment.

In Canada the Lord's Day Act makes unlawful all buying and selling, or exercise by a man of his ordinary vocation on Sunday, except in the case of works of "necessity or mercy." No excursion for hire is allowed. Another Act prohibits the lending of money at more than 12 per cent. interest on any loan under \$500.

Under Newfoundland is found the Act relating to the fisheries which brought on a diplomatic controversy between the British and United States Governments. Its object was to prevent United States fishing vessels from procuring bait, and from employing colonial fishermen in colonial waters. The Act, it is observed, has been rendered practically inoperative by the action of the British Government in exercising their powers under the Imperial Act 59 George III., c 38, which enables the Crown by Order-in-Council to issue directions for securing to United States' fishermen the rights granted to them by the Treaty of 1818. Another Act abolishes the

barmaid, a step which must be a severe blow to the local W. Jacobs, if there is such a delineator of the ways of the fisherman. The same Act prohibits the selling of more than two gallons of liquor at any one time to any one person; the allowance certainly seems a sufficiently liberal one.

There are, of course, numerous Acts for the encouragement of local industries, and among them may be mentioned an act of the Leeward Islands, under which advances of money may be made to possessors of land who desire to grow cotton.

Cape Colony To-day. By A. R. E. BURTON, F.R.G.S. (*Cape Town.*)

This volume, which is issued under the authority of the Cape Government Railway Department contains a remarkably full account of the Colony. The greater part of the book is taken up by a descriptive narrative of the tours in different districts of the Colony. Convenient section maps, showing the railway connections, accompany each tour, and the whole volume is profusely illustrated from photographs. Special articles at the end contain a variety of information, not only on official matters, but also on such subjects as "The Flora and Fauna of Cape Colony," "The Origin and Status of South African Natives," &c., &c. The author is to be congratulated on his success in imparting an immense amount of information without impairing the interest of his narrative, and the book should prove very useful in making the resources and attractions of the Colony better known.

The Commercial Intelligence Committee of the Board of Trade has issued two highly interesting reports on the

Conditions and Prospects of British Trade in New Zealand and Canada respectively. (Cd. 3,867, price 8d. Cd. 3,868, price 1s. 6d.).

The New Zealand Report is based mainly on information collected by Mr. R. J. Jeffray, the Committee's Special Commissioner, but it has been supplemented by information drawn from other sources. The ready and valuable assistance given to the Commissioner by the Dominion Government, by Chambers of Commerce, and by private individuals, is gratefully acknowledged. The general conclusions drawn from the survey are as follows:—

"The Dominion of New Zealand presents a market which, though small in comparison with Canada, Australia, or South Africa, is yet considerable, is steadily expanding, and presents great possibilities for the future. In that market British merchants and manufacturers have by far the greatest share, and, although that share did decline slowly for some years, the downward movement appears to have been checked since 1902.

"This improvement is undoubtedly due in part to the greater energy displayed by British manufacturers and traders, who have succeeded in some instances in recovering ground which they had lost ; and to some extent also to the effect of the preferential arrangements made in 1903. It may be noted that whilst the new tariff of New Zealand does not, except in a few cases, lower the barriers against imports from the United Kingdom and British Possessions, it increases the advantage which British traders enjoy over against their foreign rivals.

"Nevertheless there is considerable and active foreign competition from the United States, Germany, France and Belgium, and evidence of active efforts on the part of those countries to promote their trade with the Dominion. There are a few classes of goods which the United Kingdom might supply, in which the trade is held almost entirely by foreign countries, but with the exception of certain goods for which the countries named have acquired a special reputation, such as agricultural and some other machinery, tools and a few other metal manufactures from the United States, dress goods, and some articles of apparel from France and Germany, and glass from Belgium, the goods obtained from foreign countries are in the main either cheap lines with which British manufacturers—rightly or wrongly—have not cared to trouble themselves, or miscellaneous articles and fancy goods of many kinds which have never been important in British trade.

"It appears then that, with the exercise of reasonable vigilance and attention to the desires and perhaps the prejudices of the consumers, there is no reason why British traders should not maintain and even improve their position in the New Zealand market."

Fencing wire is obtained from America, being made of basic steel, and cheaper ; no doubt this process will be resorted to more in this country. Birmingham and Sheffield could sell more metal ware in Australia and New Zealand if they studied cheapness and attractive appearance. On the whole, however, there is little to complain of, as we secure 60 per cent. of the imports with New Zealand, and the articles in which foreign supplies are preferred are mostly of the cheap order. It is stated that the preferential tariff has diverted a portion of the foreign trade to the United Kingdom. Manufacturers should notice what articles are specially affected by the preference—they include food commodities, drugs, chemicals, metal manufactures, electrical machinery, some leather goods and furniture.

The Canadian report is the work of Mr. Richard Grigg who, like Mr. Jeffray, was the Committee's Special Commissioner. It is an elaborate piece of work, the value of which cannot be adequately represented by a summary, but we may endeavour to emphasise the

more important of Mr. Grigg's conclusion. He dwells on the one hand on the great advantage which geographical proximity gives to the manufacturers of the United States, and on the other, on the fact that to a limited extent those advantages are counteracted by the fact, that "British products enjoy preference both in goodwill and tariff." But he attaches especial importance to the fact, that Canada is herself rapidly becoming an important industrial country.

"The output is increasing rapidly, the efficiency of the Canadian works is rising fast, the industrial resources of the country are great, the tariff policy of Canada is largely directed towards the maintenance and promotion of home industry, and it may not unfairly or unreasonably be assumed that before many years have passed the most serious competitor with the United Kingdom in the Canadian market will be Canada herself. Between Canada on the one hand and the United States on the other, it is self-evident that only the most strenuous and persistent efforts can maintain (to say nothing of extend) the British trade with the Dominion. The Americans have both obtained controlling interests in works in Canada and built branch factories to an important extent. While Canadians regret that capital other than British should be so employed, they can do no other than welcome a proceeding which helps to build up the country by offering employment and so increasing population. I venture to suggest that British manufacturers should consider the placing of branch factories there; such a course would not only gratify Canadians, and so enlarge sales, but it would give manufacturers a more intimate acquaintance with the market than anything else could do, and enable them to maintain stocks there more easily. It is obvious that in some lines at least such factories could receive partly finished materials from home works, completing the work upon them in Canada exactly as the Americans are doing."

Then follows an enumeration of the steps which might be taken to promote British trade with the Dominion. Communication might be made quicker and cheaper; Canadian conditions might be more carefully studied by British traders; British merchants and manufacturers might secure more effective representation in the Dominion; they might show a greater readiness to adapt their products to the special requirements of the Canadian market. Most of this has been said before, with reference not only to Canada, but to other markets which the British trader is charged with losing by neglect. But there are one or two special points of some importance. Canada has for the most part adopted American standards, particularly in regard to iron and steel, and if the British manufacturer wishes to obtain his share of the trade, he must conform to these, even at the cost of inconvenience and special outlay on plant. The recent postal changes will, Mr. Grigg hopes, promote the circulation of British

trade journals in Canada, where their American counterparts have hitherto enjoyed almost a free field. By obtaining more accurate information as to the standing and financial position of Canadian firms, English manufacturers would be able to allow greater elasticity in terms of credit, and might thereby gain many customers. In conclusion, Mr. Grigg strongly advocates the appointment of British commercial correspondents in Canada, who would provide the "national trade representation," which is at present provided for the United States by their consuls.

The report points out the obvious advantages which the manufacturers of the United States derive from their geographical position, and adds that the preference of one-third of the duty is "of undoubted value to British imports, gives equal skill and energy in business conduct." This is putting the matter very generally, and we think does not sufficiently recognise the value of the preference. Against the nearness of the United States industrial centres, may be set the low freights over the Atlantic from east to west. The United Kingdom is Canada's principal market, and there is a large tonnage moving eastwards; low freights the other way are the necessary result. The fact which is vastly operating against British trade is not so much American competition as the extension of manufactures in Canada, largely with American capital. In many of the cases where the imports are still large, and when a few days difference in the delivery is no drawback, the preference should be a very substantial help. Practically all metal manufactures come under this description. At present the United States supply four times as much as the United Kingdom. Probably if manufacturers had used for the purpose American standards of steel and iron goods, which are adopted in Canada, and Canadian currency, weights and measures in their catalogues and advertisements, much more of the trade would be captured.

The Principles of Railway Stores Management. By W. O. KEMPTHORNE, Chief Storekeeper, Nigerian Railways. (*Messrs. E. and F. W. Spoor, Ltd.*, 10s. 6d. net).

This is a detailed account of the methods of keeping the store accounts on a line of railway either under construction or when the line is open for traffic. The methods are very well described, and easy to follow, and for purposes of a line of railway owned and constructed by a company could probably not be improved on. The author at the beginning of the book gives a number of trees, showing how the responsibility devolves from the head of each section or department to his different subordinates or deputies; in Government undertakings a greater extent of combination of duties would, we think, be usually contrived.

The author makes the store department of the railway somewhat of a water-tight compartment of its own ; this, no doubt, has its advantages on a large railway system, when the department is so large that it must practically work on its own, but in small Colonial railways the stores department must often dovetail in with the other departments of the Colony, such as the Public Works, which require stores, and whose store accounts require to be audited and indented for.

The book is written largely from a storekeeper's point of view, and very naturally gives a great prominence to that department, and somewhat enhances the importance of the officials in charge of it. It may be argued, on the other hand, that the personnel of a stores department should be restricted to the smallest number compatible with efficiency, and that the easiest way of arriving at this is to make the store department responsible only for the numerical value and the condition of the stores, and for the receipt and issue of stores numerically, the actual money value being left in the hands of the accounts branch of the railway, with the general manager or chief resident engineer (in case of construction) as the final authority over both departments—this would undoubtedly avoid the duplication of work and staff.

The inspection of the stores should, in the first instance, be carried out by the stores department, but it should not be possible for the stores department to write off any stores or to reduce their value owing to depreciation without the sanction of the final authority ; this is a very essential point in Government undertakings.

The duties of the different officers required in a store department, and the qualifications required in the selection of such officials, are well described. There are also forms for various purposes, which ought to be useful to officials in charge of stores, and which appear to be well thought out, and the result of experience.

Report on the Emigrants' Information Office for the Year 1907. (Cd. 3,918, price 2d.)

This report shows that the Office continues to perform very valuable work, and that its usefulness as a source of accurate information is being increasingly recognised. There was an increase of nearly 22 per cent. in the amount of correspondence dealt with, and of over 49 per cent. in the number of personal applications. We understand that in view of the expansion of the work the Treasury have recently agreed to an increase in the annual grant from £1,500 to £1,700. Mr. H. C. M. Lambert, who has been chairman of the managing committee for eleven years, retired towards the close of the year, and the appendix to the report contains warm expressions of appreciation of the value of his services from the Secretary of

State and from the committee. He has been succeeded by Mr. F. G. A. Butler. The report refers in the following terms to the experiment made by the Queensland Government in the recruiting of labourers in the United Kingdom for service on the sugar farms :—
“The committee felt it incumbent on them to place on record their opinion that emigrants from this country are not suited for work on sugar plantations in the tropics. The attitude of the committee on this question was criticised by Mr. Deakin, the Prime Minister of Australia, at the meeting of the Imperial Conference on the 25th of April, but their action in the matter was explained and defended by Mr. Burns, the President of the Local Government Board. The committee see no reason to modify their opinion that the ordinary emigrant from this country is not suited for such labour in the tropics.”

Reference is also made to the resolution passed by the Imperial Conference :—

“That it is desirable to encourage British emigrants to proceed to British Colonies rather than foreign countries ;

“That the Imperial Government be requested to co-operate with any Colonies desiring immigrants in assisting suitable persons to emigrate.

In a letter from the Colonial Office communicating this resolution to the committee, it was stated that “Lord Elgin is aware that . . . the influence of the Office has, in fact, been exerted . . . in the direction of diverting emigration from foreign countries to the great British Colonies, and that the committee are alive to the importance of keeping in touch with the representatives of the various Colonies.” This last statement is strikingly borne out by a letter, in which Mr. Bruce Walker, the late head of the Canadian Emigration Office in London, acknowledges in cordial terms the value of the work which the Emigrants' Information Office is doing.

BUSINESS NOTES.

Motor Boats.

THE following extract records the very great success which has attended the introduction of motor-boat transport on the Cross River (Southern Nigeria) :—

“The very light draught necessary for all craft navigating the Cross River in the dry season renders the employment of steam craft with any accommodation for Europeans impossible. The large boilers required, and the space boilers and engines occupy, leave but little room for passengers and cargo in small light draught steam craft, such as the steam canoes in use in Northern Nigeria, and the heat from the engines and boilers makes travelling in such craft very disagreeable and unhealthy for Europeans. This led to the experiment of the purchase of the motor-canoë ‘Spider,’ an enlarged steel canoë of the type which has long been in use on the Cross River.

“The trials of this boat on the Thames created great interest in engineering circles, and I have since seen articles, with photographs of the boat, in many of the English illustrated papers, and also in the *Scientific American*. The boat has now run over 10,000 miles. Its engines are still in perfect condition, and two native firemen have been taught to act as drivers, and have taken it successfully on trips of over 250 miles unaccompanied by any European. The engines use ordinary kerosine oil, no petrol is used, even for starting.

“The draught of the boat is only 12 inches, and the work it does is well evidenced in the report on her work for November last, a copy of which I enclose.

“In all our Colonies and Protectorates where navigation in shallow rivers is desired, I doubt if this type of boat can be much improved on, except that magneto ignition should be provided in order to dispense with the trouble of recharging accumulators. In the Federated Malay States a boat of this type on the Perak and Pahang rivers would be of the greatest use to officers whose work takes them up and down the rivers, and also in transporting supplies to up river stations.

"The 'Spider' is supplied with 'tunnel screws.' The sister boat, the 'Sandfly,' is of the stern-wheel type, and has hitherto not proved successful owing to faulty design, by which the draught aft was increased to over 18 inches. It is hoped, however, by placing the engines amidships and modifying the transmission gear, that this boat will ultimately be as successful as the 'Spider,' and some engineers think that the stern-wheel type will prove more serviceable, as trouble has been found in the 'Spider' by the rapid wearing away of the 'bushes' on the shafting near the screw, owing to the unavoidable entrance of the sand stirred up by the screws into the shaft bearings.

"The boats were both built by Messrs. Thornycroft at Chiswick, and the Crown Agents can supply full particulars of price, size, etc. I have travelled 300 miles in the 'Spider' with my wife, and can testify to the comfort of this boat, compared with a steam-engined craft, and the ease with which it can be pushed off any sandbanks on which it may be aground."

The Most Powerful Motor Steam Fire Engine in the World.

A NEW motor steam fire engine has just been constructed by Messrs. Merryweather & Sons, of Greenwich Road, London, for the Shanghai Fire Brigade. It is of the "Fire King" pattern, and is especially interesting as being the largest of its kind in the world, its pumping capacity being 800 gallons per minute, while the powerful single jet thrown is $1\frac{1}{2}$ inches diameter at the nozzle. The boiler is of the quick steam raising water-tube pattern, and, as with other engines of the same type, is fired with oil fuel by means of an improved spray burner, enabling steam pressure to be raised from cold water in six to eight minutes, but by keeping a head of steam in the boiler whilst standing in the fire-station a turn out can be effected in one minute. Solid indiarubber tyres are fitted to the wheels, those in the rear being of twin-section. A capacious box enables a full quantity of hose and all necessary gear to be carried, and tanks are provided for carrying an ample supply of feed-water for the boiler while on the road, as well as a supply of oil fuel. A speed of 20 to 30 miles an hour on the level can be attained, whilst gradients as steep as 1 in 6 can be ascended. The steering is irreversible, and the powerful brakes enable the machine to be efficiently controlled. Before being shipped to its destination it was subjected to severe road tests in the neighbourhood of the makers' works. The steep hills leading to Blackheath were negotiated with ease, and the engine was afterwards taken along the Bromley Road to the picturesque pond at Southend. Here an exhibition of its pumping powers was given, commencing with a powerful $1\frac{1}{2}$ -inch jet, and afterwards throwing two, three and four jets simultaneously. The

tests were highly satisfactory, the road running and pumping capabilities of the engine being in every way efficient. Although Messrs. Merryweather & Sons have built several other motor steamers the Shanghai engine far exceeds in power any other machine of its type, the largest engine previously made being of 500 gallons per minute capacity. However, the motor "Fire King" pattern steamer has been very extensively adopted. London has six engines of this type, and has decided to have all new fire-stations equipped entirely with motor appliances; Liverpool has five, and Edinburgh two; whilst it is also to be found at several other British towns, and in the Colonies at Cape Town, Johannesburg, Kimberley, Port Louis, Lucknow, Bassein, Penang, Selangor, Singapore, etc.

Wireless Telegraphy.

The following report on the service between Trinidad and Tobago will be of interest.

"The power now used is so small that there is little danger of breakdown, and the plant is in duplicate.

"The more powerful, but less economical set is run about once a month to keep it in order.

"The temporary posts erected in the first instance have started to rot, and hard wood butts will have to be fixed soon if the present stations are to be permanent. I understand from Mr. Hahn this is receiving his attention.

"I experimented with the Lodge Muirhead most recent arrangement of raising the lower aerial capacity from the ground. It was evident that this is an improvement leading to less power being required, and greater freedom of interference from both atmospheric disturbances and signals from other stations. I have given instructions to the Chief Wireless Operator to carry this improvement out at a cost not exceeding £20, from the working estimate of this financial year.

"The Operators have made several experimental receiving transformers, and they are now able to exchange satisfactory signals under most conditions.

"From trials I made whilst two or more American battleships were signalling at the same time, it was evident that under ordinary conditions the station at North Post could be arranged to receive by sound two sets of signals at the same time, with wave lengths differing ten per cent. or even less. The sound detectors recently installed work satisfactorily. It was only after receiving with these that I could advocate the use of wireless stations in preference to the telephone for outlying districts."

Paints.

The following letter shows the deleterious influences of hot and moist climates. Speaking generally, the paints used should be zinc oxide, as lead oxidises quickly.

"We have experienced great trouble with paint on the Gold Coast. In many cases paint both sent out ready mixed, and also that mixed locally has turned black in a few weeks. During the last 18 months some sage green paint used at Kumasi turned black, being covered with a black mould. Several other bungalows at Tarkwa, Sekondi and Accra, were painted with similar results. The exterior paintwork suffers more than the internal, and the walls of rooms which are more exposed to the wind suffer most.

"An addition was made to Sekondi Hospital recently, and the interior of one of the wards painted some light colour. A curious growth was observed, not exactly a growth of a sooty character, but more like small black stalks or fibres projecting at right angles to the surface of the wood. The wood came from England (pitch pine). I did not send home a sample of this as I could not make certain when all the constituents of the paint were received in the Colony.

"At Accra, this black growth is not noticed to the same extent as at the out-stations, probably due to the fact that Accra is very much drier. My bungalow was painted in 1904, and is still in fair condition. In some cases the black growth can be washed off but leaves the paint underneath discoloured, and it soon reappears. Torbay paints do not appear to be affected so badly. In Sierra Leone, I did not notice the same defect in the paint, and though some of it did not stand well it was much better than the paint on the Gold Coast. For external work I used Gay's Impenetrable Paint with good results, but the cost of the paint is considerable. Paintwork is at present so unsatisfactory that I think a combined enquiry or investigation carried out in all the West African Colonies and possibly some others might produce some useful result. |

Engine Oils.

There is a considerable difference of opinion whether the best oil is a pure mineral oil or a "compound" oil, *i.e.*, partly mineral and partly vegetable. On the one hand, it is argued that the heat of the engine room causes a pure mineral oil to thin down very rapidly, thus preventing perfect lubrication. For marine work it is necessary that the engine oil should saponify when mixed with water, otherwise the oil and the water will not amalgamate, and consequently the water will wash the oil from the bearings. Mineral oil does not possess this quality, while a com-

pound oil does. If, however, sufficient care can be taken to prevent water from getting at the oil, mineral oil is probably the best, and is, we understand, used by the Admiralty and the India Office. A small amount of saponifiable matter is found in all natural black mineral oils, in quantities varying from about 0·4 to 5 per cent., and the process of removal is costly, but if the proportion is left large, there is a danger of acidic decomposition. In a strict specification the proportion allowed is ·05.

Light Houses.

The introduction of the incandescent oil burner has made greater intensities than was possible with smaller apparatus. A second-order lantern will now give a candle power of greater intensity than a first-order lantern under the old conditions, and can be put up in a smaller tower. The old first-order light had an intensity of 80,000 candles, and the new second-order light has one of 140,000.

MEDICAL NOTES.

Outbreak of Plague in the Gold Coast.

THE outbreak of a suspicious disease at Accra was reported on the 4th of January, and on the 10th the Acting Governor, Major Bryan, was satisfied that it was bubonic plague. Accra was immediately declared an infected port, and vigorous measures were set on foot to check the speed of the epidemic. The local chiefs were assembled, and the gravity of the situation was explained to them; and the co-operation of the native community in the campaign against plague was effectually secured. Extra medical assistance was engaged locally, and extensive scavenging operations were carried out.

The Secretary of State was informed by telegram on the 11th of January, and acting on the advice of Sir Patrick Manson, he at once engaged the services of Professor W. J. Simpson (of King's College, London, and the London School of Tropical Medicine), who had had great experience in dealing with plague in India, South Africa and Hong Kong, and had also visited the Straits Settlements, to report on the sanitary condition of Singapore. Dr. J. A. Haran, of the Medical Service of the E.A.P., was selected as his assistant, and both these gentlemen left for the Gold Coast on the 18th of January, arriving on the 2nd of February. Professor Simpson has been appointed President of a Committee of Public Health, specially appointed to carry out the sanitary and other measures necessary to suppress the outbreak. These measures include wholesale inoculation with Haffkine's prophylactic, removal of suspected persons to solitary camps; evacuation and disinfection or demolition of infected houses, and removal of all the inhabitants from a congested and insanitary quarter of the town; systematic destruction of rats and mice; inspection of cargo shipped from Accra, and fumigation of sacks, &c., and the establishment of a land cordon round Accra, through which no one may pass without a permit which certifies that the bearer has been inoculated.

With a view to insuring the detection and suppression of any outbreak in the smaller coast towns, six medical men are being selected and sent out to the Gold Coast for plague duty for six months. At the same time no such outbreaks are apprehended. There have been isolated outbreaks in four small places between Cape Coast and Prampram, but the latest returns go to show that these have been successfully suppressed, whilst the number of deaths at Accra itself, which in the week 15th to 21st January was 25, had dropped to five in the first week in March.

Professor Simpson will, if possible, visit Freetown, and other important coast towns in British West Africa, and report upon their sanitary condition.

An elaborate report on Plague in Queensland, 1900 to 1907, by Dr. B. Burnett Ham, Commissioner of Public Health, has been presented to both Houses of the State Parliament. The Report is in four sections, dealing respectively with the Statistics, the Incidence, the Medical aspects and the Epidemiology of Plague, and is illustrated by a number of charts, diagrams and photographs.

A further paper has been presented to Parliament (Cd. 3,854. Price 2d.) containing the French text and English translation of a report on Sleeping Sickness by Dr. Louis W. Sambon, one of the Italian delegates to the recent International Conference.

A report on the Prevalence and Distribution of Leprosy in Fiji, by Dr. B. Glanvill Corney, Chief Medical Officer of the Colony, has been laid before the Legislative Council. Dr. Corney comes to the conclusion that "leprosy is an endemic disease which has endured in these islands from remote times; and that it has for untold ages been accepted by the Fijians as a permanent factor in their collective existence." He estimates that about 1 per cent. of the population are affected with the disease, and that this proportion has tended to remain constant for many years; and he advocates measures for the compulsory segregation of lepers.

Vol. II., No. 1, of *Annals of Tropical Medicine and Parasitology*, which is published by the Liverpool School of Tropical Medicine, and has been sent to us by the Liverpool Chamber of Commerce, contains two valuable papers by Sir Rubert Boyce and Sir Patrick Manson, on the treatment of Sleeping Sickness by Atoxyl. Sir Patrick Manson gives an account of the cases of the disease in Europeans which have come under his notice, and definitely concludes that the disease is not necessarily fatal in its results.

In a letter to the *Manchester Guardian* Sir Rubert Boyce, of the Liverpool School of Tropical Medicine, claims attention to the fact that the use of atoxyl as a remedy for sleeping sickness, on the value of which great stress has been laid by Dr. Koch in his account of his work in German East Africa, was first brought to the notice of the medical profession by three of the workers at the Liverpool School, Doctors Thomas, Breinl and Todd. The suggestion of the employment of arsenic in the treatment of the disease originated with Doctor Livingstone and Doctor Braid, of Manchester, but it was Doctor Thomas who first hit upon the particular compound of arsenic known as atoxyl as the most suitable for the purpose, and it was only after elaborate investigations, carried out by him in conjunction with Doctors Breinl and Todd, that it became possible to recommend its use in our tropical possessions with confidence "Practically stated," says Sir R. Boyce, "atoxyl accomplishes for sleeping sickness what quinine accomplishes for malaria. This is surely an enormous gain, and it cannot but stimulate commercial men still further to support the investigations taking place in the tropical schools of England."

Rat Poisons.

"Danyesz" is being used by Professor Simpson in combating the attack of bubonic plague at Accra. The "Liverpool" rat virus is, we believe, practically the same preparation; it is issued by the Institute of Comparative Pathology. The anti-rat campaign is important everywhere, but most of all in hot countries, and the trials of these preparations will be watched with interest. In Mauritius alone hundreds of thousands of pounds have been spent in the attempt to get rid of them; indeed it has been said that the Dutch were driven out by them, though this is somewhat of an exaggeration. One difficulty is that virus is most efficacious when fresh, and a long voyage, especially in a hot position, may render it more or less inert.

LETTERS TO THE EDITORS.

The Growth of Empire.

THE rise of the British Empire has been accounted for in various ways, according to the predilections of the writers, but there seems to be an increasing disposition to attribute it largely to accidental causes. The greatest political structure the world has ever seen has been ascribed to a prolonged fit of absence of mind. More than one influential statement delivered lately seems to reflect this attitude. Lord Curzon, in an eloquent address at Birmingham, ascribed the Empire to an "instinct"—"that ineradicable and divinely implanted impulse which had sent the Englishman forth into the uttermost parts of the earth, and made him the parent of new societies and the architect of unpremeditated erections." The Englishman, as a matter of fact, is not distinguished by an ability, instinctive or otherwise, to found new societies or to construct new erections. Wherever he goes he retains his original characteristics. He does not meddle more than he can help with the ideas and customs of the races with which he is brought into contact; neither, on the other hand, does he mix with them. His main object in emigrating is to make money or money's worth, and so far as is consistent with this to leave other people alone.

There would be no occasion to criticise Lord Curzon's phrases, if they were merely meant to be a picturesque mode of stating that the empire-builders did not foresee the vast developments to which they were contributing. But there is more intention in them than that. They lead towards a conclusion that we must be more wide-awake in future; that we must realise that we have been singularly lucky in piling up the structure; and that some definite political principle must be imported for future guidance. Language which would otherwise be unobjectionable may, when used for an ulterior object, be insidiously and dangerously inaccurate. Let me, therefore, repeat—there is a clear and explicit object running through the history of the Empire, and that was trade. Great Britain has never

occupied territory for the sake of governing. The flag has followed the trade—often very reluctantly; and the more the history of our eastern or western possessions is studied the clearer it is that the movement was commercial and the wars we waged economic.

Let us look at the facts. It is amply clear that the Empire consists of a group some members of which are now for business purposes on the same plane as Great Britain. This has been of course a matter of growth. It is not due to a change of ideas or a revolution in spirit, but simply to material progress. But it seems to be held that political ideas ought to have had some place in the matter. "The political ideas which prevailed in the time of our youth," Lord Milner has observed in a recent address, "were in the main ideas not wholly favourable to the organisation of our Empire such as ours, or to the creation of the only bond which can hold together its self-governing states."

He went on to say that these ideas were losing their "evil dominion." Yet it was in the period that Lord Milner referred to that, despite the "evil dominion," the dominions grew into greatness. The "ideas" in fact, whatever they were, had nothing to do with the growth. Without going the length of suggesting, with the school-boy, that idea is the feminine of idiot, I submit that the vague use of the word is baneful. The British Empire is not a problem or a theorem, and the men who have made it have not worked on paper. The real "ideas," if one must use the word, which have made it are those which are now recorded in the Board of Trade statistics of imports and exports.

There is no difficulty in realising the nature of past processes if attention is paid to those now going on. In Nigeria we have a territory which may prove to be almost a second India. Development is now being pushed on, and the real object is to open up the country to trade. In particular the growth of cotton is aimed at for the advantage of our Lancashire looms, and it is hardly open to question that the railway, now being laid towards the interior, would not have been decided on without that consideration. We are of course forced into administrative questions of great interest and importance by these movements, but this is a secondary matter, not desired but inevitable. It is work and enterprise, capital and labour, that have made the modern Empire, and the chief meed of thanks that we owe to the "organisers" is that, on the whole and as far as in them is, they have meddled little.

But we are to understand that although the Empire has got on excellently well so far, in some mysterious fashion, without the help of constitution-mongers and political theorists, all that is going to be changed. It appears that there is an "enormous peril" hanging over us. We are on the point, unless something is done and that

quickly, of ceasing to be a united community. Forces of "disintegration" are at work and the branches of the fabric are likely to fly asunder. To prevent this collapse some sort of brickwork and cement is called for. All this, if it is to be taken seriously, is very alarming. But what is the evidence for it? One description of evidence, as we all know, is something you want to be true to support some ulterior object of your own. This sort of evidence is greatly in favour at election times, and on other occasions when you cannot be found out until too late. But it must be admitted, when there is time to do so, that it is unfair to mould premises by conclusions. Let us look at the actual position. Is there any sign of fissiparous division at present? Does any State want to stand out? It is abundantly clear that nothing of the kind is going on. There never was a time when the general union was so strong and so harmonious. It would be a plain libel on the common-sense and patriotism of the Empire to assert that there is a movement in the direction of disunion. The breaking up of the British Empire will never be a voluntary act. There may conceivably some day be danger from without; whenever that occurs we must take up sword and buckler, and assuredly every member of the union will rally to the flag. But this is not the sort of danger that is in question. It is urged that the real danger will be, in a sense, from within. We are, it seems, to anticipate that the dominions will proceed to construct "bonds" with certain foreign countries, the effect of which will be to place those countries in a more favourable position than Great Britain. But all the actual signs are the other way about. The dominions, which are really now as free as ever they will and can be to conclude preferential engagements are, with an extraordinary unanimity, actually giving Great Britain preference.

The cry of the Imperialist orator is for more federation of the machinery description. The idea, of course, has its attractions. Machinery to the outward eye means strength, and the more of it the better. "There must be," the *Times* has recently written, "common institutions as well, besides the link of the Crown, if the fabric is to be permanent and endure. What these institutions are to be, and how they are to be created and developed is the true Imperial problem. We must find them at our peril. The Empire cannot stand still." This puts this kind of thought plainly. No evidence is offered on this and similar occasions to show that the Empire is in danger. Usually, what facts are presented are all the other way. But the assumption is necessary to lead up to the conclusion that salvation is only to be found in more parliamentary institutions. No one really has any definite idea of what the proposed machinery is to be or what it is to do. Rarely, indeed, in political literature has any scheme been put forward in language so vague, in form so nebulous.

Surely if the necessity is so great as is represented, the actual requirements would leap to the eyes.

But the remedy is for a disease which does not exist. The union is not weak, but strong; the consolidation of the Empire is not a fiction, but a fact. It may be possible to strengthen the connection by commercial agreements; it is no part of my purpose to deny this. But let us start fair. I protest against the belittling of present results merely for the purpose of introducing the argument for tariff reform. I further protest against the ignoring of elements of union which are not material, which lie deep in our nature, and which I believe are essential and permanent. The greatest bond of union which we have, and can have, is that of intellectual fellowship. The common language, the common literature, the common associations of the past, make us all children of the same family; and the natural love and affection which are inspired by these things are kept alive by the genius of the race. Tennyson and Kelvin were real Empire-builders. London, with its satellite band of ports and manufacturing towns, appeals to us as an intellectual centre, and so long as Great Britain commands the respect of the Colonies by the vigour of her output, moral and industrial, so long may she count upon them for support.

X. Y. Z.

FAMAGUSTA,
20th February, 1908.

GENTLEMEN,

I see in your journal for January, 1908, on page 259, that you consider the Cyprus railway a failure, because the ancient port of Famagusta has been chosen for the railway to start from. Now, east of a line joining Alexandria and Rhodes, Famagusta is the only natural harbour in the Mediterranean, and from time immemorial Salamis just to the north of Famagusta or Famagusta itself has been the port of the country. In Cyprus it is the only port, as Larnaka and Limassol are open roadsteads.

When the Turks took Famagusta after a sanguinary siege at the beginning of the 16th century, the Sultan of the time was so impressed by the strength of the place that he decided to allow the Venetian harbour to shut up, closed the entrance, and turned the fort into a political prison. He was afraid to garrison Famagusta with Turks, lest the Governor might declare its independence, and he was afraid to leave it as a commercial port lest the Venetians should retake it. The European consuls and colony were sent to Larnaka on the south-east coast where there was an open roadstead where ships could lie. Larnaka filled a temporary need, while Famagusta was suppressed. After the British occupation there was no fear of the Turks in Cyprus rebelling or other powers possessing themselves

of Famagusta, and the Government decided to dredge the old Venetian harbour, build a large fine quay, and make Famagusta the terminus of the railway which runs the whole length of the island through Nicossea.

The harbour and railway was completed in 1905.

Steamers drawing 23 feet of water can lie along the quay and load on to the railway, or unload direct from the railway, and for this reason Famagusta is fast developing as the export place of live stock for the island and for the importing all heavy machinery and engines. Goods sent to Nicossea from all parts of the world can be taken direct from the steamers on to the railway, and then be delivered in bond in the bonded warehouses of Nicossea, the trade and distribution centres of the island. The merchants of Nicossea are petitioning the Government to get the Austrian Lloyd boats to come to Famagusta. Between Famagusta and Morphu, along the whole length of the island lies the the Mesarria plain where nearly the whole of the grain of the island is grown. The railway goes through the very middle of the plain. With all these advantages in its favour, Famagusta and the railway have one serious difficulty before them. The export merchants, traders, landing agents and, money lenders of Larnaka have their vested interests in Larnaka, and are opposing the development of the port and railway by every means in their power, and as the peasantry are deeply indebted to them, and financed by them, the grain produced along the railway has to be taken in carts across country to Larnaka and not down the railway. The recently opened agricultural Bank of Cyprus is gradually freeing the peasantry, while the natural advantages of Famagusta and the railway alignments are so great that, in spite of everything, great progress is being made. The peasantry are far from conservative, as you say; they are helpless in the hands of the creditors and financiers.

Here are figures for 1905, 06, 07.

Year.	Famagusta Harbour.				Railway.	
	Exports.	Sailing Ships.	Steamers.	Imports.	Passengers.	Goods.
	£	Tons.	Tons.	£	£	£
1905	70,788	12,792	21,542	45,752	2,080	1,560
1906	70,226	11,472	22,113	55,787	4,160	3,120
1907	125,992	17,180	81,133	79,422	6,240	4,680

For any enterprising merchants there is a great opening in Famagusta, and the local people though energetic are not wealthy, while the Larnaka merchants refuse to come. Famagusta and the railway are fast justifying the wisdom of the Government which

decided on utilising the ancient harbour of the island as the modern one, and taking the railway through the middle of the agricultural lands of the island.

Yours faithfully,

W. WILLCOCKS.

[We did not say that the Cyprus railway was a failure, but that " it does not seem likely that the railway will succeed in converting Famagusta into the leading port of the island, and the case is an instance of the importance of fully recognising established commercial habits when fixing the base of a railway." We should look more to Egypt than to Syria for the trade development of Cyprus. But, the railway is doing good work, and the figures for 1907, which Mr. Willcocks gives, certainly show excellent progress. Ed.]

GENTLEMEN,

In the January number of THE COLONIAL OFFICE JOURNAL (p. 211), you quote a statement from the *Daily Express* that " Government experts who have visited the territory are convinced that before long Nigeria will be one of the greatest oil-producing regions in the world."

If I am one of the Government experts referred to, I should be greatly obliged for permission to say that the very optimistic remarks of the *Daily Express* are not in accord with any opinion given by me.

I am, Sir, &c.,

JOHN PARKINSON,

January 11th, 1908.



OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ANDREWS, M. S. ...	12 Apr., '08	HARRIS, J. B. ...	9 May, '08
ATKINSON, J. ...	11 Apr., '08	HOOD, T. ...	11 Apr., '08
BURKE, C. J. ...	22 May, '08	JARDINE, J. ...	15 Apr., '08
BRISTOWE, L. W. ...	30 June, '08	JANSEN, O. J. L. ...	12 May, '08
BERKELEY, H. M. H. ...	10 May, '08	JOHNSTONE, B. ...	9 May, '08
BRANDFORD-GRIFFITH, Sir W. ...	1 Apr., '08	LE FANU, C. V. ...	2 May, '08
CURLING, C. N. ...	12 May, '08	LATHAM, H. ...	30 May, '08
CLARKE, Maj. H. C. S. ...	4 Apr., '08	LEGGE, Capt. P. A. ...	
CLARIDGE, Dr. W. W. ...	30 Mar., '08	LOVE, H. G. ...	12 Apr., '08
CRUTCH, H. E. ...	22 May, '08	MULGRUE, Capt. E. C. ...	26 May, '08
COCKCRAFT, Capt., L. W. La T. ..	17 Mar., '08	NEALE, E. R. ...	11 Apr., '08
DEEKS, Miss A. M. ...	12 May, '08	O'KINEALY, Capt. J. ...	14 May, '08
DE VALDA, F. ...	14 Apr., '08	ROSS, H. ...	16 June, '08
193, Bruntsfield Place, Edinburgh.		READ, Capt. B. M. ...	4 June, '08
EVANS, A. E. ...	22 July '08	RUBERT, Sergt. C. ...	25 Apr., '08
FULLER, F. C., C.M.G. ...	16 May, '08	ROBINSON, G. H. ...	11 Apr., '08
FELL, T. E. ...	20 Apr., '08	RUTHERFORD, Capt. G. J.	11 Apr., '08
FFOULKE, A. ...	9 Apr., '08	STEWART-RICHARDSON, Lt. L. G. ...	30 May, '08
GALE, E. E. ...	25 Apr., '08	SMITH, A. ...	30 June, '08
HARRISON, E. L. ...	21 June, '08	TIPLADY, C. E. ...	27 Apr., '08
HOBART, Capt. E. H. ...	23 July, '08	WALE, W. C. ...	12 Apr., '08
HILL, C. W. ...	17 May, '08	WRIGHT, G. W. F. ...	8 May, '08
HEARNshaw, W. ...	16 May, '08	WALKER, Dr. G. C. ...	4 June, '08
		WILKINSON, E. F. W. ...	

SIERRA LEONE.

AYTON, H. R. ...	13 June, '08	MARTIN, J. D. ...	4 May, '08
BURRA, J. S. ...	13 June, '08	NECK, F. A. ...	25 Apr., '08
BARKER, E. H. ...	21 June, '08	OSWELL, W. St. J. ...	20 Apr., '08
BURROWS, Dr. D. ...	17 Apr., '08	c/o Messrs. Holt & Co.,	
COLQUHOUN, Capt. F. ...	5 Apr., '08	3, Whitehall Place,	
CHAMLEY, J. W. ...	5 Apr., '08	S.W.	
CORNER, G. H. ...	9 May, '08	PATTERSON, J. ...	6 Apr., '08
CALLAWAY, H. N. ...	1 July, '08	PALING, A. G. F. ...	4 May, '08
FRANCIS, G. ...	21 June, '08	PROUDFOOT, Rev. J. ...	3 Apr., '08
HOBBS, G. ...	17 June, '08	ROXBURGH, Miss M. C....	6 Apr., '08
HADDON-SMITH, G. B.,		SMITH, H. ...	25 Apr., '08
C.M.G. ...	25 Apr., '08	TAKEL, M. J. ...	16 May, '08
JEBB, R. R. ...	30 May, '08	VARLEY, G. ...	1 July, '08
JOHNSTONE, R. M. ...	25 Apr., '08	WILLOUGHBY, E. D. ...	21 June, '08
MILES, W. J. ...	9 May, '08	WHITE, R. ...	11 Apr., '08
MURPHY, E. H. ...	9 May, '08		

GAMBIA.

BROWN, J. ...	17 Apr., '08	PIERCE, T. E. ...	26 June, '08
BIDEN, A. G. ...	3 Apr., '08		

SOUTHERN NIGERIA.

ANGUS, Sergt. F. W. ...	9 May, '08	BIRD, H. J. ...	9 May, '08
AUSTIN, E. P. ...	21 June, '08	BALNAVE, Sergt. W. F.	15 Apr., '08
c/o Sir C. R. McGrigor,		BOWKER-BOOKER, H. T.	5 Apr., '08
Bart. & Co., 25, Charles		BEEHAM, P. H. ...	9 May, '08
Street, S.W.		BINNY, J. M. ...	9 June, '08
AMBROSE, Capt. W. G....	16 May, '08	Constitutional Club,	
BAKER, Lieut. A.C., R.N.R.	9 May, '08	Northumberland	
Blenheim Club, 12,		Avenue, W.C.	
St. James' Square, S.W.		CRAVEN, J. C. ...	21 June, '08
BELLAMY, C. V....	16 June, '08	CHEETHAM, Lt. H. C. U.	
BROOKS, R. B. ...	18 Apr., '08	B., R.N.R. ...	9 June, '08
BARLOW, R. J. ...	13 June, '08	CULLEN, C. S. ...	5 Apr., '08
BENTON, A. P. ...	4 May, '08	COTTON, E. P. ...	
BARLEY, Sergt. A. ...	30 Mar., '08	COATLEY, J. L. ...	18 Apr., '08
BEDWELL, H. ...	22 May, '08	CRAWFORD, W. E. B. C. ...	17 Apr., '08
c/o Sir C. R. McGrigor,		CHAMBERS, C. H. ...	9 May, '08
Bart. & Co., 25, Charles		CLARK, W. B. ...	29 Apr., '08
Street, S.W.			

SOUTHERN NIGERIA—continued.

CORRY-SMITH, Capt. G. C.	1 July, '08	MOORE, Commander	
c/o Messrs. Burnett & Co., 123, Pall Mall, S.W.		H. G., R.N.R.	11 Apr., '08
DEBRIMAN, F. H.	28 Apr., '08	MORLEY, Lieut. C.	13 June, '08
DE LIVERA, C.	16 May, '08	MONEY, W.	3 Apr., '08
DISLEY, A. F.	27 June, '08	MAY, A. H.	16 Apr., '08
DOUGLAS, H. M.	1 June, '08	MCISACK, T. H.	
DAVIDSON, J.	6 May, '08	McCORKINDALE, Sergt. D.	29 Mar., '08
DUGUID, Capt. E.	21 May, '08	MADDISON, T.	28 Apr., '08
Caledonian Club,		MUIRHEAD, Sergt. J.	25 Apr., '08
St. James', S.W.		MOORMAN, F. W.	9 May, '08
FURLONG, A. E.	6 June, '08	MANN, J. G.	4 May, '08
FAIRBURN, S. A. C.	22 May, '08	McPHERSON, A.	9 Apr., '08
FARQUHAR, J. H. J.	28 Apr., '08	MEARS, H.	13 Apr., '08
GRABHAM, A. C.	27 June, '08	MYTTON, A. R.	25 Apr., '08
GRAHAM, Dr. E. W.	11 Apr., '08	NICHOLSON, T.	5 Apr., '08
GREENSTOCK, Lieut. A.	18 Apr., '08	PROFECT, A.	22 May, '08
R.N.R., c/o London & Westminster Bank, St. James' Square, S.W.		PARTRIDGE, C.	31 May, '08
GREEN, J. E.	6 June, '08	PALMER, E. C.	21 Apr., '08
GRAY, E. A. S.	23 June, '08	c/o Sir C. R. McGrigor, Bart. & Co., 25, Charles Street, S.W.	
GRAY, Dr. R. W.	13 July, '08	PUNCH, C.	5 Apr., '08
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		PENROSE, S. J.	13 June, '08
GLEDALL, E. D.	16 May, '08	PONTIFEX, F. C. O.	4 May, '08
HILSDON, J. E.	6 June, '08	Junior Athenaeum Club, 116, Piccadilly, W.	
HICKS, Sergt. W. T.	15 June, '08	PICKWOOD, C. A.	22 May, '08
HUTTON, S.	25 Apr., '08	PERCIVAL-JONES, Lt. J. R.N.R.	16 June, '08
HOLMES, R. B. W.	2 May, '08	ROBERTS, R.	9 May, '08
HOLT, A. R. E.	23 Apr., '08	ROBERTS, D.	6 June, '08
HORDERN, A. D.	13 June, '08	ROWE, W. H.	8 June, '08
HUMFREY, Capt. L. E. H.	4 Apr., '08	RYDER, D. J.	25 Apr., '08
HARVEY, G. L.	13 June, '08	RAE, A. C.	28 Apr., '08
HAND, J. St. V.	14 May, '08	ROSS, W. J.	9 May, '08
INGLES, F. H.	21 Apr., '08	READ, Dr. E. H.	6 June, '08
JONES, H. E.	11 Apr., '08	RYAN, J. G.	14 Apr., '08
JAMES, F. S., C.M.G.		SLOAN, W. S.	11 Apr., '08
JERVIS, J.		STEEL, Lt. E. A.	12 Apr., '08
JOHNSON, F. E. G.	9 May, '08	THORBURN, J. J.	22 May, '08
KNIGHT, J.	19 Apr., '08	THOMPSON, Dr. F. B.	25 Apr., '08
KNIGHTS, E. G.	22 June, '08	WILLS, A.	9 June, '08
LUMLEY, G.	5 Apr., '08	WILSON, Lt. J. D., R.N.R.	16 May, '08
LUBBOCK, E. N.	22 May, '08	c/o Messrs. King & Co., 65, Cornhill, E.C.	
LLOYD, L. E.	1 June, '08	WHEELWRIGHT, J. C.	15 Apr., '08
LEESE, C. W.	13 July, '08	WHITE, Miss L. S.	13 May, '08
LINDLEY, Sergt. W. T.	26 May, '08	WOODS, P. S. C.	5 Apr., '08
LODGE, A. J.	5 June, '08	WILLIAMS, J.	9 May, '08
MANNERS, Dr. W. F.	21 Apr., '08	WARNOCK, Sergt. A.	24 May, '08

NORTHERN NIGERIA.

ANDERSON, Capt. G. ...	12 May, '08	GRANT, J. H. ...	27 June, '08
ALEXANDER, Dr. D. ...	21 May, '08	GLEED, J. A. ...	
BAIN, Major A....	24 June, '08	GOSDEN, Armr.-Sergt. W.	26 June, '08
BARBER, Capt. W. D. ...	9 May, '08	GILL, J. W. ...	6 June, '08
BURNARD, Capt. C. F. ...		HIDES, Capt. E. C. ...	5 Apr., '08
BOVILL, H. E. W. ...	11 June, '08	HILL, J. F. ...	3 Apr., '08
BERTON, Sergt. T. G. ...		HOPKINS, F. F. ...	14 June, '08
BENTON, P. A. ...	7 May, '08	c/o Messrs. Way & Co.,	
BOYLE, Capt. C. V. B. ...		Billiter Buildings, Bil-	
BARCLAY, G. N. ...	26 May, '08	liter Street, E.C.	
Constitutional Club,		HOLME, H. F. C. ...	16 June, '08
Northumberland		HEWBY, W. P., C.M.G....	6 May, '08
Avenue, W. C.		IRONS, A. Campbell ...	21 July, '08
BOND, J. ...	25 Apr., '08	Royal Societies Club,	
BLACKWOOD, Lt. R. M....	13 June, '08	St. James's St., S.W.	
BIRKETT, Sergt. J. ...	4 May, '08	JOHNSON, Capt. A. E. ...	
BLAKENEY, Maj. J. E. C.	29 May, '08	LE FANU, Sergt. R. E....	21 July, '08
CATOR, D. ...	21 June, '08	LEWIS, Capt. E. H. ...	
COTTON, Sergt. A. ...	11 June, '08	LOBB, Dr. H. P. ...	9 July, '08
CUNNINGHAM, C. E. ...	11 July, '08	LEWER, Dr. H. G. ...	1 June, '08
CHANDLER, Sergt. C. E.	25 Apr., '08	LANG, D. H. ...	11 June, '08
COLCHESTER-WEMYSS,		LA CHARD, L. W. ...	19 June, '08
Capt. J. M. ...	6 June, '08	MICKLETHWAIT, Miss	
CROFT, Lt. W. D. ...	19 Aug., '08	G. G.	
DIX, E. W. ...	11 June, '09	MATHEW, Maj. W. M. ...	27 May, '08
DAVIDSON, Dr. J. ...		MURLEY, Sergt. J. ...	25 June, '08
DUFF, E. C. ...	30 June, '08	MORGAN-OWEN, Lt.	
c/o Messrs. Grindlay		L. I. G. ...	9 Apr., '08
& Co., 54, Parliament		MORAN, Capt. G. W. ...	6 June, '08
Street, S.W.		MACKENZIE, Capt. J., V.C.	8 Apr., '08
DOOLEY, J. ...	6 Aug., '08	Junior Naval and	
EAGLESOME, J. ...		Military Club, 96, Pic-	
Royal Societies Club,		cadilly, W.	
St. James's Street,		MANN, Lieut. G. D. ...	9 May, '08
S.W.		MAYNARD, H. C. ...	
ELLIOTT, Lieut. C., R.N.R.	6 June, '08	McLEOD, Capt. A. A. ...	24 May, '08
c/o Messrs. H. S. King		Caledonian Club, St.	
and Co., 9, Pall Mall,		James's, S.W.	
S.W.		MARSH, F. ...	
ELDER, J. H. C....	6 July, '08	MURRAY, Lieut. C. G. ...	6 May, '08
FARINI, W. L. ...	31 Aug., '08	c/o Messrs. Cox & Co.,	
FESTING, Maj. A. H.,		16, Charing Cross,	
C.M.G., D.S.O. ...	21 June, '08	S.W.	
FOULKES, Capt. H. D. ...		MANUK, Dr. M. W. ...	
GROOM, A. H. ...	26 June, '08	MACKAY, Capt. J. F. ...	
GARRATT, Sergt. J. C. ...	9 May, '08	MERRICK, Capt. F. S. ...	21 June, '08
GIROUARD, Sir E. P. C.,		MITCHELL, Miss E. ...	
K.C.M.G., D.S.O. ...	6 May, '08	McLAY, Lieut. W. J. ...	20 Aug., '08
c/o The Colonial Office,		Sports Club, St.	
Downing Street, S.W.		James's Street, S.W.	

NORTHERN NIGERIA—continued.

MENENDEZ, SIR M. R. ...		TOMSETT, A. P. ...	9 May, '08
O'LEARY, Sergt. F. D. ...	16 Apr., '08	THESIGER, G. E. P. ...	16 July, '08
PATERSON, J. H. ...	22 May, '08	TEMPLE, C. L. ...	
PALMER, H. R. ...	26 June, '08	VERMUELEN, Sergt. A. ...	
ROWE, Capt. C. F. ...	19 Apr., '08	VAURENEN, Lieut. D. A. ...	22 May, '08
RICH, Lieut. W. S. ...	26 May, '08	VEREKER, S. H. P. ...	31 July, '08
RUXTON, Capt. U. F. ...	6 Apr., '08	c/o Messrs. Woodhead	
RICHMOND, W. F. ...	5 Aug., '08	& Co., 44, Charing	
RICHARDSON, Lieut. J. F. ...	16 Apr., '08	Cross, S.W.	
SOMERVILLE, J. ...		WILLIAMS, Sergt.-Major,	
Royal Societies Club,		W. T. G. ...	12 July, '80
St. James's St., S.W.		WOOD, Miss M. B. ...	21 Apr., '08
SEECOMBE, Capt. G. ...	1 July, '08	WOOD, Lieut. J. H. ...	20 Mar., '08
c/o Messrs. Cox & Co.,		WATSON, Dr. C. F. ...	9 July, '08
16, Charing Cross, S.W.		The College, Guy's	
SEARIGHT, Maj. H. ff. ...	19 May, '08	Hospital, S.E.	
Army and Navy Club,		WALLBACH, Capt. D. A.	
Pall Mall, S.W.		WEBSTER, Sergt. W. J....	29 Mar., '08
SLACK, Sergt. J. ...	6 June, '08	WILLIAMS, Capt. E. E. ...	
SNEPP, Lieut. E. N. ...	28 Apr., '08	WALTON, Capt. W. I. ...	
SULLIVAN, Lieut. J. K....	21 Apr., '08	WOOD, Sergt. W. ...	1 June, '08
SOPER, F. P. W....	8 June, '08	YATES, C. C. ...	5 Aug., '08

NYASALAND.

APLIN, H. D. ...	16 May, '08	MOGGRIDGE, L. T. ...	30 Apr., '08
APLIN, C. E. ...	16 May, '08	PEARCE, Maj. F. B.,	
ENGLAND, E. S. ...	28 June, '08	C.M.G. ...	16 May, '08
EYRE, R. G. ...	Steamer of	STORRS, F. J. T....	16 May, '08
	2 May, '08	WYKE-SMITH, Dr. P. ...	18 July, '08
KIRKPATRICK, F. J. ...	16 May, '08	WYATT, A. H. ...	Steamer of
MERCIER, G. H. ...	10 June, '08		11 Apr., '08
MOLESWORTH, Capt. A.		WIGHTMAN, A. E. ...	16 May, '08
St. A. ...	21 July, '08		

EAST AFRICA.

AYLMER, Capt. L. ...	4 May, '08	RIDDICK, Capt. C. ...	Steamer of
ESPENT, C. F. ...		c/o Messrs. Holt & Co.,	10 July, '08
FREEMAN, H. W. ...	27 Apr., '08	3, Whitehall Place,	
JENKINS, F. M. ...	6 June, '08	S.W.	
KEMPE, W. A. ...	25 Apr., '08	SERGEANT, J. ...	27 June, '08
LOGAN, E. R. ...	27 Apr., '08	TYBSEN, F. D. ...	27 June, '08
MITCHELL, O. ...	6 July, '08	WEBBS, R. ...	6 July, '08
PATTERSON, J. ...	27 Apr., '08		

UGANDA.

BOYLE, A. G.	16 May, '08	BAGSHAW, Dr. A. G. ...	11 June, '08
c/o Messrs. H. S. King		PASKE-SMITH, R. ...	27 June, '08
& Co., 9, Pall Mall,		WYNDHAM, Maj. L. C. E.	6 July, '08
S.W.		WEATHERHEAD, A. E. ...	

SOMALILAND.

BRESLIN, Capt. A. E. H.	16 July, '08
-------------------------	--------	--------------

ORANGE RIVER COLONY.

COUCH, Miss C.	30 June, '08	FERGUSON, C.	30 Apr., '08
-----------------------	--------------	---------------------	--------------

BASUTOLAND.

ROBBINS, Miss T.	14 July, '08
-------------------------	--------------

JAMAICA.

ALLWOOD, Dr. J. A. ...	10 Apr., '08	MELLISH, C. E. ...	22 July, '08
Cox, S. A. G.	11 Apr., '08		

DOMINICA.

BELLOT, Dr. C. H. L. ...	31 July, '08	JARVIS, L. H.	2 June, '08
--------------------------	--------------	----------------------	-------------

TRINIDAD.

BURSLEM, W.	18 Dec., '08	MONCKTON, C. C. F. ...	
MAY, G. H.	24 June, '08	PASHLEY, E. R.	22 June, '08

BRITISH GUIANA.

BUGLE, C.	21 Apr., '08	LAW, Dr. W. F.	13 Sept., '08
BARKLIE, T. W. S. ...	13 Aug., '08	McGILL, Rev. J. W. ...	Early in June, '08
DARNELL-DAVIS N.,		MASKELL, T. A. C. ...	10 July, '08
C. M. G.		MOULDER, E. R. D. ...	1 May, '08
FERGUSON, Dr. J. E. A.	24 Oct., '08	SCONCE, H. W.	8 July, '08
GWYTHER, Ven. Arch. A.	26 July, '08	WEBER, O.	1 May, '08
HEMERY, P.	17 Aug., '08	WARD, R.	1 May, '08

FIJI.

ARNOLD, Dr. E. G. E. ...	24 July, '08	FRANCIS, Col. C. A. ...	
CORENY, Dr. B. G. ...	15 July, '08	MAJOR, C.	

BRITISH HONDURAS.

WINTER, Dr. W. C. P. ... 30 *Apr.*, '08

GRENADA.

BRANCH, G. F. ... 22 *May*, '08

BARBADOS.

CHANDLER, W. K. ... 9 *July*, '08

ST. VINCENT.

BRANCH, Dr. C. W. ... 17 *May*, '08

MAURITIUS.

BARBEAU, Dr. L. G. ...	MADELON, L. J. ... 9 <i>Oct.</i> , '08
BILSBORROW, Canon J. R. 25 <i>June</i> , '08	SCROOGS, Lieut. H. C.,
BROWN, R. M. ... 25 <i>July</i> , '08	R.N. ... 11 <i>Nov.</i> , '08
BANBURY, G. A. L. ... 9 <i>Oct.</i> , '08	THOMPSON, A. S. ... 7 <i>Sept.</i> , '08
DAWSON, J. W. ... 12 <i>Aug.</i> , '08	TOUREAU, A. R. ... 30 <i>Apr.</i> , '08
EYRE, T. W. ... 20 <i>June</i> , '08	WHEATLEY, Rev. Canon
EDWARDS, C. H. ... 26 <i>June</i> , '08	G. ... 22 <i>May</i> , '08
MILNE, Dr. A. J. ... 9 <i>July</i> , '08	

SEYCHELLES.

DENMAN, Dr. R. ... | WRIGHT, E. B. ... 7 *May*, '08

HONG KONG.

ATLEE, N. G. ... 13 <i>Sept.</i> , '08	CULLEN, W. F. ... 20 <i>Sept.</i> , '08
ANGUS, P. ... 27 <i>Sept.</i> , '08	GOURLAY, Miss H. M. ... 17 <i>May</i> , '08
BIRD, R. E. O. ... 3 <i>July</i> , '08	HUNTER, Dr. W. ... 1 <i>Oct.</i> , '08
BARKER, Miss S. E. ... 13 <i>Aug.</i> , '08	McKENZIE, D. J. ... 12 <i>Dec.</i> , '08
BADELEY, F. J. ... 6 <i>July</i> , '08	McKAY, Sergt., J. A. ... 1 <i>Aug.</i> , '08
BALL, J. D. ... 25 <i>Jan.</i> , '09	MACDONALD, J. ... 30 <i>Apr.</i> , '08
CURWEN, W. ... 29 <i>Oct.</i> , '08	O'SULLIVAN, P. ...
COOMES, H. ... 7 <i>June</i> , '08	ORME, G. N. ... 31 <i>July</i> , '08
CRAIG, R. H. A. ... 14 <i>Jan.</i> , '09	SIM, G. ... 30 <i>Sept.</i> , '08

STRAITS SETTLEMENTS.

BATTEN, C. ...	20 Jan., '09	PHILLIPS, C. M. ...	26 Sept., '08
BOYER, G. ...	15 Sept., '08	PERRY, A. ...	...
BROOKE, G. E. ...	17 Aug., '08	ROFFEY, J. ...	15 Sept., '08
BOURNE, W. ...	19 July, '08	SMITH-STEINMETZ, G. A. J.	19 Sept., '08
BACON, E. ...	28 July, '08	STENHOUSE, M. C. ...	...
DICK, G. N. ...	10 May, '08	SHELLCOCK, F. ...	29 Apr., '08
DAVID, P. F. ...	26 Oct., '08	TYRELL, J. ...	6 Aug., '08
ELLIS, Dr. W. G. ...	16 May, '08	TRUSDALE, W. H. ...	20 Jan., '09
FANE, J. ...	20 June, '08	WHITEHEAD, C. B. ...	8 June, '08
FARRER, R. J. ...	30 May, '08	WRIGHT, F. M. ...	16 May, '08
HYNDHAM-JONES, Sir	...		
W. H. ...	24 July, '08		
LITTLEDYKE, S. ...	19 Jan., '09		
MARSHALL, W. H. ...	15 Sept., '08		
NUNN, B. ...	20 June, '08		

TANJONG PAGAR DOCK.

FISH, P. G. ...	...
WALLACE, R. ...	6 May, '08

PAHANG.

BLATHERWICK, T. C. ...	24 June, '08	KENNEDY, H. A. ...	1 June, '08
GRAY, M. T. ...	1 Aug., '08	MARSHALL, F. C. ...	21 July, '08

NEGRI SEMBILAN.

CAMPBELL, D. G. ...	21 Apr., '08	SWAN, H. E. ...	30 Nov., '08
HUGHES, G. E. E. ...	27 Aug., '08	WARD, A. E. C....	15 Oct., '08
MCCAUSLAND, C. F. ...	4 Oct., '08		

SELANGOR.

BYRNE, H. E. ...	18 Aug., '08	ROBINSON, H. O. ...	24 June, '08
CRAWFORD, R. A. ...	2 Nov., '08	SHAW, G. E. ...	11 Aug., '08
CLAYTON, T. W. ...	3 June, '08	SANGUINETTI, W. R. ...	30 Sept., '08
DESBOROUGH, C. E. M....	14 Oct., '08	VALPY, G. C. ...	27 July, '08
LOTT, W. E. ...	25 Oct., '08	WARD, J. F. ...	3 June, '08

PERAK.

BOWES, J. ...	5 Oct., '08	MACKENZIE, W. H. ...	3 Oct., '08
BLACKSHAW, W. ...	7 Nov., '08	REEVE, Miss G. R. ...	29 Nov., '08
BAILEY, D. ...	2 Sept., '08	SIBBALD, S. K. ...	25 June, '08
HOUGHTON, Miss M. ...	4 July, '08	WELD, F. J. ...	2 July, '08

FEDERATED MALAY STATES.

BROWN, J.	8 July, '08	MILLS, C. B.	10 Nov., '08
BUTTERWORTH, A. W. ...	24 Sept., '08	MACDONALD, F. J. ...	15 Oct., '08
CAMPBELL, A.	14 June, '08	NEAL, G. F.	11 May, '08
CHAPMAN, W. T.	29 May, '08	OPENSHAW, F. D. B. ...	30 June, '08
DENNY, F. O. B.	23 July, '08	PARRY, G. LI. J.	28 Aug., '08
Sports Club, St. James'		PHILLIPS, P.	14 Feb., '09
Square, S.W.		RICHARDS, H. G.	22 July, '08
EVANS, R. G.	30 Nov., '08	RAE, J. M.	7 Oct., '08
FONSECA, A. H. DE R. ...	28 Sept., '08	STEVENS, E. G.	30 Sept., '08
GRAVES, H.	2 Mar., '09	VEARY, P. J.	25 Sept., '08
HAYNES, A. S.	7 Feb., '09	YOUNG, A. E.	9 Sept., '08

CEYLON.

BAKER, C. F. S.	22 May, '08	HODSON, T. A.	13 July, '08
BRAYNE, C. V.	7 Jan., '09	LOUCH, G. H.	2 July, '08
CALDICOTT, A. E.	31 Dec., '08	LEAK, J. H.	21 Apr., '08
COWLEY, F.	13 May, '08	McMATH, J.	31 May, '08
CARBERRY, W. H. B. ...	14 Apr., '08	MOFFAT, J.	19 June, '08
DOWBIGGIN, H. L.	2 May, '08	MCDONALD, J.	30 July, '08
DAVEY, W. C. D.	2 May, '08	SPEAR, DR. A. E.	9 June, '08
DENHAM, E. B.	22 Aug., '08	STURGEON, G. W.	4 May, '08
DREW, C. R.	31 Oct., '08	THAINE, R. N.	29 May, '08
FESTING, R. A. G.	26 July, '08	THORPE, W. E.	12 May, '08
FRASER, J. H.	13 May, '08	TRANCHELL, C. L.	25 Aug., '08
GRENIER, DR. F.	4 Oct., '08	TILLEKERATNE, DR. C. J.	16 May, '08
GRINAWAY, W. C.	25 July, '08	TYRRELL, F. G.	26 Nov., '08
HYDE, G. H. M.	8 Aug., '08	VIGORS, C. T. D.	1 June, '08
HOWISON, J.	31 Oct., '08	WARMAN, S. E.	30 June, '08

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. A. E. WEATHERHEAD (retrenched from the South African Constabulary), District Superintendent of Police, Uganda.
- Mr. MALCOLM DUFF (of the Crown Agents' Office), Treasury Assistant, Uganda.
- Mr. W. F. TUTHILL (retrenched from the South African Constabulary), Assistant District Commissioner, Southern Nigeria.
- Mr. E. D. BROWNE (retrenched from the South African Constabulary), Assistant District Commissioner, East Africa Protectorate.
- Mr. A. F. SMITH (Colonial Postmaster), Receiver-General, Bermuda.
- Mr. A. K. YOUNG (Attorney-General, Nyasaland), Puisne Judge, Southern Nigeria.
- Mr. F. J. DAWSON, M.I.C.E. (late Chief Engineer, Roads and Bridges Department, Transvaal), Deputy Director of Public Works, Southern Nigeria.
- Mr. C. W. HILL (Senior Assistant Treasurer, Gold Coast), Colonial Postmaster, Gibraltar.
- Captain A. G. M. NORTON HARPER (late Chief Clerk, British Consulate, Lorenzo Marques), Assistant District Commissioner, Southern Nigeria.
- Lieutenant J. A. BAILLIE, D.S.O. (retrenched from the South African Constabulary), Assistant District Commissioner, Southern Nigeria.
-
- Mr. N. DARNELL DAVIS, C.M.G., Auditor-General of British Guiana, has arrived home on retirement. Mr. R. H. MCCARTHY, C.M.G., Collector of Customs, Trinidad, is coming home on retirement. Mr. V. G. BELL, C.M.G., Director of Public Works, Jamaica, and Mr. JUSTICE LAMB, Jamaica, intend to retire shortly.



THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

R. V. VERNON, of the Colonial Office.

VOL. I.

JUNE, 1907.

No. 1

CONTENTS.

EDITORIAL NOTES

Colonial Conferences—Shipping Questions—The Schools and the Colonies—Income Tax on Colonial Visitors.

TRANSVAAL CONSTITUTION

Points in the Letters Patent.

TRANSVAAL NATIVE AFFAIRS

Sir G. Landon's Report.

ADMINISTRATION OF NORTHERN NIGERIA

Sir F. D. Lugard's Memoranda.

ADMINISTRATION OF BRITISH NEW GUINEA

Australian Royal Commission's Report.

RAILWAY NOTES

Standardisation—Sleepers—Timber—Management—Ceylon Railways—West African Railways.

MEDICAL NOTES

Expeditions—Regiment.

MANUFACTURE OF STAMPS

Processes—Colours—Watermarks.

REVIEWS AND NOTICES

New Books—Old Age Pensions in Australia—Tropical Products.

BUSINESS NOTES

Paints—Disinfectants—System of Tenders—Contract Work—Purchases.

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE

Crown Colonies and Transvaal.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. A. E. WEATHERHEAD (retrenched from the South African Constabulary), District Superintendent of Police, Uganda.
- Mr. MALCOLM DUFF (of the Crown Agents' Office), Treasury Assistant, Uganda.
- Mr. W. F. TUTTILL (retrenched from the South African Constabulary), Assistant District Commissioner, Southern Nigeria.
- Mr. E. D. BROWNE (retrenched from the South African Constabulary), Assistant District Commissioner, East Africa Protectorate.
- Mr. A. F. SMITH (Colonial Postmaster), Receiver-General, Bermuda.
- Mr. A. K. YOUNG (Attorney-General, Nyasaland), Puisne Judge, Southern Nigeria.
- Mr. F. J. DAWSON, M.I.C.E. (late Chief Engineer, Roads and Bridges Department, Transvaal), Deputy Director of Public Works, Southern Nigeria.
- Mr. C. W. HILL (Senior Assistant Treasurer, Gold Coast), Colonial Postmaster, Gibraltar.
- Captain A. G. M. NORTON HAPPER (late Chief Clerk, British Consulate, Lorenzo Marques), Assistant District Commissioner, Southern Nigeria.
- Lieutenant J. A. BAILLIE, D.S.O. (retrenched from the South African Constabulary), Assistant District Commissioner, Southern Nigeria.

Mr. N. DARNELL DAVIS, C.M.G., Auditor-General of British Guiana, has arrived home on retirement. Mr. R. H. MCCARTHY, C.M.G., Collector of Customs, Trinidad, is coming home on retirement. Mr. V. G. BELL, C.M.G., Director of Public Works, Jamaica, and Mr. JUSTICE LAMB, Jamaica, intend to retire shortly.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies
AND

R. V. VERNON, of the Colonial Office.

VOL. I.

JUNE, 1907.

No. 1

CONTENTS.

EDITORIAL NOTES	I
Colonial Conferences—Shipping Questions—The Schools and the Colonies—Income Tax on Colonial Visitors.	
TRANSVAAL CONSTITUTION	12
Points in the Letters Patent.	
TRANSVAAL NATIVE AFFAIRS	15
Sir G. Lagden's Report.	
ADMINISTRATION OF NORTHERN NIGERIA	23
Sir F. D. Lugard's Memoranda.	
ADMINISTRATION OF BRITISH NEW GUINEA	33
Australian Royal Commission's Report.	
RAILWAY NOTES	44
Standardisation—Sleepers—Timber—Management—Ceylon Railways—West African Railways.	
MEDICAL NOTES	58
Expeditions—Reports.	
MANUFACTURE OF STAMPS	63
Processes—Colours—Watermarks.	
REVIEWS AND NOTICES	68
New Books—Old Age Pensions in Australia—Tropical Products.	
BUSINESS NOTES	83
Paints—Disinfectants—System of Tenders—Contract Work—Purchases of Foreign Goods.	
RECENT APPOINTMENTS	98
COLONIAL OFFICERS ON LEAVE	101
Crown Colonies and Transvaal.	

ADVERTISEMENTS.

STANLEY, LONDON.

LARGEST MANUFACTURERS OF
SURVEYING & DRAWING INSTRUMENTS
IN THE WORLD.



CONTRACTORS TO INDIA OFFICE,
CROWN AGENTS FOR THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.



Please send for our
H60 CATALOGUE
(Post Free), and compare our
prices with those of other
FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,
Great Turnstile, Holborn,
LONDON, W.C.

Show Rooms:—286, High Holborn, W.C.

THE COLONIAL BANK.

Established and Incorporated by Royal Charter in 1836.

SUBSCRIBED CAPITAL, £2,000,000, in 100,000 Shares of £20 each.

PAID UP, £600,000. RESERVE FUNDS, £150,000.

HEAD OFFICE, LONDON—

No. 13, BISHOPSGATE STREET WITHIN, E.C.

COURT OF DIRECTORS.

Chairman—HARRY HANKEY DOBREE, Esq.

Deputy-Chairman—E. BRODIE HOARE, Esq.

JOHN JAMES CATER, Esq.

SPENCER H. CURTIS, Esq.

THOMAS DU BUISSON, Esq.

JAMES FLETCHER, Esq.

DAVID QUIXANO HENRIQUES, Esq.

CHARLES R. GURNEY HOARE, Esq.

SIR NEVILLE LUBBOCK, K.C.M.G.

ARTHUR JOHN McCONNELL, Esq.

EDMUND C. MORGAN, Esq.

AUDITOR.

T. A. WELTON, Esq., F.C.A. (Welton, Jones & Co.)

MANAGERS.

GORDON WM. TURNER, *Secretary*. JAMES K. MORRISON.

BANKERS.

LLOYDS BANK, LIMITED.

NEW YORK AGENCY—82, WALL STREET.

BRANCHES AND AGENTS.

ANTIGUA.

BARBADOS.

BERBICE.

DEMERARA.

DOMINICA.

GRENADA—ST. GEORGE'S

AND AGENT AT

GRENVILLE.

JAMAICA—KINGSTON,

AND MONTEGO BAY

(*Sub-Branch*)

AND AGENTS AT

FALMOUTH,

SAVANNA-LA-MAR.

ST. KITTS.

ST. LUCIA.

ST. VINCENT.

ST. THOMAS.

TRINIDAD—PORT OF

SPAIN

AND AGENT AT

SAN FERNANDO.

AGENTS.

Dominion of Canada

THE BANK OF BRITISH NORTH AMERICA.

Paris

Messrs. MALLET FRÈRES & CIE.

Copenhagen

THE PRIVATE BANK.

Hamburg

Messrs. SCHRÖDER GEBRÜDER & Co.

The Bank issues Letters of Credit, Drafts on Demand, and Telegraphic Transfers on the Branches.

Receives for collection Bills of Exchange, and conducts General Banking Business connected with the West Indies.

The Bank has made special arrangements with its Agents, the Bank of British North America, for the conduct of business between the West Indies and the Dominion of Canada, and vice versa, including the issue of Drafts and Telegraphic Transfers and the collection of Bills.

ADVERTISEMENTS,

STANLEY, LONDON.

LARGEST MANUFACTURERS OF
SURVEYING & DRAWING INSTRUMENTS
IN THE WORLD.



CONTRACTORS TO INDIA OFFICE,
CROWN AGENTS FOR THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.



Please send for our
H60 CATALOGUE
(Post Free), and compare our
prices with those of other
FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,

Great Turnstile, Holborn,
LONDON, W.C.

Show Rooms:—286, High Holborn, W.C.

THE COLONIAL BANK.

Established and Incorporated by Royal Charter in 1836.

SUBSCRIBED CAPITAL, £2,000,000, in 100,000 Shares of £20 each.

PAID UP, £600,000. RESERVE FUNDS, £150,000.

HEAD OFFICE, LONDON—
No. 13, BISHOPSGATE STREET WITHIN, E.C.

COURT OF DIRECTORS.

Chairman—HARRY HANKEY DOBREE, Esq.

Deputy-Chairman—E. BRODIE HOARE, Esq.

JOHN JAMES CATER, Esq.

SPENCER H. CURTIS, Esq.

THOMAS DU BUISSON, Esq.

JAMES FLETCHER, Esq.

DAVID QUIXANO HENRIQUES, Esq.

CHARLES R. GURNEY HOARE, Esq.

SIR NEVILLE LUBBOCK, K.C.M.G.

ARTHUR JOHN McCONNELL, Esq.

EDMUND C. MORGAN, Esq.

AUDITOR.

T. A. WELTON, Esq., F.C.A. (Welton, Jones & Co.)

MANAGERS.

GORDON WM. TURNER, *Secretary*.

JAMES K. MORRISON.

BANKERS.

LLOYDS BANK, LIMITED.

NEW YORK AGENCY—82, WALL STREET.

BRANCHES AND AGENTS.

ANTIGUA.

BARBADOS.

BERBICE.

DEMERARA.

DOMINICA.

GRENADA—ST. GEORGE'S

AND AGENT AT
GRENVILLE.

JAMAICA—KINGSTON,
AND MONTEGO BAY

(*Sub-Branch*)

AND AGENTS AT

FALMOUTH,

SAVANNA-LA-MAR.

ST. KITTS.

ST. LUCIA.

ST. VINCENT.

ST. THOMAS.

TRINIDAD—PORT OF

SPAIN

AND AGENT AT

SAN FERNANDO.

AGENTS.

Dominion of Canada ... { **THE BANK OF BRITISH NORTH AMERICA.**

Paris **Messrs. MALLET FRÈRES & CIE.**

Copenhagen **THE PRIVATE BANK.**

Hamburg **Messrs. SCHRÖDER GEBRÜDER & Co.**

The Bank issues Letters of Credit, Drafts on Demand, and Telegraphic Transfers on the Branches.

Receives for collection Bills of Exchange, and conducts General Banking Business connected with the West Indies.

The Bank has made special arrangements with its Agents, the Bank of British North America, for the conduct of business between the West Indies and the Dominion of Canada, and vice versa, including the issue of Drafts and Telegraphic Transfers and the collection of Bills.

ADVERTISEMENTS.

**Manufacturers to His Majesty by Appointment. Strong Rooms, Doors, Locks & Safes.
THE BANK OF ENGLAND AND ITS BRANCHES.**

CONTRACTORS to His Majesty's War and Works Departments, for Palaces, Museums, Magazines, Indian State Railways, Admiralty, &c., &c., Prison Boards of England, Scotland, Ireland and Colonies, Great Britain and Colonial Railways, Principal Hotels, Hospitals, Asylums, Workhouses, Infirmaries.

HOBBS, HART & Co. LTD..

MANUFACTURERS OF

London-Made Locks for all Requirements.

ORIGINAL MANUFACTURERS OF

BENT BODY STEEL SAFES TO MEET ALL RISKS.

STRONG ROOM AND PARTY-WALL DOORS.

Constructors of Bullion Vault, and Muniment Rooms.

ILLUSTRATED PRICE LIST FREE ON APPLICATION.

Showrooms: 76, CHEAPSIDE, LONDON, E.C.

General Offices and Works:

ARLINGTON ST., ISLINGTON, LONDON, N.

The ABERDEEN LINE **of Direct Steamers.**

**LONDON
to
PORT NATAL.**

DELAGOA BAY, BEIRA, CHINDE, AND EAST AFRICAN PORTS.

FLEET.

SS. "Ifafa."
SS. "Illovo."
SS. "Inchanga."
SS. "Ingeli."

SS. "Inkonka."
*SS. "Inkosi."
SS. "Insizwa."

SS. "Inyati."
SS. "Inyoni."
*SS. "Inanda."

* Fitted with Wireless Telegraphy.

REGULAR SAILINGS

From No. 11 Shed, West India Import Dock, calling at Portland and Las Palmas and Tenerife alternately. These Steamers have very fine accommodation for First and Second Class Passengers at very moderate fares, and are well found in every respect. The Cabins are unusually spacious, and elegantly fitted up with all requisites, and are lit throughout with Electric Light.

SURGEON AND STEWARDESS CARRIED.

FOR FREIGHT OR PASSAGE APPLY TO THE OWNERS—

JOHN T. RENNIE, SON & CO., 4, East India Avenue, E.C.
JOHN T. RENNIE & SON, 48, Marischal Street, ABERDEEN.
JOHN T. RENNIE & SONS, DURBAN.

LONDON GUARANTEE AND ACCIDENT COMPANY, LIMITED.

Incorporated 1869.

CHIEF OFFICE: 61, MOORGATE STREET, LONDON, E.C.

CLAIMS PAID EXCEED - - - £1,375,000.
ASSETS EXCEED - - - £676,000.

Directors:

J. P. BICKERSTETH, Esq.,	Grove Mill House, Watford.
HERBERT E. COLES, Esq.,	Messrs. Padgett & Coles, 21, Finsbury Circus, E.C.
E. MURRAY IND, Esq.,	Coombe Lodge, Great Warley, Essex.
A. R. KIRBY, Esq.,	81, Cromwell Road, South Kensington.
HUGH MORRISON, Esq.,	34, Cadogan Place, S.W.
Sir OWEN ROBERTS, J.P., D.L.,	Henley Park, Guildford.
ALEXANDER WARD, Esq.,	Billericay, Essex.

Australasian Local Board.

HON. ALFRED DEAKIN, M.P. SENATOR SIR W. A. ZEAL, K.C.M.G.
Secretary in Melbourne: F. HANDLEY.

Canadian Advisory Board.

ROBERT KILGOUR, Esq., Toronto.
Canadian Branch Manager—D. W. ALEXANDER, Toronto.

AGENTS IN—

Jamaica, Messrs. Harvey and Bourke.
Mauritius, R. B. Graham, Esq.
Ceylon, Messrs. Whittall & Co.
Turk's Island, H. H. Hutchings, Esq.
Singapore, Messrs. Adamson, Gillfillan & Co., Ltd.
Trinidad, J. H. Harragin, Esq.
British Honduras, Messrs. Steven Bros. & Co.
Seychelles, Messrs. Baty Bergne & Co.
Port Elizabeth, Cape Colony, J. F. Ward, Esq.

GUARANTEE DEPARTMENT.

The Bonds of the Company are accepted by:—His Majesty's Home and Colonial Governments, the High Court of Justice, the Board of Trade, Local Government Board, the City of London, and other Municipal Corporations, and by various Banks and Railways, and other large Companies throughout the United Kingdom and the British Dependencies.

The different kinds of Risk have been carefully classified. The Company is therefore in a position to undertake the best at the lowest possible scale of premium.

Special Attention is called to the Company's Floating and Schedule Policies, under which any number of, or the whole staff of employes (provided the number is at least five), are guaranteed in one Bond. The cost is considerably less than for Ordinary Guarantees, and the risk that, through an oversight, individual Bonds may lapse is removed. Full particulars of these Special Policies will be forwarded upon application.

Policies are issued to cover:—Accidents of all kinds, Workmen's Compensation, Burglary and Theft, Lift Accidents, Employers' Liability, and Fire Brigades.

Applications are invited for Agencies where the Company is not already represented.

S. L. ANDERSON, } Joint
W. R. STRONG, F.I.A., } Secretaries.

ADVERTISEMENTS.

HENRY SOTHERAN & CO.,

Booksellers, Publishers & Bookbinders to H.M. the King.

General Agents for all Book-Buyers in India, the Colonies, and Abroad.

NEW BOOKS, MAGAZINES, and NEWSPAPERS (including FOREIGN) supplied at discount prices.

BOOKBINDING in every style, including Plain Strong Binding for Reading Clubs and Public Libraries. A large selection of BOUND BOOKS for the LIBRARY and PRESENTATION.

BOOKS SOUGHT FOR in Weekly Lists free of charge, and COMMISSIONS AT SALES executed with care and judgment.

SECOND-HAND BOOKS.—A Stock among the largest in England; especially rich in the publications of Learned Societies, and Scientific and other Periodicals. Their Monthly Catalogue of fresh purchases (well known for over fifty years as SOTHERAN'S PRICE CURRENT OF LITERATURE) will be sent post free on application.

COLONIAL AND EXPORT DEPARTMENT.

They would direct special attention to their facilities as Literary Agents in Europe for all Book-buyers abroad, and will send with pleasure any information as to terms and mode of business.

140, STRAND, W.C., & 37, PICCADILLY, W.

Telegraphic Address—BOOKMEN, LONDON.

Codes—UNICODE and A B C.

Telephone—CENTRAL, 1515.

Founded in Tower Street, City, 1816.

CROSSE & BLACKWELL,

LIMITED.

PICKLES, SAUCES, JAMS, JELLIES,
TART FRUITS, POTTED MEATS,
PRESERVED FISH,
SOUPS, GAME, SAUSAGES, HAMS,
BACON, AND CHEESE.

MAY BE OBTAINED OF STOREKEEPERS THROUGHOUT THE WORLD,

ALL GENUINE GOODS ARE LABELLED

CROSSE & BLACKWELL,

Purveyors to the King,

SOHO SQUARE, LONDON, ENGLAND.

SPECIAL AGENTS FOR

LEA & PERRINS' WORCESTERSHIRE SAUCE.

THE
COLONIAL OFFICE
JOURNAL

JUNE, 1907.

To be continued Quarterly.

(The next number will be issued at the beginning of October.)

London:

WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d.

Forwarded by the Publishers post paid to any part of the world abroad,
on remittance of ~~2s.~~ 1/9.
Subscriptions received for one year's issue.



CAMMELL LAIRD & CO., LTD.

Iron and Steel Manufacturers, Shipbuilders and Engineers.

MANUFACTURERS OF STEEL RAILS AND FISHPLATES,

AND ALL CLASSES OF RAILWAY MATERIAL, VIZ.:

LOCOMOTIVE CARRIAGE AND WAGON TYRES AND AXLES,

SPRINGS (*Laminated, Spiral and Volute*), **BUFFERS,**

Wheel Centres and other Castings,

MARINE CASTINGS AND FORGINGS FOR TURBINES

AND ALL OTHER PURPOSES,

GUNS, ARMOUR PLATES AND PROJECTILES,

SPRING STEEL, BILLETS, BLOOMS AND BARS.

ALL CLASSES OF TOOL AND MINING STEEL.

"CYCLONE" HIGH SPEED STEEL.

Special "H.R.D." Self-hardening Steel for Turning Brake Hardened Tyres.

Sole Licencees & Makers in the United Kingdom of the "ABT" System of Rack Railway for Steep Grade Lines.

MAKERS OF
BATTLESHIPS, CRUISERS, DESTROYERS AND ALL CLASSES OF VESSELS.

WORKS, —

DERWENT IRON & STEEL WORKS, WORKINGTON.

LOWTHER IRON WORKS, WORKINGTON.

SOLWAY IRON WORKS, MARYPORT.

YORKSHIRE STEEL & IRON WORKS, PENISTONE.

GRIMSTHORPE ORDINANCE, STEEL, TYRE & SPRING WORKS.

NEW OAKS COLLIERIES, NR. BARNLEY.

SHIPBUILDING WORKS, BIRKENHEAD.

**Contractors to Admiralty, War Office, Crown Agents
and Foreign Governments.**

HEAD OFFICE:—CYCLOPS WORKS, SHEFFIELD. LONDON OFFICE:—9, VICTORIA ST., S.W.

BENSON'S Warranted Watches.

Best for ACCURACY, DURABILITY, and STRENGTH.



In 18ct. Gold Cases
£25.

BENSON'S Renowned "FIELD" WATCH **£25**

For Home or Colonial wear,

BEST LONDON MAKE. Half Chronometer, Breguet Sprung, with all the latest improvements to be found only in BENSON'S WATCHES. In Hunting, Half Hunting, or Crystal Case 18ct. Gold Cases, including rich monogram, **£25** cash.

Or by "The Times" system of
20 MONTHLY PAYMENTS OF 25s.

Benson's do not charge extra for purchasing this way.



Gold Chains (London Hall Marked), **£5 to £20.**



In 18ct. Gold Cases
£20.

We guarantee to Customers sending Post Orders the same benefits and attention as to those making personal selections.

Benson's £20 Keyless Ludgate,

BEST LONDON MAKE, with all latest improvements. In Hunting, Half-Hunting, or Crystal Glass. 18ct. Gold Cases, including rich monogram, **£20**, or by

"The Times" system of
20 MONTHLY PAYMENTS OF £1.

NOTICE.—For Indian and Colonial Orders payments on "The Times" System should be on a 12 MONTHS' basis instead of 20.

**BENSON'S
Illustrated
BOOKS.**

- No. 1, Of Watches, Chains and Jewellery.
No. 2, Clocks, Bags, Suit Cases, Imperial Plate, and pretty, yet inexpensive, articles in Silver for presents.



Brilliant,
£4 4s.



Ruby or Sapphire
and Brilliant, **£6.**



Amethyst, Diamond
Points, **£6 6s.**



Brilliant,
£17 10s.



Pearls and
Brilliant, **£30.**

Electric
Power
Factory:

62 & 64, Ludgate Hill, E.C.,

AND 25, OLD BOND STREET, W.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

• • • • •

"The book is intended for educational purposes, and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

BULLIVANT & Co., Ltd.,

INVENTORS AND MANUFACTURERS OF
FLEXIBLE

STEEL WIRE ROPES.

FLEXIBLE. DURABLE. RELIABLE.

WIRE ROPES

FOR CRANES, LIFTS,
HOISTS, DERRICKS, ETC.

WIRE ROPES

FOR SHIPS' HAWSERS,
RUNNING & STANDING
RIGGING.

WIRE ROPES

FOR CABLE TRAMWAYS,
INCLINES, COLLIERIES,
MINES.

WIRE ROPES

FOR HAULING & WINDING,
SUSPENSION BRIDGES, ETC.

BLOCKS, PULLEYS, AND ALL WIRE ROPE APPLIANCES.

AERIAL ROPEWAYS

Designed and Constructed ON ALL SYSTEMS
for Conveying Materials of every Description.

COLONIAL AGENCIES:

BULLIVANTS' AUSTRALIAN CO., LTD., 331, KENT STREET, SYDNEY.
10, NEW EXCHANGE BLDGS., JOHANNESBURG (F. W. DUQUEMIN).
T. A. MARTIN & CO., 6 AND 7, CLIVE STREET, CALCUTTA.
WALKER, SONS & CO., LTD., COLOMBO, CEYLON.

Registered Office:

72, Mark Lane, E.C., LONDON. MILWALL.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

"The book is intended for educational purposes, and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

BULLIVANT & Co., Ltd.,

INVENTORS AND MANUFACTURERS OF
FLEXIBLE

STEEL WIRE ROPES.

FLEXIBLE. DURABLE. RELIABLE.

WIRE ROPES

FOR CRANES, LIFTS,
HOISTS, DERRICKS, ETC.

WIRE ROPES

FOR SHIPS' HAWSERS,
RUNNING & STANDING
RIGGING.

WIRE ROPES

FOR CABLE TRAMWAYS,
INCLINES, COLLIERIES,
MINES.

WIRE ROPES

FOR HAULING & WINDING,
SUSPENSION BRIDGES, ETC.

BLOCKS, PULLEYS, AND ALL WIRE ROPE APPLIANCES.

AËRIAL ROPEWAYS

Designed and Constructed ON ALL SYSTEMS
for Conveying Materials of every Description.

COLONIAL AGENCIES:

BULLIVANTS' AUSTRALIAN CO., LTD., 331, KENT STREET, SYDNEY.
10, NEW EXCHANGE BLDGS., JOHANNESBURG (F. W. DUQUEMIN).
T. A. MARTIN & CO., 6 AND 7, CLIVE STREET, CALCUTTA.
WALKER, SONS & CO., LTD., COLOMBO, CEYLON.

Registered Office:

72, Mark Lane, E.C., LONDON.

WORKS:
MILWALL.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. I.

OCTOBER, 1907.

No. 2.

CONTENTS.

EDITORIAL NOTES	11
IMPERIAL ORGANIZATION	120
THE STORY OF THE PACIFIC CABLE	126
EMIGRATION AND THE INFORMATION OFFICE	135
BRITISH MANUFACTURES IN COLONIAL MARKETS	139
THE DEVELOPMENT OF NORTHERN NIGERIA	142
FRENCH AND BRITISH METHODS IN WEST AFRICA	147
A VIRGIN TROPICAL FOREST IN EAST AFRICA	150
CANADA'S PURCHASING POWERS IN RELATION TO BRITISH WEST INDIAN PRODUCE	156
RUBBER CULTIVATION IN CEYLON	159
MANUFACTURE OF STAMPS—(<i>continued</i>)	162
BUSINESS NOTES	166
MEDICAL NOTES	178
RAILWAY NOTES	183
REVIEWS AND NOTICES	186
COLONIAL OFFICERS ON LEAVE	192

BENSON'S Warranted Watches.

Best for ACCURACY, DURABILITY, and STRENGTH.



In 18ct. Gold
Cases
£25.

BENSON'S Renowned "FIELD" WATCH £25

For Home or Colonial wear,

BEST LONDON MAKE. Half Chronometer, Breguet Sprung, with all the Latest Improvements to be found only in BENSON'S WATCHES. In Hunting, Half Hunting, or Crystal Glass 18ct. Gold Cases, including rich monogram, £25 cash.

Or by "The Times" system of
20 MONTHLY PAYMENTS of 25s.

Benson's do not charge extra for purchasing this way.



Gold Chains (London Hall Marked), £5 to £20.



In 18ct. Gold
Cases
£20.

We guarantee to Customers sending Post Orders the same benefits and attention as to those making personal selections.

Benson's £20 Keyless Ludgate,

BEST LONDON MAKE, with all latest improvements. In Hunting, Half-Hunting, or Crystal Glass, 18ct. Gold Cases, including rich monogram, £20, or by

"The Times" system of
20 MONTHLY PAYMENTS OF £1.

NOTICE.—For Indian and Colonial Orders payments on "The Times" System should be on a 12 MONTHS' basis instead of 20.

**BENSON'S
Illustrated
BOOKS.**

- No. 1. Of Watches, Chains and Jewellery.
No. 2. Clocks, Bags, Suit Cases, Imperial Plate, and pretty, yet inexpensive articles in Silver for presents.



Brilliant,
£4 4s.



Ruby or Sapphire
and Brilliant, £6.



Amethyst, Diamond
Points, £6 6s.



Brilliant,
£17 10s.



Pearls and
Brilliant, £30.

Electric
Power
Factory!

62 & 64, Ludgate Hill, E.C.,

AND 25, OLD BOND STREET, W.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the Colonial Office List is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts.

Journal of the Royal Colonial Institute.

"The book is intended for educational purposes, and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

BENSON'S Warranted Watches.

Best for ACCURACY, DURABILITY, and STRENGTH.



In 18ct. Gold
Cases—
£25.

BENSON'S Renowned "FIELD" WATCH

For Home or Colonial wear.

BEST LONDON MAKE. Half Chronometer, Breguet Spring, with all the Latest Improvements to be found only in BENSON'S WATCHES. In Hunting, Half Hunting, or Crystal Glass 18ct. Gold Cases, including rich monogram, **£25** cash.

Or by "The Times" system of
20 MONTHLY PAYMENTS OF 25s.

*in chains extra for pure
this way.*



Gold Chains (London Hall Marked), **£5 to £20.**



In 18ct. Gold
Cases
£20.

We guarantee to Customers sending Post Orders the same benefits and attention as to those making personal selections.

Benson's £20 Keyless Ludgate,

BEST LONDON MAKE, with all latest improvements. In Hunting, Half-Hunting, or Crystal Glass, 18ct. Gold Cases, including rich monogram. **£20,** or by

"The Times" system of
20 MONTHLY PAYMENTS OF £1.

NOTICE.—For Indian and Colonial Orders payments on "The Times" System should be on a 12 MONTHS basis instead of 20.

**BENSON'S
Illustrated
BOOKS.**

No. 1, Of Watches, Chains and Jewellery.

No. 2, Clocks, Bags,
articles in for presents.

pretty, yet inexpensive



Emeralds, £12.



Ruby or Sapphire
and Brilliants, **£20.**



Amethysts, Diamond
Points, **£5 6s.**



Brilliants,
£17 10s.



Pearls and
Brilliants, **£20**

Electric
Power
Factory:

62 & 64, Ludgate Hill, E.C.,

AND 26, OLD BOND STREET, W

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

"The book is intended for educational purposes, and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

**Manufacturers to His Majesty by Appointment. Strong Rooms, Doors, Locks & Safes.
THE BANK OF ENGLAND AND ITS BRANCHES.**

CONTRACTORS to His Majesty's War and Works Departments, for Palaces, Museums, Magazines, Indian State Railways, Admiralty, &c., &c., Prison Boards of England, Scotland, Ireland and Colonies, Great Britain and Colonial Railways, Principal Hotels, Hospitals, Asylums, Workhouses, Infirmaries.

HOBBS, HART & Co. LTD..

MANUFACTURERS OF
London-Made Locks for all Requirements.

ORIGINAL MANUFACTURERS OF

BENT BODY STEEL SAFES TO MEET ALL RISKS.

STRONG ROOM AND PARTY-WALL DOORS.

Constructors of Bullion Vault, and Muniment Rooms.

ILLUSTRATED PRICE LIST FREE ON APPLICATION.

Showrooms: 76, CHEAPSIDE, LONDON, E.C.

General Offices and Works:

ARLINGTON ST., ISLINGTON, LONDON, N.

The ABERDEEN LINE LONDON to PORT NATAL. of Direct Steamers.

DELAGOA BAY, BEIRA, CHINDE, AND EAST AFRICAN PORTS.

FLEET.

SS. "Ifafa."
SS. "Illovo."
SS. "Inchanga."
SS. "Ingeli."

SS. "Inkonka."
*SS. "Inkosi."
SS. "Insizwa."

SS. "Inyati."
SS. "Inyoni."
*SS. "Inanda."

* Fitted with Wireless Telegraphy.

REGULAR SAILINGS

From No. 11 Shed, West India Import Dock, calling at Portland and Las Palmas and Tenerife alternately. These Steamers have very fine accommodation for First and Second Class Passengers at very moderate fares, and are well found in every respect. The Cabins are unusually spacious, and elegantly fitted up with all requisites, and are lit throughout with Electric Light.

SURGEON AND STEWARDESS CARRIED.

FOR FREIGHT OR PASSAGE APPLY TO THE OWNERS—

JOHN T. RENNIE, SON & CO., 4, East India Avenue, E.C.

JOHN T. RENNIE & SON, 43, Marischal Street, ABERDEEN.

JOHN T. RENNIE & SONS, DURBAN.

LONDON GUARANTEE AND ACCIDENT COMPANY, LIMITED.

Incorporated 1869.

CHIEF OFFICE: 61, MOORGATE STREET, LONDON, E.C.

CLAIMS PAID EXCEED - - - £1,375,000.

ASSETS EXCEED - - - £676,000.

Directors:

J. P. BICKERSTETH, Esq.,	Grove Mill House, Watford.
HERBERT E. COLES, Esq.,	Messrs. Padgett & Coles, 21, Finsbury Circus, E.C.
E. MURRAY IND, Esq.,	Coombe Lodge, Great Warley, Essex.
A. R. KIRBY, Esq.,	81, Cromwell Road, South Kensington.
HUGH MORRISON, Esq.,	34, Cadogan Place, S.W.
Sir OWEN ROBERTS, J.P., D.L.,	Henley Park, Guildford.
ALEXANDER WARD, Esq.,	Billericay, Essex.

Australasian Local Board.

HON. ALFRED DEAKIN, M.P. SENATOR SIR W. A. ZEAL, K.C.M.G.
Secretary in Melbourne: F. HANDLEY.

Canadian Advisory Board.

ROBERT KILGOUR, Esq., Toronto.
Canadian Branch Manager—D. W. ALEXANDER, Toronto.

AGENTS IN—

Jamaica, Messrs. Harvey and Bourke.
Mauritius, R. B. Graham, Esq.
Ceylon, Messrs. Whittall & Co.
Turk's Island, H. H. Hutchings, Esq.
Singapore, Messrs. Adamson, Gilfillan & Co., Ltd.
Trinidad, J. H. Harragin, Esq.
British Honduras, Messrs. Steven Bros. & Co.
Seychelles, Messrs. Baty Bergne & Co.
Port Elizabeth, Cape Colony, J. F. Ward, Esq.

GUARANTEE DEPARTMENT.

The Bonds of the Company are accepted by:—His Majesty's Home and Colonial Governments, the High Court of Justice, the Board of Trade, Local Government Board, the City of London, and other Municipal Corporations, and by various Banks and Railways, and other large Companies throughout the United Kingdom and the British Dependencies.

The different kinds of Risk have been carefully classified. The Company is therefore in a position to undertake the best at the lowest possible scale of premium.

Special Attention is called to the Company's Floating and Schedule Policies, under which any number of, or the whole staff of employes (provided the number is at least five), are guaranteed in one Bond. The cost is considerably less than for Ordinary Guarantees, and the risk that, through an oversight, individual Bonds may lapse is removed. Full particulars of these Special Policies will be forwarded upon application.

Policies are issued to cover:—Accidents of all kinds, Workmen's Compensation, Burglary and Theft, Lift Accidents, Employers' Liability, and Fire Brigades.

Applications are invited for Agencies where the Company is not already represented.

S. L. ANDERSON,	} Joint
W. R. STRONG, F.I.A.,	

Secretaries.

KAHN

TRUSSED BARS



THE KAHN TRUSSED BAR, ALTERNATING TYPE

FOR

REINFORCED CONCRETE.

KAHN TRUSSED BARS

Are **UNEQUALLED** as a Reinforcement of Concrete for every Kind of Structure, including :—

**PUBLIC BUILDINGS,
FACTORIES,
WAREHOUSES,
BRIDGES,
ROOFS,
STAIRCASES, etc., etc.**

BECAUSE :

- (1) The System fulfils every Scientific requirement ;
- (2) Exhaustive tests have established its efficiency ;
- (3) £10,000,000 worth of Buildings have been erected on the Kahn System ;
- (4) The Kahn System insures **RAPIDITY** and **ECONOMY** of erection ;
- (5) With rapidity and economy are combined **DURABILITY** and **STRENGTH**.

Many other reasons are given in our Handbook, which will be sent to you **FREE**, on application to

The TRUSSED CONCRETE STEEL CO., LTD.,
56, CAXTON HOUSE, WESTMINSTER, S.W.

THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1907.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world abroad
on remittance of 1s. 9d.

Subscriptions received for one year's issue.



CAMMELL LAIRD & CO., LTD.

Iron and Steel Manufacturers, Shipbuilders and Engineers.

MANUFACTURERS OF

STEEL RAILS AND FISHPLATES,

AND ALL CLASSES OF RAILWAY MATERIAL, VIZ.:

LOCOMOTIVE CARRIAGE AND WAGON TYRES AND AXLES,

SPRINGS (*Laminated, Spiral and Volute*), **BUFFERS,**

Wheel Centres and other Castings,

MARINE CASTINGS AND FORGINGS FOR TURBINES

AND ALL OTHER PURPOSES,

GUNS, ARMOUR PLATES AND PROJECTILES,

SPRING STEEL, BILLETS, BLOOMS AND BARS.

ALL CLASSES OF TOOL AND MINING STEEL.

CYCLONE

HIGH SPEED STEEL.

Special "H.R.D." Self-hardening Steel for Turning Brake Hardened Tyres.

Sole Licensees & Makers in the United Kingdom of the "ABT" System of Rack Railway for Steep Grade Lines.

MAKERS OF

BATTLESHIPS, CRUISERS, DESTROYERS AND ALL CLASSES OF VESSELS.

WORKS:—

CYCLOPS STEEL & IRON WORKS, SHEFFIELD.

DERWENT IRON & STEEL WORKS, WORKINGTON.

LOWTHER IRON WORKS, WORKINGTON.

SOLWAY IRON WORKS, MARYPORT.

YORKSHIRE STEEL & IRON WORKS, PENISTONE.

GRIMESTHORPE ORDNANCE, STEEL, TYRE & SPRING WORKS, SHEFFIELD.

NEW OAKS COLLIERIES, NR. BARNSBLEY.

SHIPYARD, BIRKENHEAD.

**Contractors to Admiralty, War Office, Crown Agents
and Foreign Governments.**

HEAD OFFICE:—CYCLOPS WORKS, SHEFFIELD. LONDON OFFICE:—9, VICTORIA ST., S.W.

ADVERTISEMENTS.

METHUEN & Co., 36, ESSEX STREET, LONDON, W.C.

Baden-Powell (R. S. S.), Major-General. **THE DOWNFALL OF PREMPEH.** A Diary of Life in Ashanti, 1895. Illustrated. *Third Edition. Large Crown 8vo. 6s.*

A Colonial Edition is also published.

The diary of the officer commanding the native levy. After giving the reasons for the expedition, the author describes the journey through the bush and the arrival and seizure of Kumassi. An appendix by Sir George Baden-Powell deals with the political and commercial position of Ashanti.

THE MATABELE CAMPAIGN, 1896. With nearly 100 Illustrations. *Fourth Edition. Large Crown 8vo. 6s.*

A Colonial Edition is also published.

A volume of sketches taken on the spot during the campaign in Matabeleland.

Hall (R. N.) and Neal (W. G.). **THE ANCIENT RUINS OF RHODESIA.** Illustrated. *Second Edition, revised. Demy 8vo. 10s. 6d. net.*

This book gives an account of the ancient gold workings of Rhodesia, and contains descriptions of two hundred ruins of temples and forts. The ancient gold industry in Rhodesia was extensive, continuous, and successful, the continuity of the ancient workings being recognised by prospectors as a guide to payable reefs. The ancients never sunk further than water-level, below which depths the most successful gold mines are now working. The ancient ruins are shown in red on the large map supplied with the book.

Hall (R. N.). **GREAT ZIMBABWE.** With numerous plans and Illustrations. *Second Edition. Royal 8vo. 21s. net.*

In 1902, Mr. R. N. Hall resumed his archaeological researches at Great Zimbabwe, and continued the work of exploration at this central group of monuments down to the year 1904. The results, which have exceeded all expectations, are embodied in the present volume, which thus forms a necessary sequel to 'The Ancient Ruins.' It comprises full descriptions of the chief edifices—Elliptical Temple, Conical Tower, Acropolis, Terraces, Platforms, Enclosing Walls, Passages, and Approaches—together with detailed accounts of the hitherto almost unknown detached groups in 'The Valley of Ruins,' and the many other remains covering a space of fully a mile radiating in all directions from the great central structures.

Hosie (Alexander). **MANCHURIA.** With Illustrations and a Map. *Second Edition. Demy 8vo. 7s. 6d. net.*

A Colonial Edition is also published.

The first four chapters give a history of the important events which have happened in Manchuria since 1899, and the remaining chapters are devoted to a study of the country, its people, products, industries and trade.

Johnston (Sir H. H.), K.C.B. **BRITISH CENTRAL AFRICA.** With nearly 200 Illustrations and Six Maps. *Third Edition. Crown 4to. 18s. net.*

A Colonial Edition is also published.

The volume includes chapters on (1) The History of Nyasaland and British Central Africa generally, with detailed accounts of events during the last seven years. (2) A detailed description of the various races, considered anthropologically and ethnologically. (3) The language of British Central Africa. (4) The European settlers, their mode of life: coffee cultivation, etc. (5) The Missionaries. (6) The fauna of Nyasaland, with much information concerning its big game. (7) The flora and the minerals. (8) The scenery (copiously illustrated to show the remarkable natural beauty of the country); and (9) A concluding chapter on the future prospects of the country.

Robertson (C. Grant) and Bartholomew (J. G.), F.R.S.E., F.R.G.S. **A HISTORICAL AND MODERN ATLAS OF THE BRITISH EMPIRE.** *Demy 4to. 4s. 6d. net.*

The Atlas contains 64 Maps, with numerous inserts, Historical Tables and Notes, an Introduction, a Historical Gazetteer, a Bibliography, and an Index. The combination of modern maps on physical geography, trade, industry, etc., with the special and extensive historical maps of the Empire as a whole and of each part of it (e.g. India, Canada, etc.), give the Atlas a character and completeness not hitherto offered by any other Atlas.

Scott (A. M.). **WINSTON SPENCER CHURCHILL.** With Portraits and Illustrations. *Crown 8vo. 3s. 6d.*

An appreciative record of an adventurous career and of a new and powerful force in politics. The scope and intention of the book are best indicated by the Table of Contents: Youth and Genius—Subaltern of Hussars—'The Bright Eyes of Danger'—The South African War—The Member for Oldham—'The Tattered Flag'—Army Reform—The Fair Trade Issue—The Parting of the Ways—Rallying the Opposition—A Future Leader.

Dunn (J. T.) D.Sc., and Mundella (V. A.). **GENERAL ELEMENTARY SCIENCE** With 114 Illustrations. *Second Edition. Crown 8vo. 3s. 6d.*

An intermediate course in Physics and Chemistry for London Matriculation. It is the text-book adapted by the Admiralty for Elementary Science at Greenwich College.

BULLIVANT & Co., Ltd.,

INVENTORS AND MANUFACTURERS OF
FLEXIBLE

STEEL WIRE ROPES.

FLEXIBLE. DURABLE. RELIABLE.

WIRE ROPES

FOR CRANES, LIFTS,
HOISTS, DERRICKS, ETC.

WIRE ROPES

FOR SHIPS' HAWSERS,
RUNNING & STANDING
RIGGING.

WIRE ROPES

FOR CABLE TRAMWAYS,
INCLINES, COLLIERIES,
MINES.

WIRE ROPES

FOR HAULING & WINDING,
SUSPENSION BRIDGES, ETC.

BLOCKS, PULLEYS, AND ALL WIRE ROPE APPLIANCES.

AËRIAL ROPEWAYS

Designed and Constructed ON ALL SYSTEMS
for Conveying Materials of every Description.

COLONIAL AGENCIES:

BULLIVANTS' AUSTRALIAN CO., LTD., 331, KENT STREET, SYDNEY.
10, NEW EXCHANGE BLDGS., JOHANNESBURG (F. W. DUQUEMIN).
T. A. MARTIN & CO., 6 AND 7, CLIVE STREET, CALCUTTA.
WALKER, SONS & CO., LTD., COLOMBO, CEYLON.

Registered Office:

72, Mark Lane, E.C., LONDON. WORKS:
MILWALL.

HENRY SOTHERAN & CO.,

Booksellers, Publishers & Bookbinders to H.M. the King.

General Agents for all Book-Buyers in India, the Colonies, and Abroad.

NEW BOOKS, MAGAZINES, and NEWSPAPERS (including **FOREIGN**) supplied at discount prices.

BOOKBINDING in every style, including Plain Strong Binding for Reading Clubs and Public Libraries. A large selection of **BOUND BOOKS** for the **LIBRARY** and **PRESENTATION**.

BOOKS SOUGHT FOR in Weekly Lists free of charge, and **COMMISSIONS AT SALES** executed with care and judgment.

SECOND-HAND BOOKS.—A Stock among the largest in England; especially rich in the publications of Learned Societies, and Scientific and other Periodicals. Their Monthly Catalogue of fresh purchases (well known for over fifty years as **SOTHERAN'S PRICE CURRENT OF LITERATURE**) will be sent post free on application.

COLONIAL AND EXPORT DEPARTMENT.

They would direct special attention to their facilities as Literary Agents in Europe for all Book-buyers abroad, and will send with pleasure any information as to terms and mode of business.

140, STRAND, W.C., & 37, PICCADILLY, W.

Telegraphic Address—BOOKMEN, LONDON.

Codes—UNICODE and A B C.

Telephone—CENTRAL, 1515.

Founded in Tower Street, City, 1816.

CROSSE & BLACKWELL.

LIMITED.

PICKLES, SAUCES, JAMS, JELLIES,
TART FRUITS, POTTED MEATS,
PRESERVED FISH,
SOUPS, GAME, SAUSAGES, HAMS,
BACON, AND CHEESE.

MAY BE OBTAINED OF STOREKEEPERS THROUGHOUT THE WORLD.

ALL GENUINE GOODS ARE LABELLED

CROSSE & BLACKWELL,

Purveyors to the King,

SOHO SQUARE, LONDON, ENGLAND.

SPECIAL AGENTS FOR

LEA & PERRINS' WORCESTERSHIRE SAUCE.

THE COLONIAL BANK.

Established and Incorporated by Royal Charter in 1836.

SUBSCRIBED CAPITAL, £2,000,000, in 100,000 Shares of £20 each.

PAID UP, £600,000. RESERVE FUNDS, £150,000.

HEAD OFFICE, LONDON—

No. 13, BISHOPSGATE STREET WITHIN, E.C.

COURT OF DIRECTORS.

Chairman—HARRY HANKEY DOBREE, Esq.

Deputy-Chairman—E. BRODIE HOARE, Esq.

JOHN JAMES CATER, Esq.

SPENCER H. CURTIS, Esq.

THOMAS DU BUISSON, Esq.

JAMES FLETCHER, Esq.

DAVID QUIXANO HENRIQUES, Esq.

CHARLES R. GURNEY HOARE, Esq.

SIR NEVILLE LUBBOCK, K.C.M.G.

ARTHUR JOHN McCONNELL, Esq.

EDMUND C. MORGAN, Esq.

AUDITOR.

T. A. WELTON, Esq., F.C.A. (Welton, Jones & Co.)

MANAGERS.

GORDON WM. TURNER, *Secretary*.

JAMES K. MORRISON.

BANKERS.

LLOYDS BANK, LIMITED.

NEW YORK AGENCY—82, WALL STREET.

BRANCHES AND AGENTS.

ANTIGUA.

BARBADOS.

BERBICE.

DEMERARA.

DOMINICA.

GRENADA—ST. GEORGE'S

AND AGENT AT

GRENVILLE.

JAMAICA—KINGSTON,

AND MONTEGO BAY

(*Sub-Branch*)

AND AGENTS AT

FALMOUTH,

SAVANNA-LA-MAR.

ST. KITTS.

ST. LUCIA.

ST. VINCENT.

ST. THOMAS.

TRINIDAD—PORT OF

SPAIN

AND AGENT AT

SAN FERNANDO.

AGENTS.

Dominion of Canada ... { THE BANK OF BRITISH NORTH AMERICA.

Paris Messrs. MALLET FRÈRES & CIE.

Copenhagen THE PRIVATE BANK.

Hamburg Messrs. SCHRÖDER GEBRÜDER & Co.

The Bank Issues Letters of Credit, Drafts on Demand, and Telegraphic Transfers on the Branches.

Receives for collection Bills of Exchange, and conducts General Banking Business connected with the West Indies.

The Bank has made special arrangements with its Agents, the Bank of British North America, for the conduct of business between the West Indies and the Dominion of Canada, and vice versa, including the issue of Drafts and Telegraphic Transfers and the collection of Bills.

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT, WOLVERHAMPTON, AND LONDON (ENG.)

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From **BRISTOL (Avonmouth Dock)** to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

THE COLONIAL BANK.

Established and Incorporated by Royal Charter in 1836.

SUBSCRIBED CAPITAL, £2,000,000, in 100,000 Shares of £20 each.

PAID UP, £600,000. RESERVE FUNDS, £150,000.

HEAD OFFICE, LONDON—

No. 13, BISHOPSGATE STREET WITHIN, E.C.

COURT OF DIRECTORS.

Chairman—HARRY HANKEY DOBREE, Esq.

Deputy-Chairman—E. BRODIE HOARE, Esq.

JOHN JAMES CATER, Esq.
SPENCER H. CURTIS, Esq.
THOMAS DU BUISSON, Esq.
JAMES FLETCHER, Esq.
DAVID QUIXANO HENRIQUES, Esq.

CHARLES R. GURNEY HOARE, Esq.
SIR NEVILLE LUBBOCK, K.C.M.G.
ARTHUR JOHN McCONNELL, Esq.
EDMUND C. MORGAN, Esq.

AUDITOR.

T. A. WELTON, Esq., F.C.A. (Welton, Jones & Co.)

MANAGERS.

GORDON WM. TURNER, *Secretary*. JAMES K. MORRISON.

BANKERS.

LLOYDS BANK, LIMITED.

NEW YORK AGENCY—82, WALL STREET.

BRANCHES AND AGENTS.

ANTIGUA.
BARBADOS.
BERBICE.
DEMERARA.
DOMINICA.
GRENADA—ST. GEORGE'S
AND AGENT AT
GRENVILLE.

JAMAICA—KINGSTON,
AND MONTEGO BAY
(*Sub-Branch*)
AND AGENTS AT
FALMOUTH,
SAVANNA-LA-MAR.
ST. KITTS.
ST. LUCIA.

ST. VINCENT.
ST. THOMAS.
TRINIDAD—PORT OF
SPAIN
AND AGENT AT
SAN FERNANDO.

AGENTS.

Dominion of Canada	...	{ THE BANK OF BRITISH NORTH AMERICA.
Paris	... ..	Messrs. MALLET FRÈRES & CIE.
Copenhagen	... ..	THE PRIVATE BANK.
Hamburg	... ..	Messrs. SCHRÖDER GEBRÜDER & Co.

The Bank issues Letters of Credit, Drafts on Demand, and Telegraphic Transfers on the Branches.

Receives for collection Bills of Exchange, and conducts General Banking Business connected with the West Indies.

The Bank has made special arrangements with its Agents, the Bank of British North America, for the conduct of business between the West Indies and the Dominion of Canada, and vice versa, including the issue of Drafts and Telegraphic Transfers and the collection of Bills.

JOHN LYSAGHT, LIMITED,
ST. VINCENT'S IRON WORKS,
BRISTOL,
AND AT NEWPORT, WOLVERHAMPTON, AND LONDON (ENG.)

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND

R. V. VERNON, of the Colonial Office.

VOL. I.

JANUARY, 1908.

No. 3.

CONTENTS.

EDITORIAL NOTES	205
WIRELESS TELEGRAPHY IN THE EMPIRE	216
JURISDICTION BEYOND THE REALM	223
NATIVE AFFAIRS IN NATAL	227
MINERAL RESOURCES OF SOUTHERN NIGERIA	233
CANADA AND OLD AGE PENSIONS	239
LAND IN BRITISH EAST AFRICA	242
STAMPS	245
REVIEWS AND NOTICES	247
BUSINESS NOTES	251
RAILWAY NOTES	256
MEDICAL NOTES	263
ASIATIC IMMIGRATION—LETTER TO THE EDITORS	267
COLONIAL OFFICIALS ON LEAVE	276

ADVERTISEMENTS.

STANLEY, LONDON.

LARGEST MANUFACTURERS OF
SURVEYING & DRAWING INSTRUMENTS
IN THE WORLD.

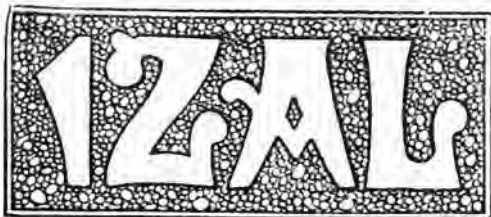
CONTRACTORS TO INDIA OFFICE,
CROWN AGENTS FOR THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.



Please send for our
H60 CATALOGUE
(Post Free), and compare our
prices with those of other
FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,
Great Turnstile, Holborn,
LONDON, W.C.

Show Rooms:—286, High Holborn, W.C.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISING

STANLEY, LONDON.

**LARGEST MANUFACTURERS OF
SURVEYING & DRAWING INSTRUMENTS
IN THE WORLD.**

**CONTRACTORS TO INDIA OFFICE,
CROWN AGENTS FOR THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.**



Please send for our

H60 CATALOGUE

*(Post Free), and compare our
prices with those of other*

FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,
Great Turnstile, Holborn,
LONDON. W.C.

Show Rooms:—286, High Holborn, W.C.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

**For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.**

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.



THE PERFECTED PAINT

Velure

There is no paint on earth
SO ELASTIC as Velure,
 nor, **BECAUSE OF THIS,**
 so perfect in surface, so
 free from flaws, cracks and
 blisters, so easily kept clean
 or so durable for indoor or
 outdoor painting, especially
 if exposed to sun & weather
 which quickly destroy ordinary
 paint but leave Velure unaffec-
 ted for years. No varnish required
ITS SECRET IS ELASTICITY.

PROVED BY LETTERS FROM HUNDREDS OF USERS.

Send for Handbook
 with full particulars to **C. Chancellor & Co.,** 13, Clerkenwell Rd.,
 LONDON, E.C.

Name this publication.

**VERY HOT
 AND
 VERY COLD
 CLIMATES**

WHERE EXPOSURE
 TO SUN AND
 EXTREMES OF
 TEMPERATURE MAKE
 ORDINARY PAINTS
 AND VARNISHES
 CRACK, CHIP, CRAZE
 AND PEEL OFF,
 SCARCELY AFFECT
 THE LASTING
 PROPERTIES OF

Velure.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

North British & Mercantile Buildings, East Parade, LEEDS.

Grams: "Ferro, Leeds."
 Phone: 2821.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :— Monolithic Construction, | Light, Durable,
 Economical, Fireproof, | Vibrationless, Sanitary.

More than 14,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories,
 Grain Silos, Coal Hoppers,
 Reservoirs, Wharves, Jetties,
 Retaining Walls, Piers, Bridges
 up to 200 ft. clear span, Water
 Tower, Swimming Baths, Water
 and Sewer Pipes, &c., &c., are
 now in use.

A LARGE NUMBER OF
 WELL-MATURED FERRO-
 CONCRETE PILES OF
 DIFFERENT LENGTHS AND
 SECTIONS KEPT IN STOCK
 AT OUR HULL DEPÔT READY
 FOR IMMEDIATE SHIPMENT.

ADVERTISEMENTS.

HENRY POOLEY & SON, LIMITED.



Manufacturers of every Description of Weighing Machinery.

Head Office :—TEMPLE STREET, BIRMINGHAM.

Telegrams :—Pooley, Birmingham.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

C. H. REYNOLDS,

**Queen Anne's Chambers,
Westminster.**

General Manager.

ADVERTISEMENTS.



Silver Medal,
Sydney, 1879.



Registered
Trade Mark.



Awarded First-Class Medal for
Prismatic Compass & Stand, 1893.

Cable Address :
"Altazimuth,
London."



Second Award,
Melbourne, 1880.

HIGHEST AWARDS FOR COMPASSES, BAROMETERS, AND SUN-DIALS.

Instrument Makers
TO
**THE ADMIRALTY,
WAR OFFICE,
INDIA OFFICE,
&c.**

Makers of

Abney's Levels,
Abney's Levels and
Prismatic Compass
Combined, Barker's
Patent.
Aneroid Barometers, for
Pocket, Surveying and
Mining, with Barker's
Registered Altitude
Scales.
Box Sextant & Prismatic
Compass Combined,
Barker's Patent.
Box Sextants.
Clinometer Rules.
Clinometer and Sight
Compass Combined,
Barker's Improved.

ESTABLISHED 1848.

BARKER'S PATENT ALTITUDE INSTRUMENT AND PRISMATIC COMPASS COMBINED.

(PATENT 1,928)



As Altitude Instrument
and Clinometer.

Made in 3 and 4 inch sizes, with Card Dial or
Aluminium Ring.

With this Instrument Horizontal Angles,
Compass Bearings, and Rise and Fall of
any surface in degrees or inches per
yard, can be obtained with accuracy and
despatch.

Prices and further particulars sent upon application.

Full directions for use sent with each Instrument.

Barker's new Patent Surveying & Mining
Aneroid in Aluminium, with Vernier
reading to 1 foot; full particulars upon
application.



As Prismatic
Compass

Instrument Makers
TO
**LONDON COUNTY
COUNCIL,
GOVERNMENT
LABORATORY,
&c.**

Makers of

Ediographs.
Levels, all kinds.
Levelling Staves.
Pentagraphs.
Prismatic Compasses (a
speciality).
Protractors, all kinds.
Range Finders.
Rules, Parallel and
Rolling.
Sun-Dials.
Thermometers of ever
descriptions.
Theodolites, &c., &c.

A.B.C. CODE USED.
8th Edition.

F. BARKER & SON,

SUN-DIAL HOUSE, 12, CLERKENWELL ROAD, LONDON, E.C.,
Makers of Drawing, Surveying, and Scientific Instruments of every description.

ILLUSTRATED BOOKLET AND PRICE LISTS SENT POST FREE UPON APPLICATION.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,

26, 27 & 28, BILLITER STREET,
LONDON, E.C.

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1908.

Issued Quarterly.

London :

WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the United Kingdom
on remittance of 1s. 8d. and to any part of the world for 1s. 9d.

Subscriptions received for one year's issue.



CAMMELL LAIRD & CO., LTD.

Iron and Steel Manufacturers, Shipbuilders and Engineers.

MANUFACTURERS OF STEEL RAILS AND FISHPLATES,

AND ALL CLASSES OF RAILWAY MATERIAL, VIZ.:

LOCOMOTIVE CARRIAGE AND WAGON TYRES AND AXLES,

SPRINGS (*Laminated, Spiral and Volute*), **BUFFERS,**

Wheel Centres and other Castings,

MARINE CASTINGS AND FORGINGS FOR TURBINES

AND ALL OTHER PURPOSES,

ARMOUR PLATES, PROJECTILES, GUN SHIELDS,

SPRING STEEL, BILLETS, BLOOMS AND BARS.

ALL CLASSES OF TOOL AND MINING STEEL.

CYCLONE HIGH SPEED STEEL.

Special "H.R.D." Self-hardening Steel for Turning Brake Hardened Tyres.

Sole Licensees & Makers in the United Kingdom of the "ABT" System of Rack Railway for Steep Grade Lines.

**MAKERS OF
BATTLESHIPS, CRUISERS, DESTROYERS AND ALL CLASSES OF VESSELS.**

WORKS:—

CYCLOPS STEEL & IRON WORKS, SHEFFIELD.

DERWENT IRON & STEEL WORKS, WORKINGTON.

LOWTHER IRON WORKS, WORKINGTON.

SOLWAY IRON WORKS, MARYPORT.

YORKSHIRE STEEL & IRON WORKS, PENISTONE.

GRIMESTHORPE ORDNANCE, STEEL, TYRE & SPRING WORKS, SHEFFIELD.

NEW OAKS COLLIERIES, NR. BARNSELY.

SHIPYARD AND ENGINEERING WORKS, BIRKENHEAD.

**Contractors to Admiralty, War Office, Crown Agents
and Foreign Governments.**

HEAD OFFICE:—CYCLOPS WORKS, SHEFFIELD. LONDON OFFICE:—9, VICTORIA ST., S.W.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Billiter Buildings, Billiter Street,
LONDON, E.C.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

**Accounts collected, Salaries drawn, Family and other remittances
made, and general Banking facilities granted.**

Complete Equipments purchased and deferred payments arranged on special terms.

BAGGAGE, &C., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

WAY & CO. act as buying Agents for Firms on lowest possible Commission.

All kinds of Insurance effected:

LIFE (with special rates for Africa), FIRE, MARINE, AND ACCIDENT.

“The African” Liqueur Whisky,
SPECIALLY BLENDED FOR THE TROPICS,
OVER 9 YEARS OLD.

WAY & CO. Ltd.,

Sole Agents for East and West Africa for the Distillers, John Haig & Co. Ltd.
(ESTABLISHED OVER 200 YEARS).

“THE AFRICAN” COOK’S BASKET.

“THE AFRICAN” LUNCHEON BASKET.

The “Handy-Cosy” Bed.

Very suitable for Ambulance purposes: can be used as a STRETCHER.

It is a folding Portable Bed.

It can be set up or taken down in one minute without bolt or screw.

It is neat in appearance and light in weight, being only 28 lbs.

It is a giant in strength.

It is rigid.

A Light Steel-frame Portable Folding Bed.

*It does not squeak or become shaky. It is very comfortable to sleep on. It can be changed
into a hammock in twenty seconds.*

HANDY-COSY BED CO.,

49, LEADENHALL STREET, LONDON, E.C.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

.

"The book is intended for educational purposes, and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

COLONIAL POSTAGE STAMPS.

WANTED TO PURCHASE

Stamps from Asia, Australia, North, Central and South America, the West Indies, and, in fact, from all British Colonies in large or small quantities, used or unused.

PROVISIONALS and HIGH VALUES particularly desired.

Accumulations from Firms' Correspondence, Government Reminders, &c., purchased. No quantity too large for me to handle,

All offers are promptly attended to and the best prices paid. Goods sent instead of cash if preferred.

Old issues especially wanted, used or unused. Extra high prices paid for Stamps in complete sheets or large blocks.

AFRICAN STAMPS

are a speciality with me, and I will buy at good prices any of the following (particularly High Values and Provisionals):—British Central and South Africa, Bechuanaland, Cape Colony, Somaliland, East Africa, Uganda, Gambia, Gold Coast, Lagos, Mauritius, Natal, Niger Coast, Northern and Southern Nigeria, St. Helena, Seychelles, Sierra Leone, Transvaal, Orange River Colony, Zanzibar, Zululand, &c.

Residents in all parts of the world should send me any Stamps they may wish to dispose of. Satisfaction Guaranteed.

Newly Issued Provisionals purchased at a good percentage over face value if sent to me within a few weeks of issue, while they are still novelties.

Highest references, Banker's or otherwise, given if desired.

ALL KINDS OF STAMPS BOUGHT, SOLD AND EXCHANGED.

Publisher of "The West-End Philatelist." Price 1/6 per annum, post free. The best paper for stamp collectors.

D. FIELD,

4 & 5, The Royal Arcade, Old Bond Street, and
Albemarle Street, London, W., England.

ESTABLISHED 1884.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT, WOLVERHAMPTON, AND LONDON (ENG.)

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, &c.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT, WOLVERHAMPTON, AND LONDON (ENG.)

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

**Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).**

**Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.**

Galvanized Wire Netting.

**Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.**

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

***SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.***

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1887, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,

AND

R. V. VERNON, of the Colonial Office.

VOL. I.

APRIL, 1908.

No. 4.

CONTENTS.

EDITORIAL NOTES	285
Asiatic Immigration—Naval Defence—Responsible Government— Political and Commercial Matters.	
AUSTRALIA AND THE NEW PROTECTION	298
THE PREVENTION OF STRIKES	305
THE LABOUR PARTY AND THE EMPIRE	313
THE STATE AS LANDLORD	316
THE FUTURE OF THE WEST INDIES	322
By G. B. Mason.	
THE USES OF FERRO-CONCRETE	327
By J. S. E. De Vesian.	
COLONIAL STAMPS	339
REVIEWS AND NOTICES	344
Tropical Australia—Canadian Constitutions—Comparative Legislation —Commercial Reports—Books of Travels, &c.	
BUSINESS NOTES	355
Motor Boats—Motor Fire Engines—Wireless Telegraphy—Paints— Oils.	
MEDICAL NOTES	360
LETTERS TO THE EDITORS	363
The Growth of Empire—Cyprus Railways—Nigerian Oils.	
COLONIAL OFFICIALS ON LEAVE OF ABSENCE	369
RECENT APPOINTMENTS	378

MERRYWEATHERS' LONDON-MADE "DUB-SUB" CANVAS HOSE

WOVEN AT

Merryweather & Sons' Works, Greenwich Road, London, S.E.

—
GREAT
STRENGTH.
—



—
GREAT
DURABILITY.
—

THE BEST TO WITHSTAND CHAFING.

In order to meet the demand for a

SPECIALLY STRONG CANVAS HOSE,

necessitated by the more general use of Steam Fire Engines and High-pressure Hydrants, Messrs. Merryweather & Sons have introduced their "DUB-SUB" (Double Substance) Canvas Hose.

This Hose is made of specially selected long flax of the very highest quality, and woven on greatly improved looms, which enable a hose of great strength to be manufactured, and with 15 strands instead of the 9 or 10 usually employed, and each individual thread is extra stout and strong. It is

CAPABLE OF STANDING GREAT PRESSURE,

and is therefore suitable for the most powerful Steam Fire Engines and Pumps. It represents the very

LATEST & BEST PRACTICE IN WEAVING CANVAS FIRE HOSE.

The special stoutness of this Hose ensures for it a very much longer life than that of ordinary Canvas Hose, as it is much better adapted to withstand the effects of the chafing and rubbing unavoidable in course of ordinary work.

The "DUB-SUB" (Double Substance) Hose, when first used, allows the water to pass through the pores somewhat freely, but after it has been in use a short time it becomes as tight as more finely woven hose.

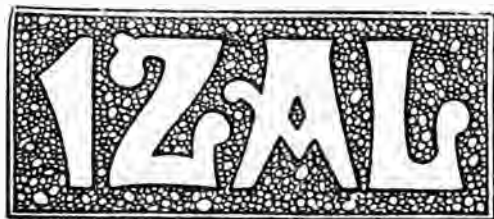
MERRYWEATHERS' INDIA-RUBBER-LINED "DUB-SUB" HOSE

Is a Watertight Hose of the Very Highest Class.

CAUTION—See that the name "MERRYWEATHERS," as well as the brand, appears on every length. Indent for MERRYWEATHER HOSE.

MERRYWEATHER & SONS,
GREENWICH ROAD, S.E., and 63, LONG ACRE, W.C., LONDON.

Telegrams: "Merywether, London."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

MERRYWEATHERS' LONDON-MADE "DUB-SUB" CANVAS HOSE

Merryweather & Sons' Works, Greenwich Road, London, S.E.

GREAT
STRENGTH.



GREAT
DURABILITY.

THE BEST TO WITHSTAND CHAFING.

In order to meet the demand for

SPECIALLY STRONG CANVAS HOSE,

necessitated by the more general use of Steam Fire Engines and High-pressure Hydrants, Messrs. Merryweather & Sons have introduced their "Dub-Sub" (Double Substance) Canvas Hose.

This Hose is made of specially selected long flax of the very highest quality, and woven on greatly improved looms, which enable a hose of great strength to be manufactured, and with 15 strands instead of the 9 or 10 usually employed, and each individual thread is extra stout and strong. It is

CAPABLE OF STANDING GREAT PRESSURE,

and is therefore suitable for the most powerful Steam Fire Engines and Pumps. It represents the very

LATEST & BEST PRACTICE IN WEAVING CANVAS FIRE HOSE.

The special stoutness of this Hose ensures for it a very much longer life than that of ordinary Canvas Hose, as it is much better adapted to withstand the effects of the chafing and rubbing unavoidable in course of ordinary work.

The "Dub-Sub" (Double Substance) Hose, when first used, allows the water to pass through the pores somewhat freely, but after it has been in use a short time it comes as tight as more finely woven hose.

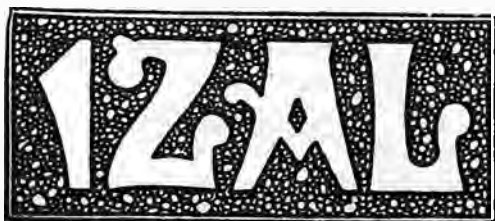
MERRYWEATHERS' INDIA-RUBBER-LINED "DUB-SUB" HOSE

Is a Watertight Hose of the Very Highest Class.

CAUTION—See that the name "**MERRYWEATHERS**," as well as the brand, appears on every length. Indent for MERRYWEATHER HOSE.

MERRYWEATHER & SONS,
GREENWICH ROAD, S.E., and 63, LONG ACHE, W.E., LONDON.

Telegrams: "Merryweather, London."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.


**For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.**

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.



elure

There is no paint on earth
SO ELASTIC as Velure,
 nor, **BECAUSE OF THIS**,
 so perfect in surface, so
 free from flaws, cracks and
 blisters, so easily kept clean
 or so durable for indoor or
 outdoor painting, especially
 if exposed to sun & weather
 which quickly destroy ordinary
 paint but leave Velure unaffec-
 ted for years. No varnish required
ITS SECRET IS ELASTICITY.

PROVED BY LETTERS FROM HUNDREDS OF USERS.

Send for Handbook
 with full particulars to **C. Chancellor & Co.,** 13, Clerkenwell Rd.,
 LONDON, E.C.

Name this publication.

**VERY HOT
 AND
 VERY COLD
 CLIMATES**

WHERE EXPOSURE
 TO SUN AND
 EXTREMES OF
 TEMPERATURE MAKE
 ORDINARY PAINTS
 AND VARNISHES
 CRACK, CHIP, CRAZE
 AND PEEL OFF,
 SCARCELY AFFECT
 THE LASTING
 PROPERTIES OF

Velure.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
 Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph
 Office, or at the Offices of any of the Atlantic Cable
 Companies, which register addresses free. No charge
 for the words "Via Pacific."

G. H. REYNOLDS,
 General Manager.

Queen Anne's Chambers,
 Westminster.

ADVERTISEMENTS.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Vladuet Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :—Monolithic Construction, | Light, Durable,
Economical, Fireproof, | Vibrationless, Sanitary.

More than 14,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories,
Grain Silos, Coal Hoppers,
Reservoirs, Wharves, Jetties,
Retaining Walls, Piers, Bridges
up to 200 ft. clear span, Water
Tower, Swimming Baths, Water
and Sewer Pipes, &c., &c., are
now in use.

A LARGE NUMBER OF
WELL-MATURED FERRO-
CONCRETE PILES OF
DIFFERENT LENGTHS AND
SECTIONS KEPT IN STOCK
AT OUR HULL DEPÔT READY
FOR IMMEDIATE SHIPMENT.

HENRY POOLEY & SON, LIMITED.



Manufacturers of every Description of Weighing Machinery.

Head Office:—TEMPLE STREET, BIRMINGHAM.

Telegrams :—Pooley, Birmingham.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.



Silver Medal,
Sydney, 1879.



Registered
Trade Mark.



Awarded First-Class Medal for
Prismatic Compass & Stand, 1893.

Cable Address :
"Altazimuth,
London."



Second Award
Melbourne, 1880.

HIGHEST AWARDS FOR COMPASSES, BAROMETERS, AND SUN-DIALS.

Instrument Makers
TO
THE ADMIRALTY,
WAR OFFICE,
INDIA OFFICE,
&c.

Makers of

Abney's Levels,
Abney's Levels and
Prismatic Compass
Combined, Barker's
Patent.
 Aneroid Barometers, for
Pocket, Surveying and
Mining, with Barker's
Registered Altitude
Scales.
Box Sextant & Prismatic
Compass Combined,
Barker's Patent.
Box Sextants.
Clinometer Rules.
Clinometer and Sight
Compass Combined,
Barker's Improved.

ESTABLISHED 1848.

BARKER'S PATENT ALTITUDE INSTRUMENT AND PRISMATIC COMPASS COMBINED.

(PATENT 1,928)



As Altitude Instrument
and Clinometer.

Made in 3 and 4 inch sizes, with Card Dial or
Aluminium Ring.

With this Instrument Horizontal Angles,
Compass Bearings, and Rise and Fall of
any surface in degrees or inches per
yard, can be obtained with accuracy and
despatch.

Prices and further particulars sent upon application.

Full directions for use sent with each Instrument.

Barker's new Patent Surveying & Mining
Aneroid in Aluminium, with Vernier
reading to 1 foot; full particulars upon
application.



As Prismatic
Compass.

Instrument Makers
TO
LONDON COUNTY
COUNCIL,
GOVERNMENT
LABORATORY,
&c.

Makers of

Ediographs.
Levels, all kinds.
Levelling Staves.
Pentagraphs.
Prismatic Compasses (a
speciality).
Protractors, all kinds.
Range Finders.
Rules, Parallel and
Rolling.
Sun-Dials.
Thermometers of every
description.
Theodolites, &c., &c.

A.B.C. CODE USED.
5th Edition.

F. BARKER & SON,

SUN-DIAL HOUSE, 12, CLERKENWELL ROAD, LONDON, E.C.,
Makers of Drawing, Surveying, and Scientific Instruments of every description.

ILLUSTRATED BOOKLET AND PRICE LISTS SENT POST FREE UPON APPLICATION.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

EMPIRE TYPEWRITER.



Price £13 2s. 6d.

STANDARD VISIBLE MACHINE.

UNIVERSAL KEYBOARD.

EASILY LEARNED AS IT IS SIMPLE IN CONSTRUCTION.

NO TROUBLE TO KEEP IN ORDER.

QUITE PORTABLE.

Fitted with Tin, Canvas, or Leather Travelling Case.

The EMPIRE TYPEWRITER Co., Ltd., 77, Queen Victoria St., London, E.C.

CROSSLEY & CO. (Established 1845.)
ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

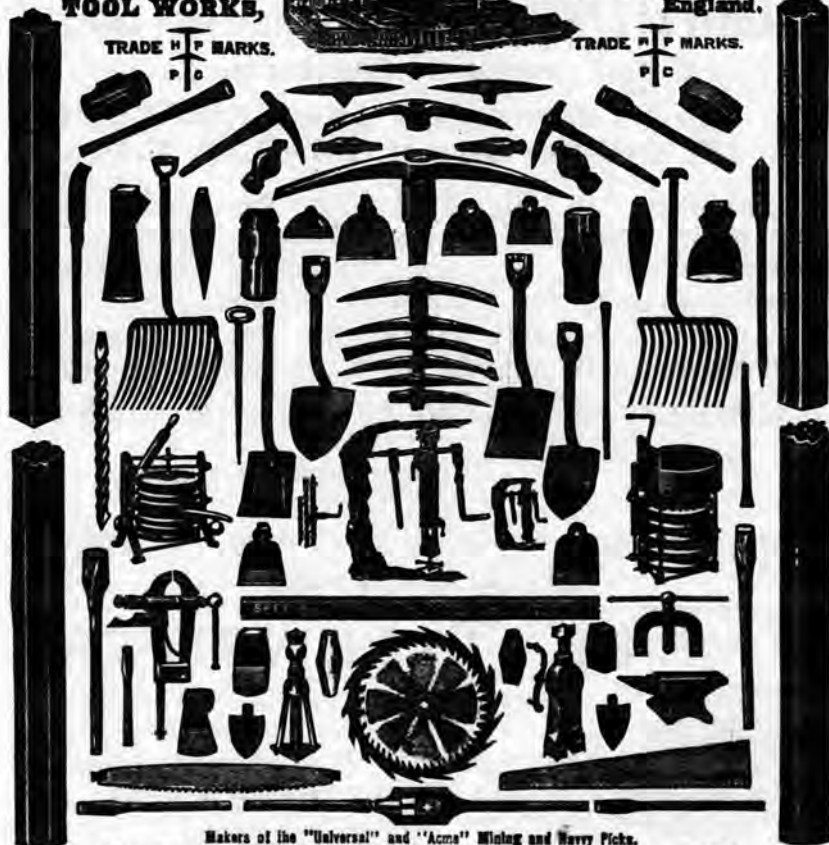
Offices:—57, COLEMAN STREET, LONDON, E.C.

ADVERTISEMENTS.

THE
HARDY PATENT PICK Co. Ltd.,
MINING
TOOL WORKS, SHEFFIELD, England.

TRADE MARKS.

TRADE MARKS.



Makers of the "Universal" and "Acme" Mining and Heavy Picks.

HAND & POWER BORING MACHINES for ROCK & COAL.
PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS.
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Rasps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

**Simplest and most durable machines extant
for Mines and Quarries.**

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

APRIL, 1908.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the United Kingdom
on remittance of 1s. 8d. and to any part of the world for 1s. 9d.

Subscriptions received for one year's issue.

London Office :



9, VICTORIA ST., S.W.

CAMMELL LAIRD & CO. LTD.

Head Office : CYCLOPS WORKS, SHEFFIELD.

Works :

Grimeathorpe Ordnance, Steel, Tyre and Spring Works,
Sheffield.
Yorkshire Steel and Iron Works, Penistone.
Derwent Iron and Steel Works, Workington.
Lowther Iron Works, Workington.
Solway Iron Works, Maryport.
New Oaks Collieries, near Barnsley.
Clyne Valley Colliery, Swansea.
Shipyard and Engineering Works, Birkenhead.

Manufacturers of

STEEL RAILS AND FISHPLATES,

Tyres, Straight and Crank Axles, Springs, Buffers,
Wheel Centres and Castings for Locomotives, Carriages and Wagons,

Spring Steel

Billets

Blooms

Bars

MARINE CASTINGS AND FORGINGS FOR TURBINES,

And all other purposes.

Any Size or Weight. In the Rough or Machined.

Sole Licensees & Makers in the United Kingdom of the "ABT" System of Rack Railway
for Steep Grade Lines.

ARMOUR PLATES, GUN SHIELDS, PROJECTILES,

HIGH SPEED STEELS.

CYCLONE

"H.R.D."

"0172."

ALL CLASSES OF TOOL AND MINING STEEL

SHOES AND DIES. FILES AND RASPS

Special Manganese Steel for Mining Machinery Parts.

Makers of

BATTLESHIPS, CRUISERS, DESTROYERS, PASSENGER AND
CARGO STEAMERS, MARINE ENGINES & BOILERS.

Contractors to Admiralty, War Office, Crown Agents
and Foreign Governments.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Billiter Buildings, Billiter Street,
LONDON, E.C.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

**Accounts collected, Salaries drawn, Family and other remittances
made, and general Banking facilities granted.**

Complete Equipments purchased and deferred payments arranged on special terms.

BAGGAGE &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

WAY & CO. act as buying Agents for Firms on lowest possible Commission.

All kinds of Insurance effected:

LIFE (with special rates for Africa), FIRE, MARINE, AND ACCIDENT.

“The African” Liqueur Whisky,
SPECIALLY BLENDED FOR THE TROPICS,
OVER 9 YEARS OLD.

WAY & CO. Ltd.,

Sole Agents for East and West Africa for the Distillers, John Haig & Co. Ltd.

(ESTABLISHED OVER 200 YEARS).

“THE AFRICAN” COOK’S BASKET.

“THE AFRICAN” LUNCHEON BASKET.

The “Handy-Cosy” Bed.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER.***

It is a folding Portable Bed.
It can be set up or taken down in one minute without bolt or screw.
It is neat in appearance and light in weight, being only 28 lbs.
It is a giant in strength.
It is rigid.

A Light Steel-frame Portable Folding Bed.

It does not squeak or become shaky. It is very comfortable to sleep on. It can be changed
into a hammock in twenty seconds.

HANDY-COSY BED CO.,

49, LEADENHALL STREET, LONDON, E.C.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of A1 Quality "Empire" Plate and Real Ivory Cutlery.
A service for 12 persons.

Price £19 (Others £3 12s. to £100).

"EVERLASTING"

"EMPIRE" PLATE

FOR

HOME AND COLONIAL WEAR.

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER & TEA SETS, &c.
Guaranteed 60 years' wear.

"Empire" Plate Spoons and Forks supplied separately from 17s. per dozen.

"EMPIRE" PLATE looks and wears like Solid Silver, and excels in quality all other makes of Electro-Plate Ware.

"The Times" System of Monthly Payments of £1 is available at Cash Prices.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.
The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c., &c.

COLONIAL POSTAGE STAMPS.

WANTED TO PURCHASE

Stamps from Asia, Australia, North, Central and South America, the West Indies, and, in fact, from all British Colonies in large or small quantities, used or unused.

PROVISIONALS and **HIGH VALUES** particularly desired.

Accumulations from Firms' Correspondence, Government Remainders, &c., purchased. No quantity too large for me to handle.

All offers are promptly attended to and the best prices paid. Goods sent instead of cash if preferred.

Old issues especially wanted, used or unused. Extra high prices paid for Stamps in complete sheets or large blocks.

AFRICAN STAMPS

are a speciality with me, and I will buy at good prices any of the following (particularly High Values and Provisionals):—British Central and South Africa, Bechuanaland, Cape Colony, Somaliland, East Africa, Uganda, Gambia, Gold Coast, Lagos, Mauritius, Natal, Niger Coast, Northern and Southern Nigeria, St. Helena, Seychelles, Sierra Leone, Transvaal, Orange River Colony, Zanzibar, Zululand, &c.

Residents in all parts of the world should send me any Stamps they may wish to dispose of. Satisfaction Guaranteed.

Newly issued Provisionals purchased at a good percentage over face value if sent to me within a few weeks of issue, while they are still novelties.

Highest references, Banker's or otherwise, given if desired.

ALL KINDS OF STAMPS BOUGHT, SOLD AND EXCHANGED.

Publisher of "The West-End Philatelist." Price 1/6 per annum, post free. The best paper for stamp collectors.

D. FIELD,

4 & 5, The Royal Arcade, Old Bond Street, and
Albemarle Street, London, W., England.

ESTABLISHED 1884.

NESTLÉ'S

CONDENSED MILK



—
The
Richest
in
Cream.
—

**FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.**

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

**Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).**

**Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.**

Galvanized Wire Netting.

**Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.**

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY ^{AND} FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1889.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.







Branford 1984

THE COLONIAL OFFICE JOURNAL.

VOL. II.

JULY, 1908.

No. 1.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE Franco-British Exhibition is attracting a very large number of visitors from the Colonies, and the size of the Australasian contingent is particularly noticeable. The occasion will cause many persons to regret that the All-Red route between Australasia and Great Britain via Canada is not yet in existence, and that the signs are not promising. Everyone sympathises with the arguments in favour of a great line of communication being established through Canada. The scheme contemplates nine days as the duration of the journey to Vancouver from Great Britain, and 28 to Sydney, as against 30 or 31 by the eastern route. The new Australian mail contract, however, the service under which will begin in February, 1910, will shorten the time by the latter route by about two days, so that the reduction hoped for by the Canadian route will disappear. The heavy cost of maintaining a fast line between Vancouver and Australasia—the mileage between Vancouver and New Zealand being double that between Liverpool and New York—and the breaking of bulk in the case of through freight are the principal difficulties. It is clear that the enterprise would be expensive. There is no popular movement in Australia in favour of it, and all that can be said at present is that it languishes for want of definite proposals from the other parties interested.

In connection with the Australian naval defence discussions, attention may be called to a report by Mr. R. Lister, his Majesty's Minister at Paris, on the latest views entertained by the French Government on the subject of colonial defence. Mr. Lister states that the question of the best means of guaranteeing the external and internal security of the Colonies has been very freely discussed during the last few years. In 1898, in a sudden moment of panic, Parliament voted a number of credits destined to secure the Colonies against a sudden attack. A naval programme was hurriedly drawn up, bases were selected all over the globe for receiving fleets which existed mainly on paper, troops and provisions of war were despatched to them, and hundreds of millions of francs were expended with very little practical result.

M. Gervais, in his Report on behalf of the Budget Committee, examines the whole question, and arrives at the conclusion that the idea of defending the Colonies in the Colonies is fundamentally wrong; that their fate will be decided either in land battles in Europe or on the high seas, and will depend on the effectiveness of the French armies and fleets; that the feeble squadrons in colonial waters would be useless to resist the attack of a foreign fleet, and that no amount of money, however great, spent on fortifying and garrisoning the Colonies would enable them to resist an invasion by an enemy mistress of the sea. At the same time, in the course of a war it might often prove necessary to despatch a fleet to the Colonies, and for this purpose it is essential to create naval bases stocked with every possible requirement, and sufficiently strong to resist an attack pending the arrival of the home fleet.

This represents substantially the view of the Admiralty.

A good deal of attention has been attracted by the recent adoption by the Canadian Government of two measures which are to a certain extent restrictive of emigration from the United Kingdom. The first of these measures is the requirement that all emigrants landing in Canada must have in their possession twenty-five dollars at the time of landing, as well as money for their inland railway fare, unless they can satisfy the emigration officers at the time of landing that they are going to already assured employment, or will be cared for by friends. This requirement, originally enforced temporarily during the winter months, is now continued for the whole of the current year. The other measure is the regulation that all emigrants sent out by British charitable societies, or by public funds, must obtain certificates from the Canadian emigration authorities in London that they are suitable settlers for Canada. The fact that it has hitherto been the settled policy of the Canadian Government to

encourage emigration has, we think, led to a somewhat exaggerated view being taken of the significance of the new regulations. The first regulation is not likely to result in the disqualification of many intending emigrants, and we fancy that few of the agencies which direct emigration from this country would ever have advised emigrants to risk starting life in a new country, when work was not already assured them, with a smaller cash balance than twenty-five dollars. The second regulation is no doubt the outcome of a fear that Canada was becoming, or might become, a convenient receptacle for the waste products of British city life. Wisely administered, as we have no doubt it will be, it should cause little trouble. There is no reason to suppose that the Canadian authorities are less sensible than they were of the fact that the Dominion wants more men for the full development of her resources. But the effects of the financial crisis in the United States last year and of an unusually severe winter have been temporarily to diminish the country's power to absorb fresh population, and there is undoubtedly a feeling that for the moment the proper policy is to "go slow." But we do not for one instant believe that the door of Canada is in process of being closed to the British emigrant, or that more than a temporary slackening in the westward tide is to be anticipated.

Mr. Mackenzie King's report on his mission to England to confer with the Imperial Government on the subject of Oriental immigration into Canada is an interesting document, though the more important part of his report has been embodied in a confidential memorandum, which has not been published. Mr. King makes cordial reference to the nature of his reception in England.

"Of the interest taken in the subject of my mission by the British Ministers and officials of the several departments with whom by their direction I was privileged to confer, I cannot speak too strongly, nor can I lay too great emphasis on the sympathetic manner in which the representations made on behalf of the people of Canada were received, or the frankness and fulness with which the whole subject in its many bearings was discussed. Notwithstanding that Parliament was in session, and that in some respects the pressure of their duties was exceptional, the time accorded by the Ministers was so considerable that it was possible, within the duration of four weeks, to effect such an interchange of views and to conduct such negotiations as afford reason for believing that a satisfactory understanding of the situation has been reached, in so far, at least, as an appreciation of Canada's position in regard to Oriental immigration is concerned, and as may serve to prevent such immigration from India as may not be desirable in the interests either of the natives of that country or of the people of this country."

Mr. King finds that the recent growth of emigration from India into Canada has been not a spontaneous movement, but the result of artificial causes, prominent among which are the circulation in India of misleading accounts of conditions in British Columbia and the activity of steamship agents anxious to secure commissions and of certain individuals and industrial concerns in British Columbia eager to reap the benefit of exploiting cheap labour. These influences can be counteracted without any heroic or drastic measures, and the Government of India has shown a readiness to co-operate, particularly in disseminating accurate information and by letting it be known that they do not view this form of emigration with favour. Mr. King's report concludes with a paragraph which will be read with pleasure as a testimony to the reality and effectiveness of co-operation between the different constituent parts of the Empire.

"Whilst effective as a means of restricting a class of immigration unsuited to Canada, it will be apparent that the arrangement as herein set forth is one which finds its justification on grounds of humanity as strong as are the economic reasons by which it is also supported. The liberty of British subjects in India is safeguarded rather than curtailed, the traditional policy of Britain in respect to the native races of India has been kept in mind, and the necessity of enacting legislation either in India or in Canada which might appear to reflect on fellow British subjects in another part of the Empire has been wholly avoided. Nothing could be more unfortunate or misleading than that the impression should go forth that Canada, in seeking to regulate a matter of domestic concern, is not deeply sensible of the obligations which citizenship within the Empire entails. It is a recognition of this obligation which has caused her to adopt a course which, by removing the possibilities of injustice and friction, is best calculated to strengthen the bonds of association with the several parts, and to promote the greater harmony of the whole. In this, as was to be expected, Canada has had not only the sympathy and understanding but the hearty co-operation of the authorities in Great Britain and India as well."

In connection with the question of Asiatic immigration it is interesting to notice that Lord Lamington, in a recent paper read to the Royal Society of Arts, points out that in India itself there are general complaints of the lack of labour and of the rise of wages. "Closely bearing on this question [factory labour]," he observed, "is the noticeable fact of the great scarcity of labour. This is due to plague, famine, and emigration, as well as to the increase of manufacturing and the development of mining enterprise. Wherever I

went, I heard complaints of the lack of labour. Lands in remote or unhealthy tracts are lying waste, factories cannot be run, and recently I read that the new harbour scheme at Karachi would be retarded by the difficulty of getting workmen. A further proof of the demand for labour is found in the continual rise in the wages of every class of subordinate service. Shortly before leaving Bombay, I was told that a skilled working coolie on the railway could earn a rupee (1s. 4d.) a day. This may not sound much to a British audience, but it is a fortune compared with the daily wage of 2 or 3 annas prevalent 30 years ago." This state of things does not indicate that there is any solid ground for the apprehension that there will be a great emigration from India, and, probably, as time goes on, similar forces will operate to restrain the vast exodus from China which some thinkers prophesy. There is everywhere an adventurous and roaming class, but the great populations of Asia will remain stationary, proof against the seductions of Western civilisation.

While the Dominions and some Crown Colonies are showing strong opposition to Asiatic immigration, there is good reason for noticing any case in which it might be legitimately developed. The British Guiana Immigration Law of 1891 provides only for immigrants who are destined for the plantations and the public departments. They cannot be engaged for the gold mines or the forests. The main reason for this limitation is that supervision can be easily exercised over a plantation, and the authorities can easily see whether the coolies are properly treated in accordance with the regulations laid down. There would be more difficulty in making and enforcing provisions for labour of a less organised character, but the task is by no means insuperable, and in a place which is largely under popular government much reliance can be placed on the spirit of equity and justice. If it is the fact that it is desirable from the Indian point of view to encourage emigration, it seems hardly likely that the Indian Government would insist on the retention of the present limitation.

Then there is the condition that at the end of five years half the return fare to India shall be paid to the coolie if he wishes to go back. The half is about £5, while the savings of returning immigrants average £100. The coolie could, therefore, well afford to pay the full fare. But it is not merely a matter of money. The payment of the half-fare tempts many a coolie to go back who is far better off in British Guiana than he ever will be in India. On the other hand, the colony wants permanent settlement. Instances frequently occur of coolies who pay the £5 for a trip to India and shortly afterwards engage again for the colony. If the Indian is to be regarded as an ordinary emigrant, and if the Colonies are to be encouraged to take him, it is

difficult to see why this onerous condition should be imposed. The coolie in this case goes back for his own pleasure, and should pay the cost if he can do so without any difficulty. A general power might be given to enable the Colonial Government to deal with any special cases.

In connection with the article on Compulsory Arbitration which we published in our last number, we may note that a new Arbitration Act has recently been passed in New South Wales, the principal features of which are the continuance of Conciliation Boards, as the first means available for the prevention of strikes, and the establishment of a single industrial Court of Appeal, whose decision is to be absolutely final. An interesting account of the Act and of the circumstances out of which it has arisen is given by the Sydney correspondent of *The Times*; and in view of the unfavourable views which that journal has generally taken of legislation of this character his approval of the Act must be regarded as a good augury for its success.

"As it now stands," he writes, "the Act may be reckoned as nearly perfect as Acts can be. That is to say, considering that the actual industrial situation, the strength of the unions, and the genuinely valuable work done under the expiring Act make the demand for compulsory arbitration irresistible, it would be difficult to suggest a fairer method of enforcing it on both parties in the public interest. It would be quite easy to raise dozens of abstract objections—to the compulsory principle, to the judicial control of private enterprise, to the 'side-tracking' of 'freedom of contract,' to the Judge's power of investigating an employer's profits (this power is given unless the employer admits that he can afford to raise wages if so ordered), and to many other details of the new law. But the answer to all these objections may be found in the history of the last six years and in the state of affairs to-day. Consider the Act as legislation for Utopia, and you must condemn it; consider it as legislation for New South Wales in 1908, and it deserves emphatic praise."

The scheme for the combination of the British South African Colonies into either a federation or some more compact form of union is perhaps nearer realisation than anyone would have ventured to predict a few months ago. Probably the most hopeful sign is the fact that the statesmen of South Africa are not inclined to under-rate the difficulties which confront them. The matter requires delicate handling; and any attempt to deal with it in a spirit of impatience or over-confidence would almost inevitably lead to disaster. At the recent Intercolonial Conference great wisdom

seems to have been shown in the attitude of the representatives of the different Colonies towards this question. It was decided to leave undisturbed the present arrangement, admittedly imperfect, with regard to customs duties and railway rates, in order not to provoke controversy at an inauspicious moment, and because it was felt that no final adjustment was possible so long as the Colonies participating in the Conference remain separate entities with no constitutional bond of union. As General Smuts expressed it, in a striking speech which he delivered at the Cornish banquet, "The time for patchwork arrangements is past." It will remain for the Conference or rather Convention which is to assemble in Natal in the autumn to lay the foundations of future union; so far no more has been done than to affirm the principle that such union is desirable. The resistance of the Transvaal Government to the demand for local protection affords another indication of the determination not to foster the growth, at the eleventh hour, of further separatist tendencies. The Imperial Government has indicated very clearly that it regards the question as one for the people of South Africa to settle for themselves, and there will be no repetition of Lord Carnarvon's unfortunate attempt at pressure from outside. But the movement inside South Africa is being very carefully and intelligently promoted. The first instalment has been issued of a work entitled "The Government of South Africa," which has been produced anonymously by a group of writers drawn from all the South African Colonies, whose labours have been assisted by the several governments. The book is designed to put before the South African public in a concise and readable form the facts of the present situation, with some account of their historical origin. If future instalments come up to the standard of the first, the complete work will be admirably adapted to fulfil this purpose.

In our last number we remarked that the distances between the West Indian Islands, which are much greater than is usually realised, stood in the way of complete federation. As to this, Mr. McCarthy, in the article which we publish, expresses the opinion that this difficulty will cease to be a serious one as soon as interinsular communication by steamer is established, and that the introduction of wireless telegraphy is inevitable before long, and will greatly facilitate the arrangements. Mere distance has not counted for much in many places, such as Queensland. On the other hand, it is urged that the advantages of federation would be considerable. A small place, left to itself, inevitably falls into a small groove; when it is constituted a part of a large body politic, wider ideas are fostered, greater interest is developed, and the natural result is greater energy and efficiency. There is much force in these considerations, and we anticipate that the improvement of trade in the archipelago will

eventually bring about a revival of the question, though at first Jamaica, British Guiana, and perhaps Trinidad will stand outside the project. We would also draw the attention of our readers to the letter which Mr. Joseph Rippon has addressed to us on this subject.

The article by the Chief Justice of Hong-Kong which we publish revives a question which was much discussed at the Colonial Conference of 1887, but has remained almost dormant since—viz. the enforcement of United Kingdom judgments in the Colonies and vice versa. The old principle was that no writ or notice could be served outside the jurisdiction of the court trying the case, but nowadays, when contracts are continually being made between people resident in different countries, this rule would be too inconvenient, and practically every country has therefore adopted the practice of serving writs in certain cases outside the jurisdiction, or, in other words, wherever the defendant is to be found. The action can thus proceed and judgment be given. But the judgment can only be enforced by bringing another action in the courts of the defendant's country. This is reasonable and proper, on the general principle that the plaintiff must come to the defendant's place of residence if there is a bona fide defence which the defendant could not conveniently set up in the original action. But there are a great number of claims to which there is virtually no defence, or which could be contested in the plaintiff's country if the defendant chose to do so, and in these cases the necessity for bringing a second action in a distant place constitutes a great hardship, and does much to prevent business. This consideration points towards reciprocal agreements for enforcing one another's judgments, under conditions to be settled. One difficulty is that the rules of practice and procedure are different in different places, but in the case of the United Kingdom and the Colonies this could probably be surmounted, there being a considerable resemblance among the systems, and a provision that the defendant should be served personally, or in such manner as the local law required, would obviate some objections. The judgment could be sent to the court of the defendant's country with a certificate that he had been served in the above manner. It would then rest with the judge of that court to direct that judgment should be enforced immediately, or to make such other rules as he might think fit. In a large percentage of cases the judge would have no difficulty, and the mere fact that this expeditious process is possible would tend to the easier recovery of debts without the help of the law. Under the present system the party in one country must employ a solicitor to represent him in the other, and as he rarely knows one, this obstacle is practically insuperable in comparatively small cases. The

reason why the matter has not advanced, lies, we believe, not so much in the difficulty of arranging details as in a sort of professional mistrust of courts in other places. But the proposal in 1887 only embraced superior courts, and the discretion which is left to a judge before a judgment is enforced by execution seems an ample safeguard. It is for the commercial communities to decide whether in the interests of business the question should be pressed.

Sir Francis Piggott also refers to the "Cash on Delivery" system under which the postal authorities collect the money due to the vendor when delivering parcels. The General Post Office proposed to introduce this system in this country, but the retail dealers organised a strong opposition and the idea was given up. This we imagine was a matter of votes and politics, as no question can arise of the usefulness of the arrangement to the buying public. But it has recently been decided that in the interests of the commerce of Empire the system should no longer be deferred as between the United Kingdom and the Colonies. Otherwise foreign competition for British Colonial trade would have the advantage of the system, while the British trader would not. The argument really applies equally to foreign countries, in which the British trader will be at a distinct disadvantage; but we understand that the opposition has had the effect of preventing the logical conclusion being carried out. Egypt, however, has been included, owing to repeated representations by Lord Cromer that Egyptian traders and customers were making large use of the system for exchanging goods with France and Germany, and the British trade must suffer unless it has the same facilities. The Colonies have been asked whether they wish to participate in this arrangement, and some, but not all, have agreed to do so; the General Post Office is issuing a notice on the subject.

The Colonial Office has arranged a scheme for a special three months' course of instruction in London for candidates selected for clerical appointments in East and West Africa, and the first course is now in progress. The subjects are tropical hygiene, law, accounting and economic products. Selected candidates are required to attend the course, and are paid at the rate of £150 a year during it and up to the appointed date of departure. Other candidates may attend on payment of £5 for each series of lectures, or £20 for the complete course. The training, brief as it is, is of a very practical character, and may lay the foundation for deliberate study. The age limit for candidates for appointment has, at the same time, been reduced from 25 to 23 in the case of West, and 22 in the case of East Africa, an alteration which may be regarded as evidence of the improvement in health conditions in our tropical dependencies.

In what town is the greatest number of living languages spoken? Entble, though a small settlement, has a strong claim to the distinction, as the inhabitant who assayed to converse with all his fellow-townsmen would have to grapple with 10 European languages, 13 Asiatic, and 29 African.

Mr. Mallock, in his "Critical Examination of Socialism," lays great stress on the thesis that the State can obtain ordinary labour, but that the exercise of directive ability is voluntary, and can only be obtained by adequate inducements, and that the public servant is not and cannot be of the energetic and inventive type. This view is generally current, but we venture to think that it rests on little or no foundation. The civil servant is invariably subject to fixed limitations—the rules of the service, estimates and statutes; the business is not his private business, and he must deal with it under direction. But these limitations are imposed from without. They are rigid, in comparison with those of private employment, because the real employer—the public—cannot be consulted at every turn, as is possible in commercial life. But it does not follow that the servant of the Crown is lacking in the power of initiation, and in the energy which makes things move. The expenditure of public money will certainly always carry with it a considerable feeling of responsibility, but on the whole we see no proof that civil servants are unduly slow or timid in proposing schemes or planning enterprises. The Empire-builders who have served under the Crown need fear no comparison with those who have been associated with private adventures. The inventive and originitive type will not be lacking in the civil service when it is allowed to come into existence. It is indeed probable that much of the research and discovery of the future will take place in institutions organised and subsidised by the State. We have already come to that stage in tropical medicine and agriculture, and it is abundantly clear that highly intellectual and interesting work will command willing and able minds whenever the State will pay reasonable professional salaries for such positions. The private inventor has not, on a general view, enjoyed such a good time as to warrant the conclusion that the present system is the only one that can encourage originality.

Even journals, which are by no means disposed to support Mr. Mallock's opinion, appear to admit that his analysis of motive is sound, and that the hope of large profits will always be a very much greater incentive to work of the energetic kind than any stimulus which can be created by State employment. We would submit that this conclusion is not an established one, and that it underrates the

hold which congenial work has upon a capable mind. Every hard worker demands reasonable pay, but the salt of his life is, in the vast majority of cases, his work and not the money. The colonial service abounds with instances of zeal and devotion in the public interests. It does not, however, speculate or float daring enterprises, and cannot, therefore, present spectacles of great coups and sensational profits to the eyes of the mammon-worshipping public. Government business is conducted on honest, and usually sound, lines, and, if it does not propagate the type of worker who flourishes by crushing his rivals, it encourages steady application and disinterested character.

We are accustomed in this country to vigorous onslaughts in the daily press upon different branches of the Civil Service for alleged want of business methods, and civil servants have not infrequently occasion to wonder whether the writers really possess the knowledge of the business world which they assume. The suggestion which is most strenuously put forward is that Government requirements should be much more largely put out to open tender and advertised. No responsible authority has ever countenanced this argument, and the plea for advertisements can hardly pass as disinterested; certainly, if one turns to the advertisement columns, no signs appear that the ideal buyer of commercial life adopts this method. Slowness of action and the stereotyped character of replies are fair matters for comment, but allowance must be made for the necessary formalities of public offices and the representative character of the officials. The work done is at any rate sound and accurate, and if it lacks the brilliancy of a comparatively few highly successful enterprises, it must be remembered that the civil servant cannot plunge his office into speculation or daringly skirt the edges of the criminal law.

The public and the service are in much the same relation in these matters all through the Empire, and as an illustration we reproduce the following vigorous article from the *Queensland Public Service Review*, evidently lashed into indignation by the criticisms of the local press. It is written with a freedom which we admire, if we cannot imitate.

“RED TAPE.

“When the public service of this State is attacked, it is our duty to defend it. We shall try not to fail in that duty.

“A prominent Brisbane daily, of recent issue, contained the following:—

‘It may seem too much to expect hide-bound departments to adopt vigorous business methods without passing some Act of Parliament to that effect; but the public gain would be immeasurable if only public departments were transformed into business firms.’

"The above is one of those peculiar, irresponsible statements which are often made in regard to the public service, but when the assertion is analysed, and the case for 'red tape' fairly and impartially considered, one finds how absurd such irresponsible utterances often are.

"Red tape means honest system, no more and no less, and the deplorable failures so often recorded of numbers of alleged business concerns are, more often than not, attributable to the want of honest system—or good old red tape.

"We know what alleged business men and alleged business lines brought the Q.N. and other banks to, and we know what the result has been since our Q.N.B. has been subject to Government red tape methods.

"One has only to wade through the statement of affairs of bankrupt businesses and bankrupt business men to learn that if there had been a little more red tape in their business methods, and a little less business speculation and business chicanery in their transactions, creditors would not so often deplore the payment of a dividend of three farthings in the pound, or less, instead of twenty shillings.

"We have at the present time a prominent department of State administration which the Minister is doing his best to run on up-to-date business lines, but with proper red tape safeguards, and what is the result? Simply that the Minister is being politically bludgeoned for his red tape safeguards, and for his heroic refusal to completely disorganise his department by running it on the business lines which a section of the public press desire him to follow.

"Government officials would indeed stand aghast at some of the business changes which the public would have them carry out, but public officials, fortunately for their masters, the public, have too wide a knowledge of 'tricks of the trade' to be hoodwinked or led astray by spurious business methods.

"We believe that our Government Analyst could tell many a tragic tale of business methods were he put in the witness box, and we are inclined to think that the Official Trustee in Insolvency could also reveal many a remarkable instance of business methods and 'sound commercial lines' were he called before a Royal Commission.

"Indeed, it is safe to say that when anything utterly bad, fraudulent, unpatriotic, or disgraceful happens, it is reasonably safe to assume that the 'Commercial class,' with their 'sound commercial lines,' is more or less responsible. Its record of Customs misdemeanours became so glaring that 'red tape' of the most drastic sort had to be introduced to check them. Its secret commissions in connection with the butter trade (Victorian) were so absolutely reprehensible that one began to wonder whether there was an honest commercial man in the community. Its press organs point out, with the most

lofty air imaginable, that if there were more commercial men in Parliament, it would be better for the country. As a rule, the 'Commercial class' produces about the most disastrous class of politicians that Australia has had experience of. When the periodical plague breaks out, the unfortunate city nearly always finds that it is the callousness and selfishness of business men that is responsible. Result: Government red tape methods have to be called in to clean up the sickening mess.

"We were going to say a little about the sweating evil on sound commercial lines, so much lauded by the commercial press, but, really, the subject is too sordid and too horribly infamous for a respectable publication like the 'Review' to tackle. It would be as well, however, to point out that Government red tape, with its factory officials, is exercising a salutary check on this evil, which is no doubt galling to the business and commercial world.

The business methods of the commercial world have forced the Commonwealth Government to pass a Commerce Act, in order that no more shoddy shall be imported as wool, or cotton as silk; no more paper masquerading as leather; no more rolled gold jewellery as best 18 carat; no more swindling preparations as good fertilizers for robbing the poor unsuspecting amateur public servant gardener, and the backbone of the country. With a vigorous red tape administration of the Commerce Act, half the alleged business men will find their nefarious business ruined. If they live on dishonesty, they cannot survive under honest conditions, and it is 'the hide-bound traditions of red tape' which are responsible for too much honesty in business, to make 'business methods' and 'sound commercial lines' pay.

"In fact, the general public owe so much to 'red tape,' and have so much to be thankful to it for, that they ought to petition the Government to erect a statue to it, and to proclaim a public holiday once a year as a sort of Thanksgiving Day, in order to salute it.

"The Special Inquiry Board was an instance of 'business methods,' but 'red tape' could give that concern a long start, and beat it easily. The payment of 8s. in the £ to public servants was another instance of 'business methods,' therefore, the less the public service sees of business methods the better. The only thing approaching 'business methods' in the public service, is the salaries paid, but this is not intended to be flattering to 'business methods.'"

HERBERT SPENCER ON COLONISATION.

THE search for immutable truths is always being prosecuted by keen intellects, but it is somewhat disconcerting to find that generalisations on political and social subjects follow to a large extent temporary fashions, and have exceedingly little effect in shaping the actual course of things. The fact is, that human relations are so complex and variable that particular cases which are very much in evidence at one time may point to conclusions which are wholly inapplicable at another. Situations are continually occurring which are so new and novel that past history gives little practical help regarding them. The student may interest himself by drawing morals from old events, or detecting analogies. But the world of the voter and the legislator is not governed and hardly affected by such considerations. It is necessary to distinguish clearly between the educational value of records and their utility in application to present day problems. There is an old story that Cobden thought there was more in an issue of the *Times* than in the whole history of Greece. If history is being looked to as a training for the mind, this is of course absurd. But if what is wanted is a contribution to the data of current politics, the newspaper of the day is obviously preferable. The general ideas which everyone derives from historical reading are too vague and remote to be made clearly applicable to questions of the day. The dynamics of social organisations are continually converting the rule into the exception, the exception into the rule. No little peril therefore follows the footsteps of the philosopher who endeavours to build up a stable structure for the future on the crumbling ruins of the past.

Herbert Spencer, however, understood the task with a force and consistency which showed no misgiving and undoubtedly largely influenced the thinking class. He took a fair number of strong instances of mistakes made by governments, and drew the inference that for the State to do more than is strictly necessary is immoral. Thus the duty of the State was simply to protect, to enforce the law

of equal freedom, and to administer justice. He argued that the State cannot add to our moral feeling. "No legislative manipulation can eke out an insufficient morality into a sufficient one." The State in short can do little. It is an easy step to the proposition that all coercion is immoral. "Will it not follow," he asks, "that it is immoral to use violence in opposing a trespasser?" and he answers, "certainly" ("Social Statics," p. 2,717); but it is some comfort to find that when you are attacked, you are to resist, notwithstanding the immorality of the act; and the explanation of this apparently contradictory position is that "action and reaction are equal; the blow dealt at morality in the person of the injured cannot end with itself, there must be a corresponding recoil."

Few people will think that these subtleties contain the pith of the matter. They have a forced appearance; they do not flow as natural consequences of given facts. The whole intent is to bolster up the conception that the State should not interfere. This conception is based on data which the latter-day observer will certainly pronounce insufficient, and to a great extent untrue. Thus Spencer contended that the attempt to suppress the slave trade on the coast of Africa was a mistake—an instance of the "unwarranted assumption that it is possible for the self-guided human judgment to determine, with something like precision, by what method it (the "greatest happiness") may be achieved." His reason was that the attempt "would only aggravate the horrors, without sensibly mitigating the extent of the traffic." The abolitionists of England he said, "dreamed not that when hard pressed a slaver might throw a whole cargo of 500 negroes into the sea." There were no doubt cases of this kind, but when the slightest regard is given to the general aspect of the matter—the infinite mischief done by the institution of slavery to slaves, employers, and the whole of society—it is clear enough that the philosopher's view of the matter, so far from being a profound one, was exceedingly shallow. Concrete cases, however, were not much to Spencer's theory. He proposed to generalise without them. "Why" he asks, "cite individual cases?" What is the Statute Book but a record of such unhappy guesses? Nearly every Parliamentary proceeding is a tacit confession of incompetence. There is scarcely a bill introduced but is entitled "An Act to amend an Act." The "Whereas" of almost every preamble heralds an account of the miscarriage of previous legislation."

It seems singular that the fact of continual changes in the laws should have appeared to be so fatal a feature to a philosopher whose creed was based on the principle that humanity is indefinitely variable, and that things are constantly undergoing modification. No one would question the fact that in public, as in private life, mistakes are frequent, and that experience is dearly bought. But that is no reason why the effort should be given up. Certainly it is

no proof that no progress is being made. It is idle to point to the instances where modern law and civilisation have failed if any regard is paid to the vast gulf which has been left behind in the progress from ancient times. The "Act to Amend" and the "Whereas" record on the whole a steadily growing desire to amend, and increasing wisdom in the way of doing it.

Spencer objected generally to Government colonisation, on the ground that, so far as this involves State expenditure, it implies the taxation of some class of the State's subjects for an object which is not necessary to them. "As it is the function of a Government," he says, "to administer the law of equal freedom, it cannot, without reversing its function, tax one portion of its subjects at a higher rate than is needful to protect them, that it may give protection to another portion below prime cost; and to guard those who emigrate, at the expense of those who remain, is to do this." To tax one class merely for the benefit of another is manifestly unsound, but the argument ignores the consideration that men may agree to co-operate for a common object. This country has undoubtedly made great sacrifices to develop the Colonies, but not merely in the interest of the emigrants; the money spent has been laid out as an investment. Spencer further contends that "Colonial Government, properly so called, cannot be carried on without transgressing the rights of the Colonies." The "law of equal freedom" is broken by any assertion of authority by the Mother country. This "law" is derived immediately from an "*a priori* view of creative design," and is also a "direct deduction from the necessities of existence." No doubt it is true enough that perfect freedom is necessary for the highest development. The difficulty in practice is that the administration is confronted with the fact that there are at present widely different standards of thought and civilisation. We may be all on the road to the millenium, but that goal is not in sight, and the rate of progress towards it is too palæontological in character to satisfy modern desires. In numerous places, were it not for autocratic government, a small superior race would be absolutely overwhelmed by a large inferior race. To contend that in such cases all should be placed on the same footing is equivalent to surrendering the accumulated advantages of the best education. The law of equal freedom might on the same theory be applied to proving that children should never be forced to attend school. It is necessary to discriminate, and every one does so when brought into contact with an alien community.

It is easy enough to collect examples of mistakes from our Colonial history. It is another matter to infer that the whole movement was wrong and has been unsuccessful. Spencer would have had to revise his cases considerably to meet recent developments. "If you object," he says, "to the expenditure of £110 000 per

annum on the government of Ceylon, it is thought a sufficient answer that Ceylon buys manufactures from us to the gross value of £240,000 yearly." We do not know how long ago the above expenditure was incurred in Ceylon, if ever it was, but in recent times the expenditure has been nothing, and the imports from the United Kingdom some £2,000,000 a year. The other economical instances given are much of the same sort. But the whole British Empire, according to Spencer, was in a bad way in his time.

"Chronic irritation, varying in intensity from that of which petitions are symptomatic, to that exhibited in open rebellion, is habitually present in these forty-six scattered dependencies which statesmen have encumbered us with." "All winds bring the same tale of a negligence caring for no expostulations, impertinence without end, blunderings, disputes, delays, corruption." It was not merely a matter of mal-administration by the Colonial Office; the vice was in everyone. Throughout colonial history there were "atrocities that disgrace civilization," and "even down to our own day kindred iniquities are continued." The picture is overdrawn for a special purpose, but no argument is forthcoming to show that these barbarities were due to the system of government. In truth they had nothing to do with it. It has always been the man on the spot and not the man at home who has really dealt with the natives. Much of the unpopularity of the Colonial Office has been due to the fact that, in deference to local opinion at home, they have endeavoured to intervene in some fashion between the settlers and the natives. In such matters the plain fact is that there are two standpoints, that of the man who has himself to meet the situation and that of the man who has not. There is inevitably a wide difference between the two. The thinker at home is, very rightly, endeavouring to apply the moral law to the political world. But the application may be, in the actual circumstances, premature; "*salus populi suprema lex*," the ideal must be waived when existence or necessary development is threatened. Whether this is the case the man on the spot is the best judge; he may exaggerate the danger from nervousness, but, on the other hand, he is the only one exposed to it. The conflict of the two standpoints has arisen everywhere—in North America, the West Indies, Australia, Africa and the East. The universality of the fact suffices to show that it has nothing to do with "colonisation under State management."

The doctrine of equal rights appears to be applied by Spencer without regard to person. He objects to any government from home, and urges that the inhabitants of every colony would prefer to administer their own affairs. This is certainly not the case in the inception. It might have been if every colony had had a clear field, but there are natives everywhere, and a young or small settlement is by no means anxious to dispense with protection from home.

Apparently the doctrine implies the recognition of equal rights in all persons of whatever race. The obvious differences of intellectual and moral standards are a matter of which it takes no note. They are merged in the ultimate perfectibility of all species. It is however, suggestive that on the first occasion when Spencer was asked for his opinion on an actual question of this kind—the claim of women for votes—he expressed himself decidedly against the grant, on the ground that women had a different intellectual standard from that of men. Such is the difference (sometimes) between thought and action. It is not that the habit of theorising is wrong, but the philosopher who emerges from the closet on to the open field finds new facts. Wherever the British flag goes it spreads education, and a constant endeavour is everywhere taking place to interest natives in questions of administration. As soon as they show that interest, they are generally given some share in the government. More than once the concession has been made too soon, and it has been found necessary to curtail it, as in the Cape Colony. If Spencer had lived in a colony with a large native population, the pride of race and intellect would have operated as much in his case as in that of the average man against admitting the inferior race to the level of his own. He argued in the printed book that class government reflects the selfishness of the class. It may be admitted that to a large extent it does. But an enlightened selfishness, is at any rate, better than barbarism, and it is now so generally recognised that the prosperity of the individual is bound up with that of the community, that class selfishness—while no doubt it still exists, as we cannot pretend to have eliminated self-interest—is very far from doing the mischief which it did in old times.

Spencer's doctrine was, in short, that mechanical remedies for our deficiencies do not promote, but retard, the process of adaptation. This may be so. But in many passages, at least, he assumed, in common with many thinkers of the time, that adaptation was synonymous with improvement. This is far from being true. The environment may be a bad one, and the process of change is in many cases in a worse condition. A pure policy of drift or *laissez faire* has resulted in too many palpable hardships to commend itself to the nations. Life is a struggle in all its aspects, and a vast amount of effort and combination is necessary to improve it. But Spencer's plan was simply to let things alone. Thus he says "all profitable trade with colonies will come without the outlay of a penny for colonial administration must flow to us naturally." Trade will of course follow its natural course, but it is another matter whether it cannot be increased by administrative measures. On this point the practice of all the progressive world runs counter to Spencer's principle. The philosopher who gave an ideal value to the possibilities of human nature, has been displaced by the politicians who

have a keen sense of present evils and shortcomings. The contest has not really been fought out on paper or on the ground of general principles. The complications of modern life; the rapacity of impersonal capital; the helplessness of the individual in the whirlpool of vast combinations, are facts which become more striking every year. All classes and parties come in turn under their influence. An irresistible tide of circumstances has established a universal practice of considering and regulating affairs from the corporate point of view, and no enumeration of past mistakes can affect the position that the State must undertake in multitudinous ways the task of improving the position of its members.

The British Empire shows this practice at its present highest point of development. A race which is personally strongly individualistic and has a large respect for private enterprise has passed all others in its applications of government resources to industrial works. It has been clearly realized that in many cases an expenditure will be remunerative to the State when it would not be to any private person. Thus a railway may barely meet its working expenses, and a low rate of interest on capital. But the State takes further into account a consideration which the investor does not benefit from, viz.: the increase in dutiable goods, and the saving of labour which is set free for the purpose. No doubt in many cases, it happens that, while all are taxed for the purpose, some benefit from the enterprise more than others, and some not at all. A public want which only helped a small class would obviously be unjustifiable, but a broad view has usually been taken and small interests have done little to oppose the large ones. The construction of the Canadian Pacific Railway, in which a considerable part of the eastern provinces saw no particular advantage to themselves, was an education in national feeling. It seems strange nowadays to read that in such undertakings "the state becomes self-contradictory—violates that very freedom which it proposes to maintain." The conception of the State has advanced far beyond this bare and cold affirmation of freedom. It stands for united action in relation to all the great affairs of life. Unlimited individualism would be a return to barbarism. The only way in which man can free himself from daily attention to the commonest necessities and find leisure for higher ideals is by State organization.

LORD CROMER ON GOVERNMENT ORDERS.

Lord Cromer's memorable work on Egypt is a treasure-house of valuable information, but it does not and could not by any means cover all the administrative questions to which his practical wisdom and experience was applied. One of these questions was that of public tender for government supplies, and as this is a matter in which all governments are constantly concerned and which is continually exercising parliamentary bodies, we reproduce the following remarks from one of his despatches to the Foreign Office.

"The matter is one which has frequently formed the subject of discussion here, and on which very diverse opinions exist amongst competent authorities. That the system has its merits and also its demerits cannot be denied. Its principal merit is that it minimizes the possibility of undue influence being exerted in favour of any particular firm or individual. It cannot be doubted that this is a very great merit; for it is of importance, not only that there should be no favouritism, but that the public should be convinced that none exists. So far as my experience goes, the latter is far more difficult of attainment than the former of these two objects; for, whilst the public are, perhaps not unnaturally, prone to suspect the existence of favouritism on grounds which are frequently inadequate, the officials—or, at all events, those with whom I am principally brought in contact—appear to be wholly dominated by two ideas, namely: (1) To get the best and cheapest article they can for their Department; and (2) To studiously avoid any course of action which might possibly involve imputations of favouritism being cast on them. Indeed, the popularity of the tender system amongst the official classes, in spite of its recognized defects, is very largely due to the fact that it not only relieves them of a certain amount of responsibility but also minimizes the risk of imputations, such as those to which I have alluded above, being made. These imputations are often very

unfair, and must be singularly galling to honourable men who are endeavouring, often under circumstances of much difficulty, to do their duty irrespective of any considerations but the merits of the particular question with which they have to deal.

"The principal demerit of the system is that it not unfrequently fails to secure the main object in view, which is to obtain for the taxpayers, for whom various responsible officials act as trustees, the best and cheapest article which can be procured. That there have been some notorious failures in this connection cannot be denied. I need not, however, on this occasion dwell on the details of any special case.

"It is obviously difficult to combine the advantages and, at the same time, to obviate the disadvantages of the tender and non-tender systems. My personal opinion is that the question of which systems should be adopted depends greatly on the circumstances of each case. For instance, there would, I think, have been the strongest objections to the adoption of the tender system in the case of the reservoir works now being executed at Assouan and Assiout. In the case of works of these dimensions and of this importance, the paramount necessity of obtaining the services of a contractor of proved trustworthiness, and possessed of substantial means, must be placed before any other consideration. I may say that, in the particular case under discussion, I felt the force of the argument which I have stated above, so strongly that, at the time when the matter was under consideration, I should have advocated the abandonment or, at all events, the postponement of these most useful and necessary works, rather than have consented to any conditions under which the responsible officials of the Government would have been in any degree hampered, either in the free choice of the agents whom they might wish to employ, or in their liberty of control over those agents.

"In more ordinary cases, whether the question involved be the execution of public works or the supply of any particular article, there is sometimes no objection to the adoption of the tender system. One of the disadvantages of that system may, at all events, be greatly mitigated by restricting competition to firms or individuals of known standing and reputation. Several instances have occurred in this country of tenders being made at prices which obviously could not be remunerative. When this occurs, although, under the conditions of tender, the Government is not obliged to accept the lowest offer, a great temptation obviously exists to accept it, and, as a matter of fact, it is frequently accepted. Experience has, however, shown that the danger of paying too little has, in the case of Government contracts, to be guarded against quite as carefully as that of paying too much; for cases have occurred when, after finishing half the contract, the contractor has found himself unable to proceed with

the work. The Government then is practically powerless. The caution money, which the contractor has usually deposited, may, indeed, be forfeited, but it is in most cases insufficient in amount to compensate for the inconvenience and expense which would be caused by annulling the contract and starting afresh with some other contractor. The result is that the Government has to come to the defaulting contractor's assistance, and only ends by eventually obtaining what it requires after a great deal of trouble, and often at a price equal to, if not in excess of, some offers which were originally rejected. Hence the necessity of limited, in preference to unrestricted, competition."

In this country the practice is to provide in the contract for the detention of a certain percentage, say 2 per cent. per week, as liquidated damages in case of delay, and this provision can be enforced at law, even if no actual damage is shown. But many contractors take little heed of such provisions and lightly undertake contracts which are much beyond their powers. When delay occurs, the government can cancel the contract, but it is not likely to do so until the delay has been serious, and on this step being taken the whole process has to be gone through again, with the possibility of a similar failure. The matter of quality is even more important. In a large percentage of cases the lowest tenderer under the open system has put in a price which makes it absolutely necessary for him to scamp the work or supply inferior material, if he is to make any profit at all; and usually the cost of such detailed inspection or analysis as would be required to guard absolutely against his well-disguised methods would be prohibitive.

Lord Cromer further stated that his opinion was against the policy of accepting the lowest offer. It is difficult and invidious, when tenders have been invited, to reject the lowest; if the contractor in question is not to be trusted, why trouble him for a tender? The only solution seems to be that only firms should be applied to which have furnished reasonable evidence of fitness. If tenders are invited from several first-class firms, in a matter in which there is no ring, a fair price will certainly be secured.

Lord Cromer suggested that, in order that the risks involved in the system of public tenders may be minimised, attention should be given to three points—"more ample consultation, and more rigorous application of the system of limiting the number of competitors, and greater care in specifying the conditions of make and material to which tenders must conform." The first point refers to the calling in of technical advice. The expert should certainly be consulted whenever the expense is moderate in comparison with the total cost. But the common difficulty is that of fully specifying the particulars. This is Lord Cromer's third point. Theoretically it can always be done, but practically the cost of setting out the full details and of

seeing that they are observed in the performance often makes it impossible. When a very special article is required, or an assortment is required, or an assortment of different articles in small quantities of each, there is nothing for it but to go to a good firm which can be relied on to consider its permanent reputation as well as the interests of the buyer. This is the usual practice of governments and, indeed, of ordinary commercial life. But this course should be limited to the fewest possible cases. Efforts should be made to standardise all articles which are in frequent demand, so that several firms can be asked to send in quotations.

FEDERATION OR UNIFICATION.

THE political situation in South Africa revives the old question as to how far local institutions can be reconciled and combined with a central authority. There are two systems of amalgamation. There can be established one sole Parliament and one purse for all the parties to the agreement. This is unification. Or each party, while being represented in the common Parliament, can retain its local Parliament, limited in its functions, as may be agreed, and keep its own property, subject to any contribution which may be resolved upon for the common purposes. This is federation. The first system gives, of course, the strongest central government and the full strength of combined power. The unified State can borrow money on the credit of the whole community: in a federation the individual parts are generally responsible only for their own debts. The law is uniform under the first system, and there is one authority in all matters; in a federation, the laws are different and there is inevitably some friction and frequently acute quarrels. The cost of government is greater under federation, and the consideration that the parts of working machinery should be as few and simple as possible is clearly in favour of unification. The influence which militates against unification and for federation is the very natural desire of a community which has had its individual civic existence, to retain its identity and to manage its own local affairs. Political ideas and material interests vary considerably within a comparatively small geographical range, and every locality cherishes a more or less definite suspicion that its particular views and wants will not be understood or appreciated by a distant legislature. Local feeling is, in fact, one of the strongest forces in politics, and a large amount of education and altruism is necessary before this feeling yields to a broad conception of national life. Man, as an object of political manipulation, is by no means a plastic material, and is at all times disinclined to surrender his powers if he can help it. Some strong force, such as war, or the fear of war, financial embarrassments, or trade troubles, is alone sufficient to combat the centrifugal instinct.

Even when union is accepted and carried out, it is largely begrudged and restricted. The thirteen American Colonies, after the war of independence, remained at first independent of each other; each followed its own lights and went its own way, and it was only the genius and moral force of Washington that, almost on the brink of internecine war, averted the danger by the creation of a central legislature. Canada has gone through an experience of a similar nature, and on the whole it may fairly be said that the general trend is towards greater consolidation. Not only is it more and more understood that union is strength, but the increasing part which government takes in administration and enterprise, renders combination continually more valuable.

Geographical distances and diversity of interests are, of course, considerations which tell in favour of the retention of local powers. It is found that it is hard to believe that a Parliament at a remote place can study the requirements so well as one on the spot. It is probable, however, that this apprehension can easily be exaggerated. In these days of universal railways and telegraphs mere distance counts for little. If a local object is opposed by a central body, this is not usually because it is not understood, but because there are some arguments against it which appeal to persons who are not directly interested.

It is naturally the smaller States that are disposed to favour federation as against unification. Thus, Natal may be expected to take a different view from that espoused by the Cape and the Transvaal. The subject will be fully discussed by the South African Convention, which is to prepare a draft constitution.

SOME MINOR ASPECTS OF COLONIAL TRADE AND THE EXECUTION OF COLONIAL JUDGMENTS.

ENGINEERS, when they are constructing great reservoirs, make what is called a "catchment area," or gathering ground, for keeping up the supply of water, and they are careful to include in it every possible square yard of ground from which the rain will flow downwards to the reservoir, or which contains however small a spring. This catchment area is a practical application of the many rickles which make the muokle.

There is a great deal of talk about Colonial trade and the imperial duty of fostering it. Much attention is paid to the great feeders which go to swell the volume of it, but it has often struck me that those who have it in charge—the trade organisations—differ from the engineers constructing a reservoir, in that they are not very careful in the development of the catchment area, paying little attention to the discovery of the little springs and small rivulets which might tend to increase it, but which unfostered degenerate into the merest tricklets. I have seen many such trickling streams dry up for want of supervision, and some traders at home the worse therefor, the intending purchaser either going without or going elsewhere. The matters to which I am going to refer are indeed so trifling, as almost to be unworthy of notice. I cannot pretend to say that at the year's end the figures in the Blue Book returns would be altered for the better in the "hundred thousand" column if things were different, I can put it no higher than this, that some of the minor rivulets in the gathering ground of British Colonial trade would be somewhat swollen and run in greater volume to the benefit of some individual traders in the mother country.

The few points I have to note are in the main negative in character; to continue the metaphor, they are rocks in the course of the stream, which accumulate debris round them, ultimately blocking it altogether.

The Imperial Penny Post has been established for at least ten years ; yet it is astounding how many letters are still sent to the Colonies by every mail with the 2½d. stamp. This may be due to the lack of elementary geographical knowledge in the stamping clerk of a firm ; but it is noticeable in all classes of correspondents, and it is the visible sign of an absence of knowledge about the Colonies themselves, and there whereabouts : and not of an absence of knowledge only, but of an absence of any desire to know. As typical of this, letters for Mauritius are often superscribed "Mauritius, West Indies." I have seen greater attempts at accuracy—thus, "Mauritius, Indian Ocean," or "near Madagascar." In that Island the story is still current of the clergyman who was requested—by which Department it matters not—to take the afternoon service in Seychelles.

This astounding ignorance of all that concerns the smaller Colonies—at least it appears astounding to us whose fate it is to live in them—comes out in trade matters in a more important manner. One illustration will suffice to show my meaning and its bearing on the subject in hand. Good tobacco is a scarce commodity in the Colonies ; and once upon a time some of us, knowing that tobacco can be obtained out of bond from home as good as was ever smoked, and imported to ——— much cheaper than any of the inferior stuff to be bought locally, put our heads together and decided to order an experimental consignment of x pounds. The period when pipes could be smoked with comfort and refreshment was drawing near, and we calculated that the justly celebrated firm of Z. Y. & Co., of ———, would consider it worth their while to despatch this consignment with commendable promptitude. Giving the parcel and its packers a large margin of grace, and adding yet another fortnight, it should have been with us and in our pipes by the beginning of July. The beginning of July came and went, as also did the beginning of August. The invoice announced despatch by the S.S. "——," due to arrive, according to her agent, somewhere in the middle of September, and she in fact cast anchor in the harbour towards the end of that month. Now the obvious cause of the delay was ignorance of the elements of trade with the Colony, failure to make the necessary enquiries as to sailing of the mail ships (which also carry cargo, it seems necessary to add), and general slackness all round, from the senior partner to the office boy. Had the tobacco come anywhere near the time it was expected it would have put us all in a good humour, its fragrant fumes would have permeated every hearth, and quite a lucrative little business would have sprung up, for in the Colonies more than elsewhere men recommend good things to one another, for in all conscience there are few enough of them. But what happened was that men saw what a bother it was getting things out from home, there were always a lot

of unexpected difficulties, and then someone had meanwhile discovered a "Mixture" supplied by the Hanseatic firm of X.W. & Co., which really wasn't so bad, and would "do." I believe this to be quite typical of what often takes place.

In connection with the subject of small orders for things to be sent out from home, there is a most convenient system inaugurated I believe in Switzerland, the introduction of which into the Colonies would be a great boon to those who live there, and would do much to foster trade with home; for small orders lead to bigger, and they in turn engender big ones. The system is known as "C.P.D.," or "cash paid on delivery," and it adapts the parcel post to most convenient ends. An order is sent to a tradesman in a distant town, the goods are despatched, and the post office collects the amount due, charging a small commission. It fosters trade because it panders to human weakness, saving people the trouble of going to the post office for a money order, and it is admitted by those who know that many things are sent for which otherwise would not be ordered. The convenience of having such a system in the Colonies would be very great, for the trouble of sending to the post in the hot weather is a very real one. But another less apparent advantage would result from the introduction of the system into the Colonies. A large proportion of the people draw their salaries monthly. It may not be convenient to get the necessary money order for, say a new parasol for the wife in time for the next mail, and the end of the month must be waited for, and then it may arrive too late for the wedding where it was intended to make quite a sensation. But with the C.P.D. system the order can be sent at once, the money provided in time for the arrival of the parcel, and everybody satisfied—the seller, the post office, the purchaser, the purchaser's wife, and also the other guests, whose husbands are bidden to do likewise on the next occasion—so does trade breed trade. There is no running into debt, nor is there any risk to the seller, for the system is worked on strictest cash principles, and if cash is not forthcoming the parcel may be opened and its contents sold.

It may be said that the introduction of this system would interfere seriously with local trade; as to this I have to make a few remarks which I think will not be very familiar to many of my readers.

Nothing is so unsatisfactory as making general statements concerning any class of persons which cannot from its nature be applicable to all of them. Those to whom they do not apply defend themselves vigorously, while those to whom they do apply keep silence in the protection which their friends' virtuous vigour affords them. This is especially true of the remarks I am going to make about the retail trade in the Colonies. No one will deny that good things are sometimes procurable in some Colonies more often than in others; but

the general feeling which is universal is that the best things are not to be had, and that a very large proportion of bad things find their way on to the colonial market. There has always been a veiled sarcasm in the word "colonial"; in spite of many improvements in many respects it is idle to deny that it still exists, and in the matter of supplies sent to the Colonies from home it is often more than justifiable. The following facts are I believe true. There is a very large amount of "commission" business, as distinguished from genuine retail trade, or ordinary agency business. The peculiarity of commission business is that the first rate firms do not as a rule go in for it; it therefore implies as often as not an inferior article foisted on the public by means of ingenious advertisement and tempting commissions to the so-called agent. The advertising firms live by means of this class of business, and from sheer force of circumstances thrive, because as often as not there is nothing else on the market. It is I believe a special feature of the wine and spirit trade, and I look back with a shudder on a whisky—we will call it the "Apocalypse Brand"—which for many months we had to drink in a certain place, because there was no other. Why should not the genuine agency business, with good articles on sale, be adopted? Ask Messrs. A. B. & Co., the celebrated wine merchants why they will not make Messrs. L. M. & Co., the leading merchants of Saint Phillips, their agents. The answer will be "We don't know them. Suppose anything went wrong &c., &c., "Although Mr. L. and Mr. M. are honourable gentlemen, taking their part perhaps in the Councils of the Colony, the firm Messrs. A. B. & Co. will not trust the firm Messrs. L. M. & Co." Yet the experiment has been tried in one Colony that I know of with conspicuous success, to the benefit of all concerned, including the consumer.

It is impossible to imagine the depths to which the retail trade of a Colony can descend. In one place I have a very lively recollection of having to depend on travellers' "samples" for some necessaries of life. There was, for example, an assortment of pipes of different shapes sewn on to a card from which we selected, till at last there were no more, and then we had to go without.

Yet another peculiar feature of the trade is what I believe is called the "colonial line" in commercial jargon. The process by which goods get into this line, where the colonial "buyer" is waiting for them, has been described to me somewhat as follows. New goods make their first bow to the public in the serene atmosphere of Bond Street. The length of their residence there depends of course on the favour with which they are received by customers. Some make a quicker descent than others in the social scale, the next stage of which is I believe Sloane Street. The large towns then have their turn, and after them the suburbs and the county towns. There are many stages, but there is one at which Chelsea is reached, and then the last

the Colonies. This gradual declension in the scale of fashion takes at least two years, sometimes longer, the time somewhat depending on the output of "new goods." As a matter of course the price declines *pari passu* with the remoteness of the age when the goods were "in fashion"; so that by the time the Colonies are reached they are long out of date, and the colonial buyer gets the "bargain" it is his business to be on the look out for. I fear that the purse of the colonial purchaser benefits little by this process, for the price—how shall I put it?—bears a favourable comparison with, we will say, the Sloane Street price. I will not touch more on the question of price, for it is a delicate subject, involving many things unknown at home; to use the text of the trade, the retail trader does not go out to the Colonies "for the benefit of his health," and perhaps this method of buying is in the circumstances the only one possible. To the long-resident in the Colony it perhaps does not much matter, for if a thing is good enough to have been in the fashion once, it must have some virtue in it, and with that he is fain to be content. But there are many other persons in the Colony, and their opinion counts for something; also they are potential purchasers, and the antique mode of the goods offered for sale prevents them; they won't so much as "look at them." I am convinced that the "colonial line" is seriously detrimental to the retail trade of the Colonies with the Mother country, and that it is one of the reasons why spruce bright-looking things from, say, the other side of the Atlantic, find there too ready a sale.

There are two causes which seem to me to lie at the root of the present unsatisfactory state of the retail trade between the Colonies and Great Britain—ignorance in the traders at home of the conditions of life in the Colonies, and want of confidence in the individual who lives there. I have given a few examples of the former; the latter, in so far as the facts are concerned, springs from this fundamental ignorance. But there is a legal aspect of the question, the proper understanding of which I believe to be of the utmost importance, and which I will now endeavour to make clear.

In the unseen and unnoticed operation of the law, in the constant unconscious obedience to its behests, is to be found the chief evidence of its strength and the secret of its efficacy. The less frequently its sanctions are invoked, the more potent is its influence; and contracts, for example, are fulfilled without the aid of writs of execution. To put this in another form; commerce is carried on with freedom and mutual confidence, because it is known that in case of default the law may be appealed to with certainty, and its processes set in motion with some approach to swiftness. There can be little doubt that the existence of the bills of exchange system in commerce depends in large measure, not merely on its convenience, but on the summary remedies by which it is supported. They lend the convenience the

stability which is not inherent to it. So Order XIV. gives a security to ordinary commercial transactions, and the same additional stability to credit. Business of all sorts is the more readily entered into when both parties have the certainty that default will be followed by certain judgment and swift execution. It is not too much to say that the law with its attendant procedure is sub-consciously present in all transactions. On the other hand, substitute uncertainty for certainty—even though it be but theoretical—dilatatory delays for swiftness—even though this be but relative—and hesitation in entering into the commonest transaction becomes inevitable.

The simplest case will illustrate my meaning. A publisher receives an order for a book from a person in France. The would-be purchaser may be known to him, but inevitably one of the questions which will arise in his mind is—"In case of non-payment how shall I recover the money?" Let me bring the question nearer home. One of my readers is taking up an appointment in the Colonies. His outfit and the payment therefor becomes a most serious question. His tailor, his bootmaker, his haberdasher, perchance, if he be so blessed, his wife's dressmaker, when credit is suggested, will without doubt say, "Well Sir, of course you see, you are going to the Colonies, and" Perhaps a payment on account may ease off the difficulty, which is a very considerable one to those who are not given an outfit allowance. As it is with small, so it must be with large transactions. The uncertainty of the remedy in case of default must impede, if not prevent altogether, the entering into new commercial relations between persons residing in different parts of the Empire. The tailor and the dressmaker are conscious of no more than this, that if there is any difficulty as to payment of the bill there is no certainty of speedy recovery of judgment and execution. When the solicitor is consulted the client will be initiated into all the mysteries of "service out of the jurisdiction," and the delays attending the endeavour to get execution of English judgments in the Colonies, especially of judgments by default. If counsel is consulted he will probably give a learned opinion with much reference to the maxim *actor sequitur forum rei*; and the advice will waver between the advisability of suing in the Colony with all its attendant difficulties and expense, and suing in England followed by another suit in the Colony, to obtain execution of the English judgment. If counsel is very learned he will probably point to the manifest difficulty of reconciling the two decisions of the Privy Council in *Ashbury v. Ellis*, and *Sirdar Gurdial Sing v. the Rajah of Faridkote*, given respectively in 1893 and 1894. Counsel will see a vision rising before his eyes of a leading case in which the whole law of foreign and colonial judgments will be threshed out before the House of Lords. And the tailor and the milliner will ponder these things deeply, and perhaps

wonder what all the talk of "Imperial Unity" means, when so simple a matter as the recovery of money declared to be due by a Court in one part of this great Empire cannot be recovered without so much trouble and uncertainty in another part. There will seem to him to be a hiatus between the promise and the fulfilment. One conclusion he most certainly will come to--that never again will he supply goods to gentlemen in the Colonies without prepayment.

These very homely illustrations will serve, I think, to show that alike in large and small matters the questions involved in the reciprocal execution of judgments in different parts of the Empire has an important bearing on their commercial relations. I am not riding a mere legal hobby once more. I believe it to be an eminently practical question, and I feel certain that if the procedure of the law with regard to it could be made more stable, there would inevitably result a beneficial reaction on the general trade of the Empire. Let me put this question: Is the Judgments Extension Act of 1868, of any use in promoting sound commercial relations between the three Kingdoms of Great Britain? I am certain that the answer must be in the affirmative. At least, it was found expedient to extend the principle of the Act to the judgments of inferior Courts. In order, so to speak, to link up my argument with the one with which I started, the true effect of these two statutes is not to be gauged by the number or judgments registered under them in different parts of the United Kingdom, but rather by the fewness of them. What it is necessary to realise is that they have had a beneficial effect on the general commercial relations of the three kingdoms, by the mere fact that they have rendered the appeal to the law when necessary certain and effective, and, therefore, have induced people to avoid that appeal except as a last resource.

I must now ask my readers to bear with me while I indicate, as shortly as possible, the lines on which the improvement in the matter of executing colonial judgments in Great Britain and throughout the Empire, and, conversely, judgments of the United Kingdom in the Colonies, must proceed.

The present cumbrous proceeding by way of action on the judgment should be abolished, and the principle of registration adopted as in the case of judgments of the United Kingdom under the Judgments Extension Acts.

I may say that this proposal was adopted in principle by the Colonial Conference in 1887, when a draft of a statute, which I had prepared, with the then Lord Chancellor, Lord Halsbury's permission, to form the basis of discussion, was approved.

Order XIV., which has been held to apply to actions on foreign judgments, is insufficient for the purpose, for, in the first place, the expense of issuing the writ and of the subsequent proceedings is far higher than that involved in mere registration; and, secondly

because it opens the door to defences, and the law on the subject of defences to foreign judgments is at the present time in too vague a condition. The two important heads of defence are "fraud" and "absence of jurisdiction." Of these fraud is the most insidious. It should not be recognised in the case of colonial judgments any more than it is recognised under the Judgments Extension Acts. Whatever may be said with regard to the defence in actions on foreign judgments, it can have no bearing in the case of colonial judgments, for there is a remedy in the colonial court where the judgment was given, and there is an appeal to the Privy Council. It has been laid down over and over again that the English Court, in which an action on a foreign judgment is brought is not an appeal court from the foreign court, the remedy being to that court alone, and this applies with additional force to colonial judgments.

The following example will illustrate what is meant by the insidious nature of the defence, and how it makes for delay. One of the last cases I was engaged in before I left for Japan in 1887 was an action on a judgment of the Cape of Good Hope. There had been a submission to arbitration; both parties had appeared, the award had been given and made an order of court. On the application for judgment under Order XIV. fraud was set up, and the defendant obtained leave to defend, the Divisional Court declining to take into consideration the fact that the judgment was of a colonial court. The defence involved a commission to the Cape, and, of course, great delay. In the spring of 1891, when I returned to England, the first brief on my table was in the trial of this same action, and when it came on judgment was obtained by consent. Comment on a procedure which allows such delay is superfluous.

The question of jurisdiction must be dealt with in another way. The subject is more than intricate, and I do not propose to discuss it in all its varied aspects, but must be content to state certain principles which I believe to be sound, leaving their discussion for another place.

I adopt Lord Esher's opinion (when Brett J.) in *Jackson v. Spittal*, that it is essential, in the interests of commerce, that there should be a procedure for reaching absent defendants in certain circumstances. I adopt also the opinion expressed by the Privy Council in *Ashbury v. Ellis* in the same sense, that it is within the powers of a colonial legislature to pass such laws, as being included in the phrase "peace, order and good government" of a colony. And I respectfully demur to the contrary opinion of the same tribunal in the *Rajah of Faridkote's* case.

I further believe that these opinions warrant Parliament in departing from the traditional doctrine expressed by the maxim *actor sequitur forum rei*, which was so forcibly adhered to in the last mentioned case.

I admit the argument, for the sake of this argument, that the inevitable fact that the details of this procedure, both with regard to the cases in which it is allowed, and the manner in which it is executed, vary in different Colonies, render it impossible for judgments by default given in actions begun against absent defendants to be executed in England. But I maintain that it is preposterous that in so important a matter the law of the Mother country and of her Colonies should so differ as to produce so disastrous a result to commerce.

I believe that it would not be impossible to arrive at an understanding as to the details of the procedure on the subject; for already many of the Colonies have adopted the English practice. I believe, therefore, that a uniform code for the Empire could be settled. Not the least curious part of the matter is that the procedure in some of the Colonies is based on the Common Law Procedure Act or the Rules of Court of 1875, which have been superseded by the Rules of 1883.

With the recognition of this code by the Imperial Parliament it would cease to be an extraordinary procedure, but would become effective; and its adoption would have this important result, that it would import an obligation on the absent defendant to appear, or to suffer judgment by default. From this it would follow that judgments by default given in actions begun according to this procedure would be included in the operation of the statute, and execution on them could be speedily obtained.

There are, of course, innumerable other details which would require discussion and settlement, but the broad lines I have indicated once settled, the others would follow as a matter of course.

I believe that, with a certain amount of *bonne volonté* on all sides, it would be possible to achieve what I have indicated, and that the resolutions of the Colonial Conference of 1887 could thus be put in force. If it were done, it could not fail to produce an appreciable effect on the commercial relations of the Colonies with the Mother country. It certainly would be a tangible link in the chain of Imperial Unity.

F. T. PIGGOTT.

HONG KONG.

POSTSCRIPT.—The following are important periods in the official dealing with the subject, in which I have taken part.

In 1887, I drafted a bill for the execution of Colonial Judgments, which Lord Halsbury, then Lord Chancellor, agreed should be submitted to the Colonial Conference. It was discussed at two or three sittings of the Conference, and the principle of the bill was agreed to.

During the same year the larger question of the execution of

foreign judgments was under consideration of the Foreign Office. A draft convention with Italy was prepared, and a preliminary agreement as to the terms of a possible arrangement with that country was come to at Rome. Italy had at that time been making proposals to the Powers for a conference on the subject, and it was hoped that this draft convention would serve as a basis for discussion at the Conference, should it ultimately be agreed to. The Colonies were, of course, included in the scope of the convention, and had it been agreed to, the question of the mutual execution of judgments between the Colonies and the Mother country would have been dealt with separately.

In 1899, an ordinance was passed by the Legislature of Mauritius (No. 42 of 1899), dealing with the question of the enforcement of foreign and colonial judgments in that colony. This Ordinance was disallowed, if I may say so, quite properly; on the broad ground that the subject was not one which could properly be dealt with by one colony. The Bill of 1887 and the Ordinance of 1899 differed widely in the method of dealing with this question. The Bill was based on the same principle as the Judgments Extension Acts of the United Kingdom, which apply to English, Scotch and Irish judgments. This ordinance treated colonial judgments on the same footing as foreign judgments. I think there can be little doubt that this last method is the more correct of the two, for the following reasons.

It is probable, according to Story (Conflict of Laws, § 551), that the judgments of the Roman courts were executable as of course throughout the Roman empire. It is a fact that French and German judgments are executed *de plein droit* in the colonies of these countries respectively. But the constitutional system on which the British empire is based—and which in the application of its cardinal principle is the same for Hong Kong, Mauritius, the Commonwealth of Australia, or the Dominion of Canada—I think requires that the question should be looked at from a different standpoint. Subject to the rule of precedent the courts in the smallest as well as the largest colony are independent of the courts of the Mother country, they are, strictly speaking, “foreign” to those courts, and some of them administer an actually foreign law. This principle is in harmony with the great spirit of independence of all its parts which pervades the Empire. If, then, it were possible to determine a code dealing scientifically with foreign judgments generally, I think that it should be applicable to colonial judgments. I do not think this is so hopeless a task as some seem to think; but perhaps we are still a long way off from a second endeavour being made to settle the question. But the question as it affects the Colonies is not only easier of solution but lies more within our grasp. Some of the problems do not bristle with difficulties as in the case of judgments coming from foreign courts. I think the principle of the Judgment Extension Acts is hardly

sufficient for the purpose. We want to get farther back. It ought not to be a very difficult task to establish once and for all a code for the Empire for service out of the jurisdiction. And when once this is established the recognition of judgments is robbed of half its difficulty. And then, these two questions finally settled, intercolonial commerce would have the same benefit of legal sanctions as home commerce, with, I have little doubt, most beneficial results. I am disposed to think that the present state of the question is hardly realised. At the risk of reiteration I venture to state it once more. A judgment in a colonial court against a non-resident Englishman may be upheld on the question of jurisdiction by the Privy Council (as in *Ashbury v. Ellis*, 1893, A.C. 339); the only means of enforcing it would be by action in England, and (as in *Turnbull v. Walker*, 77, L. T. 667) it would not be enforced; and if the principles established in *Gurdayal Sing v. Rajah Faridkote* (1894, A.C. 670) are accepted, the decision would be upheld by the House of Lords. This can hardly be said to be a scientific method of dealing with an important Imperial question.

F. T. P.

HONG KONG.

NOTES ON WEST INDIAN FEDERATION.

By R. H. MCCARTHY, C.M.G.

THE April issue of the COLONIAL OFFICE JOURNAL contains an article on the Future of the West Indies, in which confederation is discussed, and this part of the subject is also touched upon by the Editors. An old and interesting part of the Empire, the West Indies collectively display an absence of that vitality which is as conspicuous elsewhere in the British Dominions. From time to time palliatives have been administered, but the disease is deep-rooted, and there is a growing feeling that more drastic remedies are needed if these Colonies are to become prosperous, or to be rendered able to work out their own salvation.

Last year in the *Fortnightly Review* a writer signing himself "Imperialist," proposed to exchange the West Indies for the Philippines. The proposal exhibited more boldness than wisdom, and was very effectively dealt with by Mr. Norman Lamont, M.P., in the *Contemporary*, and it is here only referred to as showing the lengths to which some thinkers go in search of an effective cure. The remedy most usually dwelt upon, and the most obviously reasonable, is the union of these Colonies either by unification or confederation. The home authorities have encouraged movements in that direction, but so far the only result has been the federation of the Leeward Islands. It is to be feared that one consequence of this step has been to discredit the idea of federation. With an area of 704 square miles, a population of 130,000, and a total revenue of £120,000, this little group was given five executive and five legislative councils, with 47 and 73 members respectively, while each port continued to levy customs duties on imports from the other ports. Unification would apparently have been more appropriate in this case than federation, whose machinery is unsuited to units so small. The JOURNAL article already referred to advocates union over a larger area, while regarding the confederation of the whole of the West Indies as impracticable. This makes the question one of

degree, but it is not quite easy to prove that while union over, say, a line of 500 miles is advisable, it would be unworkable over a line of 1,000, or even 1,500. In passing, the author's suggestion may be noted that even the governors of Colonies outside the confederation with members of their staffs, should be invited to general conferences with the authorities of the federated Colonies. This suggestion seems to weaken somewhat the argument against a wider federation, as it implies the existence of common interests.

The present writer would welcome the confederation of Barbados, the Windward, and the Leeward Islands as a step in the right direction. However, while admitting that there are difficulties attending a larger scheme (about most things worth doing there are difficulties), he is satisfied that they are not insuperable; and as a contribution to the discussion he will examine, necessarily very briefly, the objections most commonly urged. These are:—

1. *Mutual remoteness, lack of means of communication, and diversity of laws, races and interests.*

2. *Consequent difficulties of administration, conspicuously with reference to inspection by Governor, or Governor-General. Alleged to be easier practically to govern from London.*

3. *Disinclination on the part of the West Indies, with which the initiative rests. Difference in resources and unfairness of partnership to the more prosperous.*

4. *Absence of advantages.*

Distance; communication; and diversity.—The Australian Commonwealth measures approximately 2,700 miles by 2,000, and Canada covers from east to west over 3,000 miles, but the remoteness of the various parts has not prevented confederation. In these cases land forms the barrier of distance, and in that of the West Indies, water, a difference entirely in favour of the West Indies, though the fact is not always realized. When you have at immense expense spanned a continent with a railway, you have only rendered accessible a strip on either side, while on the sea you already have an easy road in whatever direction the head of a vessel is turned. Were the Atlantic land instead of water, probably the West Indies would still await their discoverer. Take a local illustration. Practically, as regards ease, speed, or cheapness of transit, is not the capital of British Guiana nearer to Jamaica than to her own interior, say 300 miles away?

It is true that means of inter-communication both by steamer and by telegraph are defective, and urgently call for improvement. If a reform be instituted which is needed in any case, the present defects will cease to be an argument against federation. On the

other hand, had the West Indies a single authority and a joint purse these defects would beyond any reasonable doubt be speedily removed.

Assimilation of laws would be useful, and would probably take place by degrees were the Colonies under one legislature, but it is not absolutely necessary. Even now the laws of England, Ireland, and Scotland present many discrepancies.

The alleged diversity of interests is purely imaginary. There is more of such diversity in any one English county than there is throughout the whole of the West Indies, which are—broadly speaking, of course—purely agricultural, and with no greater variety of products than may be found on a single English farm.

Racial diversity is an equally fanciful difficulty. Trinidad alone has as varied an assortment of races as have the West Indies collectively.

Difficulties of administration.—Surely too much stress is laid on frequent visits by a Governor (why "Governor-General"?) Is there any large state or dependency whose every part is frequently visited by its head?

How often does the Governor-General of Canada visit Vancouver, or even Winnipeg? or the Viceroy of India ten per cent. of the cities in his charge? One is tempted to ask a similar question respecting the Governors of Jamaica, Trinidad and British Guiana. During a recent tour Sir Henry McCallum was told by the inhabitants of an important district in Ceylon that they had not seen a Governor for 25 or 30 years. It is suggested that except for perhaps an annual tour, occupying a month or so, the Governor of the West Indies would be better employed at head-quarters, leaving inspection to his officers. With a special steamer, preferably a man-of-war, he would be actually at sea about ten days.

Governing the West Indies from London and government from a local centre have scarcely a feature in common. Even if the Secretary of State had such a body of advisers as the Indian Council, that is to say of men who had spent many years on the spot, and were familiar with local circumstances, there would still be a very material difference. Government by cable has its disadvantages, and in practice a distance of 4,000 miles is a factor of some importance. A governor stationed in, suppose, Barbados, would be fairly near any part of the West Indies, and could within three days reach any Colony. Meanwhile, he would have at his side officers possessing an intimate knowledge of every Colony.

West Indian disinclination or indifference.—Bearing in mind the number of separate governments in the West Indies, and the arguments based on the remoteness and difficulties of communication, it seems unreasonable to expect these small communities to take the

initiative in a movement as important and whose details are necessarily complicated. It will also be remembered that West Indians have long been struggling with economic troubles, with the heart-sickness engendered by hopes deferred. Nor must it be forgotten that the Crown Colony system of government, whatever be its merits, and however necessary it may be in the West Indies, does not encourage initiative.

An objection commonly urged in the West Indies is based on the relative poverty of some of the Colonies. "Why should we be linked with a miserable island like —?" is a natural question. However, everything depends on the financial arrangements made. It would be possible to keep the purses separate, each Colony making a contribution to the Federal exchequer. That is not to be recommended, and in the opinion of the writer the best means of meeting this difficulty is by what may be called a wedding gift from the Mother country on the occasion of the happy union. What direction this should take there is no need to discuss. It might take that of wiping out certain debts, or of a contribution towards setting up house; whatever its direction, it might be made to serve the purpose of removing glaring inequalities. The expectation of such a gift is not unwarranted. These Colonies have contributed largely to the wealth of great Britain in the past; now that many of them have fallen on evil times they have a claim to assistance. There is a more material reason. Looking back over the long list of grants and subsidies to the West Indies, it evidently would be well worth the while of Great Britain to contribute handsomely towards an arrangement calculated to put a stop to the stream of doles, and to diminish her responsibility for the poorer members of the group.

Absence of Advantage.—This point could not be discussed adequately except at considerable length, and here the benefits which might be expected will only be briefly indicated.

What has led to the development of the family into the tribe and thence into the nation? What prompted confederation in Canada and Australia, and is going to bring it about in South Africa? The knowledge that union is strength. In contiguous communities like those of the West Indies, mainly of the same race, with histories very similar, subject to the same economic conditions, and free from commercial rivalry, it must be obvious that Customs barriers, differences in laws, separate administrations and separate treasuries mean loss and inconvenience and, in external affairs, weakness. How little is known in Britain of the West Indies, and how little attention their affairs receive from the public! For weeks together these Colonies are unmentioned in the London Press. The fact must be recognised that the West Indies do not fill a large space in the public eye. Compared with other possessions, they are small and poor. Excluding British Guiana and the Bahamas, their total

area is 7,500 square miles. That of the comparatively insignificant Gold Coast Colony is 40,000, of Northern Nigeria 310,000, and of Australia nearly three million square miles. These possessions appeal more strongly to the investing public, and touch more forcibly the pride and the imagination of the masses than do small Colonies which, whatever their past, are now best known by their misfortunes. The combined West Indies, though still relatively small, would have more weight than they have now, and the existence of a common treasury, by enabling them to help one another and to dispense with Imperial doles, would cause them to be held in more respect by the materially minded, and would at the same time improve their credit.

The best thing done for the West Indies during the past fifty years has been the establishment of the Imperial Department of Agriculture. That Department derives strength from its centralised character, but at the same time its independence of local authority is a source of weakness. Similar work would undoubtedly be carried on, and under more favourable conditions, by a federal government. Science has, speaking generally, overlooked the West Indies, because the separate Colonies cannot afford such a luxury. Education, defence, communications—these are only some of the many matters for efficiently dealing with which a central authority and a joint treasury are necessary. It is said that much might be done by conferences. These have an educational value, but they are necessarily only advisory, and confined to one subject, and they could not be a substitute for a central legislature and executive.

If it were possible to calculate the total cost to the West Indies of the barriers they erect against one another by customs tariffs and quarantine restrictions, it would be universally admitted to be appalling. If delay and expense be inflicted on your carriers, and obstacles be thrown in the way of your traders, sooner or later you pay for it in one form or another. Lately, on the initiative of the Colonial Office, quarantine law and practice, both of them discreditable to British communities, were amended, and, it was hoped, made uniform. A great deal of discretionary power, however, was left to the different health officers, with the result that the degree of loyalty and intelligence with which the law is now administered varies very considerably, and in the absence of central executive control uniformity shows an irresistible tendency to disappear, and with it much of the value of reform.

Though the average rate of pay in the West Indian Public Service is considerably below that of public departments at home, in spite of the lower cost of living in Britain, and very many of the officers are miserably underpaid, the total cost of administration is out of all proportion to the resources of these Colonies. This fact is mainly due to the number of separate governments, each with its crowd of small separate departments. Not only governors, but

other officers with high-sounding titles, are by far too numerous, and to a great extent they are necessarily employed on work which might well be committed to cheaper men, were there more centralisation, with an efficient system of supervision. One result of federation would be a great reduction in the number of these high officials.

The writer, however, lays less stress on economy than on the increased efficiency which might be expected. The want of uniformity in the conditions of service precludes the free movement of officers between the Colonies. In one colony no pension is payable unless a man has served in it for ten years; in another an officer is compelled to contribute to his own pension; scales of salary vary, not with the volume or nature of the work, but with the financial position of the respective colonies; and the policy, explicable but disastrous, of regarding recruits from outside as trespassers, prevails almost throughout the West Indies. Some years ago, in the course of a Parliamentary enquiry, attention was called to the large sums spent by certain departments. At home, on the removal of officers, it was explained that the money was considered to be well spent in keeping men fresh and broadening their experience. A similar policy might be adopted, with immense advantage, in the West Indies, the drawbacks attending the retention of a public officer in one small community for many years, especially if he be a native of the place, being very grave. A Public Service, properly paid and graded, such as is found for the Eastern Colonies by open competition, would be by far more efficient, and probably, in the end, by far cheaper than is the present service. The formation of such a service, which is practically impossible in present circumstances, would be one of the most striking benefits likely to accrue through federation.

Other advantages might be anticipated from confederation, but the writer thinks that the case for union rests securely on the following: Increased ability to develop resources and to meet passing difficulties by means of a central authority and a common exchequer; increased intercourse and trade through the abolition of customs barriers; more liberal quarantine administration; improved means of steam and telegraphic communication; the growth of a more progressive spirit and of wider views in legislation; greater administrative efficiency, and probably economy, by the consolidation of establishments; more influence in England and elsewhere in advancing West Indian interests; and improvement of West Indian credit by mutual assistance and independence of help from outside.

GOLD COAST RAILWAYS AND HARBOUR WORKS.

IN such a country as the Gold Coast the first question of railway policy is whether the lines to be constructed should radiate from one port, or should run, more or less, perpendicularly from different points on the coast into the interior. Ten years ago the former plan was contemplated. The idea was to make Accra the starting point, and the first line contemplated was one from Accra to Kpong, a place on the Volta River. This railway would take up the transport of goods brought down the river, at a point above some difficult rapids and shoals.

The other plan has, however, so far prevailed. The sea is the main line of communication, and it is believed that the most economical results will be effected by connecting the coast towns with the various planting and mining centres, at as many points as possible, by means of roads, rivers and railways. It would be different if there was any natural harbour on the coast. But there is none, and it would be a very expensive matter to convert Accra into a commodious harbour. The making of the Sekondi railway to Kumasi went far to settle the policy. The railway was urgently wanted, and for a special purpose, and the mining companies gave the Government a guarantee to get it. It was out of the question under the circumstances to continue this line along the coast to Accra, and, even if it had been clear that such a work would be remunerative, it would have been obviously wasteful to carry goods over the additional distance from the eastern side. While, however, there was a good case for allowing that side to have its own system, it may be urged that the multiplication of bases is costly and inconvenient, and that the advantages of converging any future lines upon Accra are considerable. The organisation of a separate base in each case is expensive at the outset, and necessitates a separate staff and workshops. A reduction of the customs and other Government staff would also be possible by concentrating the trade. The increase of business at Accra would, no doubt, lead in time to the construction of a harbour, such as has been long talked of; but if imports and

exports are spread all over the coast, the case for any large expenditure at any one point is weakened and any project of great improvement remains in the domain of pious aspirations. Another point well worth consideration is that the construction of a harbour would invite many steamers, which, under present conditions, are quite unable to load or discharge cargo along the coast, and that, therefore, the railway policy, if moulded to that end, would greatly increase facilities.

The Kpong project has been given up, at all events for the present, as it has been found that another direction to the interior is more promising. An alternative scheme has been under consideration and has recently been sanctioned by the Secretary of State. This is for a railway from Accra to Mangoase.

The line would pass through twenty-one villages, near most of which there are cultivated tracts, but good land is not reached till about six miles before Mangoase; at this point plantations of cocoa, yam and plantains begin and extend for four miles beyond Mangoase. Mangoase lies in the Densu valley—that is, in the valley of a river which flows to the sea near Accra. This position is in itself some indication that the engineering difficulties will not be great, and a survey has made this clear. Nearly all the food supplies of Accra come from places on the route. The unofficial members of the Legislative Chamber were unanimously in favour of the route selected. The distance between Accra and Mangoase is about 35 miles.

The tract has been staked out on a gradient of 1 in 80. The need for the line has become pressing largely in consequence of the great increase in the export of cocoa, an article which it is difficult to transport in any other manner, and it is anticipated that it will prove remunerative at once. It is an important consideration that a large number of natives were engaged in carrying will be rendered available for other purposes by the construction of such a line.

An interesting feature of the scheme is that the Secretary of State has decided to invite tenders for the construction of the railway. Hitherto the railways on the West Coast, and generally in the other Crown colonies, have been constructed by the Colonial Governments; but many schemes have been put forward by contractors, and there is a considerable volume of opinion in the commercial world that a contractor would do the work in such cases more cheaply and expeditiously than a Government department. There can be no doubt that a contractor who has undertaken to lay a line for a stated sum, and in a stated time, under penalties for failure, has a greater incentive to be economical and speedy than Government officials have, and probably under his control there would be less wastage in some ways. On the other hand the contractor lays himself out to make a profit and does the work as cheaply as is

possible; he is not particularly concerned with the question of the permanency of the construction, so long as he complies with the letter of the specification. The result has been in some cases that a railway built by contract has soon had to bear a heavy expense for repairs and renewals, and the financial position is in the long run worse than if it had been built more laboriously and at a greater cost. If the specification could provide for everything in detail, this objection could be met, but in a rough and new country it is impossible to foresee everything. Much of course depends on the character and position of the firm, and the great resources and experience of the big contractors are considerations of the first importance. The Colonial Office have long thought of trying the experiment; the occasion has now come, and the result will be watched with deep interest. The advertisements were issued about 10th June and tenders may be sent in till 10th September.

Much of the belief that a contract system would work well comes from the fact that the contractor binds himself to do the work under a penalty if he does not do it; in other words he is a responsible party from whom compensation is obtainable if things go wrong. On the other hand, under the departmental system, neither the public works office or special staff which carries out the work on the spot, nor the consulting engineer who advises from home, have any pecuniary liability. If a mistake is made, or the estimates of money or time exceeded, there is no redress, except the inadequate one of dismissing somebody. The unofficial world naturally enough views such a position with dissatisfaction. It may be—and generally is—the case that the contractor in like circumstances would plead some excuse successfully; contractor's delays are many and fines are few; but at any rate he is liable, and it is an act of grace to let him off. This power to deal with the case on its merits makes all the difference in the feeling with which the case is regarded.

There is no doubt an advantage in resorting to contractors of good repute for works which can be fully specified and carefully inspected. A harbour or a pier is a work of this class. A railway is a much more doubtful matter, and general experience points to construction by Government. But, whenever the work is done by Government, the above considerations show that it is important that the responsibility should be definitely allocated. The object to be aimed at is, we would suggest, that the general responsibility should be taken by the Colonial Government, and that the Consulting Engineer should only be referred to on purely technical matters.

The construction of a deep water harbour, capable of giving shelter to ocean going ships, is practically out of the question on the Gold Coast, and all that can be arrived at under present circumstances is the making of landing facilities which will afford secure shelter and berthage for barges and other craft not drawing more

than five feet of water. The present method of landing and shipping cargo by means of surf boats is both crude and expensive, and it would be impossible to land in this way the heavy material required for a railway.

The work which has been commenced at Accra consists of the construction of a breakwater 800 feet in length and 30 feet in width, running partly over a reef of rocks, and of a jetty under the lee of this work, 270 feet in length and 52 feet in width, from which the rails would start. The depth alongside will be sufficient for surf boats. The work now in progress was decided upon in October, 1905. It was found that the stone near the works was not suitable for making blocks, and it was necessary to open a quarry three miles away and to build a railway to it. The retaining wall for the railway has been built to the point where the breakwater proper begins with blockwork, and the work of setting the blocks commenced last summer. To make the scheme complete it would be desirable to make the jetties and increase the length of the breakwater to 900 feet, on this basis the estimated cost is £185,000.

At Cape Coast there is a reef of rocks running south-easterly, which affords considerable protection from the surf, and it would be fairly easy to construct a concrete breakwater 470 feet long, and a pier 150 feet long by 30 feet wide, inside the protected area. The cost of these works has been estimated at £21,500. The country behind the town is densely populated and used to produce considerable trade, equal in fact to that of Accra, but the Sekondi railway has lately diverted a great part of the traffic from the Northern Territories through Kumasi, and the trade has fallen off considerably.

At Sekondi there are two iron jetties put up by the railway department, but it is necessary to enlarge the quay room. The great increase in the timber trade has caused the want of space to be severely felt, and as agricultural industries increase a much larger area than is now available will be required. In the last two years the railway freight rose from £130,000 to £170,000, and that of 1907 will probably reach £200,000. As an instance of the development which has taken place since the construction of the railway, we may mention that in 1898 the African mail steamers called as required five or six times a year, while in 1906 as many as 426 steamers used the port. A new jetty has just been completed, and a scheme has been approved for the prolongation of the railway to the customs warehouse, for the construction of a breakwater, 750 feet long, and of a new jetty, 255 feet long, and for the extension of the railway quay on the north side of the harbour for stacking timber. The breakwater would run from the southern margin of the bay in a north-easterly direction, and is estimated to cost £82,000. A reclamation of $2\frac{1}{2}$ acres is contemplated.

FERRO-CONCRETE BUILDINGS IN COUNTRIES SUBJECT TO EARTHQUAKES

By J. S. E. DE VESIAN, M.Inst.C.E., M.I.M.E.

THE appalling loss of life which follows any serious convulsion of nature, must render doubly welcome any suggestion made to adopt a form of construction calculated to lessen the fearful holocaust and wide-spread devastation and misery inseparable as the result of seismic disturbances.

The most recent of the earthquakes, resulting in great loss of life and damage to property, occurred at San Francisco, in April, 1906, and in Jamaica, in January, 1907.

At Kingston, Jamaica, the number of deaths resulting from the shock and from consequent fires which broke out in various parts of that city, have been variously estimated at from 1,200 to 1,500. In the official report included in the correspondence presented to Parliament the following passage occurs:—"It is not too much to say that there is not one single brick-built house remaining intact in the whole Town and very few that are not, more or less, completely wrecked."

Buildings of the ordinary type of construction, whether of steel, iron, stone, brick or wood, have not withstood the shocks of an earthquake, and when one considers the enormous loss of life caused through the sudden destruction of buildings alone, any suggestions made with the view to lessening such loss, or probably obviating it altogether, should command the serious attention of every member of the community.

Ferro-concrete is so essentially a modern type of construction (it has only come into general use during the last thirteen years), that, with one exception, no recorded instance can be given of the effect which a serious earthquake shock has on buildings entirely constructed on ferro-concrete principles. One is, therefore, driven to the conclusion that at the best it is only possible to theorise the result which tremors of the earth surface would have on ferro-concrete edifices.

But while one has of necessity to deduce conclusions which can only be partially substantiated by actual experience, it must be borne in mind that many, and probably the majority of inventions and systems have been but the outcome of theories arrived at by the

embodying of known facts. And it is by the embodying of known results as to the construction of concrete and steel during the past decade that leads the writer of this paper to advocate the use of ferro-concrete buildings in those parts of the world that are subject to periodical visitations of earth convulsions or, what has been described as "nature's death toll on suffering humanity."

There are, of course, a number of so-called reinforced concrete methods of construction, but the writer is only concerned to show in this paper the advantages of a building of monolithic character, which, in his opinion, is the keystone to its adaptability for successfully resisting earth shocks.

But to obtain this monolithic result, the strictest observance and adherence to the principles governing the production of ferro-concrete must be adhered to. It is this rigid adherence to known rules that has led the various departments of H.M. Government, and the principal Public Bodies and Corporations throughout the United Kingdom as well as some of the Dependencies abroad, to adopt the monolithic system which the writer has the honour of being actively associated with—that known as the Mouchel-Hennebique system of ferro-concrete.

Briefly stated, ferro-concrete or reinforced concrete is a combination of concrete and steel, in which the steel takes the tension stresses and the concrete the compression. It may rightly be termed a new material conforming to laws of its own. For instance, if a beam of concrete alone will extend under tension for, say one-tenth of an inch, a similar beam reinforced properly with steel will extend one inch, or ten times as much, without showing signs of cracking or distress. The more the steel can be sub-divided throughout the tension area of the concrete the better, or, in other words, small round bars are preferable to rolled sections of considerable area. By the suitable employment of such bars, the designer is enabled to secure monolithic construction, in which all parts are connected absolutely without joints, and the reinforcement extends throughout the concrete, imparting the necessary resistance to tensile and other stresses to individual members, and by passing from one member to another the bars perform a most valuable duty by helping to distribute the forces over the different parts of the structure.

It is in a thorough comprehension and understanding of the foregoing—though necessarily brief—formula, that one arrives at the conclusion of the great safety factor given by the employment of ferro-concrete. Of course, proper discernment must be shown in the selection of the steel most suitable for the reinforcement, the quality of the Portland cement, and the sand used in the-mixing of the concrete, the aggregates for the concrete, and the proportions of the materials, &c., to be mixed.



GRAIN ELEVATOR, TUNIS.—FIG. 1.



GRAIN ELEVATOR, TUNIS.—FIG. 2.

Ferro-Concrete Buildings in Earthquakes. 49

Before enlarging on the style of structure which the writer thinks the most suitable, it will be of great interest to cite two instances where ferro-concrete buildings have been subjected to movements of the ground, although in one case only was the movement attributable to earthquake shock.

The first showed the inherent strength and wonderful tenacity in ferro-concrete, and occurred at Tunis. Two Grain Elevators had been erected, but, owing to the unstable character of the soil and consequent unequal settlement, the two outside buildings tipped as a whole away from the central structure, until in one case an angle of 25 degrees from the vertical was reached, it being nearly 12 feet out of plumb. Both buildings were returned to a vertical position by loading the elevated sides with sand, and at the same time making excavations along the foundations on the same side. Throughout this severe test the buildings remained whole and uninjured.

Photograph No. 1 illustrates the angle at which the buildings inclined, and supports the writer's theory that a monolithic building properly constructed can reasonably hope to escape damage from the shock of an earthquake.

Photograph No. 2 gives the interior view of one of the inclined buildings, showing the method used in bringing them to a vertical position; the plumb line at the left conveys some idea of the extent to which the building leaned over. It will be observed that not one of the panes of glass shown in the photo was damaged. A building constructed under ordinary conditions would, in all probability, have totally collapsed.

The second instance is that of ferro-concrete buildings in the district of Calabria, in the south of Italy. Calabria is situated two degrees of latitude nearer the Equator than that of Mount Vesuvius, and is subject to earth tremors every year. These earth shocks, although at times severe, have not hitherto been of a very serious nature, nor can they be compared to the disastrous earthquakes already mentioned, yet it is important to note that no damage of any kind whatever has been done to any of the ferro-concrete buildings in the Calabrian district.

Passing now to the details of the buildings which the writer recommends should be erected in localities subject to earthquakes, it may be stated that these details are arrived at after serious deliberation and after a careful research and study of the reports made by public bodies and various authorities on the earthquakes at San Francisco and Jamaica above referred to.

The following two typical illustrations of ferro-concrete buildings suitable for resisting movements of the ground on which they are built will exemplify the ease with which this system of construction can be adapted for the purpose.

The building at Quayside, Newcastle-on-Tyne, illustrated in Figs. 3 and 4 was erected several years ago for the Co-operative Wholesale Society of Newcastle on ground which had been condemned as unfit for such a heavy building, as borings showed there were some 60 feet or 70 feet of peat slush. It was decided to erect a ferro-concrete building on a general sill as being the only possible means of using the site for the purpose for which it was required.

This building consists of eight floors calculated and used for 6 cwts. per square foot superload, exclusive of the weight of the floor itself. The foundation consists of practically a ferro-concrete floor with beams designed to resist a reaction of the ground of 23 tons per square yard. This sill or floor spreads the load evenly over the ground, and being one with the building itself, which is without joints from foundation to roof, a structure is formed like a hollow casting, which could be tipped in any direction by a subsidence of the ground without injury. The water level in the ground being above the foundation slab, the basement becomes a ferro-concrete reservoir, watertight without the use of asphalte.

Fig. 5 illustrates the Submarine Store erected at Woolwich for the War Office, which is also of monolithic construction and built upon a general sill much in the same manner as the foregoing.

In districts subject to earthquake the height of the buildings should be somewhat limited, so as not to exceed a certain low multiple of the base. Moreover, it is important to note that in ferro-concrete buildings a definite lateral stability must be furnished, with less reliance upon the indefinite internal rigidity of the finished structure.

Much evidence, fully supporting the writer's contention, could be taken from the official reports made by the various authorities on the San Francisco and Jamaica earthquakes, proving the enormous advantage ferro-concrete buildings possess in withstanding earth shocks, but the following may be taken as illustrating the great resistive power of such buildings over those of ordinary construction.

In the Report of the San Francisco earthquake, undertaken by a Committee of the San Francisco Association of Members of the American Society of Civil Engineers, it was stated that geologists pronounced the opinion that the upheaval was due to the relief of accumulating stresses in the earth's crust along a previously known fault plane. From the ruins of the buildings the engineers inferred that a building designed to withstand a wind pressure of 30 lb. per square foot, and equipped with bracing necessary to prevent distortion under that pressure, would withstand a shock equal to that in violence which threw down lofty structures in that city.

Repeated public tests have shown that a properly constructed ferro-concrete building can withstand a very much greater pressure than

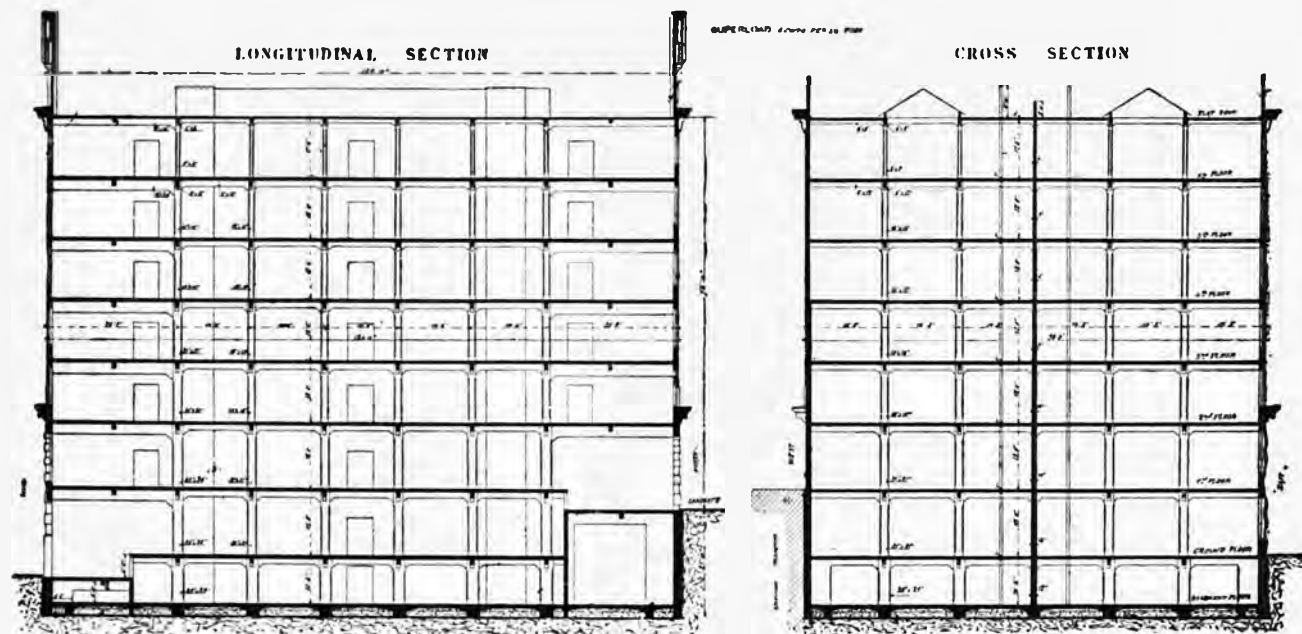


FIG. 3.

Ferro-Concrete Buildings in Earthquakes. 51

30 lb. per square foot. The grain elevators at Tunis above referred to proved that no distortion could occur. Again in a report on the conflagration consequent on the San Francisco earthquake, prepared by the Engineers to the National Board of Fire Underwriters, it was stated that reinforced concrete arched floors had stood the test of the fire; they were thus entirely unaffected by either earthquake shocks or heat.

The result of investigations made subsequently to the San Francisco conflagration, by the California Promotion Committee, further supports the writer's contention. It is well known, for example, that the Museum at Stanford University was built 17 years ago of reinforced concrete, being the first building of its kind in California. As compared with our modern methods it was a very crude example of reinforced concrete construction. Nevertheless, it stood the earthquake admirably, the marble statuary in the interior was toppled over and broken and the pictures damaged, but the building sustained no damage, not even being cracked in the slightest extent. The girl's dormitory was also of concrete construction except in the roof. The roof was badly damaged, but the remainder of the building was only slightly injured.

The *Speaker* in its issue of the 22nd September, 1906, stated that the Chairman of the Associated Portland Cement Manufacturers had announced in his recent speech that "from photographs of the recent disaster in San Francisco practically no buildings were saved except those erected with cement and steel."

The result of observations made by eminent seismologists upon buildings damaged by earthquake shocks reveal the fact that cracks or fissures made by such shocks are either lateral in direction or oblique. Lateral cracks occur where the upheaval of the earth's crust has been in a horizontal direction, the fissures made passing from left to right or from front to back of the building, those in an oblique direction show that the movements of the earth's crust took a circular direction, causing fissures in the building of an oblique or wavy character. The latter is far the more dangerous, as the structural character of the building is fatally affected, causing the walls to fall and thereby entailing great loss of life. It may be of interest to note that, in connection with these two forms of fissure, seismologists are able to locate the centre of the disturbance.

The sketches given of the buildings constructed in ferro-concrete show that, in either case, whether the movements of the earth take a horizontal direction, or are oblique or circular in direction, no damage to ferro-concrete-constructed buildings can result.

Briefly summarised, the result may be likened to that of a well-formed ocean-going vessel, which, rising and falling with the action of the storm waves, receives no injury, and on the subsidence of the movements of the waves, remains intact. Similarly uninjured would

ferro-concrete structures remain, due to the jointless or monolithic character of their construction.

In conclusion, it may not be amiss to quote the opinion of the Board of Underwriters, a thoroughly representative body in New York, who made exhaustive investigation after the San Francisco earthquake and conflagration.

EXTRACT FROM *New York Times*, DATED 30TH JUNE, 1907.

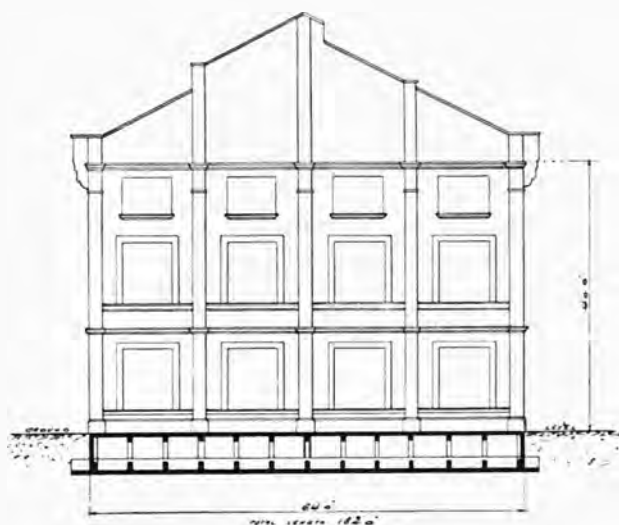
"A special committee appointed by the Board of Underwriters has been investigating for a considerable period the general subject of cement and concrete as used in various types of buildings, with the view of determining their value as fire-resisting material, and to formulate a standard specification for their use which should be both safe and commercially practicable. Experiences of the last year or so, particularly those in the fire following the San Francisco earthquake, have added materially to the knowledge of these materials as fire-resisting agents, and figure largely in the results of the investigation as reported to the underwriters.

"Among the three general features upon which the committee lays special emphasis, that of the design of reinforcement is taken up first.

"*We would call attention to a point omitted in the specification,' says the report, 'namely, that the design of such buildings should be undertaken only by engineers of special training and experience along this line. Some of the alluring advertisements of patent systems of reinforcement may seem to indicate that the erection of a building using some particular design is easy, and does not require much experience, but the fact is, there are many intricate questions which cannot be solved by the aid of advertising text books or stereotyped specifications, and we would urge that the design of a building of this type should only be entrusted to trained engineers of recognised ability in this particular direction, just as would be the case if a steel-frame building or bridge of equal importance was under consideration.'*"



FIG. 4.



SUBMARINE STORE, WOOLWICH.—FIG. 5.

COLONIAL STAMPS.

IN our last number we endeavoured to explain how it happened occasionally that colonial postmasters issued surcharged stamps—the explanation being simply that sometimes a particular stamp finds favour with philatelists and the stock is rapidly exhausted; some other available stock is then surcharged. This explanation has been severely assailed in *Truth*, which contends that no stock of any particular stamp should ever be exhausted, and that the postmaster should in his estimate allow for all contingencies, and should be muloted himself if his stock runs out. *Truth* adds the almost inevitable remark that the permanent officials, in this case the editors of this journal, show themselves more sympathetic towards official abuse than concerned for the public interest. We must admit that we did not realise that the public interest was particularly affected. We were not passing judgment on any specific case, but simply stating facts which occur in different places from time to time, with the object of showing that surcharging could come about in a natural way, and without any intention of manipulating issues for profit. As to the suggestion that in all cases a supply should be stocked large enough to meet all requirements, we would point out that, when once a particular issue has attracted the attention of collectors, it is impossible to say how far the demand will go; if, on the other hand, the demand is normal, the large stock necessitates continual auditing for a number of years; also the gum in hot climates would deteriorate, and sometimes the colours would be affected. After all, stamps are essentially only a convenient and economical method of collecting postal charges, and it is hardly reasonable to expect colonial Governments to go to any extra expense and trouble, because surcharging creates extra issues which are eagerly bought by some philatelists and objected to by others. So long as the issue has been made simply for postal and revenue purposes, it seems to us that the “public interest” is not affected. It is of course another matter if it has been made deliberately with the object of alluring collectors.

The following completely new issues of stamps may be expected before our next number :—

BRITISH SOLOMON ISLANDS PROTECTORATE (a dependency of Fiji) will issue $\frac{1}{2}$ d., 1d., 2d., $2\frac{1}{2}$ d., 5d., 6d., and 1s. stamps printed by the steel plate process. The design will be similar to the existing lithographic issue, and the colours will follow the new colour scheme with the exception of the 5d. value, which will be in sage green instead of purple and sage green.

MALDIVE ISLANDS (near Ceylon) will issue stamps of four values, *i.e.*, 2, 3, 5 and 10 cents. The principal part design will be a representation of a minaret.

CAYMAN ISLANDS are about to issue $\frac{1}{2}$ d. stamps for internal postage in Grand Cayman.

MALTA will issue a 5s. revenue stamp, which will simply be a 10s. stamp printed in red and surcharged 5s. revenue.

The following Colonies have been the first to adopt the new colour scheme for existing series of stamps, *i.e.*, SIERRA LEONE and BRITISH HONDURAS, but no order has yet been received from either.

NATAL will in future use a separate series of stamps for postage and revenue purposes above the value of 6d. Particulars of the colours will appear in our next issue.

BRUNEI.—An order has just been received for 2 and 8 cents stamps, which will be in the new colours described in our last issue.

BERMUDA $\frac{1}{2}$ d. and 1d. stamps have been supplied for the first time in single Postal Union colours.

DOMINICA.—1d. and $2\frac{1}{2}$ d. for the first time in single Postal Union colours. These and the $\frac{1}{2}$ d. value are on unsurfaced paper; 2s., 2s. 6d., and 5s. (previously on unsurfaced single watermark paper) have now been supplied on multiple watermark surfaced paper.

FEDERATED MALAY STATES.—3 and 8 cents for the first time in Postal Union colours.

FIJI 1s., previously on unsurfaced single watermark paper, now on multiple watermark surfaced paper.

LEEWARD ISLANDS 6d. and 1s. (hitherto on unsurfaced single watermark paper), now on multiple watermark surfaced paper.

MALTA 2d., 2s., and 2s. 6d. revenue stamps for the first time on multiple watermark paper.

MONTSEBART, 1d. and $2\frac{1}{2}$ d. stamps for the first time in single Postal Union colours. These values and the $\frac{1}{2}$ d. value on unsurfaced paper.

ST. KITTS—NEVIS— $\frac{1}{2}$ d. for the first time in single Postal Union colour. The paper is unsurfaced.

SOMALILAND PROTECTORATE 1 anna stamps will in future be printed completely in red, this and the $\frac{1}{2}$ anna stamp will be on unsurfaced paper.

The note in our last issue about buff paper seems to have been misunderstood. There has never been, and, as the colour has been abandoned, never will be any such paper with multiple watermark. The paper may, of course, be found both surfaced and unsurfaced according to the date of printing. The surface is, as we explained in the October No. of this journal, applied after the paper leaves the manufacturer's hands, so that the fact of its being surfaced does not give grounds for a belief that a fresh supply of paper has been manufactured.

BUSINESS NOTES.

In the Board of Trade report on British trade with New Zealand, on which we commented in our last number, the statement was made that hosiery and Berlin wools from Germany were preferred to British on account of dyeing. The figures given of the imports of hosiery did not seem to bear this statement out, being about £140,000 from the United Kingdom and £2,000 from Germany; and in order to get to the bottom of the matter we consulted the Nottingham and Leicester Chambers of Commerce, those being the hosiery districts. Nottingham have replied that "English hosiery dyers supply colours in all kinds of materials, wool, cotton, or silk, quite equal to German. Enquiries have recently been made in Nottingham by German dyers as to how certain colours are produced, whilst large quantities of silk yarns are regularly sent here to be dyed. The statement referred to has come before us previously, and appears to have been made by German manufacturers to secure attention to their own products." Leicester replied that "the bulk of the hosiery imported into New Zealand is of British manufacture and British dyed. Of the yarn trade, the worsted knitting and fingerings are entirely British, while the Berlin yarns are now limited to a very small trade." It is very satisfactory to find that the British manufacturer does so well with this important class of goods.

We have remarked, in commenting on the Board of Trade commercial reports, that the British manufacturer holds his own in the production of articles of a superior class, and that if the foreign maker frequently beats him it is mostly in cheap lines. We notice that Lord Brassey in his presidential address to the Chambers of Commerce (17th March) put this matter strongly. "It is," he observed, "in the cheap and low grade goods that we lag behind. As to the quality of some of these productions, I can speak from experience. I have been a buyer of ready-made white duck trousers

at Aden. They were shabby in an hour, and worn out in a day. (Laughter.) I recall the purchase of a bale of blue dungaree at Valparaiso. It was made up into trousers by the most skilled tailors on board the *Sunbeam*. The first time they went aloft to loose topsails the crew came down in rags. Let us not say that reluctance to engage in competition for the supply of goods of these descriptions does discredit to our British manufacturers. (Hear, hear.) It is commendable to take a pride in doing good work, and to look with contempt on shoddy. It were unwise to regard cheapness as being in itself contemptible. Whether it be the European immigrant into South America, the Asiatic, the West Indian negro, or the well-paid workers of our self-governing Colonies, all think more--and doubtless too much--of the low price than of the quality and wear of the goods they buy. It is more difficult to sell high-class goods at high prices than less valuable goods at low prices. Manufacturers must consider customers."

It is no doubt sound advice that customers should be considered, but a reputation for sound and honest work is a valuable asset, and the British manufacturer may fairly argue that it pays him in the long run to confine himself generally to good articles. The too cheap article soon tells its own tale. Thus the United States turn out windmills at £20 upwards, and numbers of these flimsy erections may be seen abandoned and cumbering the ground in South Africa. A defect may of course be thoroughly disguised for the moment, as when an apparently innocent paint contains some 75 per cent. of clay; but to any one who studies the matter the price reveals the true character.

The railway locomotive is an excellent case for examination from the point of view of comparative price and quality. A few years ago the India Office was somewhat embarrassed, and the home manufacturers greatly exercised, by the fact that German manufacturers tendered at about 20 per cent. below home prices. The tenders were not accepted, as the Secretary of State for India decided to wait for experience of the working of German locomotives. Clearly in such a case nothing but use and the whole record during the lifetime of the engine can determine the matter. In Egypt, where a very full comparison was made between British and American locomotives, the results seem to have been decidedly in favour of the former. The American locomotives were about 19 per cent. cheaper, but were so much more costly to run that the difference in price was covered by the difference in coal consumption within two years; while in about fifteen years, say half the average life of an engine, the cost of the extra coal burnt by the American type would cover

not only the difference in price, but the cost of a British engine as well.

It was also found that the average life of the boiler tubes of a well-known English make was nine years and eight months, against five years and five months in the case of those of the Franco-Belge Company.

We have on previous occasions drawn attention to the merits of zinc oxide as a pigment in place of white lead. It is not affected by sulphurous fumes, and when ground in oil is exceedingly durable. The best grades are quite white, while lead has a yellow tinge. But it must not be mixed in the way customary with lead: dryers and turpentine should be used sparingly. It is unlike lead in being non-poisonous. Some white lead is often mixed with it to make it more adhesive.

Ready mixed paints save labour and have much improved recently. A paint compounded from a mixture of pigments must be thoroughly mixed, and this is best done by machine. It is also finely ground. Ready mixed paints, however, are hardly suitable for houses where an exact shade is desired.

Genuine American turpentine is getting more and more expensive, and much stuff is sold which is distilled from sawdust, &c., and is of very inferior quality. The use of turpentine is mostly to thin the paint so that it can be easily taken up by the brush, and wholly evaporates. White spirit is now produced which evaporates equally slowly as turpentine and may be safely used for it. The old test of the characteristic smell of turpentine is not sufficient nowadays, as inferior productions are given enough of the genuine article to serve that purpose.

Steel rusts more rapidly than iron, and a steel structure corrodes rapidly in the presence of salt spray or gases from the smoke stacks of locomotives. It is essential that all rust, dirt, and scale shall be removed before repainting, otherwise they come off and bring the paint with them. The paint must then be worked well in, so as to expel any air, moisture, and carbonic acid which would produce rust. The most effective way of cleaning steel is by the sand blast, which in the shop or yard is little, if any, more expensive than hand cleaning, though more expensive on bridges after erection.

It is proposed to provide for the Niger a dredger of an American type, similar to those used on the Mississippi, to cost about £23,000. It is said that the capacity of these dredgers is such that they can reduce an ordinary bar or "crossing" to navigable condition in from two to three days. The design is that of a light-draught river steamer fitted in front with dredging apparatus, and having a floating discharge pipe 800 feet long, of the deflecting type. This dredger can set its own anchorages, and make a cut of 18 feet wide by 3 feet deep at a rate of advance of 350 lineal feet per hour in ordinary sand. This is equal to a capacity of 700 cubic yards per hour. A stern paddle-wheel is preferred to a tunnel screw as being more accessible for repairs, slower, and therefore subject to less wear, more effective in manœuvring, and less liable to be broken or clogged. The engine to drive the pump is of the high speed type with forced lubrication, and the boilers are "locomotive marine," which are well adapted for burning wood.

Dredging.

It is often inadvisable to deposit the dredgings in some other part of the channel which is being cleared, and, in order that they may be tipped where required, it may be desirable to place steel wagon bodies or skips in the lighters, which skips would be filled by the grab dredger. The lighters would then be brought alongside the wharf, and the skips lifted out of the lighters by a crane and placed upon under-carriages, which would be run along a light temporary railway and tipped where required. Some of the wagons, if not all, should be "universal," i.e., adapted for either end or side tip. The cost of the plant is approximately, as follows:—

	£	s.	d.
Side tip wagons, $\frac{3}{4}$ cubic yard capacity, each ...	7	15	0
Universal wagons, each	9	0	0
Railway complete, 20 inches gauge, per lin. ft....	0	1	0
Points and crossings, set	4	10	0
Turntables, each	4	0	0

A two-ton portable hand crane costs about £150.

Motor Cars.

The account of Southern Nigeria in the Colonial Office List states that, in 1907, a Government road motor transport service of three Laure cars was inaugurated between Oyo and Ibadan, a distance of 35 miles, and that further road extension is in progress to develop

motor traffic. This pioneer service has proved very popular, and has already decreased the cost of transport by at least 50 per cent.

Wooden Wheels.

The War Office Mechanical Transport Committee remark that "the question of wooden wheels for lorries is a troublesome one. It is very difficult to obtain properly seasoned wood, and, unless the very best is used, trouble is sure to come. The attention required to keep the wood from shrinking as practised in India is as follows—cover all wooden parts with kus-kus or similar absorbent material and keep damp with water. The wheels under this treatment are never allowed to get dry. Soaking the wheels periodically and then allowing them to dry is not so effective."

If the wooden wheels of motor vehicles shrink, the rims are apt to get loose, and the tyre may come partly off.

Inks.

The permanency of inks is an important matter for Government documents, and special care must be taken in damp climates. Any paper containing alkali is bad; it should therefore be made entirely from rags, without any mixture of wood pulp, if permanence is desired. Parchment is worse, as it contains very destructive chemicals. When paper is blotted, it is reckoned that four-fifths of the colouring matter may be removed, and for any permanent purpose, as distinguished from ordinary commercial correspondence, specially strong inks are required. The only absolutely indestructible colour material is carbon, and, as this not a soluble colour, it could only be held in a menstruum, which would make it very unpleasant to write with, and would require occasional stirring; it is not, therefore, much used except where out-door exposure has to be considered and for typewriters. The black record ribbon used with typewriters varies with the amount of carbon which it contains. Under exposure to light or after long periods, the writing changes in tint owing to the colours, other than the carbon, perishing. Aniline must be used in copying ink ribbons in order that copies may be taken; it is not itself permanent against some influences, such as sunlight, but becomes so in conjunction with a carbon pigment.

Photographs.

In some tropical countries bromide prints are attacked by certain insects, and cannot be protected. The carbon and platinotype processes can be made secure against this danger.

The Bye-Products of Gas Works are fast becoming an immense industry. Several hundred thousand tons of pitch are now shipped annually to different parts of the globe for the manufacture of patent fuel from small coal.

Sulphate of ammonia is largely used as a fertiliser in every agricultural country, and with the ever-increasing scarcity of timber, the necessity of preserving is being more and more realised. Of all the preservatives generally used, none is as efficient and cheap as coal tar creosote, and of this to-day many millions of gallons are annually shipped from England, in addition to the large quantity used by English railways and others.

Besides carbolic acid, quite a series of the best disinfectants is produced from gas tar and various fluids for dipping sheep.

The mining industry is also largely dependent upon the gas works for the supply of cyanides of potassium and sodium for gold-extracting purposes. Prussiates of potash and soda, used for dyeing purposes, are also bye-products of this manufacture.

Naphthaline is a very good preservative for skins and furs, whilst picric acid, which is "tri-nitro-phenol," is the chief ingredient in the well-known explosive "lyddite."

Benzole and toluole, the bases of the aniline colour trade, are derivatives of coal tar, as also naphtha, the solvent for india rubber. Black varnish is also made from tar.

Locust Destruction with Arsenite of Soda and Sugar.

The use of arsenite of soda for this purpose is greatly increasing, and the following extract from the *Midland News* (Cape) gives an instructive account of its application.

"Mr. W. S. Marais, of De Poort, De Aar, reports that during December several swarms of locusts have hatched out on his veld, and a great many swarms have also invaded his veld from other veld in his vicinity. Mr. Marais has completely destroyed all swarms so far, and the means he used are as follows: He dissolved 1 lb. of arsenite of soda and 4 lbs. of sugar in 5 gallons of water in a 10 gallon drum. He then took green grass (*osgras* and *klitgras*) out of the garden and cut it very fine, not more than one inch long, and filled up the drum with it. This he allowed to soak during the night, and in the early morning spread the soaked grass very thinly round the bushes on which the locusts were sleeping. They began to feed on it directly they began to move, and it completely destroyed the swarms. The amount of grass used was about a quarter to half of a grain bag, and it was sufficient for most swarms. The grass was

spread so thinly that it was impossible for stock to pick it up, and if the locusts did not eat it all, what was left was dried up by the sun. The above was the amount used for locusts in the hopper stage, and in the case where the locusts were more advanced the amount of arsenite of soda was increased to 2 lbs. and 8 lbs. of sugar, and Mr. Marais advises plenty of sugar, as he noticed they liked the sweetest best, also the younger the grass was the better it acted. Mr. Marais advocated that in parts of the Colony where grass was not to be obtained out of the gardens, then veld grass should be used in preference to spraying the liquid on the veld, which takes so much water and too much work, and is not so effective, as the solution soaks into the ground, and does not soak thoroughly into the grass. Mr. Marais considers the time has arrived for the compulsory destruction of locusts of the 'voetganger' stage with arsenite of soda and sugar. This should be enforced unaccompanied by taxation."

Uses of Lime in Agriculture.

A leaflet, No. 170, of the English Board of Agriculture, deals with the practice of liming the soil, and can be recommended to the attention of farmers. We extract the following :—

Besides its indirect value in neutralising acids in the soil, lime has several other uses, all of which are of importance to the farmer. These uses may be given as follows :—

1. Lime improves the nature of the soil by coagulating the finest particles of the clay and rendering the land more open and friable. Thus drainage goes on more readily, the land is warmer, and it is more easily worked to a good tilth. It is difficult to exaggerate the value of this action of lime on the heavier soils; it is frequently possible to secure a seed bed when the unlimed land is still too wet to work, and the character of the crop may depend as much upon securing a good tilth as upon manuring.

2. Lime is an essential plant food, and without it soils cannot produce good crops. Soils are generally considered to be deficient in lime when they contain less than from .5 to 1 per cent. Some soils, however, which are provided with a considerable amount of organic matter may respond to lime, although they contain much more than these amounts.

3. The insoluble reserves of nitrogenous and potassic material in the soil are brought into action and rendered available for the plant by the presence of lime. The following table shows the result of applying in January, 1903, 2,000 lbs. per acre of ground quicklime to

some of the grass plots at Rothamsted, where there was a good deal of residue from past manuring looked up in the soil :—

YEAR.	Plot 7.		Plot 9.	
	Yield with Mineral Manures only.		Yield with Complete Artificial Manures.	
	Unlimed.	Limed.	Unlimed.	Limed.
	Cwt.	Cwt.	Cwt.	Cwt.
1903	49.5	51.9	50.1	60.5
1904	61.9	61.8	63.7	69.8
1905	44.3	47.2	36.9	52.2
1906	34.4	41.4	39.0	50.0

4. The leguminous crops usually cultivated on the farm flourish better when a good supply of lime is present in the soil. Clover, in particular, is very intolerant of acid soil conditions, and is much more subject to clover sickness when lime is deficient.

5. It seems to be established that the soil organism (*Asotobacter*), which fixes nitrogen without the aid of leguminous plants and is probably a great factor in the gain of fertility when land is laid down to grass, cannot develop properly unless a good supply of carbonate of lime is present.

6. Lime in one form or another is the best remedy for finger-and-toe disease in turnips and swedes. These root crops are always liable to the disease when the soil is deficient in lime.

The fertility of many farms to-day is undoubtedly due to the liming and chalking that was done by the farmers of the eighteenth and earlier centuries; they, indeed, made the soil, for it is through their labours that it remains in profitable cultivation at the present time. Owing to the very large amounts of chalk and lime which were then applied, it has been possible for later generations to live upon the capital thus accumulated and dispense with any expenditure of their own in this direction. But this spending process cannot continue indefinitely, for natural causes alone—the percolating rain-water—are steadily removing the lime in the surface soil.

The Application of Lime.

The most common method of liming is to put quicklime on the land in small heaps and allow it to slake naturally, or to slake it with

water from a water-cart. It may then be spread with a shovel and harrowed in at once. Lime shells may also be slaked as is done by a mason's labourer, reducing them to a fine powder. They are spread in layers a foot deep, one above the other, each layer receiving about 6 cwt. of water per ton of lime, or rather less water if the lime is inferior. The heap is then covered in about half a ton of sand for each ton of lime. The lime in such a heap will keep for a considerable time. Before using, the heap may be screened through a three-eighth-inch gauge locking screen. Lime thus slaked should be in a fine powdery condition, and the sand mixed with it renders the spreading a somewhat less dusty process. Lime when overslaked becomes pasty, after which even distribution in the soil is impossible. The lime may be carted to the land and distributed by hand direct from the carts, a process which must be thoroughly done. It is much better, however, when small quantities are being applied, to adopt the American plan, *i.e.*, to use a suitable manure distributor, to which old bagging should be attached at the sides and behind. This trails along the ground, ensures better distribution, and prevents much of the discomfort that is otherwise caused by the blowing about of the fine lime. Glasses for the eyes and protective devices for the nostrils and mouth are also used by men who do this work.

Since lime is used for many purposes the proper quantity to apply varies widely. Common dressings are from 2 to 3 tons of lime shells at intervals of from six to ten years. Smaller dressings of about 1 ton per acre once in four or five years are now becoming common. Considerably larger quantities than the above may be used in the treatment of newly reclaimed land rich in organic matter and plant food.

Export of Fruit.

The following report is made by the Cape Trades Commissioner in London (Mr. C. du P. Chiappini) on the subject of exporting pineapples :—

“The price of pines here depends very much upon appearance, so much so that even if a box of pines arrives in a perfectly sound condition, but with shrivelled tops and packed in an untidy manner, it would not make half the price that a box packed neatly in wood-wool or mealie cob leaves would, with the tops green and fresh, though the fruit in both cases might be perfectly sound.

“*Packing.*—I am strongly in favour of wood-wool being used in packing. I am convinced that the small extra cost would add to the appearance, and thus increase the value of the fruit by at least 20 per cent., besides which, wood-wool is an excellent material for packing fruit, as it permits a great deal of ventilation, which is essential in the pine export trade. A few large dealers in pines on the market

suggest mealie cob leaves. Remember, not the leaves from the stalks of the mealies, nor the outside rough leaves of the cobs, but the *clean white, thin leaves* covering the cob of the mealie. These leaves should be shredded with the hand before packing, so as to make them thin and pliable, and, when farmers are collecting these leaves for purposes of packing fruit, every care should be taken with them that they do not get wet. They must be very dry indeed before using same, and it is in consequence of the danger of the leaves not being dried enough that I am reluctant to recommend them.

"The fruit should be packed 12 in a single layer box (and two boxes battened together) of a size to fit the fruit, but it is not necessary to put a lid on the lower box, the upper box serving as a lid. I have already tried 12 pines in a box, and think that the following measurements will be suitable:—Length, 25 inches; breadth, 15 inches; depth, 6 inches. Outside measurements.

"The packing must be very tight between the pines, to prevent the fruit from shaking, and the box should have a good appearance, and must not be made from all manners of scrap wood. Further, to give a neat appearance when opened, after the fruit has been well packed, before the lid is put on, a sheet of thin dark blue paper (the kind which boys use for making kites) should be nicely placed on top of the packing. What is usually done by the retailers when they open their boxes is to remove the fruit and then replace this sheet of paper on the packing, and lay the fruit thereon when exposed for sale. The blue paper shows up the colour of the fruit and makes it more attractive.

"*Prices.*—My opinion is, after my own experience and after consulting several dealers, that if the Cape Queen Pines arrive in a good, sound condition they will make from 4s. to 6s. or perhaps more per box of one dozen. I have estimated the cost of shipment, and with the information at my disposal I make it that

Freight will be	£0	0	10
Cost of box and wood-wool ...	0	0	8
Railage and dock dues in South Africa	0	0	6
Dock dues and cost of selling on this side... ..	0	0	7
	<hr/>		
	0	2	7 per dozen fruit.

"Of course, this is a minimum calculation. Should the fruit, therefore, only realise 4s. a box, the growers and packers will have to be satisfied with 1s. 5d. for a dozen pines; but it is quite possible, and may be probable, that the fruit will realise about 6s. a dozen or more; but this, as I have said before, depends upon the condition and the get-up of the fruit upon arrival. I must again state that

should the fruits arrive in a bad or rotten condition, then it is, of course, impossible for me to realise at a profit, or perhaps to get any price at all for them."

Mr. Winston Churchill has pointed out, at a meeting of the British Cotton-growing Association, the enormous possibilities of Uganda for the production of cotton. "It is no exaggeration," he observed, "to say that within a hundred miles of Lake Victoria there are one million landowners—anxious, willing, intelligent landowners—willing to cultivate cotton and possessed of nearly 20,000 square miles of the finest cotton-land in the world." What is now wanted is scientific supervision and organisation, and it is good news that the Treasury have sanctioned the expenditure of some £10,000 a year for three years for this purpose. Such an expenditure is an investment which will probably lead to a vast return.

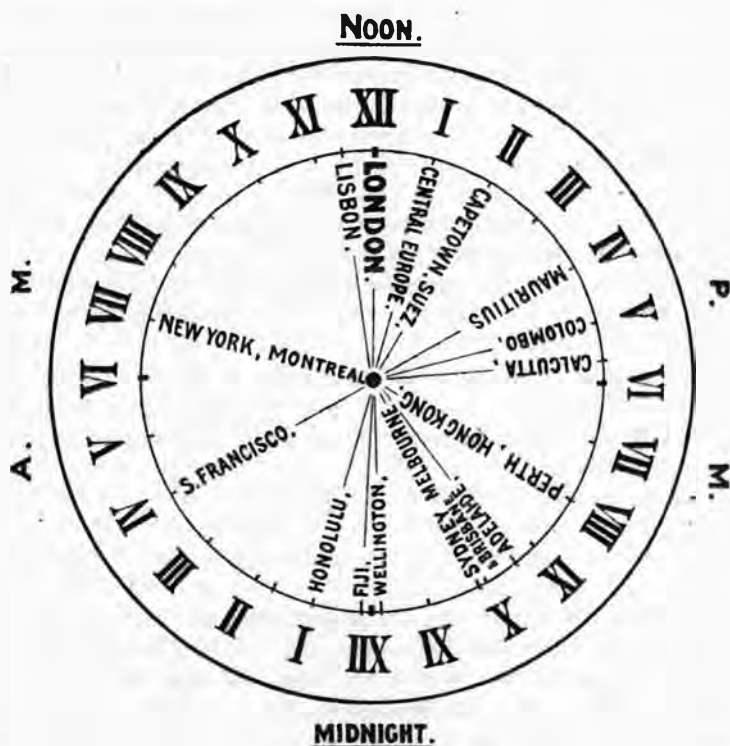
Thus may cotton return more and more to the East, from which it came. Alexander the Great's admiral, Nearchus, wrote of the "fleeces that grow on the trees in India," and in later times the "fleeces" had a holy character. Thus a cotton robe was one of the treasures of the Chinese Emperor, and in India the Brahmans adopted cotton for the sacred cord of their caste, hemp being allotted to the soldier and wool to the trader. This was in days when the cotton tree was known as a perennial; the modern development took its rise in the discovery that it could be cultivated, with vastly better results, as an annual. Now cotton is again kingly, in an improved sense, and governs millions of workers.

Concrete Steel Sleepers have now been tried on some railroads for over two years, and it is said that they have remained in perfect condition and alignment. They are made of two blocks of concrete moulded on the ends of a pair of 3 by 1½ by 3-pound steel channels, 7 ft. 11 ins. long, placed back to back and spaced 2 ins. apart. The blocks centre under each rail so that the centre of pressure coincides with the centre of the base of the sleeper. It is claimed that these sleepers eliminate the tendency of rails to incline outwardly.

There will be an "International Rubber and Allied Trades' Exhibition" in September next, under the presidency of Sir H. A. Blake, G.C.M.G., at the Royal Horticultural Hall, Westminster. Its main object will be to direct public attention to the enormous advances by the rubber producer and manufacturer during recent years.

A Universal Time Indicator.

It is often useful to merchants and officials, especially when telegraphing, to know the time at some distant place; and a way which anyone can adopt of doing this is to mark the twenty-four hours on a circle, on paper, and inside this circle to fix a smaller circular piece of paper which can be turned round on a stud; this inside circle bears the names of the leading places at correct intervals. Setting the inside circle so that London is in line with XII. noon on the outer circle, the time at other places would be shown approximately, thus :—



MEDICAL NOTES.

At the instance of the late Secretary of State for the Colonies and with the co-operation of the Government of the Sudan and the Royal Society, His Majesty's Government have decided to establish in London a Bureau for the collection and general distribution of information with regard to sleeping sickness. The Royal Society will find accommodation for the Bureau at Burlington House, and one-fourth of the cost of upkeep will be borne by the Sudan Government. The Treasury have agreed to grant £1,200 for one year.

The Bureau will be under the general control and direction of an honorary Committee of management, appointed by and responsible to the Secretary of State for the Colonies. The Committee will be composed of the following:—

Chairman.—The Right Honourable Sir J. WEST RIDGEWAY, G.C.B., G.C.M.G., K.C.S.I., P.C., who is also Chairman of the Advisory Committee of the Tropical Diseases Research Fund.

Sir PATRICK MANSON, M.D., K.C.M.G., F.R.S.

Sir ROBERT BOYCE, F.R.S.

Dr. ROSE BRADFORD, F.R.S. (representing the Royal Society).

Colonel D. BRUCE, C.B., F.R.S.

Mr. E. A. WALROND CLARKE (representing the Foreign Office).

Mr. H. J. READ, C.M.G. (representing the Colonial Office).

With Mr. A. B. KEITH, of the Colonial Office, as Secretary.

The main function of the Bureau, which will be administered by a paid director, will be to collect from all sources information regarding sleeping sickness, to collate, condense, and, where necessary, translate this information, and to distribute it as widely and quickly as possible among those who are engaged in combating the disease. The publications of the Bureau will be divided into two categories, viz., scientific publications intended for those who are engaged in research work or in carrying out medical administration in the infected districts, and publications of a less technical character for the use of Government officials, missionaries, and others, whose duties involve residence in those districts. One important piece of work will be the preparation of a map of the whole of tropical Africa

showing the distribution of the disease and of the different species of blood-sucking insects which are suspected of conveying it. A map of this kind, showing, as it would, the extent to which the distribution of the disease coincides with the distribution of the different species of insects, is expected to supply valuable information to scientific investigators and to give guidance to the different administrations by indicating the lines of advance of the disease and the districts which require special protective measures.

The duties of the Director of the Bureau will for the present be undertaken by Dr. A. G. Bagshawe, of the Uganda Medical Staff, who has been seconded from the Protectorate service for the purpose.

It was at one time contemplated that an international bureau should be constituted, but difficulties arose; information, however, will be distributed to France, Germany, and the Congo Free State, and no doubt these countries will reciprocate.

Owing largely to the exertions of the Bishop of Queensland, an institution for research in tropical countries is likely to be established at Townville. It is understood that the Commonwealth Government is prepared to grant £450 a year, Queensland, £200 a year, and the Australasian Universities, £300, as a donation. It is possible that a grant may be made from the Tropical Diseases Research Fund. An annual income of £1,000 is required, and it is to be hoped that it will be forthcoming.

The June issue (Volume II., No. 2), of *Annals of Tropical Medicine and Parasitology*, published by the Liverpool School of Tropical Medicine, is largely devoted to the subject of Sleeping Sickness. It contains report by Drs. Kinghorn and Montgomery on the Sleeping Sickness Expedition to the Zambesi, and on Trypanosomiasis of domestic stock in North-Western Rhodesia, in both of which especial attention is paid to the connection of the disease in human beings with the infection of animals. There is also an interesting account of the work of the Greek Anti-malaria League during the year 1907, which included a systematic campaign, to be continued during present year against malaria in the Plain of Marathon.

In the American quarters on the Panama Canal it is thought better to screen the verandahs rather than the doors against mosquitoes. The expense is put at 60 cents a square yard; the advantages are that the plan protects persons near by the verandahs in the evening, and that mosquitoes are less likely to enter when an outer door is opened, or when any fracture occurs than they are when attracted by a lighted room. It is recommended that doors should be as small as possible, and should open outwards.

REVIEWS AND NOTICES.

Cross River Natives.—By CHARLES PARTRIDGE, F.R.G.S., Commissioner in Southern Nigeria. (*Hutchinson & Co.*)

THIS is not a new book, but it has not been displaced, and in view of the rapidly increasing importance of Southern Nigeria, attention may be called to the very full and clear account which it contains of the customs and characteristics of the Cross River natives. It is nowadays fully realised, in theory at all events, that every native race should be developed in the first instance along the lines of its own best institutions. The attempt to impose an alien civilisation on primitive people, without regard to their customary modes of thought, is usually a failure. It is not till a sympathetic inquiry has been made into their ideas and manners, that a successful attempt can be made to improve them. And the first essential is patience. "Our own ancestors," Mr. Partridge writes, "of 100 B.C. would find it rather difficult even willingly to adapt themselves all at once to the strenuous life of thought and action to which their present descendants have attained after two thousand years of very gradual evolution. Keeping this fact in his mind, the Political Officer deals 'softly, softly' with Nature's children of the bush, and humours them, and tries to see things from their point of view, and does his best to smooth matters amicably when a misunderstanding occurs between them and their "big father," the Government. If he begin with an open mind, free from any preconceived antagonistic prejudices, he will learn to like the people over whom the Government has placed him, and the more he can like them, the better will it be for him and for them, for the success of his work and for their advancement. The personality of the District Commissioner is an element of no small importance. His 'subjects' are very human, very observant of numerous everyday forms and ceremonies of religious and social etiquette, and very apt to form their opinion of the 'white stranger' and his policy from his observance of such points—'mere details' which are being crowded out from the strenuous life of modern England, but which were duly observed by our great-grandfathers, and still survive among old-fashioned people in quiet corners."

Diplomacy is, in fact, as necessary in the wilds as at Whitehall. "In diplomatic relations with primitive peoples, as in all other situations of life, it is highly desirable to attain to the proverbial happy mean, and the more the District Commissioner 'condescends' to study the everyday details and intricacies of the life of the people whom he has to govern—their fetishes and jujus, their festivals and dances, their customs at birth, marriage, and burial, their likes and dislikes, wants and aims—the more quickly will he acquire that knowledge which will keep him in the 'middle of the road where perfect safety is.'"

The customs, of course, mean much more than is apparent on the surface. The savage is very far from being the remarkably unfettered person he is often taken to be. He is the slave of many fears, and governed by multitudinous ceremonies and minute observances. Convention rules him with as strong a rod as can be found anywhere.

The first practical object is to find a paramount chief, so as to take advantage of an authority ready to hand. Sometimes this is difficult, as in many parts there are numbers of small communities which are essentially democratic. One way of securing civil independence is to make the chief a fetish. The fetish is too sacred to leave his palace, and his devoted tribe sees that he does not do it.

Cotton-Growing.

A collection of reports on the quality of cotton grown in British possessions which have been prepared by the Imperial Institute, has been issued by the Colonial Office in the Miscellaneous Series of Colonial Reports. These reports constitute striking evidence of the advance which has been made in the development of cotton-growing within the British Empire. We extract from Professor Dunstan's introductory remarks the passages which appear to be of most general interest:—

"Largely owing to the efforts of the British Cotton Growing Association, cotton cultivation in British Possessions has made great strides during the past two years, and certain facts of general importance may now be regarded as established.

"It is clear, especially in West Africa, that the best chances of success lie in most cases in the improvement of native cottons rather than in the introduction of foreign cottons.

"The history of Egyptian cotton cultivation shows the great results which have followed from the systematic cultivation and improvement especially by hybridisation of plants native to the country. The success which has attended the revival of cotton-growing in the West Indies is largely due to the fact that the cotton to which attention has been given is the Sea Island variety, which, although taking its name from islands on the coast of the Southern

States of America, where it has been successfully grown in recent years, is stated to have been cultivated long previously, if it did not actually originate, in the West Indies, and is, therefore, known to be suitable to the conditions of West Indian soil and climate.

"It is probable that several varieties of Upland American cotton might be acclimatised and established in our African Colonies, but careful and prolonged trials will be needed in order to demonstrate with certainty that this is the case. There can, however, be little doubt that many of the more valuable American varieties will not prove to be satisfactory when grown in countries of different soil and climate, and in which manuring and other accompaniments of highly advanced cultivation are not at present possible.

"The British Cotton Growing Association has already found that by establishing ginning and buying stations in the African Colonies and Protectorates an immense impetus has been given to native production; in fact, in West Africa, the increased output is largely due to these circumstances. The native West African cotton is often of inferior quality, but in some instances has brought even better prices than American cotton of similar type. Since African cotton-growing must for the most part be carried on as a native industry, it cannot be too strongly urged that every encouragement and facility should be given to the improvement of native cultivation, both by direct instruction and advice to the farmers and also by demonstrations at selected centres of the results of systematic experimental work. The British Cotton Growing Association, with the aid of Government contributions given for the purpose, has made provision for the conduct of experiments and the supply of information to native growers, chiefly through European agriculturists specially appointed to those African Colonies and Protectorates in which cotton-growing shows possibilities of success.

"The extent to which cotton-growing will be resorted to by the natives obviously depends on several factors, of which the most important are the price which can be offered and the competition of other occupations and of other agricultural crops. The collection of palm kernels and the preparation of palm oil in West Africa is so easy and remunerative an occupation, that it is at present useless to attempt to introduce cotton cultivation in the palm-oil regions of that country. Moreover, it must not be overlooked that cotton cultivation is one of the higher forms of tropical agriculture, and its successful pursuit calls for qualities which are not always to be found in the West African native, who frequently prefers the simple and, at least, equally profitable occupation of growing the food stuffs of the country. Fortunately, the growth of certain food stuffs may be carried on in rotation with cotton, and the extended adoption of this practice is to be recommended. In fact, cotton cultivation will have to be made a part of general agricultural practice if it is to become

a permanent industry. The steps which are now being taken by Government to teach the natives of West Africa better agricultural procedure must therefore exercise an important influence on the extension and improvement of cotton cultivation. What is urgently needed in addition are the systematic experiments in improving native cotton, which can only be successfully conducted on scientific lines and by trained specialists.

"In this connection difficulties have been encountered by the British Cotton Growing Association, chiefly owing to the virtual impossibility of securing at short notice the services of properly educated men with experience of the special problems of cotton cultivation. The ordinary American farmer from the Southern States of America is not likely to be successful in solving the problem of cotton growing under new conditions, whilst agriculturists trained in Great Britain have no knowledge either of cotton cultivation or of tropical agriculture. Progress, which must in any case be slow, is rendered slower by these circumstances. At the same time, the problem is not likely to be solved except by continuous work on these lines, and it is now necessary that plant-breeding experiments should be conducted on some definite plan. Whilst much is to be learned from the work on seed selection, breeding, and hybridisation of cotton, which has been carried on by the United States Department of Agriculture, breeding operations, on the lines first laid down by Mendel, would seem to afford most promise of success. Through experiments on Mendel's method, much has been already done at Cambridge in breeding in England a description of wheat and barley of the kind required by the miller and the British consumer.

"It is, however, obvious that such experiments are not likely to be successful unless they are conducted under the supervision of scientifically-trained men who are familiar with the details of the method and also have previously directed special attention to the problems of plant breeding. This subject is of special importance to all our African Possessions, both in those countries like West Africa where, as will be seen from the present reports, the chief problem is the improvement of native varieties, and also in South Africa, and East and Central Africa, where the problem may prove to be to find the best type of exotic cotton to introduce and, if necessary, to improve.

"Reference has been made to the successful revival of cotton-growing in the West Indies, where the long stapled Sea Island cotton is now being grown with profit, often commanding higher prices than the Sea Island cotton of the Southern States of America. The efforts of the British Cotton Growing Association in the West Indies have been greatly aided by the information and guidance which have been afforded to growers by the Imperial Department of Agriculture under the direction of Sir Daniel Morris.

Whilst growers in the West Indies appear to have reason to be satisfied with the success of Sea Island cotton, it would not be well for other countries to depend entirely on the production of this variety, which, although it fetches at present a higher price than any other kind of cotton, is used for special purposes only, and is therefore employed in comparatively small quantity. It is also to be noticed that Sea Island cotton gives a much smaller yield, and is more difficult to establish and maintain of high quality than any other kind. In most countries in which Sea Island cotton succeeds the Egyptian varieties are also likely to do well. It is said that there is a steadily increasing demand in the English cotton mills for Egyptian cotton of fairly long staple, and the cultivation of this kind is in most cases less precarious than the growth of Sea Island cotton, whilst it is likely to be more remunerative than the cultivation of ordinary American Upland.

“One of the most striking features of the accompanying reports is the excellent quality of cotton which has been grown in South Africa, especially that from American seed. In the Zoutpansberg district of the Transvaal, it will be seen that cotton grown from American seed has been valued at a higher price than the corresponding cotton grown in the United States. The results of succeeding crops will be watched with much interest. In this district of the Transvaal and in North-Eastern Rhodesia, labour in some districts appears to be sufficiently abundant, but transport requires improvement before cotton-growing can be successfully established. It is also interesting to notice that American cotton has apparently proved successful on the high ground of Nyasaland and in Uganda. Among the British Possessions in which cultivation on a small scale may prove to be remunerative are Ceylon, Fiji, and Cyprus. In the latter island conditions are exceptionally favourable, but systematic experiments are needed in order to ascertain the kind of cotton which is best suited to the island.

“At the Cotton Exhibition, which was held at the Imperial Institute in the summer of 1905, a large number of samples of cotton grown in British Possessions and also in foreign countries were shown. These included a unique collection of cottons which had been examined at the Imperial Institute, displayed so as to exhibit the length of staple and other characteristics. Owing to the interest with this collection created, it has been placed on permanent exhibition in the Public Galleries, and will be added to from time to time as additional material is received and examined.”

Natal.

We have received from the Agent-General for Natal a copy of an Illustrated Official Railway Guide and Handbook of General

Information, which we commend to all who are interested in the Colony. It is at once a manual of practical information and a record of the historical associations of the Colony, including those connected with the South African War. It is lavishly illustrated, and contains some excellent maps. A companion volume contains a valuable account of the Port of Durban, with full particulars of all dues and charges and a description of the railway connections. Like the more general guide, it is excellently illustrated.

The Romance of Empire Series.—

Canada, by BECKLES WILLSON.

Australia, by W. H. LANG.

Outposts of Empire, by JOHN LANG.

(*T. C. and E. C. Jack.* 6s. each.)

These well-printed volumes, with their vigorous style and picturesque illustrations in colour, give vivid accounts of the more romantic incidents of Colonial history, and would be treasured by any boy with a liking for the adventurous. At the same time a large amount of solid instruction is contained in the narratives, and the most striking features in the development of the Empire are skilfully brought into relief. The "Outposts of Empire" takes in Gibraltar, Malta, and the West Indies. The volumes would make excellent school prizes.

The Natural History of the Seychelles Archipelago.

A very careful investigation of Aldabra and other islands of the group, by Mr. R. Dupont, is recorded in a Seychelles report. At Aldabra about 3,000 turtles can be captured per annum, but owing to the lack of shipping facilities it appears that only about 500 are taken. The cartilaginous substances in these reptiles are boiled and then exposed to the sun, after which they become hard and constitute the calipee of commerce, from which turtle soup is made. One turtle produces 3 lbs. of calipee, which is worth 2s. per lb. There is a considerable amount of guano on the islands. The following observations on the water supplies in coral islands are interesting :—

"This question of fresh water in the coral islands is deserving of careful study, and those places where hollows and depressions of ground form a catchment area for rain water should first be investigated. There is general tendency amongst the inhabitants of coral islands to think that it is sea water which percolates through the ground and is turned into fresh water simply by filtering through sand and limestones. This belief is, I think, far from being correct, and if the presence of limestones in underground layers is necessary to form impervious strata for the water to collect, it is

impossible to think that sea water can be deprived of its salt by filtration through carbonates of lime. This is a chemical impossibility, and fresh water is present in the islands only in those places where are found impermeable layers, which on being tapped permit the creation of a well. Islands of a very small size are said to contain a supply of fresh water even when they are nearly destitute of trees such as African Banks, &c., but the question is how much fresh water can be produced on these islands.

"In digging wells and in examining wells already dug, it became clear to me that rain water in collecting underground has a rise and fall according to the time of the tide. This rise and fall can be followed easily in the spring at Takamaka when the water level fluctuates about 8 ins. It is this fluctuation which probably led persons to suppose that fresh water is simply sea water filtered through the corals; but on examining a certain number of wells, I found that sometimes the fresh water forms a film on the surface, and that the underlayers of water are brackish or saltish. This is sufficient evidence that fresh water in the wells is derived from rain water, and that the porous sand being filled with air, the rising sea water forces the descending fresh water to keep a certain level and even to reproduce to some extent the movements of the tide."

The Defence of Duffer's Drift. (*W. Clowes and Sons, 1s. net.*)

This little brochure embodies some recollections of "things actually done and undone in South Africa, 1899-1902." A series of sketches shows how unfortunate incidents and regrettable mistakes could and did occur in small engagements. The last one is meant to show how the experience could be utilised, the mistakes avoided, and success secured. The narratives are life-like and the reasoning seems plausible. The book would interest any one who has been engaged in such conflicts or wishes to study the subject.

Among recent Colonial Government publications may be mentioned the Report of the Customs Tariff Commission, Cape of Good Hope. A considerable number of increases are recommended, but the duty on catalogues, "which is vexatious in its collection," should, it is advised, be limited to catalogues printed abroad to the order of South African firms. Many applications were not encouraged, and the following remarks, showing the opinion of the Commission as to the limits of Protection, may be quoted:--

"The question as to whether the industries established in this Colony can become permanently established, even if any protection afforded by the Customs Tariff is subsequently removed, has been a very difficult matter to deal with.

"Your Commission feels that, as a general rule, it is right to afford protection only to such industries as would be natural to the country; that is, such as would use the raw products of the country and are in other ways adapted to local conditions. It, however, finds that owing, as indicated earlier in this Report, to a high Customs Tariff on certain articles, intended primarily for revenue purposes, and to the action of the preferential railway rates, many industries have been created which could not stand this test, but have in the course of years obtained a claim to recognition.

"The Commission has endeavoured, while respecting vested interests, to avoid giving further encouragement to many claims for protection put forward, as it felt in these cases that the industry could never become firmly established, and this being so would always remain a tax on the consumer."

The Customs Tariff Enquiry Commission in Natal has also issued a report, which discusses the general principles of Protection.

A copious report on immigration is issued by the Inter-Colonial Irrigation Commission, Pretoria.

A report of a Select Committee of the Legislative Council of the Straits Settlements discusses the question of Sunday labour at the ports.

The Commission on the Central South African Railways Reports on the various administrative questions, and Mr. Conacher on the distribution of overseas traffic between the railways (Pretoria).

LETTERS TO THE EDITORS.

The Future of the West Indies.

LONDON,

2nd June, 1908.

SIR,

I beg leave to hand you the following notes on the "Future of the West Indies" for insertion, if you will, in your journal, as a contribution influenced by the sincere desire to make those valuable colonies more effective to their common good in the great world-wide competition now in progress. To those who, with experience of the past, have studied the question of the future of the West Indies in relation to other colonies and foreign countries, some effective union has long appeared to be an absolute necessity, and the general utility of coming together for certain purposes, so as to give greater effect to representations coming from the West Indies, does not seem to need further discussion.

The area of the West Indies, and value of the united trade would reach an aggregate which would command permanent attention from other parts of the Empire, like Canada, as well as from foreign countries.

In order to give effect to a union it would be necessary to have a central council. This council should be representative of the several executive and legislative bodies in the West Indies. It would accept from them such powers as they cannot make use of for themselves. To such a central council, I think, the following subjects would most likely be remitted :—

(i.) Trade and commerce with other countries and among themselves.

(ii.) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the West Indies.

(iii.) Postal, telegraphic, telephonic, and other like services.

(iv.) Lighthouses, lightships, beacons and buoys.

(v.) Astronomical, meteorological, seismical, and other allied observations.

(vi.) Quarantine.

(vii.) Census and statistics.

(viii.) Currency, coinage, and legal tender.

(ix.) Marine and fire insurance.

(x.) Weights and measures.

Codification of the West Indian Acts and Ordinances on the following subjects :—

(a.) Bills of exchange and promissory notes.

(b.) Bankruptcy and insolvency.

(c.) Copyrights, patents of inventions and designs, and trade marks.

(d.) Foreign corporations, and trading or financial corporations formed within the limits of the West Indies.

(e.) Marriage.

(f.) Divorce and matrimonial causes, and in relation thereto parental rights and the custody and guardianship of infants.

(g.) The civil and criminal process of the courts of the West Indies.

(h.) Immigration and emigration.

I am, Sir,

Your obedient Servant,

JOSEPH RIPPON.

Votes for Women.

The points of similarity and of difference in the development of political ideas in the self-governing communities included in the British Empire supply interesting material for speculation and study. The original indebtedness of the dominions to the Mother country in the matter of ideas will hardly be disputed, even by the perfervid Canadian professor, who wants John Bull's children to come in and manage his affairs for him, or by the select circle of the devout to whom Mr. Kipling appeals in the columns of the *Morning Post*. The form and spirit of the constitutions set up, wherever self-government prevails within the Empire, are a standing record of the debt. But there is some ground for the opinion that matters have changed in this respect, that the spirit of inventiveness is now especially characteristic of the younger communities, and that the Mother country has relapsed into the position of a pupil, and is at

times in danger of seeming a backward one. Great Britain may claim to have been the pioneer of the democratic idea, and so complete has been her apparent acceptance of it that she has to-day no political party which is professedly hostile to it. Yet in her realization of the idea she has been, compared with her Colonies, curiously half-hearted and illogical. She recognises manhood suffrage as good for the Transvaal. She shows no disposition to adopt it herself. She patiently endures tiresome and unreasonable anomalies, which New Zealand and Australia long ago swept away. She disfranchises more than half her adult population by continuing to confine the Parliamentary vote to a single sex. There are many things which may be said against democracy, but in England they are not said; or rather they are said freely and fervently in clubs and drawing-rooms, but carefully eschewed upon the platform. But the necessary implications of democracy are sturdily resisted not less in public than in private, even by professed democrats. The course of the Female Suffrage controversy in England can hardly fail to be a source of infinite amusement to the Australian or the New Zealander. There was an Australian contingent in the London procession of June 13th, who carried a banner with the inscription "Trust the women, Mother, as I have done"; but they must have found themselves in strange company. For the favourite argument of the British suffragists is the contention that the women of the British Isles are fully competent to form a systematic and considered judgment upon the questions which are submitted to the electorate, that they understand the issues involved in political controversy, and form their opinions by the light of reason and not in the heat of emotion. It is a disastrous argument; it is essentially anti-democratic; and it is not in accordance with facts. The anti-suffragist proceeds to demolish it with a laborious or painstaking accumulation of reasons, and thinks that he (or she) has finally answered the case for Female Suffrage. Occasionally the physical force is brought in to give the *coup de grace*. "The underlying assumption in the national franchise," says the *Times* leader-writer, "is that the voter who has to decide on the well-being and even the existence of his country can argue out his views for his country's good on equal terms with his fellow and in the last resort can knock him down if he chance to be the better man." Mr. Asquith urges the women to convert their fellow-citizens; the *Times* prescribes a course of Sandow training as an additional pre-requisite to the franchise. The friends and foes of the movement alike seem to live in a world remote from the realities of modern politics. Yet every sincere person who passes outside the walls of the study knows that the votes of the vast majority of the electors are determined by anything rather than by systematic and considered judgment; that political issues are seldom if ever rightly under-

stood by the mass of the people; and that emotion plays a far larger part than reason in their determination. The women of the British Isles obviously do not possess the extreme mental enlightenment and freedom from prejudice which advocates often claim for them. But neither do the men. It would hardly be possible to devise a qualifying examination for the right to vote so elementary that even a tithe of the electors would succeed in passing it. Yet there is no clamour for the decimation of our voters. In practice there is a tacit recognition of the fundamental principle of democracy, that the vote is given to people not because they are capable of exercising it wisely—they scarcely ever are—but because they are most likely to submit to a Government which they have helped to create. Democracy is based, not on capacity, but on consent. The simple truism which the Sevenoaks women displayed on their banner, "What concerns all should have the consent of all," conveyed a more cogent argument than the parade of the many great names which women have contributed to the rolls of literature, art, and science. The *Times* leader-writer dreams of the voter straitly questioning whether it is better for his country "to be or not to be," before he drops his paper in the ballot-box; yet he must know perfectly well that he is at least as often influenced by a wild panic or a momentary caprice, by a fancied slight or an adroit compliment, a gross misrepresentation or an inherited prejudice. But it is alleged that women are subject to a special disqualification by reason of their inexperience of "business," and in a nation of shopkeepers the argument is not without weighty influence. But it springs from a very odd conception of the nature of political issues. That the city clerk who performs his daily journey from Shepherd's Bush to the Bank, and from the Bank to Shepherd's Bush, and makes the appointed number of entries in the appropriate ledger, comes into closer contact with the real and abiding interests of life than the wife who stays at home, cooks the breakfast, does the housekeeping, and minds the baby, is certainly not an obvious truth. The baby and the breakfast are more fundamental than the ledger-entries; and they are tending to play an increasing part in politics. The idea that the home has nothing to do with politics is based upon an old idea of the antagonism of the individual and the state which is rapidly passing away; there is nothing in the whole world which ought to concern the statesman more nearly than the home, and, if this is still to be regarded as woman's peculiar sphere, she possesses at least one pre-eminent qualification for the vote.

Brief allusion has already been made to the physical force argument. It is not often advanced in the crude form quoted, because we do not at present in practice disfranchise the physically inefficient, or confine the enjoyment of plural votes to prize-fighters,

and the expedient of counting heads is commonly regarded as an advance upon the earlier one of breaking them. It usually takes the form of arguing that the voter should be, theoretically at any rate, capable of rendering military service. Its advocates do not seem to reflect that even those burly guardians of the law who have so often protected the homes of our Cabinet Ministers from outrage had, every one of them, a mother; and that the like is true of our soldiers and sailors, themselves so frequently disfranchised.

It is only quite recently that the Woman's Suffrage question has become anything like a reality to the British public, and the New Zealander, who settled it so long ago that he has forgotten all about it, may be pardoned for watching the bewilderment of that public with a smile. It has treated serious appeal or argument as a jest, and mischief and practical jokes as an outrage and a peril, and it has not yet recovered its equilibrium. But the period of seriousness and sobriety is at hand. There is one test by which the British public determines the sincerity and significance of any movement, whether it be in favour of the Salvation Army, or Tariff Reform, or a National Theatre, or Anti-vaccination. If it has money behind it, there must be something in it. The Suffragists have given ocular proof of the fact that they have substantial means at their disposal; for ceaseless activity up and down the country, and monster demonstrations, cannot be organized without money. They have money. Their day is at hand. The women of the Antipodes will soon cease to fear lest they should be doing something improper when they vote. The seal of British respectability is about to be set on the practice.

ISHMAEL.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. T. H. HAUGHTON (retrenched from the South African Constabulary), Assistant Resident, Northern Nigeria.
- Dr. J. B. ADDISON (Assistant Medical Officer, Seychelles), Chief Medical Officer, Seychelles.
- Mr. W. J. ROBSON (late Auditor-General of the Transvaal), Auditor-General of British Guiana.
- Mr. F. H. GOUGH (Solicitor-General, Sierra Leone), Solicitor-General, Gold Coast.
- Mr. S. A. DICKSON (of the Colonial Secretary's Office, Pretoria), Assistant District Commissioner, Southern Nigeria.
- Mr. ST. C. E. STOBART (of the Native Affairs Department, Transvaal), Assistant District Commissioner, Southern Nigeria.
- Mr. J. H. DONDS (retrenched from the South African Constabulary), Assistant Medical Officer, Somaliland.
- Mr. G. A. SHAKESPEAR (retrenched from the South African Constabulary), District Resident (Third Class), Nyasaland.
- Mr. A. C. J. ROSS (late District Commissioner, Gold Coast), District Resident (Third Class), Nyasaland.
- Mr. H. R. MONTGOMERY (formerly in the South African Constabulary), Assistant District Commissioner, East African Protectorate.
- Mr. W. R. MACPHERSON (retrenched from the South African Constabulary), Assistant District Commissioner, Uganda.
- Mr. A. WILLOUGHBY OSBORNE (Attorney-General, Gold Coast), Chief Justice, Southern Nigeria.
- Mr. H. F. MCKAY (late Chief Clerk, Irrigation Department, Transvaal), Clerk in Treasury, Nyasaland.

Lieutenant-Colonel H. C. MOORHOUSE, D.S.O. (Commandant of Southern Nigeria Regiment, West African Frontier Force), Chief Assistant Secretary, Southern Nigeria.

Mr. A. W. MAHAFFY (Colonial Secretary, Fiji), Assistant to the High Commissioner for the Western Pacific.

Mr. EYRE HUTSON (Colonial Secretary, Bermuda), Colonial Secretary Fiji.

Mr. R. POPHAM LOBB (late Second Class Resident, Northern Nigeria), Colonial Secretary, Bermuda.

Mr. J. J. KILLINGBECK (Postmaster, Nyasaland), Assistant Postmaster-General, Northern Nigeria.

Mr. J. C. D. FENN (Assistant Treasurer, Gold Coast), Senior Assistant Treasurer, Gold Coast.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ALLAN, M.	27 July, '08	FRASER, J.	7 Sept., '08
ANSTAY, E. C.	13 Sept., '08	FURLEY, J. T.	2 Oct., '08
AGNEW, G.	13 Sept., '08	FLEMING, R.	21 Aug., '08
ABRAMS, A. B.	28 Sept., '08	GRIMSDITCH, W. H.	5 July, '08
ARCHER, A.M.	28 Sept., '08	GRAHAM, C. H.	19 July, '08
BARRETT, F. R.	16 Aug., '08	GARLAND, Dr. P. J.	23 Aug., '08
BRADSHAW, J. A. Q.	1 Sept., '08	GRIMSHAW, H. C. D.	19 Sept., '08
BURTON, W.	14 July, '08	GOODY, C. E.	7 Sept., '08
BAXTER, W. C.	14 May, '08	GUSH, Dr. H. W.	22 Oct., '08
BURKE, B.	31 July, '08	GIBSON, R.	23 Sept., '08
BACKHOUSE, H. D.	25 Aug., '08	HOLLOWAY, J. H.	3 Oct., '08
BRITTON, J. A.	15 Oct., '08	HOBART, Capt. E. H.	23 July, '08
BRUCE-AUSTIN, Rev. P.	25 Aug., '08	HIGHAM, R.	5 July, '08
West Indian Club,		HARRIGAN, C. A.	29 Aug., '08
Norfolk Street, W.C.		KORTRIGHT, Capt. A. H.	11 Aug., '08
COCKCRAFT, Capt., L. W.		LEESE, Capt. E. B.	15 July, '08
LA T.	26 Sept., '08	LEWIS, H. M.	17 Sept., '08
CROWTHER, F. G.	13 Oct., '08	LEWIS, I.	29 Aug., '08
CLARETT, H. D.... ...	3 Aug., '08	MAY, D. R. M.	27 Sept., '08
CHURCH, J. W.	17 Sept., '08	MAYALL, R. P. W.	14 July, '08
CLARIDGE, Sergt. G.	6 Oct., '08	Royal Colonial Insti-	
COCKMAN, Dr. H. T.	27 Sept., '08	tute, Northumberland	
DAKYNNE, N. H.	1 Sept., '08	Avenue, W.C.	
ELGER, P. E. L.... ...	2 Oct., '08	ORPEN, Dr. R. W.	27 Sept., '08
Junior Naval and		ORMAN, D. J.	11 Aug., '08
Military Club, 96,		PAULL, E. D. R.	18 Aug., '08
Piccadilly, W.			

GOLD COAST—continued.

PAMPLIN-GREEN, Maj. I. A. 15 Oct., '08 Senior United Service Club, Charles Street, S.W.	STOREY, Dr. F. H. ... 19 Sept., '08
PALMER, R. 1 Nov., '08	STILES, Sergt. A. W. ... 29 Sept., '08
PENNINGTON, A. R. ... 23 Nov., '08	STOKES, R. H. 25 July, '08
RUSSELL, W. G. 5 July, '38	SIMPSON, R. C. 5 July, '08
READ, Capt. H. 18 Oct., '08	TWEEDY, Dr. E. H. ... 27 Sept., '08
RICH, C. S. 23 Sept., '08	TINLING, J. A. H. L. ... 10 July, '08
RICHARDS, R. W. 21 Aug., '08	WHITE, Dr. R. O. 26 July, '08
RICE, Dr. T. E. 8 Aug., '08	WEBB, C. T. 1 Oct., '08
RIBY WILLIAMS, C., C.M.G. 12 July, '08	WATHERSTON, Lt.-Col. A. E., C.M.G., M.G.R.E. 2 Nov., '08 Army and Navy Club, Pall Mall, S.W.
ROGERS, J. A. 7 Sept., '08	WALLACE, Miss A. ... 15 Oct., '08
	WARE, Sergt. C. 23 Sept., '08
	WELLS, G. A. 23 Sept., '08

SIERRA LEONE.

ALLAN, C. H. 5 July, '08	HENDERSON, S. 1 Sept., '08
ANDREWS, E. 13 Aug., '08	JONES, A. 6 Oct., '08
BROOKS, G. L. 3 Aug., '08	KENNAN, Dr. R. H. ... 23 Sept., '08
BARNES, C. H. 6 Aug., '08	MOORE, G. R. 18 Sept., '08
CULLEN, A. J. 27 July, '08	NEWSTEAD, Capt. G. P. ... 14 July, '08
CRAVEN, J. 16 Sept., '08	PROBYN, L., C.M.G. ... 25 Aug., '08
FLETCHER, Miss A. E. ... 5 July, '08	REID, A. E. 25 Aug., '08
GOODSLIP, H. E. 23 July, '08	SMYLEY, Sir P. C. 10 Sept., '08
HUNTER, Dr. C. B. 23 Sept., '08	SMITH, J. A. 26 Aug., '08
Caledonian Club, 30, Charles Street, S.W.	TOMLINSON, Capt. E. R. 25 Aug., '08
HOLLOWAY, W. J. 19 Aug., '08	THOMAS, A. F. 27 Sept., '08

GAMBIA.

ARCHER, F. B. 23 Sept., '08	STANLEY, Capt. W. B. ... 1 Nov., '08
BALDWIN, F. A. 6 Aug., '08	VERONICA, Miss M. ... 4 Oct., '08
GREEN, E. J. 3 July, '08	WOODS, T. 13 Oct., '08
HASKETT-SMITH, W. J. J. S.	

SOUTHERN NIGERIA.

AULD, J. P. 13 July, '08	BROWN, W. R. 7 Nov., '08
ADAM, Dr. T. B.	BOURNE, V. C. 26 Aug., '08
ADAMS, E. P. V. 27 Sept., '08	BLACK, J. H. 18 Nov., '08
BUCHANAN, R. A. 15 July, '08	BRODIE-SMITH, G. T. ... 11 Aug., '09
BLATCHFORD, A. E.	CLOUGH, Dr. J. A. 17 Sept., '08
BURN, Lieut. J., R.N.R. 3 Oct., '08	COX, Miss E. L. 13 July, '08
BATE, Dr. J. B. 25 Aug., '08	COLLETT, Dr. J. W. 5 Sept., '09
Junior Athenæum Club, 116, Piccadilly, W.	CUMMINS, C. A. 3 Aug., '08
	COLSON, F. T. 23 Sept., '08
	CULLEN, R. A. 29 July, '08

SOUTHERN NIGERIA—continued.

CHICHESTER, A. A. ...	14 July, '08	HENDERSON, Lieut., P.D.,	18 Aug., '08
CHAMLEY, H. P. ...	15 July, '08	R.N.R., c/o Messrs.	
COLLIER, L. A. P. ...	3 Aug., '08	Way & Co., Billiter	
DITTON, W. B. ...	27 July, '08	Buildings, Billiter St.,	
DAVIS, P. E. C. ...	10 Sept., '08	E.C.	
DALE, C. E. ...	18 Oct., '08	INCE, D. D. ...	29 Aug., '08
DAYRELL, E. ...	19 Sept., '08	INGRAM, B. S. A. ...	23 Sept., '08
c/o Sir C. R. McGrigor,		JACKSON, G. ...	5 July, '08
Bart., & Co., 25, Charles		JELLY, F. ...	27 Sept., '08
Street, S.W.		JERVIS, J. ...	29 July, '08
DON, W. ...	23 Sept., '08	JONES, Sergt. T. ...	1 Nov., '08
DE ROSARIO, O. ...	27 July, '08	JELFS, Sergt. J. W. ...	3 Aug., '08
DARBY, C. ...	29 July, '08	JOHNS, F. ...	13 Sept., '08
DENNETT, R. E. ...	4 Oct., '08	KENT, J. ...	3 Oct., '08
DENNY, G. ...	13 Sept., '08	KINGHORN, J. M. B. ...	
DODD, E. J. ...	3 July, '08	KNOTTESFORD - FORTES-	
EMERY, W. ...		CUE, Capt. F. E. ...	
ELSTON, R. G. ...		LOCKYER, P. ...	14 Oct., '08
FREELAND, H. ...	3 Aug., '08	LAURIE, Dr. R. ...	3 Aug., '08
FARMER, W. ...	18 July, '08	LAWSON, P. B. ...	29 July, '08
FINLAY, J. D. ...	4 July, '08	LEESE, C. W. ...	13 July, '08
FROST, E. L. ...	10 Aug., '08	LABORDE, A. L. C. ...	29 Aug., '08
FOX, Capt. R. D. M. ...		LEONARD, Dr. T. M. R.	
c/o Messrs. Cox & Co.,		MOORE, Dr. E. J. ...	14 July, '08
16, Charing Cross, S.W.		c/o The National Bank	
FRAZER-TOOVEY, Dr. T. E.	26 Aug., '08	Bank Ltd., Charing	
c/o Messrs. Way & Co.,		Cross, S.W.	
Billiter Buildings, Bil-		MAIR, Capt. G. T. ...	6 Aug., '08
liter Street, E.C.		MYTTON, A. K. ...	3 July, '08
FOX, H. C. ...	9 Oct., '08	MARSHALL, J. F. ...	
FALK, E. M. ...	13 Sept., '08	Grosvenor Club, Pic-	
Auxiliary Forces Club,		cadilly, W.	
2, Whitehall Court,		MARTIN, A. R. P. ...	7 Nov., '08
S.W.		MARTIN, S. H. D. ...	14 July, '08
GRAY, Dr. R. W. ...	13 July, '08	MILLIKEN, A. R. ...	12 Aug., '08
GRAY, Commander		MARSHALL, E. T. ...	30 Sept., '08
G. S. B., R.N.R. ...	23 Aug., '08	MONCASTER, F. A. ...	1 Sept., '08
GOLDSMITH, Sergt. A. ...		MIRS, M. C. C. ...	3 Sept., '08
GREENWOOD, E. ...	6 Oct., '08	Junior Naval and	
HORNBY-PORTER, C. ...	15 July, '08	Military Club, 96, Pic-	
Royal Colonial Insti-		cadilly, W.	
tute, Northumberland		MAYNE, Sergt. E. A. J.	26 Oct., '08
Avenue, W.C.		MOORE, Capt. C. W. ...	23 Sept., '08
HEARNshaw, H. ...	16 Aug., '08	MARCH, H. T. ...	27 Sept., '08
HUBBARD, A. G. ...	2 Oct., '08	Blenheim Club, 12 St.	
HALFPENNY, Lieut. J. ...	9 Sept., '08	James' Square, S.W.	
HARVEY, G. L. ...	13 Aug., '08	MAY, G. C. M. ...	5 Sept., '08
HEAPS, R. ...	19 July, '08	McKENZIE, W. (Jun.) ...	27 July, '08
HOSLEY, Capt. W. J. S.	21 Nov. '08	NICHOLS, J. E. ...	10 Aug., '08
Junior Naval & Mili-		NEWPORT, Dr. H. M. ...	29 July, '08
tary Club, 96, Piccadilly,		c/o H. S. King & Co.,	
W.C. ...		9, Pall Mall, S.W.	

SOUTHERN NIGERIA—continued.

NICHOLS, R. J. ...	21 Aug., '08	SAMUEL, J. A. ...	11 Aug., '08
OWENS, J. ...	23 Oct., '08	STUBBS, W. W. ...	5 Sept., '08
PRATT, F. G. ...	20 July, '08	SMYTHE, Dr. A. W. S. ...	16 Aug., '08
PHILLIPS, E. C. ...	21 Aug., '08	SMITH, J. ...	17 Aug., '08
PURCELL, H. Y. ...	22 Oct., '08	STATEN, J. T. ...	16 Aug., '08
PHILLIPS, Sergt. L. H. ...	3 Aug., '08	STRACHAN, Dr. H., C.M.G. ...	26 Aug., '08
PARRY, Capt. J. L. R. ...	7 Sept., '08	SMITH, E. T. ...	29 July, '08
PYKE, C. C. ...	16 Oct., '08	SMITH, Dr. J. S. ...	14 July, '08
POWER, Capt., R. E. ...	23 Aug., '08	SUTHERLAND, R. C. ...	15 Sept., '08
POWELL, Dr. A. B. S. ...	29 July, '08	THOMPSON, E. J. ...	14 July, '08
ROE, Dr. R. L. ...	27 Sept., '08	THORBURN, J. J., C.M.G. ...	22 July, '08
ROUSE, E. E. ...	14 July, '08	TODD, C. W. ...	29 July, '08
READ, D. ...	29 Aug., '08	TALBOT, P. A. ...	11 Aug., '08
READ, Sergt. F. ...		TALFOURD-JONES, F. ...	27 July, '08
RAWLES, H. L. ...	13 Oct., '08	TAYLOR, J. E. ...	16 Aug., '08
Junior Naval and Military Club, 96, Piccadilly, W.		VAUGHAN, H. H. S. ...	13 Sept., '08
ROBINSON, Dr. C. C. ...	14 July, '08	WARBURTON, A. ...	22 July, '08
RUMAIN, W. B. ...	13 Sept., '08	WOOD, Capt. S. M. ...	3 Sept., '08
ROY, K. J. ...	28 July, '08	WERRY, Capt. F. E. ...	
SMITH, W. ...	16 Aug., '08	WINKFIELD, J. ...	3 Oct., '08
SMALLBONE, W. ...	25 Sept., '08	WAYLING, Capt. J. ...	13 Sept., '08
SELF, J. ...	3 July, '08	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
SPENCER, H. ...	14 July, '08	WHITEHEAD, J. H. M. ...	21 Aug., '08
SEWARD, R. R. ...	29 July, '08	WILSON, Dr. A. H. ...	6 Aug., '08
SOLOMON, N. V. S. ...	6 Aug., '08	YOUNG, P. Y. ...	23 Nov., '08
Junior Conservative Club, Albemarle St., W.			

NORTHERN NIGERIA.

ANDERSON, C. L. ...	3 Aug., '08	BRETON, Sergt. T. G. ...	24 July, '08
AGLIONBY, Capt. A. C. ...	21 Aug., '08	BLAKE, Capt. H. L. E. ...	8 Sept., '08
Junior Naval and Military Club, 96, Piccadilly, S.W.		BOSHER, A. E. ...	
BROCKLEBANK, J. J., D.S.O. ...	29 Sept., '08	BROWN, R. ...	6 Sept., '08
Orleans Club, 29, King Street, St. James', S.W.		BRUCE, J. ...	
BULLOCK, H. ...	26 Aug., '08	BARBER, Capt. W. D. ...	9 July, '08
BERKELEY, H. S. ...		BANCROFT, E. ...	9 Sept., '08
BURNSIDE, Capt. G. H. ...	5 Mar., '09	BREMNER, Dr. A. ...	
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		CHESNAYE, Dr. F. W. ...	
BOYLE, Capt. C. V. B. ...	3 Oct., '08	CROFT, W. D. ...	19 Aug., '08
BOOTH, Capt. C. A. ...		CARLYLE, T. F. ...	20 Oct., '08
BROWNE, G. S. ...	5 Oct., '08	CAMPBELL-IRONS, A. ...	21 July, '08
		CHARTRES, Dr. E. A. ...	2 Oct., '08
		CAMPBELL, D. ...	
		CATOR, D. ...	21 July, '08
		DOOLEY, J. ...	6 Aug., '08
		DALZIEL, Dr. J. M. ...	16 Sept., '08
		DILLON, H. M. ...	

NORTHERN NIGERIA—continued.

DIGAN, Capt., A. J., D.S.O. ... ..	...	...	McALLISTER, R. ...	...	...
DUPIGNY, E. G. M. ...	...	...	MACNAGHTEN, Capt. B.	...	...
DUFF, E. C.	30 June, '08	...	MAXWELL, C. E. ...	...	...
c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.	...	...	MATNARD, H. C. ...	31 July, '08	...
DAVIDSON, Dr. J. ...	9 July, '08	...	MANUK, Dr. M. W. ...	24 Aug., '08	...
DE PUTRON, H. ...	28 July, '08	...	c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.	...	...
FLETCHER, R. S. ...	23 July, '08	...	MACKAY, Capt. J. F., V.C.	5 July, '08	...
FREMANTLE, Capt. J. M.	...	...	MACDONELL, Capt. D. H., D.S.O.	18 Aug., '08	...
FOULKES, Capt. H. D. ...	15 Aug., '08	...	MITCHELL, Miss E. ...	5 July, '08	...
FENERAN, E. C....	...	...	McLAY, W. J. ...	20 Aug., '08	...
Junior Naval and Military Club, 96, Piccadilly, W. ...	...	...	Sports Club, St. James' Square, S.W.	...	...
FLOOD, Dr. B. ...	1 Nov., '08	...	NEILL, M.	8 Oct., '08	...
FORREST, Miss M. ...	23 Sept., '08	...	ORR, Capt. C. W. J. ...	22 Oct., '08	...
GUBBINS, S.	4 Aug., '08	...	Army and Navy Club, Pall Mall, S.W.	...	...
GALLAGHER, Capt. A. E., c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	...	...	PRENDERGAST, A. E. ...	...	...
GRIER, S. Mc G. ...	31 Jan., '09	...	PAIN, J. ... ..	...	...
GLENNY, H. Q. ...	16 Sept., '08	...	PUCKLE, Capt. T. N. ...	...	...
GEPP, N. M.	14 Oct., '08	...	PRAGNELL, T. W. ...	23 Sept., '08	...
GOWERS, W. F. ...	19 July, '08	...	Cavalry Club, Picca- dilly, W.	...	...
GOODCHILD, O. ...	13 Aug., '08	...	PAUL, Miss R. ...	...	...
HUNT, Lieut. A. W., R.N.R.	11 Aug., '08	...	PITMAN, J. ... ..	...	...
HOWSE, Sergt. C. ...	3 Aug., '08	...	PALMER, H. R. ...	26 June, '08	...
HAMMOND, Sergt. T. ...	...	...	QUINN, Sergt. M. ...	18 Aug., '08	...
HALL, Dr. W. H. A. G....	18 Oct., '08	...	RICHMOND, W. F. ...	5 Aug., '08	...
HENDERSON, E. E. D. ...	...	...	ROSE, Capt. T. A. ...	13 Sept., '08	...
HASLER, Lt.-Col. J. ...	1 Nov., '08	...	SAVILE, Capt. C. R. U.	29 Sept., '08	...
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.	...	...	New Club, Grafton Street, W.	...	...
JOHNSON, Capt. A. E., D.S.O.	11 July, '08	...	SECCOMBE, Capt. G. ...	1 July, '08	...
JOHNSTON, A. C....	13 Sept., '08	...	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	...	...
KELLY, G. C.	12 Oct., '08	...	Thompson, Dr. S. W., C.M.G.	13 Sept., '08	...
New Club, Grafton Street, W.	...	...	TRAILL, H. T. N. ...	...	...
KEMBLE, H.	16 Aug., '08	...	THOMSON, W. B. ...	...	...
Le Fanu, Sergt. R. N....	21 July, '08	...	TOPLESS, Sergt. H. W....	...	...
LAURENCE, G. ... ..	...	...	THESIGER, G. S. P. ...	16 July, '08	...
LEWIS, Capt. E. H. ...	21 July, '08	...	TEMPLE, C. L.	13 Aug., '08	...
LOBB, H. P.	9 July, '08	...	VERMEULEN, Sergt. A. ...	27 July, '08	...
LEWIN, S.	17 Aug., '08	...	VEREKER, S. H. P. ...	31 July, '08	...
MENENDEZ, Sir M. R. ...	5 July, '08	...	c/o Messrs. Woodhead & Co., 44, Charing Cross, S.W.	...	...
Junior Athenæum Club, 116, Piccadilly, W.	...	...	VALLANCE, V. de V. M....	...	...
...	...	...	WINGATE, G. R....	29 Aug., '08	...

SOUTHERN NIGERIA—*continued.*

NICHOLS, R. J. ...	21 Aug., '08	SAMUEL, J. A. ...	11 Aug., '08
OWENS, J. ...	23 Oct., '08	STUBBS, W. W. ...	5 Sept., '08
PRATT, F. G. ...	20 July, '08	SMYTHE, Dr. A. W. S. ...	16 Aug., '08
PHILLIPS, E. C. ...	21 Aug., '08	SMITH, J. ...	17 Aug., '08
PURCELL, H. Y. ...	22 Oct., '08	STATEN, J. T. ...	16 Aug., '08
PHILLIPS, Sergt. L. H. ...	3 Aug., '08	STRACHAN, Dr. H.,	
PARRY, Capt. J. L. R. ...	7 Sept., '08	C.M.G. ...	26 Aug., '08
PYKE, C. C. ...	16 Oct., '08	SMITH, E. T. ...	29 July, '08
POWER, Capt., R. E. ...	23 Aug., '08	SMITH, Dr. J. S. ...	14 July, '08
POWELL, Dr. A. B. S. ...	29 July, '08	SUTHERLAND, R. C. ...	15 Sept., '08
ROE, Dr. R. L. ...	27 Sept., '08	THOMPSON, E. J. ...	14 July, '08
ROUSE, E. E. ...	14 July, '08	THORBURN, J. J., C.M.G.	22 July, '08
READ, D. ...	29 Aug., '08	TODD, C. W. ...	29 July, '08
READ, Sergt. F. ...		TALBOT, P. A. ...	11 Aug., '08
RAWLES, H. L. ...	13 Oct., '08	TALFOURD-JONES, F. ...	27 July, '08
Junior Naval and Military Club, 96, Piccadilly, W.		TAYLOR, J. E. ...	16 Aug., '08
ROBINSON, Dr. C. C. ...	14 July, '08	VAUGHAN, H. H. S. ...	13 Sept., '08
RUMAIN, W. B. ...	13 Sept., '08	WARBURTON, A. ...	22 July, '08
ROY, K. J. ...	28 July, '08	WOOD, Capt. S. M. ...	3 Sept., '08
SMITH, W. ...	16 Aug., '08	WERRY, Capt. F. E. ...	
SMALLBONE, W. ...	25 Sept., '08	WINKFIELD, J. ...	3 Oct., '08
SELF, J. ...	3 July, '08	WAYLING, Capt. J. ...	13 Sept., '08
SPENCER, H. ...	14 July, '08	c/o Messrs. Cox & Co., 16, Charing Cross, SW.	
SEWARD, R. R. ...	29 July, '08	WHITEHEAD, J. H. M. ...	21 Aug., '08
SOLOMON, N. V. S. ...	6 Aug., '08	WILSON, Dr. A. H. ...	6 Aug., '08
Junior Conservative Club, Albemarle St., W.		YOUNG, P. Y. ...	23 Nov., '08

NORTHERN NIGERIA.

ANDERSON, C. L. ...	3 Aug., '08	BEETON, Sergt. T. G. ...	24 July, '08
AGLIONBY, Capt. A. C. ...	21 Aug., '08	BLAKE, Capt. H. L. E. ...	8 Sept., '08
Junior Naval and Military Club, 96, Piccadilly, S.W.		BOSHER, A. E. ...	
BROCKLEBANK, J. J., D.S.O. ...	29 Sept., '08	BROWN, R. ...	6 Sept., '08
Orleans Club, 29, King Street, St. James', S.W.		BRUCE, J. ...	
BULLOCK, H. ...	26 Aug., '08	BARBER, Capt. W. D. ...	9 July, '08
BERKELEY, H. S. ...		BANCROFT, E. ...	9 Sept., '08
BURNSIDE, Capt. G. H. ...	5 Mar., '09	BREMNER, Dr. A. ...	
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		CHESNAYE, Dr. F. W. ...	
BOYLE, Capt. C. V. B. ...	3 Oct., '08	CROFT, W. D. ...	19 Aug., '08
BOOTH, Capt. C. A. ...		CARLYLE, T. F. ...	20 Oct., '08
BROWNE, G. S. ...	5 Oct., '08	CAMPBELL-IRONS, A. ...	21 July, '08
		CHARTRES, Dr. E. A. ...	2 Oct., '08
		CAMPBELL, D. ...	
		CATOR, D. ...	21 July, '08
		DOOLEY, J. ...	6 Aug., '08
		DALZIEL, Dr. J. M. ...	16 Sept., '08
		DILLON, H. M. ...	

NORTHERN NIGERIA—continued.

DIGAN, Capt., A. J., D.S.O. ... ..	...		McALLISTER, R. ...	
DUPIGNY, E. G. M. ...	...		MacNAGHTEN, Capt. B.	
DUFF, E. C.	30 June, '08		MAXWELL, C. E. ...	
c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.			MAYNARD, H. C. ...	31 July, '08
DAVIDSON, Dr. J. ...	9 July, '08		MANUK, Dr. M. W. ...	24 Aug., '08
DE PUTRON, H. ...	28 July, '08		c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.	
FLETCHER, R. S. ...	23 July, '08		MACKAY, Capt. J. F., V.C.	5 July, '08
FREMANTLE, Capt. J. M.			MACDONELL, Capt. D. H., D.S.O.	18 Aug., '08
FOULKES, Capt. H. D. ...	15 Aug., '08		MITCHELL, Miss E. ...	5 July, '08
FENERAN, E. C....	...		McLAY, W. J.	20 Aug., '08
Junior Naval and Military. Club, 96, Piccadilly, W. ...			Sports Club, St. James' Square, S.W.	
FLOOD, Dr. B.	1 Nov., '08		NEILL, M.	8 Oct., '08
FORREST, Miss M. ...	23 Sept., '08		ORR, Capt. C. W. J. ...	22 Oct., '08
GUBBINS, S.	4 Aug., '08		Army and Navy Club, Pall Mall, S.W.	
GALLAGHER, Capt. A. E., c/o Messrs. Cox & Co., 16, Charing Cross, S.W.			PRENDERGAST, A. E. ...	
GRIER, S. Mc G.	31 Jan., '09		PAIN, J.	
GLENNY, H. Q.	16 Sept., '08		PUCKLE, Capt. T. N. ...	
GEPP, N. M.	14 Oct., '08		PRAGNELL, T. W. ...	23 Sept., '08
GOWERS, W. F.	13 July, '08		Cavalry Club, Picca- dilly, W.	
GOODCHILD, O.	13 Aug., '08		PAUL, Miss R.	
HUNT, Lieut. A. W., R.N.R.	11 Aug., '08		PITMAN, J.	
HOWSE, Sergt. C.	3 Aug., '08		PALMER, H. R.	26 June, '08
HAMMOND, Sergt. T. ...			QUINN, Sergt. M.	18 Aug., '08
HALL, Dr. W. H. A. G....	18 Oct., '08		RICHMOND, W. F. ...	5 Aug., '08
HENDERSON, E. E. D. ...			ROSE, Capt. T. A. ...	13 Sept., '08
HASLER, Lt.-Col. J. ...	1 Nov., '08		SAVILLE, Capt. C. R. U.	29 Sept., '08
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.			New Club, Grafton Street, W.	
JOHNSON, Capt. A. E., D.S.O.	11 July, '08		SECCOMBE, Capt. G. ...	1 July, '08
JOHNSTON, A. C....	13 Sept., '08		c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
KELLY, G. C.	12 Oct., '08		Thompstone, Dr. S. W., C.M.G.	13 Sept., '08
New Club, Grafton Street, W.			TRAILL, H. T. N. ...	
KEMBLE, H.	16 Aug., '08		THOMSON, W. B. ...	
Le Fanu, Sergt. R. N....	21 July, '08		TOPLESS, Sergt. H. W....	
LAURENCE, G.			THESIGER, G. S. P. ...	16 July, '08
LEWIS, Capt. E. H. ...	21 July, '08		TEMPLE, C. L.	13 Aug., '08
LOBB, H. P.	9 July, '08		VERMEULEN, Sergt. A. ...	27 July, '08
LEWIN, S.	17 Aug., '08		VEREKER, S. H. P. ...	31 July, '08
MENENDEZ, Sir M. R. ...	5 July, '08		c/o Messrs. Woodhead & Co., 44, Charing Cross, S.W.	
Junior Athenæum Club, 116, Piccadilly, W.			VALLANCE, V. DE V. M....	
			WINGATE, G. R....	29 Aug., '08

NORTHERN NIGERIA—*continued.*

WHITE, T. J.	3 July, '08	WATSON, E. C.	23 Sept., '08
WOODELL, Sergt. L. L...	13 Aug., '08	Royal United Service	
WILLIAMS, Sergt.-Major,		Inst., Whitehall, S.W.	
T. G.	13 July, '08	WILLIAMS, Maj. E. E.,	
WARD, Miss M. A. ...		D.S.O.,	4 Aug., '08
WATSON, Dr. C. F. ...	9 July, '08	Army & Navy Club,	
The College, Guy's		Pall Mall, S.W.	
Hospital, S.E.		WALTON, Capt. W. I. ...	30 June, '08
WAITE, Dr. J. T. ...	29 Aug., '08	WORRALL, P. R. ...	22 July, '08
WATERS, B. E. M. ...	7 Oct., '08	WOLSELEY, E. J. ...	18 July, '08
WIGHTWICK, C. ...	10 Oct. '08	WEATHERHEAD, G. E. ...	
		YOUNG, H. N.	
		YATES, C. C.	5 Aug., '08

NYASALAND.

DAVY, E. W.,	3 Sept., '08	MILTHORPE, B. T. ...	15 Oct., '08
Royal Botanical Gar-		MASON, B.	11 Oct., '08
dens, Kew.		McRAE, R. A.	31 Aug., '08
HART, R.	11 Oct., '08	STANNUS, Dr. H. S. ...	31 Aug., '08
HEARSEY, Dr. H. ...	15 Oct., '08	STONE, Capt. W. G. ...	20 July, '08
LELY, Capt. K. L. P. ...	11 Oct., '08	YOUNG, A. K.	11 Oct., '08

EAST AFRICA.

ARMITSTEAD, C. A. ...	30 Aug., '08	MILNE, Dr. A. D. ...	20 Oct., '08
BIFFEN, E. H.	27 Jan. '09	Sports Club, St.	
BARNES, H. C. E. ...	20 Sept. '08	James's Square, S.W.	
COMDE, R. M.	20 Oct., '08	MACNAGHTEN, L. H. ...	9 Oct., '08
COLLYER, A. J. M. ...	27 Oct., '08	PEARSON, W.	9 Sept., '08
ESPENT, C. U. A. ...	26 July, '08	ROEBOROUGH, Capt. J. ...	26 July, '08
GOLDIE, Dr. W. M. L.,	27 Sept., '08	RIDDICK, Capt. C. ...	1st Steamer
c/o London and County		c/o Messrs. Holt &	after 10th
Bank, Ltd., Victoria		Co., 3, Whitehall	July, 1908.
Street, S.W.		Place, S.W.	
GRIMSHAW, Capt. W. H.	27 Aug., '08	SERGEANT, J.	27 July, '08
HOWARTH, S. E. J. ...	27 Oct., '08	SMALL, Dr. R.	27 Aug., '08
HOLLIS, A. C.	20 Oct., '08	STONE, R. G.	16 Aug., '08
HOBLEY, C. W.,		SIEDMAN, H. J. H. ...	29 Sept., '08
C.M.G.	9 Oct., '08	SMITH, Maj. G. E., R.E.	27 Oct., '08
LLOYD, Capt. H. S. ...	27 Aug., '08	STOREY, F. B.	27 Aug., '08
LIKEMAN, J. L.	27 Sept., '08	TURNER, A. J.	27 Oct., '08
LUCMAN, Capt. A. V.	30 Aug., '08	TYSEN, F. D.,	10 July, '08
LLOYD, L. H.		c/o National Bank of	
MOON, J. L.	27 Aug., '08	India, Ltd., 17, Bishop's	
		gate Street, E.C.	
		WARD, J. C.	29 Sept., '08

UGANDA.

BAKER, Dr. C. J. ...	20 Oct., '08	MAC GREGOR, Capt.	
CARTER, W. M. ...	11 Nov., '08	A.H.C. ...	27 Aug., '08
GOODLIFFE, Dr. J. H. ...	11 Nov., '08	PARKE-SMITH, R. ...	27 July, '08
HUTCHINSON, Commander		RIDDUCK, Miss H. ...	
H., R.N.R., ...	13 Oct., '08	SWINHOE-PHELAN, Capt.	
Sports Club, St. James'		W. ...	27 Aug., '08
Square, S.W.		STURROCK, J. C. R. ...	27 Sept., '08
HADDON, E. B. ...	9 Oct., '08	TUFNELL, Capt. H. M. ...	27 Aug., '08
IRELAND, Capt. DE C., ...	9 Sept., '08	VAN SOMEREN, Dr.	
United Societies Club,		R. A. L. ...	11 Nov., '08
Pall Mall, S.W.		WATSON, A. H. ...	27 Sept. '08
LEAKEY, E. W. ...	11 Nov., '08	WYNDHAM, Maj., L. C. E.	6 Oct., '08
MORRIS, W. U. ...	9 Oct., '08		

SOMALILAND.

BRESLIN, Capt. A. E. H.	16 July, '08	O'BYRNE, H. M. ...	... 7 Oct., '08
BRATT, H. A., ...	24 Sept., '08	O'NEILL, H. du B.	... ..
Sports Club, St. James'		STOCKLEY, C. H.	... 1 Oct., '08
Square, S.W.		TAYLOR, A. W. ...	... 6 Oct., '08
DrAKE - BROCKMAN, Dr.		THOMSON, J. H. ...	... 26 July, '08
R.E., ...	23 Aug., '08		
c/o Messrs. Grindlay &			
Co., 54, Parliament			
Street, S.W. ...			

ORANGE RIVER COLONY.

DURDEN, Mrs. E.	... 15 Oct., '08	MACKRIDGE, E. R.	... 30 Sept., '08
EDGAR, E. G.	... 17 Sept., '08	MCLEAN, C. G.	... 31 Oct., '08
HAMILTON, J. R. R.	... 17 Oct., '08	SMITH, H. L.	... 27 Oct., '08
KATZ, A.	... 22 Oct., '08	SWIFT, Dr. E. W. D.	... 31 Oct., '08
MANSON, J.	... 16 Aug., '08		

BABUTOLAND.

ROSEWORTH-SMITH, R. M. 31 Oct., '08 | BAILEY, A. T. ... 10 Nov., '08

BECHUANALAND.

REILLY, R. 30 Nov, '08

SWAZILAND.

SWEETMAN, A. J. ... 14 Nov., '08

JAMAICA.

BRISCOE, J.	22 July, '08	MOORE, E. T.	31 July, '08
BATLEY, H.	22 July, '08	MELLISH, C. E.	22 July, '08
COX, S. A. G.	11 Oct., '08	NUNES, R. E.	9 Oct., '08
CLARK, Dr. L. M.	22 Sept., '08	PEARCE, F. L.	27 Sept., '08
CRADWICK, W.	20 Sept., '08	PIETERSZ, J. L.	22 Oct., '08
DEERR, G. H.	2 Oct., '08	ROCK, G. A.	13 July, '08
FOSTER, G. C.	4 Aug., '08	STRACHAN, A. F.	21 Oct., '08
KERSHAW, Lt.-Col., A. E., Junior United Service Club, S.W.	23 July, '08	TURTON, Dr. R. S.	7 Oct., '08
		WORTLEY, G. M.	6 Nov., '08
		WILLIAMS, J. R.	31 Oct., '08

FIJI.

ARNOLD, Dr. E. G. E.	24 July, '08	KNOWLES, C. H.	24 Aug., '08
FRANCIS, Col. C. A.		MACDONALD, Dr. R.	20 Apr., '09

BARBADOS.

CHANDLER, W. K., C.M.G.	9 July, '08
--------------------------------	-------------

MONTSERRAT.

DYETT, E. F.	30 Sept., '08
---------------------	---------------

GRENADA.

LOCKHART, N.	19 Aug., '08	LEGGE, C. A.	3 Sept., '08
---------------------	--------------	---------------------	--------------

LEEWARD ISLANDS.

BRANCH, C. E. St. J.	19 Oct., '08
-----------------------------	--------------

ST. LUCIA.

CONDELL, C. F.	20 July, '08	SHERIFF, P. M. C.	17 Aug., '08
-----------------------	--------------	--------------------------	--------------

ANTIGUA.

HUMPHREYS, H. L.	15 Nov., '08	WHIGHAM, W. H., I.S.O.	31 Oct., '08
-------------------------	--------------	-------------------------------	--------------

ST. VINCENT.

SAND, W. N.	11 Nov., '08
--------------------	--------------

FALKLAND ISLANDS.

CAMPBELL, Capt. J. C., c/o London and South Western Bank, Ltd.	27 Sept., '08	THOMPSON, W. A., Royal Colonial In- stitute, Northumber- land Avenue, W.C.	20 Mar., '09
---	---------------	--	--------------

GIBRALTAR.

FREEMAN, A.

CYPRUS.

BAYLY, Maj. G. C. ...	30 Sept., '08	PARLIDES, Dr. O. ...	1 Nov., '08
CLAUSON, Maj. J. E. ...	17 July, '08	TYSER, C. R. ...	9 Oct., '08
GILES, W. ...	20 Aug., '08	WODENHOUSE, C. B. ...	23 Oct., '08

BRITISH HONDURAS.

HARRISON, Dr. J. H. H. ...	7 Nov., '08	SWAYNE, Col. E. J. E.,
MAXWELL, F. M. ...	21 Sept., '08	C.B.
Royal Colonial Institute, Northumberland Avenue, W.C.		

TRINIDAD.

BURSLEM, W. ...	18 Dec., '08	LORD, R. C. ...	6 July, '08
GIBBON, Dr. J. F. ...	20 Sept., '08	RUSSELL, A. D. ...	3 Oct., '08
GUPPY, R. J. L. ...	6 Feb., '09	ROGERS, C. S. ...	20 Oct., '08
JACKSON, Sir H. M.,		SAUNDERS, J. B. ...	24 Nov., '08
G.C.M.G. ...	30 June, '08		

BRITISH GUIANA.

BARNES, Dr. W. S. ...	15 Oct., '08	FERNANDES, H. ...	20 Sept., '08
BRUNKE, Capt. H. M. ...	30 Oct., '08	West Indian Club,	
BARKLIE, T. W. S. ...	8 Jan., '09	Norfolk Street, Strand,	
Royal Colonial Institute, Northumberland Avenue, W.C.		W.C.	
CHRISTIANS, H. P. ...	3 Oct., '08	FERGUSON, Dr. J. E. A.	24 Oct., '08
COWIE, Miss J. M. ...	12 Aug., '08	Royal Colonial Institute, Northumberland Avenue, W.C.	
EARNshaw, A. ...	Steamer leaving	GWYTHER, Ven. Arch. A.	26 Sept., '08
	2 Sept., '08	HEMERY, P. ...	17 Aug., '08
Royal Colonial Institute, Northumberland Avenue, W.C.		LAW, Dr. W. F. ...	15 Oct., '08
		MASKELL, T. A. C.	Steamer leaving
			8 July, '08
		PILGRIM, E. O. ...	14 Sept., '08
		RAYNER, Sir T. C. ...	15 Aug., '08

MAURITIUS.

BANBURY, G. A. L. ...	9 Oct., '08	LARZEN, Rev. J. ...	18 Dec., '08
BROWN, R. M. ...	25 Oct., '08	MONTY, Dr. S. A. R. ...	25 June, '09
Royal Colonial Institute, Northumberland Avenue, W.C.		MILNE, Dr. A. J. ...	9 Sept., '08
BEAUGARD, H. M. A. ...	11 Oct., '08	MARCHAND, A. ...	11 Nov., '08
DAWSON, J. W. ...	12 Aug., '08	MADELON, L. J. ...	9 Oct., '08
GREGORY, Rt. Rev. F. A.,	9 May, '09	Common Room, Gray's	
M.A., D.D.		Inn, N.W.	
LAVERS, Rev. J. W. C. ...	27 Sept., '08	SCROGGS, Lieut. H. C.,	
		R.N. ...	11 Nov., '08
		THOMPSON, A. S. ...	7 Sept., '08

SEYCHELLES.

MACKAY, G. 7 Aug., '08 | WRIGHT, E. B. 7 Aug., '08

HONG KONG.

ATLEE, M. G. ...	13 Sept., '08	HUNTER, Dr. W. ...	1 Oct., '08
ANGUS, P. ...	27 Sept., '08	HAZELAND, F. A. ...	7 Apr., '09
BARKER, Miss S. E. ...	Steamer leaving 14 Aug., '08	LAMBLE, P. T. ...	10 Mar., '09
BADELEY, F. J. ...	13 Aug., '08	MACDONALD, J. ...	31 Aug., '08
BALL, J. D. ...	25 Jan., '09	McKAY, Sergt., J. A. ...	Arrival of P. & O. after 1 Sept., '08
BREWIN, A. W. ...	27 Mar., '09	McKENZIE, D. J. ...	12 Dec., '08
COLLETT, A. ...	15 Feb., '09	MCDONALD, D. ...	20 Dec., '08
CURWEN, W. ...	28 Feb., '09	MCDONALD, R. ...	1 Feb., '09
CULLEN, W. F. ...	20 Sept., '08	ORME, G. N. ...	2 Oct., '08
c/o Hong Kong and Shanghai Bank, 31, Lombard Street, E.C.		PIESSE, F. A. ...	10 Mar., '09
CRAIG, R. H. A. ...	14 Jan., '09	RATCLIFFE, A. ...	25 Feb., '09
CLARK, Dr. F. W. ...	8 Oct., '08	SIM, G. ...	30 Sept., '08
DOBBS, W. ...	31 Mar., '09	SINNOTT, J. J. ...	11 Feb., '09
FOWLER, G. ...	1 Feb., '09	SAVAGE, R. A. G. ...	27 Mar., '09
FISHER, H. G. C. ...	11 Sept., '08	TOOKER, H. P. ...	6 Dec., '08
FLETCHER, A. G. M. ...	20 Mar., '09	WISE, A. G. ...	20 Mar., '09
GERRARD, W. G. ...	20 Dec., '08	WOODCOCK, G. A. ...	11 Dec., '08
GOURLAY, D. ...	1 Feb., '09	WOLFE, H. W. ...	7 Apr., '09
GRANT, J. ...	1 Feb., '09	WRIGHT, Dr. G. H. B., D.D., M.A. ...	7 Apr., '09

STRAITS SETTLEMENTS.

BRYANT, A. T. ...	7 Feb., '09	MELVILLE, T. A.	Steamer due 20 Aug., '08
BROOKE, G. E. ...	17 Aug., '08	NOLAN, J. ...	5 Feb., '09
BOURNE, W. ...	19 Oct., '08	NAPIER, W. J. ...	27 Sept., '08
BOYER, G. ...	15 Sept., '08	O'NEIL, M. ...	19 Mar., '09
BATTEN, A. ...	20 Jan., '08	PHILLIPS, C. M.	26 Sept., '08
CHANCELLOR, -CAPTAIN		PATTISON, J. C. ...	30 June, '09
A. R. ...	Steamer due 3 Sept., '08	ROFFEY, J. ...	15 Sept., '08
CHAMBERLAIN, A. B. ...	25 Mar., '09	RODESSE, M. ...	1 Dec., '08
CROUCHER, Dr. F. B. ...	29 Mar., '09	RODRIGUEZ, F. ...	31 Mar., '09
DAVID, P. F. ...	26 Oct., '08	RADCLIFFE, Comm. C. A., R.N. ...	6 Oct., '08
DERRY, R. ...	24 Dec., '08	SYMONDS, J. D'A. ...	4 Oct., '08
GRIMSHAW, H. ...	10 Aug., '08	SHEEDY, A. J. ...	27 Mar., '09
HALL, G. A. ...	4 Apr., '09	SMITH STEINMETZ, G. A. J.	19 Sept., '08
HYNDHAM-JONES, Sir		TYRREL, J. ...	6 Nov., '08
W. H. ...	24 Oct., '08	TRUSDALE, W. H. ...	20 Jan., '09
HOSKINS, W. J.	24 Oct., '08	TROWELL, W. J.	13 Mar., '09
LUPTON, H. ...	17 Mar., '09	TOWNER, H. V. ...	18 Mar., '09
LITTLEDYKE, S. ...	19 Jan., '09	THORNTON, S. L.	27 Mar., '09
MARSHALL, W. H. ...	15 Sept., '08		

TANJONG PAGAR DOCK.

HOOLEY, W.	RENNIE, J. S. N. ... 23 Dec., '08
KING, F. W.	

PAHANG.

MAXWELL, C. M.	11 July, '07
-----------------------	--------------

NEGRI SEMBILAN.

HUGHES, G. E. E. ... 27 Aug., '08	UPTON, H. H. S. ... 16 July, '08
McCAUSLAND, C. F. ... 4 Oct., '08	WARD, A. E. C. ... 15 Oct., '08
SHANKLAND, Miss R. M. 13 June, '09	

PERAK.

BOWES, J. 5 Oct., '08	COOPER, H. G. ... 29 July, '09
BLACKSHAW, W.... 7 Nov., '08	KNOCKER, F. W. ... 27 July, '08
BAILEY, D. 2 Sept., '08	LANGSTON, S. H. ... 7 May, '09
BROWN, Dr. J. E. M. ... 17 Dec., '07	MACKENZIE, W. H. ... 3 Oct., '08
Royal Colonial Institute, Northumberland Avenue, W.C.	REEVE, Miss G. R. ... 29 Nov., '08
BIRCH, E. W. 14 Nov., '08	SIBBALD, S. K. ... 25 July, '08
	TOFT, J. A. A. ... 30 Apr., '09

SELANGOR.

ADAM, Capt. H. W. D. ... 10 Feb., '09	SWAN, H. E. ... 30 Nov., '08
BYRNE, H. E. Steamer due	SANGUINETTI, W. R. ... 31 Mar., '09
27 Aug., '08	c/o H. S. King & Co.,
CRAWFORD, R. E. ... 2 Nov., '08	9, Pall Mall, S.W.
DESBOROUGH, C. E. M. ... 14 Oct., '08	VALPY, G. C. ... 27 Oct., '08
LOTT, W. E. 25 Oct., '08	WATSON, W. M. ... 23 Sept., '08
ROBINSON, H. D. ... 24 Sept., '08	WARD, J. F. ... 3 Nov., '08

FEDERATED MALAY STATES.

BUTTERWORTH, A. W. ... 24 Sept., '08	MILLS, F. ... 3 May, '09
BROWNE, E. G. ... 27 July, '08	MOODY, R. J. ... 30 Sept., '08
CARDEW, C. D. ... 8 Aug., '09	NEARY, J. P. ... 25 Sept., '08
CAULDWELL, E. ... 8 Aug., '09	PHILLIPS, D. ... 27 July, '09
COOK, E. A. ... 29 June, '09	PRIVETT, C. S. R. ... 25 May, '09
DYKES, F. J. B. ... 24 Aug., '08	PHILLIPS, P. ... 14 Feb., '09
EVANS, R. G. ... 3 Nov., '08	PARRY, G. LL. J. ... 28 Aug., '08
ELLIS, S. P. ... 9 May, '09	RAE, J. M. ... 7 Oct., '08
FEENEY, J. ... 23 July, '09	ROBILLIARD, H.... 9 Feb., '09
GRAVES, H. ... 2 Mar., '09	STEVENS, E. G. ... 30 Sept., '08
GLOVER, J. S. ... 18 July, '09	SMITH, J. ... 20 July, '09
HARGREAVES, W. ... 11 Nov., '08	STEELE, J. ... 20 July, '09
HAYNES, A. S. ... 7 Feb., '09	THORNLEY, Dr. R. L. ... 16 Sept., '08
HANNIGAN, L. ... 10 May, '09	TALBOT, H. L. ... 1 Mar., '09
HIGHET, D. J. ... 14 Feb., '09	TAYLOR, W. ... 23 July, '09
INNES, J. R. ... 30 Nov., '08	TOMS, J. ... 23 June, '09
c/o Messrs. H. S. King & Co., 65, Cornhill, E.C.	TAYLOR, Sir W. T. ... 26 July, '08
MACDONALD, F. J. ... 15 Oct., '08	WHITLEY, M. H. ... 5 July, '09
	YOUNG, A. E. ... 9 Sept., '08

CEYLON.

ARYARATNA, Dr. D. M.	14 Mar., '09	HILL, B. ...	... 16 Mar., '09
BEVEN, A. ...	12 Apr., '09	KYLE, J. ...	29 Dec., '08
BRADLEY, G. T. ...	5 Aug., '08	LEWIS, G. ...	7 Sept., '08
BRAYNE, C. V. ...	7 Jan., '09	LUSHINGTON, C. M.	30 Oct., '08
BARTLAM, A. ...	12 Jan., '09	MIDDLETON, J. P.	24 Jan., '09
COWLEY, F. ...	...	MCDONALD, J. ...	30 Sept., '08
CALDICOTT, A. E. ...	31 Dec., '08	MONTAGU, D. ...	2 Dec., '08
CASTELLANI, Dr. A. ...	10 Aug., '08	MURRAY, K. ...	8 Sept., '08
CAMPBELL, J. H. ...	6 Nov., '08	MORGAN, W. R. W.	3 Jan., '09
CURTIS, W. J. ...	13 Sept., '08	MISSO, W. J. ...	21 Mar., '09
DENHAM, E. B. ...	Steamer arriving	MACREADY, W. C.	15 Apr., '09
Oxford and Cambridge	31 Aug., '08	NELSON, H. W. ...	16 Sept., '08
Club, Pall Mall, S.W.	...	PRICE, N. J. ...	6 May, '09
DREW, A. R. ...	31 Oct., '08	PIETERS, Miss S.	11 Nov., '08
DE KRETZER, J. ...	4 Sept., '08	PLANT, G. F. ...	11 May, '09
EBELL, Dr. J. H. ...	20 Oct., '08	PAUL, Dr. S. C. ...	23 Oct., '08
FESTING, R. A. G. ...	28 July, '08	RICHARDSON, Miss M. E.	11 Sept., '08
GRENIER, Dr. F. ...	4 Oct., '08	SMITH, R. L. ...	30 Mar., '08
GREEN, E. E. ...	14 Mar., '09	SPAAR, Dr. A. E.	9 Sept., '08
GODDARD, E. ...	21 Oct., '08	TAYLOR, A. H. ...	31 Jan., '09
GURR, A. W. ...	31 Aug., '08	TYLER, A. ...	2 Nov., '08
HYDE, G. H. W. ...	8 Aug., '08	TEMPLER, G. D. ...	30 Oct., '08
Junior Constitutional	...	TYRRELL, F. G. ...	26 Nov., '08
Club, Piccadilly.	...	VAN TWEST, J. T.	30 Apr., '09
HOURLSON, J. ...	31 Oct., '08	WICKWAR, A. J.	7 Sept., '08
HODSON, T. A. ...	13 July, '08	WARMAN, S. E. ...	3 Aug., '08
HENMAN, O. W. ...	10 Feb., '09		

THE COLONIAL OFFICE JOURNAL.

VOL. II.

OCTOBER, 1908.

No. 2.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE celebration of the Birthday of Canada was a brilliant success as a pageant, and unique as commemorating the most striking and romantic instance in the world's history of the union of two warring races under one flag. The international and inter-imperial courtesies were marked by a cordiality in which no *arrière pensée* is to be traced. The Prince of Wales's visit was productive of the greatest enthusiasm in Canada, while the participation of official representatives of France and the United States gave to the celebrations a significance far exceeding that of an ordinary memorial ceremony. Quebec is a name which stands at once for international rivalry and international reconciliation. It is possible for the French Canadian to acknowledge ties of affection with both Great Britain and France without any thought of divided allegiance, and an Englishman may admit ungrudgingly how many of the great names in Canadian history are French. In the whole Empire there is no spot more suitable than the Plains of Abraham for such a celebration, and great credit is due to Lord Grey for the fine imagination which conceived the idea, and the energy and determination which have made of it so complete a success. The record ride of the "Impregnable" back to England was a fitting sequel to the festivities.

CEYLON.

ARYARATNA, Dr. D. M.	14 Mar., '09	HILL, B. ...	... 16 Mar., '09
BEVEN, A. ...	12 Apr., '09	KYLE, J. ...	... 29 Dec., '08
BRADLEY, G. T. ...	5 Aug., '08	LEWIS, G. ...	... 7 Sept., '08
BRAYNE, C. V. ...	7 Jan., '09	LUSHINGTON, C. M.	... 30 Oct., '08
BARTLAM, A. ...	12 Jan., '09	MIDDLETON, J. P.	... 24 Jan., '09
COWLEY, F. ...	...	MCDONALD, J. ...	... 30 Sept., '08
CALDICOTT, A. E.	31 Dec., '08	MONTAGU, D. ...	... 2 Dec., '08
CASTELLANI, Dr. A.	10 Aug., '08	MURRAY, K. ...	... 8 Sept., '08
CAMPBELL, J. H.	6 Nov., '08	MORGAN, W. R. W.	... 3 Jan., '09
CURTIS, W. J. ...	13 Sept., '08	MISSO, W. J. ...	... 21 Mar., '09
DENHAM, E. B. ...	Steamer arriving	MACREADY, W. C.	... 15 Apr., '09
Oxford and Cambridge	31 Aug., '08	NELSON, H. W. ...	... 16 Sept., '08
Club, Pall Mall, S.W.	...	PRICE, N. J. ...	... 6 May, '09
DREW, A. R. ...	31 Oct., '08	PIETERS, Miss S.	... 11 Nov., '08
DE KRETZER, J.	4 Sept., '08	PLANT, G. F. ...	... 11 May, '09
EBELL, Dr. J. H.	20 Oct., '08	PAUL, Dr. S. C. ...	... 23 Oct., '08
FESTING, R. A. G.	26 July, '08	RICHARDSON, Miss M. E.	11 Sept., '08
GRENIER, Dr. F.	4 Oct., '08	SMITH, R. L. ...	... 30 Mar., '08
GREEN, E. E. ...	14 Mar., '09	SPAAR, Dr. A. E.	... 9 Sept., '08
GODDARD, E. ...	21 Oct., '08	TAYLOR, A. H. ...	... 31 Jan., '09
GURR, A. W. ...	31 Aug., '08	TYLER, A. ...	... 2 Nov., '08
HYDE, G. H. W.	8 Aug., '08	TEMPLER, G. D. ...	... 30 Oct., '08
Junior Constitutional	...	TYRRELL, F. G. ...	... 26 Nov., '08
Club, Piccadilly.	...	VAN TWEST, J. T.	... 30 Apr., '09
HOURLSON, J. ...	31 Oct., '08	WICKWAR, A. J.	... 7 Sept., '08
HODSON, T. A. ...	13 July, '08	WARMAN, S. E. ...	... 3 Aug., '08
HENMAN, O. W.	10 Feb., '09		

THE COLONIAL OFFICE JOURNAL.

VOL. II.

OCTOBER, 1908.

No. 2.

[*This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.*]

EDITORIAL NOTES.

THE celebration of the Birthday of Canada was a brilliant success as a pageant, and unique as commemorating the most striking and romantic instance in the world's history of the union of two warring races under one flag. The international and inter-imperial courtesies were marked by a cordiality in which no *arrière pensée* is to be traced. The Prince of Wales's visit was productive of the greatest enthusiasm in Canada, while the participation of official representatives of France and the United States gave to the celebrations a significance far exceeding that of an ordinary memorial ceremony. Quebec is a name which stands at once for international rivalry and international reconciliation. It is possible for the French Canadian to acknowledge ties of affection with both Great Britain and France without any thought of divided allegiance, and an Englishman may admit ungrudgingly how many of the great names in Canadian history are French. In the whole Empire there is no spot more suitable than the Plains of Abraham for such a celebration, and great credit is due to Lord Grey for the fine imagination which conceived the idea, and the energy and determination which have made of it so complete a success. The record ride of the "Impregnable" back to England was a fitting sequel to the festivities.

Admiral Sperry and the United States battleships have been welcomed in Australia and New Zealand with a degree of enthusiasm which must have surpassed the most sanguine expectations. It is pleasant to recognise in this reception an appreciation of the kinship and inner sympathy of the two great unions of Anglo-Saxon peoples. But the incident has a further significance which cannot be overlooked. Australia and New Zealand have always watched the encroachment of other powers in the Pacific with a nervous jealousy. They have viewed the settlement of other European powers in those waters with a sentiment akin to that which gave birth to the Monroe doctrine in the United States; and of late years they have come to regard the danger from Asia as far exceeding any to be anticipated from Europe. The recent differences between Japan and the United States on the subject of the emigration from the former into the latter country have led the Australians to see in the American Republic a nation, related to themselves, exposed to a like danger and committed to a like policy. Though there was no discussion of the Asiatic problem, the visit of the American fleet undoubtedly served as an opportunity for a demonstration of the solidarity of interest among all the white nations who occupy territories in the Pacific.

The subject of Asiatic immigration was raised by Mr. A. E. W. Mason, on the motion for the adjournment of the House of Commons for the summer holidays, and, in the course of his reply, Colonel Seely showed an understanding of the Colonial attitude which has given much satisfaction in Australia. The *Sydney Morning Herald* observes that "his speech implies a most useful recognition of the fact that this question, which is largely an academic one in England, is acute in many of the colonies. The commonest source of failure in statesmanship is inability to look at a question from the point of view of a distant and imperfectly understood colony. That English Liberalism is beginning to realise what Asiatic immigration means to us is the best assurance that no conflict will arise over the issue." The *Sydney Daily Telegraph* writes in similar terms, and adds:—

"Colonel Seely's subsidiary point, that civil rights must be granted sooner or later to every immigrant who has been admitted into a British dependency, is difficult to answer. A voteless alien population, within, but apart from the general population, would not only introduce a factor inconsistent with democratic thought, but would be a constant and pressing danger for the whole community."

The amount of British capital invested in Canada has grown from £116,600,000 in 1897 to £262,400,000 in 1907. The amount invested in the United States is valued at £449,500,000, and it is remarkable that Canada, with its comparatively small population and

trade, should figure with more than half this sum. Much of the British capital which is invested in the United States is in the form of personal undertakings which are well advertised: that which Canada receives is mostly in the form of purchases of Government and railway securities, and it is therefore absorbed more quietly. It is clear that the United States are now being pushed out of their place by Canada for the favours of the British investor. Even now, however, the British funds invested in South Africa and Australia exceed those invested in Canada, and the fact that the banks in those countries have been controlled by London capital has much to do with the facility with which money has been borrowed. But neither South Africa nor Australia are now borrowing greatly.

One rather curious result of this flow of money to Canada is the activity of Canadian enterprise abroad. *The Canadian Annual Review* remarks on this as follows:—

“Mr. H. N. Casson had an interesting article upon this subject in which he said: ‘Montreal has capital—hundreds of millions. She has millionaires—forty-two of them all told, it is said. She has mills and factories—nearly four hundred of all sizes. But the vast bulk of her wealth is invested in enterprises that lie outside of the Province of Quebec. Her capitalists are at present building a railway in Cuba. They hold two million dollars’ worth of United States steel stocks, and they have placed large amounts at the service of the Wall Street banks. They are the principal pioneers in the development of electric power in Mexico. They control the Street Car companies in Detroit, Toledo, Cleveland, Akron, St. Paul, Minneapolis, Havana, Trinidad, Jamaica and Rio de Janeiro.’

“He added that two prominent Montreal citizens held \$30,000,000 of stock in J. J. Hill’s Railways, and he might have stated that Sir W. C. Van Horne and other Canadians held large interests in Guatemala and were extending their holdings and enterprises in Brazil; that W. R. Ross, K.C., and R. E. Harria, K.C., of Halifax, were interested in Porto Rico Railways; that a group of Toronto capitalists, including William Mackenzie, Sir H. M. Pellatt and Fred. Nicholls, were largely interested in Brazil investments; that James Ross, Sir G. A. Drummond and E. S. Clouston, of Montreal, and J. H. Plummer and E. B. Wood, of Toronto, were at the back of the Mexican Light and Power Company; that some \$2,000,000 of bonds and \$500,000 of common stock in the Chicago and Milwaukee Electric Railway were said to be held in Canada. These and other concerns were, however, profitable and the investments were more or less signs of natural prosperity and enterprise. In the main they were controlled and managed by Canadians, and while this movement of capital abroad was a little curious in a debtor country, yet the intrinsic merits

Admiral Sperry and the United States battleships have been welcomed in Australia and New Zealand with a degree of enthusiasm which must have surpassed the most sanguine expectations. It is pleasant to recognise in this reception an appreciation of the kinship and inner sympathy of the two great unions of Anglo-Saxon peoples. But the incident has a further significance which cannot be overlooked. Australia and New Zealand have always watched the encroachment of other powers in the Pacific with a nervous jealousy. They have viewed the settlement of other European powers in those waters with a sentiment akin to that which gave birth to the Monroe doctrine in the United States; and of late years they have come to regard the danger from Asia as far exceeding any to be anticipated from Europe. The recent differences between Japan and the United States on the subject of the emigration from the former into the latter country have led the Australians to see in the American Republic a nation, related to themselves, exposed to a like danger and committed to a like policy. Though there was no discussion of the Asiatic problem, the visit of the American fleet undoubtedly served as an opportunity for a demonstration of the solidarity of interest among all the white nations who occupy territories in the Pacific.

The subject of Asiatic immigration was raised by Mr. A. E. W. Mason, on the motion for the adjournment of the House of Commons for the summer holidays, and, in the course of his reply, Colonel Seely showed an understanding of the Colonial attitude which has given much satisfaction in Australia. The *Sydney Morning Herald* observes that "his speech implies a most useful recognition of the fact that this question, which is largely an academic one in England, is acute in many of the colonies. The commonest source of failure in statesmanship is inability to look at a question from the point of view of a distant and imperfectly understood colony. That English Liberalism is beginning to realise what Asiatic immigration means to us is the best assurance that no conflict will arise over the issue." The *Sydney Daily Telegraph* writes in similar terms, and adds:—

"Colonel Seely's subsidiary point, that civil rights must be granted sooner or later to every immigrant who has been admitted into a British dependency, is difficult to answer. A voteless alien population, within, but apart from the general population, would not only introduce a factor inconsistent with democratic thought, but would be a constant and pressing danger for the whole community."

The amount of British capital invested in Canada has grown from £116,600,000 in 1897 to £262,400,000 in 1907. The amount invested in the United States is valued at £449,500,000, and it is remarkable that Canada, with its comparatively small population and

trade, should figure with more than half this sum. Much of the British capital which is invested in the United States is in the form of personal undertakings which are well advertised: that which Canada receives is mostly in the form of purchases of Government and railway securities, and it is therefore absorbed more quietly. It is clear that the United States are now being pushed out of their place by Canada for the favours of the British investor. Even now, however, the British funds invested in South Africa and Australia exceed those invested in Canada, and the fact that the banks in those countries have been controlled by London capital has much to do with the facility with which money has been borrowed. But neither South Africa nor Australia are now borrowing greatly.

One rather curious result of this flow of money to Canada is the activity of Canadian enterprise abroad. *The Canadian Annual Review* remarks on this as follows:—

“Mr. H. N. Casson had an interesting article upon this subject in which he said: ‘Montreal has capital—hundreds of millions. She has millionaires—forty-two of them all told, it is said. She has mills and factories—nearly four hundred of all sizes. But the vast bulk of her wealth is invested in enterprises that lie outside of the Province of Quebec. Her capitalists are at present building a railway in Cuba. They hold two million dollars’ worth of United States steel stocks, and they have placed large amounts at the service of the Wall Street banks. They are the principal pioneers in the development of electric power in Mexico. They control the Street Car companies in Detroit, Toledo, Cleveland, Akron, St. Paul, Minneapolis, Havana, Trinidad, Jamaica and Rio de Janeiro.’

“He added that two prominent Montreal citizens held \$30,000,000 of stock in J. J. Hill’s Railways, and he might have stated that Sir W. C. Van Horne and other Canadians held large interests in Guatemala and were extending their holdings and enterprises in Brazil; that W. R. Ross, K.C., and R. E. Harris, K.C., of Halifax, were interested in Porto Rico Railways; that a group of Toronto capitalists, including William Mackenzie, Sir H. M. Pellatt and Fred. Nicholls, were largely interested in Brazil investments; that James Ross, Sir G. A. Drummond and E. S. Clouston, of Montreal, and J. H. Plummer and E. R. Wood, of Toronto, were at the back of the Mexican Light and Power Company; that some \$2,000,000 of bonds and \$500,000 of common stock in the Chicago and Milwaukee Electric Railway were said to be held in Canada. These and other concerns were, however, profitable and the investments were more or less signs of natural prosperity and enterprise. In the main they were controlled and managed by Canadians, and while this movement of capital abroad was a little curious in a debtor country, yet the intrinsic merits

of the undertakings and the profits—actual or probable—may be considered to largely meet the criticisms suggested.”

To these statements we may add that there is a considerable, and increasing, amount of Canadian capital invested in the West Indian Colonies.

This export of capital, however, is by no means liked in Canada, and when the Dominion appears to be suffering from a stringency of money, complaints of course make themselves heard. This happened last year, and want of money to move the crops was alleged to have caused a loss of some \$15,000,000. The newspapers especially fulminated against the employment of about \$50,000,000 in outside call loans, chiefly in New York. There was a great demand for money locally, and there was a good deal of human nature in the view that the banks should give accommodation in the Dominion instead of sending money abroad. But the answer in such circumstances is that the funds lent are a liquid reserve. This reserve the banks are bound to maintain, and the only way in which it can be used is by lending it at call. This mode of lending, however, was not what the Canadian public wanted; for the development of industries permanent investment is necessary, and in a time of crisis banks naturally restrict their advances. If the Canadian banks were freely abused on this occasion, on the other hand they received the highest possible compliment in the complete confidence which the Canadians showed in their system.

The Commonwealth of Australia is anxious to make the resources of Australia more widely known so as to attract emigrants. The States endeavour to disseminate information, but one trouble is that newspapers do not care much for such matter. “The despatch of articles for publication in newspapers free of charge cannot be regarded as a permanent method of advertising, if unsupported by paid advertisements, as, on a second application, newspapers promptly ask for a *quid pro quo*. To push newspaper publicity, however, to anything like a permanent or semi-permanent plane of success, a considerable amount of money must be expended, for while the State wishes only a record of its pleasing features and happy occurrences printed, the newspaper controller, as a rule, has little use for such reports.” What is mostly wanted for journalistic purposes is polemical and aggressive material, and it is no use to lament the fact that bellicose controversy and local incidents are the most attractive pabulum for the general reader. The difficulty of Australia in the matter of emigration is that the Crown lands of the States are either small or unsuitable for settlement. Mr. Deakin invited the Premiers to make declarations as to the amounts of suitable land available. The answers were not all as explicit as might be desired, but it appears

that in New South Wales, Victoria and South Australia the available suitable land is not substantially more than enough to satisfy the existing local demand. But great efforts are being made to repurchase land and to improve what is already available: in particular Victoria is spending £400,000 a year on new works, which will, in the near future, open up large areas for closer settlement, and provide for a greatly increased population. In Queensland and Western Australia there are, of course, enormous areas awaiting occupation.

It is clear that the expediency of encouraging immigration is recognised by the Federal Government. The clauses which led to the "six hatters" case have been repealed, and that much discussed and misrepresented incident need no longer be dragged into the matter. That Mr. Deakin is anxious to open up the land and attract immigrants is clear from the strong position which he has taken up. "It is noted with interest," he wrote, "that a considerable amount of work of this character has been undertaken by the State Governments, and is bearing fruit in the introduction of immigrants; but the numbers who have, so far, been induced to come to this country with the intention of settling are small when compared with the vast areas to be occupied, and further efforts on a much larger scale are essential if the stream of immigration is to assume proportions which may fairly be regarded as commensurate with the needs of Australia. The Commonwealth, by its industrial legislation, has done all that was in its power to render the country self-sustaining in the direction of promoting manufactures and rural developments generally. It is upon those engaged in agriculture and dairying that Australia must rely for the fuller utilization of the advantages with which nature has endowed us; and it is on the wide range of products which our varying climates and soils enable us to raise that we must chiefly depend for the further enlargement of our growing export trade."

The decision of the Australian High Court in the "harvester" action is a notable addition to the cases which show how difficult it is to divide the power of legislation between two authorities. The Federal Government has, under the constitution act, the power to levy taxes, but not to regulate the conditions of employment. In the desire, however, to introduce the "New Protection," which we described in our April number, it imposed an excise duty on locally made agricultural implements, with an exemption in favour of those manufacturers whose rates of pay to their workmen should be considered satisfactory by the Court of Arbitration. This was clearly an attempt to regulate the conditions of employment by means of a

taxation act, and the High Court has decided that it was *ultra vires*. It seems, however, unsatisfactory in point of principle that the authority which has to decide what taxes should be imposed should not be able to frame the policy underlying them. The various labour questions are under the present constitution matters for the different States, but it can hardly be said that they are purely local. One State cannot well maintain restrictions as to pay and hours of labour if its neighbour is at liberty, as it is, to pour its goods over the border without adopting any such restrictions. There must eventually be one policy in such matters for all, and the Federal Government is now seeking to obtain the further legislative power required. The act would require an absolute majority of both Houses and the approval of the electors on a referendum. Difficulties of this kind should be borne in mind when the union of South Africa is considered in detail.

The memorandum issued by Mr. Churchill, announcing the establishment by the Board of Trade of a Standing Court of Arbitration to deal with industrial disputes, may fairly be regarded as one more example of the influence of Colonial upon British legislation. It is true that the memorandum is very guarded in its terms. The fact that no change will be made in "the voluntary and permissive character" of the proceedings under the Conciliation Act of 1895 is emphasized twice in a single paragraph; and that this emphasis is wise in the existing state of public opinion is indicated by the fact that at the recent Trade Union Congress a resolution in favour of compulsory arbitration was, for the second time, defeated by a large majority, while the traditional attitude of the employers towards the proposal has been equally one of opposition. There are some reasons for believing that the views of both parties on this matter are undergoing a change, and Mr. Churchill significantly remarks that "the state of public opinion upon the general question of arbitration in trade disputes may be very conveniently tested by such a voluntary arrangement." The procedure followed in this instance illustrates in an instructive manner, on the one hand, the tendency of English legislation to wait upon rather than to anticipate public opinion, and, on the other, the considerable powers which the heads of our public departments possess to initiate changes of policy by administrative action independently of legislation.

A report by the Comptroller-General of Customs of the Commonwealth of Australia shows that, although the importation of opium has been totally prohibited since 1st January, 1906, the consumption is much the same as before. As this was anticipated, it cannot be considered that the result is disappointing. The price has gone up

considerably, a smoke now costing 2s. 6d.; but the Commonwealth has given up £60,000 revenue without any other result. The rise in price, it appears, has induced Europeans to take a hand in the trade, and this has enormously increased the difficulty of keeping out the drug. Apparently there is an organised system of importation from Europe and America, as well as from China, and it would require a very vexatious system of examination to stop it. Most of the opium is said to be hidden in the coal. The most effective means would be for the other States to follow the example of Victoria and make it penal to be in possession of opium. A considerable quantity of opium is now grown in Australia, and more would no doubt be grown if the importation were effectually stopped. The result, however, of the effort to put down the vice is not so discouraging as may appear from the above. The high price does not prevent the hardened offender from keeping up the practice, but it does prevent the young Chinese from acquiring it, and the habit will probably die out.

In both Australia and Canada there is a striking example of newspaper enterprise which has no parallel in this country. A number of important newspapers band themselves together and enter into an agreement with a telegraph company under which they are exclusively supplied with foreign news. The combined newspapers are under an obligation to take news only from the company, and the company to supply news only to the combination. The leading newspapers in Australia and New Zealand have an agreement of this character with the Eastern Telegraph Company, and the understanding is carried out with such strictness that, when the first news of the San Francisco earthquake came along the Pacific cable, the newspapers refused to publish it. Some newspapers are, of course, left in the cold by these arrangements, and recently there has been some agitation in Australia on their behalf. In Canada, the Canadian Pacific Railway has an Associated Press Service, and last autumn some of the western newspapers made an effort to establish an independent press service. Thereupon the C.P.R. increased its press rates, and insisted that press despatches should be used "only at the point addressed," so that the same matter could not be used by more than one paper. The matter was warmly taken up, and in the end the C.P.R. made some concessions, but not so far as to bring down the rate to the new service down to the ordinary press rate.

The union of South Africa is at present the most prominent political question in the colonial empire, and there are indications that there is now a steady industrial improvement which will go far

to facilitate a settlement. It is true that the oversea traffic remains poor, and owners of ships, which are being laid up for want of return cargoes, will be hard to convince that matters are mending. But the railway and other reports contain unquestionable evidence that local production is actively growing. Farming is the industry for which South Africa, generally speaking, is best adapted, and the development of this business will not only benefit the large part of the population engaged in it, but will reduce the cost of living and render the competition of the railways for the oversea traffic less important.

Mr. J. Conacher, in his report on the distribution of oversea traffic between the South African Railways, considers the question whether any of the main lines from the coast are unnecessary, and have been built chiefly from motives of competition, and answers the question decidedly in the negative. All the lines have become inevitable as the development of the country proceeded. No railway manager, he intimates, viewing impartially the situation in South Africa, could do otherwise than recognise the favourable position of the port of Lourenco Marques, with its connecting railway, in relation to the trade of a large, and what is now a very important, district in the interior of the country; and no final settlement of the railway question is practicable which does not give to that circumstance its appropriate weight. At the same time it is impossible to dissociate the commercial and general interests of the district referred to, and especially of the competitive zone in the Transvaal comprised within it, from the welfare of the more distant ports, and the efficient working of the railways connecting them with the interior. Large portions of that district can be served more quickly and, with some goods, more cheaply through the Cape and Natal ports than through the nearer port of Lourenco Marques, and the additional facilities for the trade of the country which those ports provide are of such undoubted commercial value that had the position been reversed, and Lourenco Marques been the first instead of having been the last of the ports to be connected by rail with the interior, there is little doubt that the efforts of the inland communities, dependent as they are upon oversea communications, would early have been directed to finding additional outlets to the coast through the older Colonies. Even from the exclusively railway point of view this would have been a matter of the greatest moment; as no system of railways for which such an outlet is vital can be regarded as secure with only one, of which part is in the hands of an authority over which the owners of the system do not possess a control capable of being exercised by them at all times and under all circumstances.

It follows from this that the true position of both of the inland Colonies is that of partners with the coast Colonies in all the routes from the sea; jointly interested in their efficiency and in equity bound to concur in the fixing and apportionment of such through rates as may be necessary to maintain them in that condition. That this is not the principle on which existing through rates have been fixed is clear, and the Cape Ports have been deprived of trade which they used to possess. What is wanted is a readjustment which would remove such grievances, and this is only possible by using the economies which the consolidation of the railways would lead to. The harbours and docks of South Africa are really an integral part of the system, and no scheme would be complete or effectual which did not include them.

Sir Francis Hopwood took the opportunity of his visit to Canada to discuss informally the subject of trade relations between Canada and the West Indies, and a statement on the subject will probably be made before the year is out. The matter is obviously complicated by the fact that the West Indies represent several administrations, and their interests are not altogether identical; but this difficulty is capable of solution. It would be a great advantage to the West Indies if the market which she now enjoys in Canada could be made secure. There seems to be a reluctance in financial circles to embark capital in the group, and the memory of past misfortunes is not yet wiped out by the steadily increasing prosperity; if it could be established that the trade now done with Canada is not precarious, there would, we believe, be much more hope for industrial developments.

The regrettable death of Sir H. M. Jackson removes one of the most efficient and popular governors the West Indies have had. It is particularly unfortunate for the public interests at a time when the political situation requires tact and patience, and when several big subjects, such as the Customs Tariff and Harbour Improvements, are coming on.

The recent visit of the West Indian cotton growers' delegates to this country, to confer with the British Cotton Growing Association, brought about some pleasant gatherings and good understandings. The object was plainly expressed by Sir A. L. Jones—that each party wanted to make something out of the other and would not make much unless the other was energetic and successful. A good deal of economic science is summed up in this. The West Indies are expected to supply a quarter of a million sterling worth of cotton this year—a splendid result; but Lancashire wants ten million bales,

and there is plenty of room, therefore, for more producers. The Association is likely to spend a million in the purchase of cotton this year from the West Indies and West Africa.

It was remarked that the share of Jamaica in the movement had been small, but that, on the other hand, they had been rather rich in natural phenomena. One hundred years ago a large quantity of cotton came from Jamaica, which at any rate proves that cotton can be grown there. The agreement of Messrs. Elder, Dempster & Co. to carry Jamaica cotton free for one year will no doubt bear fruit. The earthquake of January last year was a disaster from which it takes a long time to recover. The effects were much worse than on previous occasions. The destruction of houses in Kingston was almost universal, and a large area was swept by fire. The reports of the General Relief Committee and the Assistance Committee reveal an enormous amount of careful and generous work on behalf of the sufferers. It is no small thing to be able to say that a supply of daily food was at all times assured to all. Small houses were speedily repaired to the number of 1,147. It is pleasant to see how promptly and liberally the neighbouring colonies sent help. Barbados and British Guiana each sent over £2,000, and contributions came in from every part.

The Mansion House fund of £54,053 and the Imperial grant of £150,000 enabled the rebuilding to be taken in hand, but difficulties soon arose.

“As soon as the Committee began to make building grants questions arose as to the best method of insuring the economical application of the money to the purposes for which it was intended. The offices of the Committee were besieged by contractors, and some attempts were made to tamper with the Committee's officers. At this period no contracts (save three) had been given out directly by the Committee, and it was decided that the recipients of grants should be notified and requested to make their own arrangements, submitting the name of the contractor they desired to employ, with plans and specifications, after which the money should be paid as the work progressed, on certificate that it had been done to their satisfaction.

“It was not long before this method, which had been adopted largely in concession to the desires of applicants, was found to be working unsatisfactorily. Unreliable contractors having discovered the amount of a grant would manufacture a tender for work to precisely that amount, and in several cases there was reason to suspect collusion between the contractors and the grantee, to enable

a cash balance to be divided without carrying out repairs to the full value intended. Moreover it was found that many of the grantees were not able to protect their own interest, in negotiations with contractors or to secure the proper carrying out of the work. It, therefore, became necessary for the Committee to arrange for closer supervision and in a great number of cases to make themselves responsible through a Building Sub-Committee for the expenditure of the money voted."

The applicants themselves, however, it is satisfactory to observe, were reasonable, and the Assistance Committee found that the claims sent in were, on the whole, very fully justifiable. In all 4,283 grants of various character and amount had been made by April last.

The decision which the Judicial Committee of the Privy Council has given in favour of the policyholders in an action to recover losses caused by the fire which followed the earthquake will relieve property owners and commercial firms in Kingston from a great anxiety. This action was initiated in Jamaica. In the case of an almost identical action originated in England an opposite decision was given.

In the House of Commons debate (27th May) on the West-Indian Inter-colonial mail service vote, the question was raised whether it was right to omit, as had been done in this particular contract with the Royal Mail Steam Packet Company, the clause known as "No M.P. to benefit." An Act of 1782 forbids Members of Parliament from entering into Government contracts, and imposes disabilities and penalties on them if they do, but it is expressly provided that nothing in the Act should affect or apply to any incorporated trading company. The effect of this is that a Member of Parliament cannot himself enter into a contract with Government, but that a company in which he is a shareholder can. Cases might occur in which the distinction amounts to little; a Member might be so largely interested in a company that his opinion and influence in the House of Commons might be affected to the same extent as if he were a sole contractor. The ideal immunity from such influences could never be reached unless every Member of Parliament kept out of all industrial concerns which have, or might have, contracts with Government, and as this is impracticable the distinction between owning a business and owning shares in one is convenient and serves a sound purpose.

As the provision is statutory it is mere surplusage to repeat it in a contract, but it has been the custom to do so in mail contracts.

The British Honduras Railway starting from Stann Creek has been satisfactorily constructed so far; some seven and a half miles have been laid with rails, and the line shows no signs of having been

affected by the heavy rains, and appears to be safe from floods. It is expected that over 15 miles of line will be available for the carriage of fruit in October. The whole length will be 25 miles, and the principal difficulty is that of labour. The British Honduras Creole or Carib leaves off work as soon as he has earned enough money to satisfy his extremely modest requirements; higher wages, therefore, do not mean more work. Labourers have accordingly been brought from Jamaica under agreement for one year, but the process was expensive, and it is intended to finish the work without resorting to it again. With the completion of the line labour will be liberated which will be available for new plantations, and there is good reason to believe that the line will encourage development. Certainly it is much to be hoped that the colony, the history of which is marked by extraordinary tenacity and heroism, will gain a much-needed advantage from the undertaking.

The Cayman Islands are, we are afraid, little known except to the stamp collector, but small as they are they are remarkable among the West Indian Islands in having a population the majority of which is white or partly white. This is to some extent due to the circumstance that the first patrons of the group were pirates. The tortuous passages of such archipelagos were, as every schoolboy knows, eminently favourable to that form of enterprise, and even quite recently buried spoils of Spanish coins have been unearthed. It is almost to be regretted that the advance of civilisation leaves no room for the spirit of adventure even in so suitable a place. An interesting handbook on the islands has been written by the Commissioner, Mr. G. S. S. Hirst, and published at Kingston.

In March last the Earl of Elgin addressed a despatch to the Governor of the East Africa Protectorate which is specially interesting as devising modes for securing to the State the "unearned increment" in land and for preventing the growth of vast estates. Some arguments for action in this direction, based largely on Australian experience, were put forward in our April number. The first proposals to keep down leases to comparatively short terms were naturally received with some adverse criticism in the Protectorate, which was unkindly described in the *Nairobi Star* as the home of the leopard, the tick, the baboon, and the amateur official. The object, however, is undeniably good, and settlers cannot legitimately object to the conditions laid down so long as land can be freely dealt in. At one time a lease of grazing land for 21 years was talked of, but this period is too short to make the lease a reasonable mortgageable security or to encourage development; it is to be hoped that the more

liberal provision made in the despatch will conciliate the objectors. The tenour of the despatch may be gathered from the following passages:—

“On the one hand, the settlers are naturally anxious that the land on which they spend their labour should be a marketable and mortgageable security. On the other hand, it is clear, looking to the experience of other Colonies, that steps must be taken to prevent the accumulation of enormous quantities of land in the hands of individuals through the operation of free transfer, and also that the conditions of tenure must be such that the Government may be able from time to time to obtain its share of the unearned increment in the value of the land—that is the portion of its value which is due to the growth around it of an organised economic and political system.

“Land for farms should be granted to settlers on leasehold tenancies of 99 years at rentals revisable on a basis of 5 per cent. of the unimproved value of the land, subject (except where the land in question at the time of valuation is included in a township) to maxima of 9d. and 2s. 3d. per acre respectively at the 33rd and 66th year, with complete reversion to the Crown at the end of the term on payment of compensation for improvements. Notice of the rent based on the revaluation should be given before the end of the 32nd and 65th years; and if the lessee should not within six months of such notice accept the new rent, his lease should determine at the end of the current period. Six months before the determination of the lease the land should be offered in one or more blocks at the rent fixed by the Board, and at a premium representing the value of the improvements made by the late tenant. The latter sum should be paid over by the new lessee to the outgoing lessee. If no tenant should be found within six months of the determination of the lease, the Commissioner should pay from Government funds the assessed value of the improvements to the late lessee less any amount due from him under the expired lease, and should then be at liberty to offer the land at a reduced rent. A temporary occupation title should be granted in the first instance, and the settler should be on probation for five years, during which he must spend a sum equal to 40 times the amount of his rent on development (*i.e.*, on certain specified improvements), and after which, if he fulfils the conditions, his title should be confirmed on the leasehold tenure described above. If within a period of not less than three years he spends the stipulated sum of money on development, it should be open to him to claim a secure title then. If, on the other hand, the land leased has been unoccupied for any period exceeding nine months, or if at the end of the probationary period the stipulated sum of money has not been expended, the Government should have the power to resume on giving compensation for improvements. The

probationary period should be included in the first term of 33 years. The improvements should be those specified in Schedule A of the report of the Land Board.

"I am assured by banking authorities that such a tenure will be no obstacle to advances for cultivation; but I am advised that, in general, lenders prefer to look in the first place to the forthcoming crops as their security, and next to the improvements. Values, in fact, cannot be created by legislation, but only by industry."

The British Consul at Zanzibar directs attention to the rebates and preference granted to German and French shippers by the Deutsche Ost Afrika and the Messageries Maritimes Companies, and regrets that, with the withdrawal of the British homeward service, British merchants are again left to the mercies of foreign lines. It is certainly a great pity that East Africa should be without a direct service with this country. To some extent this is due to what looks like an understanding between the British India and the South African conference lines, for neither appears to be at liberty to serve the whole of the east coast. The British India tranship at Aden, and any shipper who wishes to avoid this must go to a foreign company. The difficulty in the way of establishing a direct service is partly that the freight obtainable would be hardly sufficient, and partly that the British India would no doubt step in more actively against any such competition. It would probably be necessary to grant a subsidy, and this suggestion always invites objections. The German company are not supposed to have a subsidy, but the German Government pays the canal dues for them—which comes to the same thing.

We call attention in another place to the gratifying progress of that much-criticised enterprise, the Uganda Railway. Uganda itself is not suitable for white settlers, and the few who have started small plantations there have suffered both in health and pocket. But the country is populated with a remarkable native race, which is at once easily governed and eager to assimilate the ideas of industrial and intellectual progress. Without any aid from the Government they have produced over 700 tons of cotton in less than two years, and the area of cultivation is rapidly increasing. It is rather hard on Uganda that its neighbour, East Africa, is not only more attractive to white settlers, but possesses the whole of the so-called Uganda Railway. The improved results of this line are mainly due to the traffic from the lake ports, and largely to the exports from Uganda; but the Uganda Treasury only benefits from this indirectly, as it does not participate in the profits earned. The great promise of Uganda, however, is certain to lead to the extension of the railway.

At present a majority of the native population is engaged in doing the work of mere beasts of burden, and the development of the country would be vastly accelerated if these thousands of porters, who are now slowly trudging along the roads with burdens on their heads, could be set free for the cultivation of the soil. This is an economical advantage of railways in such circumstances which should be taken into account. A road does not pay a community directly, and a railway is only an improved road: its advantages are not to be measured merely by the excess of revenue over expenditure.

In July the Governor of the Straits Settlements paid a visit to Labuan, Brunei and Sarawak. These places have been stumbling blocks to the editors of the Colonial Office List. Labuan, however, is now safely anchored to the Straits, having been incorporated with them last year; and Brunei, whose internal affairs are still left to the Sultan, has been promoted from the "Appendix" to keep it company. Sarawak, however, remains in the latter list of undigested mouthfuls. Brunei is mostly known for its stamps and cigarettes. Sir John Anderson was presented by the Sultan with a cigarette over two feet long, and was no doubt equal to the occasion. The rest of the party were let off more lightly with fifteen inches. The *Singapore Free Press* observes of the lower orders in Brunei that they all have their peculiarities, and adds, somewhat doubtfully, that some appear to be of use. It is to be hoped that the closer connection with the Straits will help to develop them.

The experiences of the few Crown Colonies which have been represented at the Franco-British Exhibition are not calculated to make the others sorry that they have stood out. The collections were excellent, but the Exhibition Authorities first failed to complete the buildings till long after the opening, and then capped this by allowing cheap knock-knacks of Birmingham, or similar origin, to be sold in the Court. The following letter records the opinion of the Commissioner for Fiji on these proceedings:—

"CROWN COLONIES COURT,

"FRANCO-BRITISH EXHIBITION,

"14th July, 1908.

"MY LORD DUKE,

"As Commissioner for the Colony of Fiji to the Franco-British Exhibition, I desire reluctantly to bring to your notice the following facts.

"In 1907 an arrangement was made by cable with the Exhibition Authorities by the Colonial Secretary of Fiji that 800 square feet of space should be reserved for Fiji at the price of 10s. per square foot.

" In January, 1908, at the request of the Exhibition Authorities I paid through the Crown Agents £400 as arranged.

" This space has not been allowed by the Exhibition Authorities. In April, when the building was said to be ready for our exhibits, I found only 704 square feet allowed for the Fiji Court.

" In conjunction with Mr. C. H. Harley Moseley, Commissioner for Southern Nigeria, I protested against this reduction of space, but without effect, and no offer has been received to refund the sum of £48, which I now claim should be returned.

" All the exhibits from Fiji were in London in March, and should have been in the Crown Colonies Court in April. As the building was not ready at the time promised, the exhibits had to remain on storage at the expense of the Colony I represent.

" On May 26th, when His Majesty visited the Exhibition, the Crown Colonies building was still unfinished, and any inspection by His Majesty was out of the question. It would almost appear, from the small number of men employed and the irregularity of their employment on the Crown Colonies building, that the claims of similar work at the Exhibition received more favourable consideration.

" The scaffolding on the exterior was only removed on June 26th.

" The electric lighting of the interior was first available on June 23rd.

" On July 13th, owing to rain, the exhibits of Fiji, with those of the other Crown Colonies, suffered from leakage of the roof, and at 12.30 p.m. the commissionaires were still sweeping out water and there were large pools in the passage way.

" On June 9th, with the other Crown Colony Commissioners, I addressed a letter of protest to Mr. Imre Kiralfy, a copy of which I have the honour to enclose, and to which I have received no reply.

" I have only shortly referred to matters which have caused an immense amount of trouble, not to say unnecessary annoyance and expense, and which have been the subject of frequent verbal and written complaints to Mr. Collins Levy, in charge of the Colonial Section.

" In conclusion, I would ask the kindly consideration of your Grace to my claims to compensation, which I now present on behalf of the Colony of Fiji:—

" 1st.—That space has been paid for which has not been allowed by the authorities.

" 2nd.—That delay in completing the building for the Crown Colonies has caused expenses for storage of exhibits, &c.

" 3rd.—That the loss to the Colony is considerable through the building not being finished till some six weeks after the opening day.

“ 4th.—That the condition of the building is very unsatisfactory, the leakage from the roof causes trouble and loss, and the authorities have made no sufficient attempt to complete the inside of the building as ‘resolved,’ according to the original prospectus, ‘by decorations in a harmonious, artistic and tasteful way.’

“ 5th.—That though the Crown Colonies have been charged at the very high rate of 10s. per square foot for space, a number of traders in small wares have been introduced into the Crown Colonies Court.

“ I have, &c.,

“ (Sd.) C. R. SWAYNE,

“ Commissioner, &c.

“ HIS GRACE THE DUKE OF ARGYLL, K.T.,

“ Hon. President of

“ Franco-British Exhibition, London.”

It is comforting on the face of it to find, from the Report of the Committee on a National Guarantee for the War Risks of Shipping, that the effect of any probable rise in insurance rates on prices and industry has been exaggerated, but on further examination it will be seen that this is not because there might not be a serious rise in the rates, but because any such rise would be only one, and that not the most important, of the many factors controlling prices in a great naval war. The important fact is that there would probably be a financial panic of unprecedented dimensions, and prices would be regulated chiefly by the ordinary laws of supply and demand, both of which would be affected by the disturbance of trade and scarcity of money. Things would settle down or not in accordance with the course of war. No guarantee, of course, would ensure the safe arrival of ships or afford any relief to a suffering population. Everything would turn on the success of the navy. No doubt there would be a very trying time at the beginning, and great numbers of ships would be laid up, but the higher prices would quickly bring them out again if the seas were fairly safe. When the navy has been distinctly superior to its enemies the volume of British trade has actually increased during war. On the other hand, it may be urged with force that for a time there will be uncertainty and timidity, and that the discontinuance of the usual supplies will cause much injury and suffering. This, however, is an inevitable incident of war, and the Committee consider that the objections to any form of national guarantee outweigh the advantages.

Some uneasiness has been caused by a rumour that Fanning Island, the mid-ocean station of the Pacific cable, was likely to be

acquired by some Japanese. The site and requirements of the cable board are fully secured, but the rest of the island is private property, and there has been some rather curious litigation in Fiji over it. It may reasonably be surmised that when a sale is talked of it is not entirely without regard to the Government interests and to the possibility of a Government purchase. It is unlikely, however, that the authorities will rise to the bait, if such it is. The island is too small and sterile to support any considerable number of settlers. To be on the safe side, however, the High Commissioner for the Western Pacific has issued a regulation providing that it shall not be lawful for an alien to hold land in the island, subject to any existing ownership.

A Committee was appointed in June to consider "the conditions of tenure, the scale of payment of salaries and pensions, and how far arrangements in the office of the Crown Agents are in accord, or can be brought into harmony with, the principles governing the Civil Service." The Committee consists of Col. J. E. B. Seely, D.S.O., M.P. (Chairman), The Right Hon. Sir F. Mowatt, G.C.B., I.S.O., Sir R. Moor, K.C.M.G., H. J. Gibson, C.B., R. Bailey, M.V.O., I.S.O., Sir Albert Spicer, M.P., and C. A. Harris, C.B., C.M.G. It has made a general survey of the work of the office, with a view to deciding whether changes are desirable or not, and has taken evidence from a number of ex-governors, present officials, and gentlemen interested in the subject. It is to be hoped that with this assistance it will be able to pierce the veil of mystery which, according to some critics, hangs over the institution. The office has grown up in a comparatively short time from a small beginning—there are still recollections of a time when the capital resources are said to have consisted of 6s.—to a staff of 100, and a reserve fund of about £400,000; and it is clearly desirable that its constitutional status and the lines of its organisation should be set out in definite and authoritative manner, suited to its present position. The question seems to be whether it should be conducted on the footing of a commercial house or on that of a government office. Apart from this domestic side of the case, the work of the Committee will be valuable as virtually embracing an enquiry into the methods with which the business is conducted. The Committee will, it is understood, consider its report this month.

The *South African Railway Magazine* gives an alluring account of the excursion organised by the C. S. A. R., from Johannesburg to the Victoria Falls and the Matoppos Hills. The cost is under £20. The writer truly remarks that "it is difficult to make some of mankind think," but he contends that the Falls will do it if anything

can. Niagara, compared with them, is, according to an American visitor, "just a bead of perspiration."

A new illustrated guide to the Uganda Railway has been prepared and gives a lively description of the joys of "Safari," or camping out in a natural zoo. Messrs. Cook organise a tour from Mombasa over the railway to Lake Victoria Nyanza and thence to Cairo, and the fortunate people who have the time and money have no excuse for not undertaking one of the most fascinating trips that can be imagined.

The Royal Horticultural Society's autumn show of Colonial-grown fruit and vegetables will be held on November 26th and 27th next, in the Royal Horticultural Hall, Vincent Square, Westminster, London, when the President and Council hope for a large show of fruits worthy and representative of those British Colonies whose fruits are in season at that time of year, and more especially from the West Indies, Canada, British Columbia and Nova Scotia. During the past few years the November Colonial Show has been highly successful, and a complete justification of the encouragement so long extended by the Society to our Colonial fruit industry.

Ever since its foundation in 1804 the Society has constantly endeavoured to assist the fruit-growing resources of British Colonies, and to foster their interests in every way. It was the R.H.S. which first sent out the original cuttings and grafts from which the majority of the trees now growing in our Empire all over the world are descended. In the early part and middle of last century, the Society propagated wine-grapes and other fruits, such as apples, pears and plums, by tens of thousands for gratuitous distribution in the then young Colonies; and having thus laid the foundation of the material, it now endeavours, by means of exhibitions, to bring the fruits themselves before the public at home, and to indicate the Empire's resourcefulness in fruit and vegetable products, as well as their good qualities, and so to demonstrate the feasibility of the different parts of the Empire mutually to supply not only the home, but their own various markets with an ample supply of fruit and vegetables without the assistance of the foreigner.

The Council, who award the medals of the Society after the recommendations of competent and disinterested Judges, are particularly anxious to encourage fruit growers. Exhibits may be shown either through the agency of the Agents-General in London, or by the shippers, or by the growers themselves. If desired, any produce may be sent direct to the Society, and it will be stored in the cellars at Vincent Square (not cold storage) and staged by the Society's officials, but the Society cannot undertake to re-pack and return any exhibits. No entrance fee or charge for space is made.

THE FINANCIAL PROBLEM OF AUSTRALIA.

ONE of the most important benefits which can be secured by the federation of States consists in the fact that the joint credit is better for the purpose of borrowing money. Not only is the security consolidated, but the practical advantage is obtained of having one important denomination of stock, which can be firmly established on the market, instead of a number of issues, which perplex the ordinary investor and tend to prevent close prices. In the case of the Australian States, the existing stocks will come to maturity at varying periods, and it should not be impracticable to redeem or convert them, at the proper time, by the issue of stock secured upon the consolidated revenue of the Commonwealth, and bearing the attractive title of "Australian Consols." Assuming that the same security was given, it is morally certain that such consols would command a higher price than State stocks of the equivalent denomination and currency, and that conversion on terms favourable to the Commonwealth would be found to be advantageous, and to be desired by many existing stockholders. The State debts amounted in June, 1907, to about £244,000,000. As Sir John Forrest, when Treasurer of the Commonwealth, put it, "It is not reasonable to suppose that any single State of the Commonwealth can for long be able to either raise, redeem, or convert loans on such favourable terms as the Commonwealth, with its exclusive power of taxation through Customs and Excise, and with the security behind it of the whole of Australia."

If the existing State stocks were simply taken over by the Commonwealth, a very substantial advantage would be thrown away. The opportunity, if used at all, should be used to effect a conversion profitable to the Commonwealth; otherwise the result would be that holders of stock would receive a present of any increase of price caused by the combined security and the greater convenience. The best time for such an operation would be when a considerable amount of State stocks are approaching maturity.

It is, however, by no means universally agreed in Australia that the Commonwealth could borrow money on better terms than the States. Sir J. H. Carruthers, the Premier of New South Wales, said, at the Sydney Conference of 1906 :—

“I have the information from Mr. Coghlan to the effect that, as regards the confidence of the British money-lender in our stock, there would be absolutely no improvement whatever by handing over the control of our stock to the Federal authorities. On the contrary, there would be injury. This proposal is practically taking over the debts, to hand over to a body which has no tangible assets behind it, and only the power of taxation, the controlling of Australian securities. Whether we believe it or not, the advice I have got from Mr. Coghlan, reiterated time after time, is that it is a delusion and a fantasy to imagine that Australian securities would improve in value or in popularity by handing them over to the Commonwealth Government. On the contrary, he says that he believes the securities would diminish in popularity and decrease in value. I have that from Mr. Coghlan in letter after letter.”

This is undeniable on the basis of the present situation, *i.e.*, so long as the States have the solid securities and the Commonwealth has no power to tax a defaulting State. The States have the railway revenues. The Commonwealth, in fact, took over, broadly speaking, the non-remunerative services from the States, but not the remunerative. At the first session of the Australasian Federal Convention the cost of Federation was estimated at £1,550,000 per annum, made up as follows :—

New expenditure in the exercise of the original powers conferred by the Constitution ...	£300,000
Expenditure on services and powers transferred from the States ...	£3,005,400
<i>Less</i> revenue expected from transferred services ...	1,755,400
Net expenditure on transferred services ...	1,250,000
Total estimated cost of Federation ...	<u>£1,550,000</u>

It was clearly necessary, to secure uniformity, that the Commonwealth should collect the Customs duties. But it was never intended that the Commonwealth should retain them for its own purposes. The history of the case has been given with admirable clearness by Mr. T. G. Watson, C.M.G., in a paper printed officially at Melbourne. The feeling was strong from the first that the States should have in their own hands the means of meeting their liabilities. Thus it was put by Sir W. Lyne (New South Wales) in the Melbourne debates :

“I would ask honourable members to place themselves in the

position of a State Treasurer. He would not know without some guarantee what money he would receive from month to month, or from year to year, and yet he would have to forecast his financial position for each succeeding year. It is all very well to say that the Federal Parliament will be framed from the electors of the States as they are now. That is correct in one sense, but only in one sense. It will be made up from the electors of the present States, but under very different conditions. If the Federal Treasurer got into financial difficulties at any time, the first thing he would do would be to throw the responsibility on the State Treasurers by refusing to pay them the amount of money that they should receive. He would, perhaps, be able to carry on, but would do so by placing the States in a very unenviable position. I desire to leave as much as we reasonably can to the Federal Parliament, but we should consider the necessities of the States during the first few years of the Commonwealth. I do not think for one moment that there is any possibility of any of the States repudiating any of their responsibilities or becoming insolvent. Still, some of the States might be placed in very great financial straits if they were left dependent entirely on the Federal Treasurer."

Eventually the matter was fixed by the "Braddon Clause" (s. 87 of the Commonwealth Constitution Act), under which, for ten years after the establishment of the Commonwealth, the Commonwealth can apply not more than one-fourth of the net revenue from Customs and Excise towards its expenditure, and must repay the rest to the States or apply it to the payment of interest on the State debts. The question of the consolidation of the debts was not dealt with.

Till the end of 1910, therefore, the Act regulates the position. After that nothing is provided, and the result is that if nothing is done, the Parliament of the Commonwealth would, after 1910, be free to spend the whole of the revenue from Customs and Excise for Commonwealth purposes, without being responsible for the debts of the States.

The question has, therefore, been further considered at various conferences. The argument that the united credit of Australia would be better than that of individual parts presupposes that the Commonwealth would be able to offer, on the issue of a loan, the assets of the States which form the security for State loans. This practically means that, in addition to its Customs revenue, the right to collect the gross railway revenues should be vested in the Commonwealth, so far as might be necessary for the purpose of paying the interest on loans, or, at any rate, that a general power should be given to raise, by taxation, any sum which might be required.

This was urged by the first Treasurer of the Commonwealth at the Conferences of 1904 and 1905. He argued that if the debts

were taken over the States should give the Commonwealth the right to collect the gross railway revenues; that this was necessary to "satisfy the financiers in Great Britain that the Commonwealth stock is absolutely secure as to principal and interest, and has 'priority of security,'" and that "if the Commonwealth takes the place of the States as borrower it must have the same security."

The proposal, however, met with the strongest objections from all the States and was abandoned. The objections of the States are indicated in the following extract from a speech at the Hobart Conference by the Hon. J. M. Davies, M.L.C., Attorney-General for Victoria:—

"Mr. Davies.—With regard to this proposed security. The Commonwealth Act authorizes the Commonwealth to take over the State loans, subject to certain limitations, and provides what shall happen when those loans are taken over. The Constitution provides that the States as a whole shall indemnify the Commonwealth against them. It also empowers the Treasurer to apply certain payments of the State in settlement of the interest on such loans taken over. It was not contemplated under that Act that any kind of security was to be asked. Our States have been able to borrow money in the past from England, and also in Australia, upon the general State security, without hypothecating any asset whatever towards payment of the interest. It seems to me, and I am only speaking from my individual view in regard to this, that the Commonwealth Government, unlike the English creditor, will not trust the States. The Commonwealth say, "Although you have borrowed money from England without pledging any specific security, before the Commonwealth will trust you it is necessary for you to hypothecate your gross railway revenue to them." If anything can be done to belittle the State as a borrowing power, it is that. I feel very strongly against this hypothecation proposal. If the Commonwealth want to take over the loans, it is surely possible to do so without this stipulation."

After much further discussion, the Melbourne Conference of 1906 decided in favour of a financial system which keeps the Commonwealth and the States apart; that is, which excludes from the consideration of the Commonwealth Parliament the finances of the States as States, and from the States any consideration of the financial position of the Commonwealth. This is the position in the United States. The resolution adopted decided in favour of:—

(a) Giving financial security to the States;

(b) Leaving the Commonwealth and the several States financially independent, each within its sphere.

The final resolution on the subject of the financial relations carried out this principle, and ran as follows:—

" *Resolved*—That during a period of ten years from the 31st December, 1910, and thereafter until the Parliament otherwise provides, the amount to be paid by the Commonwealth to each State shall be on the following basis:—

" 1. To pay annually to each State for ten years after 31st December, 1910, a fixed sum equal to the average annual amount of three-fourths of the net revenue from Customs and Excise which that State has contributed during the period from 1st July, 1901, to the 31st December, 1910 (not including the special revenue in the case of Western Australia).

" 2. If three-fourths of the total net revenue received by the Commonwealth from Customs and Excise in any year after 31st December, 1910, exceeds the aggregate amount of the annual fixed sum guaranteed to all the States, any such sum in excess to be distributed among the States *per capita*.

" 3. Provided that, subject to the foregoing proposals being given effect to, the Commonwealth may impose additional Customs and Excise duties for specific purposes, and may specially appropriate and retain and "ear-mark" the whole of the revenue—

" (a) Derived from any new items of duties on goods not at present subject to any duty, and imposed solely for specific purposes;

" (b) Derived from any additional duties on existing items of duties imposed solely for specific purposes.

If any surplus remains in any year after providing for such specific purposes from the revenue derived from such special appropriations, three-fourths of such surplus to be annually returned to the States *per capita*."

The effect of this arrangement is that the Commonwealth would be able, after 1910, to arrange its taxation so as to provide funds for the annual contributions to the States and for its own ordinary expenditure, and will also be in a position to impose new duties for specific purposes, *e.g.*, naval defence or old-age pensions. Under the "Braddon clause," it is obvious that if the Commonwealth required additional revenue from Customs and Excise, it would have to raise four times as much as it required, as three-quarters must be remitted to the States, and this makes it practically impossible for the Commonwealth to embark upon any such schemes until this restriction is removed.

There is no intention, however, of allowing the Commonwealth to reach this position without much further debate. At the Conference held at Melbourne in April-May last, Mr. Deakin submitted a scheme, prepared by Sir W. Lyne, under which the Commonwealth would take over all the debts of the States and replace them at a new maturity by 3 per Cent. Australian Consols. But the Conference would have none of it. The resolution arrived expressed

the policy of safeguarding the independence of the States, running as follows :—

“ *Resolved*—That this Conference views with apprehension the proposals of the Commonwealth Government embodied in the Memorandum of Sir William Lyne, and is of opinion that they will, if adopted, seriously affect the financial independence and solvency of the States, and further resolves :—

“ 1. That, in view of the fact that upon the State Parliaments devolves the duty of developing the resources of their respective States by means of land settlement, railway construction, irrigation, and other public works, and that they are charged with the responsibility of maintaining adequate education and charity systems, and providing for the administration of justice and other services, the financial obligations connected with which will inevitably increase with the growth of population, no financial scheme can be assented to by the States which does not provide for their receiving—

“ (a) A fixed annual sum ; and

“ (b) A proportionate part of all increases in revenue from Customs and Excise.

“ 2. That, for the purpose of enabling the Federal Government to initiate a general scheme of old-age pensions, the State Governments will be agreeable to accept a smaller proportion of the Customs and Excise revenue than three-fourths, and thus supplement, if necessary, the amount which can be provided under the Commonwealth Surplus Revenue Bill.

“ 3. That, no restriction having been placed by the Constitution upon the borrowing powers of the States, and, further, for the reasons set out in Resolution No. 1, the States should be the sole judges as to the raising of loans, within or without the Commonwealth, for the purpose of carrying on the work of internal development without interference by the Council of Finance, as proposed in the scheme of the Commonwealth Treasurer, or by any external authority.

“ 4. That the gradual assumption by the Commonwealth of the State Debts may eventually lead to economies, but it would be advisable to allow the settlement of details to stand over until the question of the distribution of the net revenue from duties of Customs and Excise has been determined.”

Recently the Federal Parliament has passed a Bill providing for the retention by the Commonwealth of the full one-fourth of the net revenue from Customs and Excise when it is not spent in the year in question. At present, under the “ Braddon ” clause, the one-fourth may be applied to the expenditure of the Commonwealth, but if it is not so applied it must be distributed among the States. The Bill enables the Commonwealth to retain the unspent balance, but it does no more than this, and the statement which has appeared in the

press at home that it provides for the Commonwealth taking more than the quarter is incorrect.

There is no prospect, therefore, at present of the Commonwealth taking over the State debts, and it is clear that there is a strong body of objection to its doing so. The strength of the State sentiment is in fact the real difficulty. The federation of Australia is very far removed from unification.

But the matter is so important that an examination of the business aspect may well be justified. The essential question is whether a material saving could be effected, but before this is considered the ground may be cleared by one or two preliminary observations. The consolidation of the debts and future issues of loans by the Commonwealth need not interfere with the right of any State to borrow at its discretion. It is for each state to decide how much it will spend in the improvement of its territories, and there is no occasion for the Commonwealth to trespass on this sphere. The only advantage sought by the arrangement is to get money cheaper. Nor is it proposed that the debts should be taken over so as to lose their identity. If that were done the more indebted States would gain at the expense of the less indebted. The proposal can only be that the Commonwealth should consolidate the debts as opportunity offers, but each State would remain, as against the Commonwealth, responsible for the interest on its debt charge. This responsibility would have to be made definite by statute.

Coming now to the question of saving, the matter can be tested to a very fair extent by a comparison of Canadian stocks with Australian State stocks. Prosperous as Canada is, the "balance of trade" against her in 1907 was about £20,000,000, whereas in Australia the surplus of exports over imports amounted to a similar sum; and it may reasonably be premised that Australian credit should be as good, or at any rate nearly as good, as Canadian. The comparison, therefore, is a natural one, and has been made at the conferences. It was considered, however, to show that there would not be much difference, if any, between the position of the Commonwealth and that of the States in the London market. One speaker observed:—"For instance, I find that Canadian $3\frac{1}{2}$ per cent. stock, payable in 1934, was, on the 1st January, 1898, according to the *Economist*, at £108 10s. . . . Now take, for the purpose of comparison, a South Australian stock— $3\frac{1}{2}$ per cent., payable in 1939. That stock was at £109 11s., as against the Canadian stock at £108 10s., on the 1st January, 1898. So that the difference in five years is covered by the 21s. additional price for South Australian stock. I might also say that Tasmanian $3\frac{1}{2}$ per cent. stock, payable in 1920-40, was at £109 11s., as against the Canadian stock mentioned at £108 10s. on the same date. The same thing is observable throughout the whole scale of the Colonial stocks. So

that honorable members who think that the premiums will be realized are imagining that something will take place which the existing comparison between the Canadian and our own Australian stocks show will probably not be realized, at any rate at the beginning of Federation."

At the recent Melbourne Conference the same view was emphatically expressed by Mr. Waddell. "New South Wales," he said, "is in as good a position to borrow in London as Canada is. Our credit is as good. If we take the $3\frac{1}{2}$ per cent. Canadian stock, and compare it with ours, we find our stock holds as good a position as theirs. Even British consols have in some cases not returned more, or as much, interest to the investor as ours, showing that ours are in a better position." He added that there was no great difference between Canadian Dominion and Provincial loans, and urged this as showing that the like case would obtain in Australia.

These comparisons, however, are fallacious. The current price of a stock is largely ruled by the date on which the borrower can redeem. It is obvious that if it is open to the borrower to redeem at par at once or shortly, no one will buy the stock at more than a very small fraction over the par price. Thus, the $3\frac{1}{2}$ per cent. Canadian stock referred to is redeemable, not, as stated, in 1934, but at any time from 1909 to 1934, and the possibility of this redemption prevents the price from rising above about 100 $\frac{1}{2}$. On the other hand, the South Australian stock mentioned is not redeemable till 1939, though even so it reaches only 99. But take a case, for fair comparison, where the period of redemption is distant and about the same in both Canada and Australia. The Canadian 3 per cent. stock, redeemable in 1938, stands at a mean price of 95. The New South Wales 3 per cent. stock, redeemable in 1935, stands at 89 $\frac{1}{2}$. Thus the difference is fully 5 in favour of Canada. The error in the comparison of Dominion and Provincial stocks is still greater. Quebec 3 per cent. stock, redeemable in 1937, stands at 84 $\frac{1}{2}$, fully 10 below the Dominion. It is clear that Canada borrows money with an advantage of at least 5 per cent. over the Australian States.

Now, if the Commonwealth were to borrow on the same terms as Canada, this means, putting it broadly, that the saving in interest would be the proportion of, say, £3 10s., payable for £5, or 3s. 6d. This, on the debt of £244,000,000, as it stood in 1907, would come to about £435,000 a year. The whole of those debts mature by 1952, and by that time the annual saving, capitalised at $3\frac{1}{2}$ per cent., would amount to about £40,284,000.

A scheme has been put forward by the Hon. King O'Malley, under which the Commonwealth would assume the responsibility for that portion of the debt of each State, the interest and sinking fund on which would amount to the three-fourths of the net customs and excise revenue at present returnable to the State. The average net

three-fourths is £6,544,559, and this sum would cover the annual charges for about £174,000,000.

The reason for this limitation is that the Commonwealth could apply the three-fourths to this purpose without further statutory powers. A big start, at any rate, could be made in this way. It is certain that a large number of holders, especially trustees, would come forward and convert, notwithstanding the sacrifice, on the ground of the better security; and the general anticipation would probably be that the Commonwealth stock would appreciate, and the remaining State stocks, if anything, depreciate.

It would be essential to choose a good time, as so much would depend on the first operation. The Commonwealth could hardly, perhaps, expect to leap at one bound into the position of Canada in the market, but it has much to gain.

CANADIAN NATIONALISM.

SINCE the separation of the Imperial Conference of 1907, the question of the relations to one another of the various self-governing parts of the British Empire has fallen comparatively into the background. There had, perhaps, been rather an excess of discussion upon it, and there has been a not unnatural reaction, which has taken the form of a temporary apathy. There have been other sufficient reasons for a concentration of interest and activity in other directions. Canada, Australia and South Africa have all been faced with special local problems of pressing importance, to say nothing of the United Kingdom, occupied with a session of unprecedented legislative activity. But the question remains one of permanent interest, of which much more has yet to be heard, and any serious contribution towards it deserves a careful examination. Such a contribution has been made by Mr. J. S. Ewart, K.C., in an interesting collection of papers recently published—*The Kingdom of Canada and other Essays* (Toronto: Morang & Co.). They are primarily addressed to the Canadian public, but it may be hoped that they will succeed in finding readers in the United Kingdom and in the other self-governing dominions. Mr. Ewart is anxious to develop by all possible means the growth of a Canadian national sentiment, and he finds that there are two main obstacles which obstruct the attainment of this ideal—divisions within the Dominion which tend to promote provincialism, and Imperialism of a type which tends to reduce Canada to a position of subordination to the United Kingdom, or at any rate to the Empire. Each of these tendencies he is equally concerned to combat. For the existence of internal divisions Mr. Ewart suggests two principal reasons. The first is the dual race origin of the Canadian people, "emphasized as it is by a concurring line of religious difference." The second arises from the facts of geography. "We are all east and west of one another. Common lines of longitude are almost unknown. Add to this fact that interposed, here and there, are long stretches of water, of mountain and of waste land, and the force of this second reason becomes very palpable and, unfortunately, most potent." To an Englishman, the assertion that Canadians are deficient in national sentiment will probably come as a surprise. The speeches of Canadian

statesmen, the writings of Canadian authors, the conversation of Canadians who come "home"—a word which Mr. Ewart tells us is fast ceasing to be applied to the United Kingdom—seem to afford strong evidence that such a sentiment is now vigorously alive, and is growing irresistibly. But the question is one of which a Canadian is the best judge; and in any case, when you are preaching salvation, you must assume that your audience is satisfactorily unregenerate. We are not so much concerned here with the existence of internal causes of division in Canada, as with the effect on Canadian sentiment of the relations between Canada and the other parts of the Empire. "*L'Impérialisme voilà l'ennemi*" is Mr. Ewart's watchword. "How can Canadians love the British Empire, which they have not seen, when they do not love their own country, which they have seen? Is Ontario to have more sympathy with New South Wales than with Nova Scotia, or Quebec more affection for British Guiana than for British Columbia?" It would be easy, by a selection of quotations removed from their context, to represent Mr. Ewart as frankly hostile to the British connection in any shape or form. He will have nothing to do with "links of Empire." Imperial Federation was a mischievous chimæra, fortunately now moribund. Mr. Chamberlain's proposals involved an insidious attack upon "Colonial" independence. (We use the adjective with a sense of guilt, but there is no adjectival form of "dominion.") The maintenance of the legislative powers of the Parliament of the United Kingdom is an offensive anachronism. The jurisdiction of the Privy Council in Colonial causes is an impertinent piece of interference, defended by hollow and insincere arguments. The proposals generally associated with the name of Mr. Deakin are, happily, dead and buried. But this summary list of opinions expressed by Mr. Ewart does him less than justice. His view of the proper relationship of the different parts of the Empire is open to criticism and provocative of controversy. But it is consistent, intelligible and sincere; and it is wholly untainted with "disloyalty," or with any desire for separation. His cry is, "We must have a Canadian sentiment first. It is a pre-requisite of all Imperialism;" and in discussing the future he makes a shrewd remark. "It seems to be taken for granted that there are but three alternatives before us— independence, annexation, and stay as we are. I venture to suggest a fourth, namely, to go on as we have been going." Canadian history presents itself to him as a gradual process of evolution in the direction of increased freedom. "Every step has been taken with difficulty, and in the face not only of Downing Street opposition, but, strangely enough, of objection and resistance from many Canadians. Every step has been denounced as involving, or tending toward, a separation from British connection. And yet (mark this) every step has but served to strengthen the tie. Lord Thring says truly that 'the history of imperial union shows that as

the legal ties are slackened the moral ties are tightened.'” This tightening of the moral tie Mr. Ewart himself desires and seeks to promote, a fact which should be borne in mind, to prevent misunderstanding, when his animadversions on the legal ties are considered. Mr. Ewart fulminates against the limitations on the legislative powers of the Canadian Parliament which prevent it from dealing satisfactorily with such questions as copyright, naturalization or the regulation of coasting trade; and against the limitation of her jurisdiction to her own geographical boundaries. (Has he, we wonder, noticed the judgment of the Privy Council in the case of *Attorney-General of Canada v. Cain and Gilhula*, and considered its possible implications?) He resents the necessity of appealing to the Parliament at Westminster if it is desired to amend the constitution of the Dominion, and the power of the Governor-General to refuse assent to a Canadian Act, and of the Secretary of State to notify its disallowance. But as a general rule he is protesting less against the tyranny of Downing Street than against the apathy of Canada. “For the condition of the Canadian constitution Downing Street is not altogether to blame. The British North America Act is very nearly such as Canadians themselves asked that it should be.” “Canada . . . can readily obtain such changes in her constitution as she desires. Should she wish complete independence, it is hers; and should she be content with the mere removal of some of her legislative disabilities, she has but to make the request. If Canada likes subordination—likes to go to London, for example, when she wishes to rearrange provincial subsidies—she may continue it. And if she wants authority to manage her own affairs as she pleases, she may have it.” In dealing with some “badges of servitude,” Mr. Ewart is perhaps not altogether ingenuous. The importance of the power to refuse assent and of the power of disallowance seems to us to be a little exaggerated, and for his most recent example Mr. Ewart has to go back forty years. It would be easy for a constitutional lawyer, as learned and as acute as Mr. Ewart, to adduce many apparent examples of the subjection of British democracy to monarchical or oligarchic powers, which have nevertheless lost all their living reality. It has been remarked of the British constitution that nothing in it is exactly what it seems to be. The King may still refuse assent to any Act of the Parliament of the United Kingdom. The privileges of the House of Commons are “ancient and undoubted,” but in each new Parliament the Speaker “humbly petitions” His Majesty to continue them. The exclusive rights of the Commons in money matters depend only upon a resolution of the Lower House, and there is no law which prevents the House of Lords from infringing them. The final Court of Appeal for the United Kingdom is still a legislative chamber based on the hereditary principle. In all these matters the different connotations

of the words "illegal" and "unconstitutional" must be remembered, and the practice of making war on symbols is not always wiser than that of tilting against windmills. But Mr. Ewart is within his rights in objecting to whatever seems to him to convey an implication of inferiority or subordination. Two other criticisms we venture to offer on Mr. Ewart's arguments. He is occasionally too much inclined to speak in the name of Canada on matters as to which Canadian opinion is not unanimous. For example, he unequivocally condemns the jurisdiction of the Privy Council; yet he himself quotes Sir Wilfrid Laurier's statement, made only last year, that "it has, as a general rule, given very great satisfaction." And he is sometimes too ready to assume that the opinion of Canada is also the opinion of the Dominions, which is by no means always the case. But we are indebted to him for a study of Imperial relations which is all the more stimulating because it often provokes a difference of opinion. We have not space for a detailed study of his views on particular questions. He is anxious for increased treaty-making powers for Canada, and acknowledges, with gratitude, the concessions in this direction made in recent years. He is opposed to contributions for the purposes of Imperial defence, but favours the establishment of local defence forces, naval and military. He is an advocate of Imperial preference, but considers that the fiscal policy of the United Kingdom is a matter for the United Kingdom to determine; and he does not regard Imperial preference as a stepping-stone to either commercial or political union. "Not only as regards commercial questions, but as to all other matters, Canada intends to control her own affairs. Her affection for the United Kingdom is deep and indisputable, but her national status precludes the possibility of submission to any governance but her own." In conclusion, that it may be clearly understood that Mr. Ewart is, in the best sense of the word, a convinced Imperialist, we will quote a passage with which our only quarrel is that it is written in unnecessarily turgid language:—

"The British Empire must assume this grander character, and rise to its higher ideal. Not inferiority, but equality. Not subservience, but equipollence. Not subjection either of Canada to the United Kingdom now, or of the United Kingdom to Canada when their proportionate importance shall be reversed, but absolute and unreserved brotherhood, making with Australia, South Africa, and other great kingdoms 'a galaxy of nations' which, by their example of concord and affection, by their strength and widely extended situation, and by that regard for right conduct which alone can give true glory to a people, may not merely induce the world to tread the paths of peace and goodwill, but may inspire among men nobler sentiments concerning their common humanity and their duty of mutual helpfulness."

THE OUTLOOK IN SOUTH AFRICA.

THE Convention which is to consider the question of closer union among the South African Colonies is to meet at Durban on October 12th. The task which it will have to face is full of difficulties. There are wide divergences of interest and of policy between the different Colonies in such matters as railway rates and customs duties; there is a demand for local protection which, though for the most part not countenanced by the leading statesmen of South Africa, has yet powerful forces behind it; and there are differences in the electoral system, and still wider ones in the all important matter of native policy, which it will be difficult to reconcile in any compromise satisfactory to all parties. If we assume that some means will be found to overcome these special local difficulties, there still remain to be settled questions of general principle upon which it is certain that contradictory opinions will find earnest and able advocates. If the South African States decide in favour of union, it remains for them to determine whether they will follow the Australian or the Canadian model, whether they will prefer a loosely-knit confederacy of states which surrender only a fraction of their sovereignty, or a strong central government, conceding only a moderate degree of independence to local units. At the present moment the latter policy appears to commend itself to the leading spirits in South Africa. It will be remembered that it was strongly advocated in Lord Selborne's memorandum on federation, in which effective lessons were drawn from the story of Alexander Hamilton's efforts in the cause of federal union in America. The same line is taken by the anonymous authors of "The Government of South Africa," of which three instalments have now appeared, the necessity of leaving no room for a conflict of policy in matters of essential importance being strongly emphasized. But it is when the descent is made from principles to details that the difficulties to be overcome are first realized. Local jealousies and suspicions have been lulled but not eradicated. After eight years of union, the Australian States have not yet succeeded in establishing their federal capital. Will South Africa succeed in settling this

matter, and the many analogous ones without corresponding difficulties?

The most hopeful sign is undoubtedly the fact, of which there is abundant evidence, that there is a general determination among South African statesmen that the efforts now being made shall be crowned with success. The difficulties are fully appreciated and they will not be faced in any spirit of light-hearted optimism. But there is a conviction that they are not insuperable, that they can be, and ought to be, overcome; and it is the spirit which recognizes difficulties and dangers, yet refuses to be deterred by them, which commonly breeds success in political matters, as in other spheres of human endeavour.

If the present movement results in the creation of a United South Africa, it will have made a notable addition to the British Empire. The new union will be in every way worthy to take its place beside the sister federations of Canada and Australia. In one respect it will be unique. Australia has the good fortune to possess a population which is practically homogeneous and of common stock. Canada has its race problem, the juxtaposition of British and French being in many respects analogous to that of British and Dutch in South Africa. But neither Australia nor Canada has had to face a native problem of serious proportions. The remnants of the original populations of those two great continents are too scanty in numbers, and show too feeble powers of adaptation and development to present any serious problems to the dominant race. South Africa will be the first great self-governing federation in the Empire to be faced with the colour question in an acute form. It will undoubtedly be a gain that that question should be handled by a single government, and not, as at present, by four separate governments, whose policies necessarily react on one another, so that mistakes made by one state produce apprehension and irritation among its neighbours. And it seems reasonable to believe that the union of South Africa will have upon the whole a liberalizing effect upon its native policy. There will be less likelihood of measures dictated by local panic or prejudice, and as a general rule a wider horizon tends to a greater breadth of mind in political affairs. Moreover, Cape Colony, which will contribute the largest area of territory and the greatest population to the new union, has been admittedly both more generous and more successful in the treatment of the natives than her sister colonies. Beyond these statements, any prophecy would be rash. But there are signs that the whole question of the relation of the white to the coloured races in South Africa may come to be reconsidered. In the Transvaal, since the subsidence of the old controversies which preceded the war, and of the more recent ones connected with the constitution and Chinese labour, there has been a

considerable development of thought upon different aspects of this question. Two reports, those of the Mining Industry Commission and the Indigency Commission, have been published which indicate the growth of a belief that under existing conditions the permanent predominance of the white race is not adequately secured, and the materials of a stable democracy are to some extent wanting. The former of these reports is, perhaps, generally regarded as an expression of extreme views, but the latter appears to have commanded general approval. In any case, the elements of the situation admit of no dispute, and they present a remarkable contrast to the conditions which exist in the other self-governing dominions of the Empire. In Canada, Australia and New Zealand the whole fabric of society rests on a foundation of white labour, and the democratic sentiment of those communities is far more thoroughgoing and ungrudging than that of the United Kingdom in its acceptance of the view that manual labour is an honourable thing, below no man's dignity. The influence of labour on politics, profound if not predominant in Australia and New Zealand, is certainly destined before long to be felt with almost equal strength in Canada. But the South African communities are face to face with the results which invariably follow from the conjunction in society of two races, of which one claims a social and political superiority to the other. The predominant race tends to claim a monopoly of such work as calls for special intellectual faculties, and to refuse all participation in work of a purely or mainly manual character. For the white man in such a community, if he is not a landed proprietor farming his own estate, there are open the professions, trade and commerce, and the supervision of coloured labour; but manual labour itself is not for him. It is true that skilled labour in South Africa is still the sphere of the white man, that the number of such skilled labourers is very considerable, and that, in the Transvaal at any rate, they have already made their influence felt in politics. But it must be remembered that "skilled labour" in South Africa does not necessarily mean exactly the same as it does at home. As the French Consul-General pointed out in an interesting and suggestive report, the element of supervision tends to become more and more important, and the amount of actual work which the skilled man in South Africa performs with his own hands tends constantly to diminish. The maintenance of his superiority to the coloured unskilled worker is a matter of the first importance and he will do nothing to prejudice it. There are no signs of any diminution in South Africa of the determination that the whites shall remain the dominant race, enjoying a definite position of superiority. But it is beginning to be realized that the maintenance of this predominance on the basis of an "aristocracy of occupation" presents serious difficulties. Mr. Creswell

and his colleagues on the Mining Industry Commission point out that the openings for skilled labour or supervision in South Africa are after all limited, and that the opportunities of acquiring skill as a helper which the worker in purely white industrial communities enjoys are denied to the white man in South Africa. The natural source of supply for the skilled labour market is cut off. The Indigency Commissioners recognize the increasing gravity throughout South Africa of the problem of the "mean white." Debarred by circumstances or character from the few recognized "white man's occupations," he has nothing on which he can fall back without losing caste and, by his downfall, impairing the prestige of the white race. Mr. Creswell's remedy is to open the door to the unskilled white labourer by putting a stop to the recruitment of native labour from outside the limits of the Colony. He argues that the mines of the Rand can be worked at a profit with unskilled white labour earning a living wage, and that it is only the liberty which the mine owners enjoy of recruiting cheap coloured labour from foreign territory to an unlimited extent which has prevented the opening of the field of unskilled labour to the white man. The Indigency Commissioners suggest a variety of remedies, almost revolutionary in their character, to prevent the white man falling from his position of superiority into that of the "mean white." Yet, taking South Africa as a whole, it may be doubted whether even the application of all the remedies recommended by both Commissions would go far to solve the problem. When Australia embarked upon her white labour policy, it was a daring and perhaps risky experiment. But it was possible for her to arrange for the actual deportation of the Kanakas from the sugar-farms of Queensland and to cut off the sources of supply. It is possible for the Transvaal to put a stop to recruitment from Portuguese East Africa, but the supply of coloured labour from other sources would still remain considerable. South Africa cannot refuse to her native population the opportunity of earning wages, and so long as the condition of that population remains anything like what it is at present the effect of its competition must prove disastrous to the white workman. It is hardly socially possible for the black and the white man to work side by side at the same task in South Africa. It is hardly economically possible for them to be employed on the same task at wholly different rates of wages. But it is impossible for the white man to subsist on the Kaffir's wages, and so long as the Kaffir is available at such wages it is idle to suppose that the employers will fail to take advantage of his low standard of needs and comforts. It is for the future Parliament of South Africa to face these problems, and if it succeeds in solving them satisfactorily it will have achieved a task in which no other state can yet claim to have been completely successful. They are in some degree analogous

to the problems which have been faced, but hardly solved, by the Southern States of America; but it is a substantial point in favour of South Africa that the inheritance of slavery counts for far less there than in the plantations of the Southern States. A fuller realization of the fact that cheap labour, even when regarded solely from the economic point of view, is never a satisfactory basis for the policy of a country, will go some way to help in the search for a solution. It will render possible the employment of white labour in the lower ranks of industry, without which a permanent white society will never be securely established; and it will also tend to raise the native above the plane of a human labour machine, whose inefficiency is tolerated for the sake of his cheapness.

SOME RECENT RAILWAY REPORTS.

Cape.

The gross earnings of the Cape Government Railways in 1907 were £3,690,597, and the expenditure on working, maintenance and pensions, £2,575,214. On these figures the return on the capital invested would amount to about £2 17s. per cent.; and, taking the interest actually paid, viz., £1,114,655, there was a net loss of £60,032.

There was a decrease of earnings in the year of 8·03 per cent., as compared with 1906, but one reason for this is the decline in imported goods owing to greater local production. Purely South African tonnage is now greater than oversea, but as the rates to a large extent were fixed when the tonnage of the latter, which represents the most lucrative traffic, was from two to three times the tonnage of the former, the question of readjustment deserves attention. The increase in local production is, of course, a healthy feature, and one which will eventually benefit the railways, even if it unsettles calculations for the present. A remarkable increase is shown in the carriage of livestock, especially sheep and goats, and there are clear signs that agriculture is advancing.

A railway administration cannot do very much to increase receipts, but expenditure is a different matter and lends itself to criticism. The main lines in the Cape pay well; the numerous branch lines, with one exception, incur a loss. The main lines are, of course, fed by the tributaries, and so long as the whole system pays reasonably it may be argued that it is right to run the feeders even at a loss; but on the present figures it would seem justifiable to reduce the train service, increase the rates on certain commodities, and curtail special privileges—and suggestions to this effect are made by the General Manager. The passenger concessions appear to be numerous and, in some cases, curious, including as they do—

(a) *Delegates to Masonic, Friendly and Temperance Societies, Y.M.C.A., and Land Surveyors' Congresses.*

(b) *Jockeys, race-horse attendants, members of St. John Ambulance Association.*

(c) *Wives and Children of Delegates, Ministers of Religion, and Teachers.*

(d) *Lady shop assistants, art pupils, junior clerks, apprentices, messengers, teachers and students of typewriting institutions.*

(e) *Buyers of S.A. livestock for slaughter purposes.*

(f) *Editors, sub-editors and reporters on transfer.*

It is hardly fair to a railway to be loaded with such burdens ; free or special tickets should be at the expense of the departments concerned, but one weakness in the system of State-owned railways is that it lends itself readily to a long list of privileges.

The future of the Cape railways rests chiefly with the domestic trade. The pursuit of foreign trade has, perhaps, been carried too far. Business coming from beyond their own limits is subject to severe competition and fluctuations, and is not to be compared in point of stability with business which proceeds from local developments. Somehow or other, a hankering after foreign business, to the detriment of home interests, is characteristic of many railways. In America this tendency was stopped by the Hepburn Act in 1906. Now, in America, the bulk of the trade was built up by cheap rates for local produce, and in numerous cases a very low rate has been given to encourage some particular industry. This has not been done in South Africa, though the fact that the railways are the property of the State is an additional reason for encouraging local development. This aspect of the matter has been strongly put by Mr. P. Duncan in a lecture published in the *South African Railway Magazine* for July, from which we extract the following :—

“A comparison such as we can obtain of American railway rates with South African, shows very unfavourably against the latter. Outside a few special rates for export, which carry a comparatively small amount of traffic, the lowest ton-mile rate on the Central South African Railways is probably about $\frac{3}{4}$ d. On the Cape system certain kinds of agricultural produce are carried at $\frac{1}{2}$ d. per ton-mile. These, however, to all intents and purposes, are the lowest rates. On the through traffic from the coast, the receipts per ton-mile average, on a very rough calculation, from about $1\frac{1}{2}$ d. to 3d. In the United States, for the year 1903, the average rate over the whole Union, on all railways, per ton-mile, was about $\frac{3}{4}$ d. This is an average rate over all systems, covering all descriptions of freight. Let us now consider how these exceptionally low rates have been obtained. I do not think it is too much to say that the condition which has

made them possible is complete freedom of action. The following extracts from a writer on American railways will show how adaptable the railways there are to the local conditions which they have to serve:—‘The citrus and deciduous fruits and canned goods of California find, through continually lowering rates, a widening market. The sugar beet and sugar industry of Colorado and California could never have been placed upon a paying basis had not the railroads made sacrificial rates in the interests of those industries. When the boll weevil has destroyed the cotton crop in Texas and Louisiana, the railroads have instantly made very low rates on cotton seed to the stricken regions. When there has been over-production of potatoes and other vegetables, apples and other fruits, melons, rice, and other commodities, that must be marketed at once, or perish, the railroads from the growing regions have made rates that have saved the producers from loss. There is not a coalfield in the United States whose operators have not time and again called upon the railroads serving their mines to grant concessions in rates because of changing market conditions. The asphalt industry of Texas and California was built up by the railroads, which successively lowered their rates as prices had to be reduced to meet competition in distant markets. The rates on brick, stone, cement, and other building materials are in a state of continual adjustment from places of production to the scenes of building operations. The trade of the United States with the Orient is being built up by the making of rates to the Pacific coast that allow manufacturers and other producers to ship their merchandise to the trans-Pacific markets.

“Such rates are experimental, and they are invariably relatively low. No company could afford to make them the standard of all its charges, or to put them in if they could not be abandoned should the business fail to develop. No Government body would ever order such experiments, or could justify its order if it did, and no railway would or could afford to make them if a rate-making Commission existed. For such a Commission would surely regard them as the strongest evidence of the reasonableness of similarly low rates on other business, for which no commercial justification could be found.’”

In Great Britain traders are prohibited by law from giving any preferential benefit to any person, and this means, in practice, that if a special bargain is made with a trader on the basis of quantity, though this might be legal, any one else can summon the company to show cause before the Railway and Canal Commission why the same rate should not be given to him; and the result is that the companies adhere to the mileage basis. The low freights of America would never have been possible under this system. Stereotyped equality no doubt prevents some possible abuses and has the great political advantage of guarding against complaints, but the railway

which has to adopt it loses the advantages of a flexible and adaptable system. One low rate tends to bring others in its return, and it is a striking commentary on the two methods that in recent years the American lines show a reduction in rates of 19 per cent., as against 2 per cent. in the United Kingdom.

A good deal of traffic is lost to the Cape railways by the competition of ox-wagons; some of the railway officials regard this competition as carried to unreasonable lengths, and it has actually been proposed to make things more difficult for the carriers by imposing a license fee on them. It is hardly likely that the public will agree to bring about the "surrender" of the wagon owners by such means. The carriers cannot be blamed for providing a cheap service, nor the traders for taking advantage of it. The only remedy is for the railways to reduce the rates.

Natal.

The revenue for 1907 was £1,843,148, an increase of '34 per cent. on 1906; the working expenditure was £1,273,611, an increase of 2'99 per cent. There was a continued heavy loss in sea-borne traffic, but an increased coal traffic sprang up and a large export trade in maize commenced. The latter promises to attain big proportions, and we may quote, with reference to what has been written above, the remark that "although, from a railway point of view, the rates charged on this traffic are so low as to be unremunerative, the departure marks a new era in the development of the Colony, which will undoubtedly, as time goes on, prove of the utmost value, both to the railway and to the country as a whole." The report strongly urges that true economy lies in reducing working costs by the maintenance of the highest standards in every section, and in particular recommends (a) the steady improvement of adverse gradients and curves; (b) the maintenance of our permanent way at its highest standard; (c) the improvement of our engine power by the regular annual augmentation of our existing engine stock with up-to-date and heavy locomotives; and (d) the improvement of our rolling stock by a steady further supply of high capacity wagons.

The principal shrinkage in trade was in the through traffic, and is largely attributable to the steady diversion of the Transvaal transit rate to the Delagoa Bay route. The following table shows the percentage of sea-borne trade from the several Ports to the Transvaal during the last four years:—

	Natal.	Cape.	Delagoa Bay.
1904	40·08	16·33	43·59
1905	36·66	11·94	51·40
1906	32·59	13·25	54·16
1907	28·91	13·18	57·91

Central South African Railways.

The revenue in 1907 was £4,139,631, as against £4,782,049 in 1906, showing a falling off of £642,418 (13·4 per cent.). The ordinary working expenses were £2,011,154, as against £2,163,571 in 1906, a reduction of £152,417 (7·06 per cent.). The shrinkage in traffic is, of course, due to the depression in trade, but there are signs that in future the development of local industries will save the situation.

"So far as the local traffic is concerned, it is gratifying to be able to again draw attention to a steady increase. Excluding the coal and other mineral traffic (coal alone accounts for 82·3 per cent. of the total local tonnage handled by this Administration, and is referred to separately), the local tonnage is now more than *one-third* of the total traffic carried, and there was an increase under almost every head."

The Report points out that the progress of internal development is eminently satisfactory. The loss of the profitable long-haul oversea traffic is naturally regretted, but it is well to face the fact that the old figures were due to abnormal circumstances caused by the war and the expenditure of enormous sums on restoring the devastation of the war. Here, as elsewhere, the altered position must be accepted as a permanent factor and taken into account in settling railway rates. It is interesting to notice that dynamite, the monopoly in which played no small part in the negotiations preceding the war, is now manufactured in the Transvaal and soon will cease to be imported. Cement is another article where the local product promises to displace the imported entirely. An excellent step, which it is to be hoped will be widely extended and imitated, has been taken in beginning the establishment of a system of through booking of goods between South Africa and Great Britain. The London and South Western Railway Company have co-operated in the matter.

The spectacle of a railway system which makes a net profit of half its earnings is an uncommon one, and the Central South African Railways are to be heartily congratulated on their profit of over £2,000,000. This result does not prevent the administration from carefully considering every detail, but it justifies the jubilation expressed in the following lines, which we have culled from another source :—

"There's a thing called a Commission, which has issued a report,
In which they make suggestions of every kind and sort;
The great thing that they advocate is, 'Retrench in every part,'
And, as they were all railway men, they know just where to start.
Now, as the Railway makes a clear two millions every year,
The reason for such drastic measures wasn't very clear.
It puzzled us exceedingly, but now the reason's plain—
They're saving money to rebuild the Shops at Braamfontein!"

Lagos.

The gross revenue was £139,747, and the working expenses £74,435, producing a net revenue of £65,312. The gross revenue in 1906 was only £84,663, and the improvement in 1907, on the mean mileage, amounted to 36 per cent. The cost of the line in operation in 1907 is about £1,640,000, and after allowing 3½ per cent. on this capital the net revenue of £65,312 yielded a profit of nearly £8,000. The extension of the line to Oshogbo has thus changed the position, converting the previous deficit into a surplus. The cotton business is increasing and promises to be a great support. The extensions now under construction do not pass through palm or rubber-producing country and will not get this lucrative traffic; compensation, however, may be found in the fact that planting will be pushed on with more vigour than where natural products abound. It is pleasant to find that there is a continued and decided improvement in the health of the staff; there were no deaths in the year and only three invalided home.

Gold Coast.

The gross revenue for 1907 was £166,256, a decrease of £4,975, and the expenditure was £77,257, a decrease of £1,519. The mine owners have frequently complained of the high charges of the railway, and fairly numerous reductions were made in 1906, but the result was disappointing as the tonnage of mining machinery and materials fell off considerably. The year was not a prosperous one to the mining industry and it could not be expected that the mining imports would increase, but reductions will only foster traffic when there is reasonable opportunity for it if rates are sufficiently tempting. More cocoa, for instance, would be attracted from the Volta route if the rate were reduced, but machinery would not be affected by any change, unless big enough to cut down working expenses so much as to encourage development. Further reductions on plant came into force on 1st August. The net revenue is equal to 4·84 per cent. on the total expenditure charged to capital account, a decidedly satisfactory result.

Uganda.

The revenue of the Uganda Railway in 1906-7 was £231,375, an excess over expenditure of £68,838. This gratifying figure indicates a general increase of traffic, such as might be expected from the increases of exports and imports in both East Africa and Uganda.

The labour question still continues to present serious difficulties. Until recently, skilled labour, *e.g.*, carpenters, masons, &c., as well as

station masters and signallers, was easily obtainable from India ; within the past year, however, partly on account of the ravages of the plague and partly on account of the increasing demand in India for this class of labour, the available supply has not been sufficient to meet the requirements of the railway.

The year 1907-8 has been disappointing, owing partly to considerable reductions in rates and partly to a drought on the Lake Littoral. The prospects for the current year are good.

It can hardly be doubted that eventually the railway will be extended and the lakes linked up. Surveys are now in progress under Capt. A. G. Stevenson, D.S.O. Some day a connection will be made with the railway from Cairo, and we shall then have occasion to regret that the latter is a British and the Uganda a metre-gauge.

MARINE INSURANCE.

THE Emperor Claudius did a stroke of underwriting when, to encourage the importation of corn into Rome during a time of scarcity, he undertook to make good the loss which might be sustained by the owner from storms at sea. It does not appear, however, from Roman law or literature that the idea spread to commercial circles. The oldest extant policy is probably one effected in London in 1613, this being on "the good shipp called the Tiger," which is believed to be identical with that referred to by Shakespeare in *Macbeth* and *Twelfth Night*. The phraseology of the middle ages still hangs about the current form of policy, and the principal dangers might still be inferred to be "enemies, pirates, rovers, thieves, letters of mart and countermart." The practical conditions are to be found in a memorandum of glaringly modern origin, which figures as a sort of foot-note.

In a previous issue we referred briefly to the practice of colonial governments in maritime insurance. The subject is dealt with by the authorities almost entirely from the legal point of view, and some notes on practical points may be of interest to those who have not the opportunity of mastering such technical works.

The insurance is, taking the general form, against "perils of the sea." The word "of" is important. The protection does not cover every loss which may happen on the sea. "It is well settled that it is not every loss or damage of which the sea is the immediate cause which is covered by these words. They do not protect, for example, against that natural and inevitable action which results in what may be described as wear and tear. There must be some casualty, something which could not be foreseen as one of the necessary incidents of the adventure. The purpose of the policy is to secure an indemnity against accidents which may happen, not against events which must happen." Thus fire is one of the perils, but not deterioration of goods caused by the voyage, but not attributable to any extraordinary occurrence; thus loss caused by rats or vermin is not covered by the policy.

When an insurance is effected, it may be made to cover all losses, however partial, or only a case of total loss. These insurances are technically known as "with average" and "free of particular average" respectively. This term "average" is rather confusing, as

it is employed in several senses. The origin of its relation to marine insurance is somewhat obscure, but for ordinary purposes it may be taken to denote a loss or a contribution made towards any loss or expense sustained for the general safety of the cargo and ship. "General average," is the contribution so made by all parties towards a loss sustained by one or more for the benefit of all. Thus if some of the cargo is thrown overboard, *i.e.*, "jettisoned," as a sacrifice for the general good, as for instance to lighten the ship when aground, or when salvage has to be paid, the loss must in fairness be borne proportionately by all concerned. This is an ancient Rhodian law. The calculation of the amount due from each party is usually referred to a professional average adjuster, and it is often so enormously detailed as to take many months and cost more than the amount lost. Colonial Governments have not infrequently to pay claims of this kind, but, subject to any express provision in the policy, contributions can be recovered when the goods are covered by insurance.

As soon as it is decided to insure an article, it must be settled whether it is to be insured "with average" or "free of particular average." If the article is of a sort that can be partly damaged by the perils of the sea without being wholly spoilt, it is advisable to insure it "with average," and in that case compensation can be recovered for any degree of damage caused by a peril insured against. If it is either practically undamageable or if injured at all rendered worthless, it is sufficient to insure "free of particular average," in which case compensation is only paid for total loss, or in the event of a general average. The rates of premium in the latter case are naturally rather lower than in the former. Usually in cases of insurances "with average" the underwriter protects himself against any claims which come to less than three per cent. of the value of the consignment. This is to keep off small and irritating claims for trifling matters. The contract, however, may omit this provision, and if the goods insured are of considerable value it is prudent to do so.

Thus "particular average" is the liability which attaches to a policy in respect of partial damage or loss. If, for example, ten casks of cement out of 1,000 are found to be damaged by sea water, this is a particular average loss and is so endorsed on the policy.

Goods are usually insured for the sum which represents the actual outlay of the owner. This should be the Government practice, but commercial firms often add about six per cent. to cover the cost of insurance, out-of-pocket expenses and anticipated profit. The Marine Insurance Act, 1906, provides that any contract of marine insurance by way of gaming or wagering is void, and this precludes any margin of percentage which goes beyond reasonable limits.

Certain classes of goods, such as dangerous acids, which are carried on deck, can only be insured free of particular average, a claim therefore can only be made on the ground of total loss or if the goods are

jettisoned. The same may be said of bulky articles such as underframes which cannot be stowed below. An additional premium is usually charged for covering easily breakage articles, such as glass and iron castings, but a good client is often able to obtain their insurance on ordinary terms. The three per cent. clause is usual in the case of brittle goods.

The assured persons are bound by certain clauses of the policy to protect the interests of the underwriters as far as they can in the event of accident or loss. The only person who can actually do so is frequently the captain, but it is sometimes possible to minimise a loss by mending or repairing injuries. Any expenses incurred in doing so are paid by the underwriters.

The Imperial Government insures nothing, considering that its shoulders are broad enough to take the whole risk. Accordingly, the protectorates which are supported by grants-in-aid do not insure. Nearly all the crown colonies insure on the ground that a serious loss would be very embarrassing, even if it would pay them in the long run not to insure.

The rates charged by the insurance companies are rather higher than those which are often obtainable from the underwriters at Lloyd's, but in the latter case, the assured has usually in any large case when making a claim to satisfy several underwriters who have divided the risk, and to pay one per cent. to the broker for collection.

Marine insurance rates are now very low, and there is good reason to believe that underwriters generally have not had a flourishing time. Still, on the whole, as is somewhat naively expressed in an old Colonial Office despatch, "the underwriter must necessarily charge a premium more than equivalent to the risk which he runs, else he would have no profit. But what is gain to him must, of course, be a loss to the colony." It may be suggested that a means of avoiding the loss, and, at the same time, obtaining security for the value of consignments, would be for the colonies, or some of them, to establish a common fund and organisation of their own. No capital need be provided in the first instance, as it would be possible to underwrite the liability for large consignments until the profits on the small transactions yielded a sufficient fund to meet all risks. We believe that, in time, the fund would become large enough to meet all claims from accruing interest, so that no rates would have to be charged.

Maritime colonies are particularly interested in the insurance of steamers, tugs and other craft. It may be of interest, therefore, to explain the general principles which govern the insurance of vessels.

The first step is to ascertain, for the information of the underwriter, the respective values of hull and machinery, and of any stores, such as coal, &c., which may be on board. The amounts should be sufficiently large to secure indemnity to the Government in the event of the total loss of the ship, plus an allowance to cover the cost of

insurance and incidental expenses. The next proceeding is to determine the degree of protection to be secured by the policy, and on this point the Government will have to be guided by local conditions and the risks involved. Broadly speaking, vessels are usually covered (1) against total loss or constructive total loss only, with full collision clause and warranties for the payment of salvage charges, and of general average losses, or (2) under a full protection policy. In the former case claims can be made when the vessel is irretrievably lost or is so damaged by a peril insured against that the cost of repairing the damage would exceed the value of the ship when repaired. Salvage charges and general average and collision losses are also recoverable under this policy. On the other hand, the full protection policy is intended to indemnify the assured against all perils of the sea and the liabilities under Ch. 60 of the Merchants Shipping Act, 1894, and usually contains special clauses covering the following risks:—

Collision (with strange or sister ship).

Capture, seizure and detention.

Negligence of master, engineers, &c., and bursting of boilers.

Deviation.

General average.

Loss of life, personal injury and damage to fixed objects.

Claims under Workmen's Compensation Act, 1906.

The rates of premium for full protection are naturally considerably higher than those for the simpler form of policy, but it is open to the Government to omit some of the special clauses if the circumstances do not appear to render them necessary. It is desirable, however, that the collision clause should be included in every policy of this kind, as the damages payable under the Merchants Shipping Act by a shipowner whose vessel has been at fault are heavy, amounting in the case of damage with loss of life to £15, and in the event of damage or loss only, to £8 for each ton of the vessel's tonnage. Warranties for the payment of salvage charges and general average losses should also be inserted in all policies, on account of the danger of heavy losses.

It is customary to insure vessels for a period of twelve calendar months, the underwriter agreeing to make a return of premium for any period during which the vessel may be laid up or the insurance cancelled. As a vessel might at the close of her time policy be at sea and there might be reason to fear that she was lost, a clause has been devised known as the "continuation clause," which provides that in such circumstances the ship shall be held covered to her port of destination at a *pro rata* monthly premium, provided due notice be given to the underwriter. It is laid down in the Finance Act, 1901, that such a margin of time may extend to the date of arrival at destination and for a reasonable time thereafter, not exceeding

30 days. Under the provisions of the Workmen's Compensation Act, 1906, owners of vessels having a domicile in the United Kingdom are responsible for injury arising out of their employment to masters and crews, and if the vessel is being sent out from this country by an Agent of the Colony, it might be held that the Colonial Government comes within the jurisdiction. When such a vessel is insured it would be expedient, therefore, to cover this liability which may under certain conditions entail a weekly allowance for injury, or in case of death, a payment down of from £150 to £300. When this Act first came into force underwriters charged an additional premium for the risk, but in the case of larger insurances, no extra charge is now made.

Vessels purchased or built for Colonial Governments in the United Kingdom are as a rule insured for the outward voyage, the premium varying with the time of year. Barges and small craft are carried on deck at special rates of freight and insurance, or at ordinary rates if taken out in sections and stowed below. When a dredger or vessel able to proceed to her destination under her own steam is supplied, it is sometimes found expedient to entrust the contractor with the navigation. In such cases, the contractor has to effect insurance at Lloyd's or with an approved company, and to produce evidence that he has done so.

The shipowner is practically in the position of a common carrier and subject to claims for negligence. A bill of lading, however, is a document of portentous length, and appears at first sight to secure the shipowners against every possible contingency. Liability for negligence is excluded in almost every case that will be thought of. Thus it is usual to provide that the shipowner shall not be liable at all for fragile goods, and only to the extent of £2 per cubic foot for valuable goods. In a recent case (*Baxter's Leather Co. v. W. India R.M.S.P. Co.*) it was held that the latter condition was not unreasonable, and was therefore binding.

Mention of marine insurance would not be complete without reference to the Society of Lloyd's. Lloyd's may be compared in its corporate capacity with the Committee of the Stock Exchange, but, whereas the Committee lays down definite rules of a disciplinary character, Lloyd's assumes no jurisdiction over its members, and leaves them at liberty to carry on business in their own way. On the other hand, the reputation of Lloyd's is so high and so loyally upheld by its members that cases of default are, if possible, prevented by private combination amongst them for the liquidation of the liabilities. The largeness of the risks and the uncertainty of the business lead to the formation of syndicates of underwriters. A large amount of liquid capital is necessary, and a weak point in the system is that a policy-holder has no knowledge as to what capital is held by the underwriters, or how it is being employed.

PROSPECTS OF RUBBER CULTIVATION.

UNTIL recently the price of rubber was constantly on the up-grade, and plantation schemes always looked tempting. The old field of supply along the upper Amazon had been so much used up that comparatively little accessible forest was left, and vast as the untouched districts are, the cost of collection and transportation rose to nearly 2s. per pound, which is considerably more than the cost on a properly conducted plantation in Ceylon or the Straits. It is no wonder, therefore, that rubber plantations multiplied and became a prominent feature on the Stock Exchange. In the latter half of last year, however, the demand for rubber fell off greatly, and the price went down from 5s. 6d. to 3s. 6d. The all-important question is, of course, whether it will go down or go up. So far as the supply is concerned, the main question is whether the wild Amazon rubber will come more into the market. The output of this yield is still far and away the greatest: in 1905-6 it amounted to 41,000 tons out of the world's supply of 68,000: and growers have some natural apprehension that, notwithstanding the remoteness and present inaccessibility of unexplored fields, new means of transport may greatly increase the output and so bring down the price. But there are no signs of any movement of the kind, and on the whole it seems very unlikely that any extraordinary augmentation will take place in this quarter. Next to Brazil comes the Congo State, with about 4,500 tons, and, though the exportation has been steady for some years, it is known that a large part of the territory is now exhausted, and the supply must fall off until the plantations mature. The increase of plantations in our own possessions is too small a matter to affect prices for some time to come. It does not seem probable, therefore, that any serious fluctuation will be caused by the nature of the supply. The future depends on the demand, and it is clear now that there has been a certain amount of overproduction in the industries using rubber, followed by a period of depression, which accounts for the fall in price. At present the price is rising, and in the long run it is much

more likely to go up than down. Twenty years ago, when Brazil was the only, but an amply sufficient, field of supply the price kept fairly steady between 2s. 6d. and 2s. 10d.; the extraordinary developments in the industrial uses of rubber sent up the price, and though set-backs will occur occasionally, as recently from a falling-off in the motor-car business, the tendency of the demand is bound to be upwards.

The effect of the ever-growing demands of civilisation for tropical products may be illustrated by the fact that some 15 years ago the price of cocoa-nuts in the East was 13 dollars per 1,000; it is now 40 dollars.

On the subject of the cost of plantations, an interesting report by Mr. N. C. McLeod, Deputy Conservator of Forests in Southern Nigeria, based on a visit made to the Federated Malay States, has been laid before the Legislative Council of Southern Nigeria. Mr. McLeod states that rubber is being grown in the Federated Malay States on land previously under some other crop or in fresh clearings. In the former case the planter merely puts down his stumps or seedlings at any interval he fancies between rows of coffee, cocoa or sugar cane, and, as the rubber trees grow older, gradually removes the original crops, thus affording more growing space to the rubber. The Para tree in the Federated Malay States is propagated by seed from trees at least eight or ten years old. Large quantities of seed are sent abroad which are obtained from trees of younger age, but the planter in the Peninsula prefers seeds from mature trees for his own use.

Mr. McLeod thinks that rubber plantations in Southern Nigeria would be very profitable. His calculation is as follows:—

“ In the Malay Peninsula the average wage of a coolie is 27 cents per diem, which is equivalent in English money to 7½d., or about the same rate at which labourers by the month are paid in Southern Nigeria, so that figures given by Mr. Arden (pages 84–86, Johnson’s book on Para) for opening up and maintaining a plantation in the Federated Malay States may be taken as a very fair guide.

“ In the Federated Malay States, Para trees became productive in five years, but I propose to allow seven years in the case of Southern Nigeria.

“ Cost of opening up 500 acres and maintaining till plantation is productive:—

“ First year	\$25,275
--------------	-----	-----	-----	----------

“ For next six years at \$9,900	\$59,400
---------------------------------	-----	-----	-----	----------

“ Total	\$84,675 or £9,878 15s.
---------	-----	-----	-----	-------------------------

“ Allowing compound interest at 4 per cent. on expenditure from the first year to the end of the seventh, would bring the total up to

£12,694. If the trees are planted 20 ft. by 20 ft., i.e., 108 to the acre, and the average yield per tree be taken as $1\frac{1}{2}$ lbs. per annum (6 months tapping), the yield would be (500 by 108 by $1\frac{1}{2}$ lbs.)—

“ Selling price at 2s. 6d. per lb.

$$= \frac{500 \text{ by } 108 \text{ by } 1\frac{1}{2}}{8} = £10,125.$$

“ If plantation expenses, cost of manufacture of rubber and freight to Europe be put down at £2,125 per annum (a very high figure), a handsome profit of £8,000 would result.”

This calculation is pretty much in accord with the usual estimate of £20–30 as the cost of bringing a rubber estate to the productive stage per acre. In the Federated Malay States it is generally found that one coolie is required for two acres while the trees are growing, and one to each acre when they are producing. Labour is the principal item, and the cost and scarcity of labour is likely to prevent cultivation in Rhodesia and the Transvaal. In West Africa there is a great field, but the climatic conditions are unsuited to the private settler, and the work will be left to the native growers and to companies and syndicates which can acquire large areas and organise industry. The treatment is often slovenly, and the impurities found in West African rubber affect the price unfavourably.

The figures taken by Mr. McLeod in the above calculation seem to be on the safe side. He gives 108 trees to the acre, but 120 can easily be grown; and a yield of $1\frac{1}{2}$ lbs. per annum per tree, whereas 2 lbs. are frequently obtained from a mature tree. The other crops which can be obtained while the rubber trees are growing, such as cassava, tapioca or ground-nuts, may also be taken into account.

THE FINANCES OF THE LEEWARD ISLANDS.

IN the issue of this Journal for October, 1907, a brief reference was made to the improvement that had recently taken place in the financial position of the Colony of the Leeward Islands. The affairs of this group have a more than local interest, as showing how a depressed and harassed industry can be supported by energetic effort and judicious government assistance.

The improvement has been continued, we are glad to learn, during the past financial year, and the prospects of the five presidencies of which the Colony is composed are better than they were at any time during the last three decades. The total revenue of the Colony for 1907-08 was the highest on record, and amounted to £151,520, exceeding the revenue for 1906-07 by £13,366. Of the five presidencies, Antigua leads the way with a revenue of £50,619, closely followed by St. Christopher and Nevis, with a revenue of £49,336. Next comes Dominica with a revenue of £38,998, over £5,000 more than in 1906-07; then follows Montserrat with a revenue of £10,232; and lastly come the Virgin Islands with a revenue of £2,335, little enough to meet the requirements of the numerous islands comprised within that presidency, but £285 in excess of the expenditure for last year. Both Dominica and Montserrat have set up fresh records, and, so far as can be ascertained, the two islands were never in a more prosperous condition than at the present time. The total expenditure of the five presidencies in 1907-08 was £134,273, leaving a handsome balance of £17,247 in favour of revenue. In contributing to this balance, which was £9,088 in excess of the balance for 1906-07, Dominica comes first with a surplus of £8,378, Antigua next with £3,652 (this being the first time for sixteen years that its revenue has exceeded its expenditure), St. Christopher and Nevis next with £3,215, then Montserrat with £1,717, and lastly the Virgin Islands with £285. On the 31st March

last the total assets of the five presidencies of the Colony exceeded the liabilities by £38,485, and, judging from the returns of revenue and expenditure for the first four months of the year 1908-09, it would seem that the surplus of assets will be increased by the 31st March of next year.

The principal sources of the wealth of the Colony are: in Antigua and St. Kitts-Nevis, the sugar and cotton industries; in Dominica, the lime and cocoa industries; in Montserrat, the lime and cotton industries; and in the Virgin Islands, cattle, cotton and shipbuilding industries. The cotton industry in the Virgin Islands has been fostered carefully by the Government, and the Agricultural Department purchases at fixed rates the seed cotton which is brought to the Government cotton ginney at Tortola, and undertakes, at its own risk and charges, the ginning, baling and shipment for sale of the cotton. An attempt is being made, which, in course of time, is likely to prove successful, to foster on similar lines the lime industry, and it is only by the adoption of this paternal policy that there is a reasonable prospect of the Virgin Islands attaining gradually to a moderate condition of prosperity, seeing that there are no capitalists or large proprietors in the islands who can lead the way in industrial or commercial enterprises. Of the five presidencies of the Colony, Dominica appears to be the only one in which any considerable increase in the annual revenue may be expected from year to year. A revenue of £50,000 a year each should, with care, suffice for the reasonable requirements of Antigua and St. Kitts-Nevis, and allow of further additions being made to surplus funds. It is not likely that, as a general rule, a revenue of £50,000 will be much exceeded in either presidency, and, if there should be any excess, it will be a question for the Government to consider whether the heavy import duties now in force should not be reduced in those two presidencies.

There is one dark feature in the present satisfactory condition of the finances of the Leeward Islands, and that is the amount of a long-standing public debt, which, after deducting sinking funds, amounts to £208,599, with charges for interest and sinking funds for 1908-09 of £14,398. This is a large sum for so comparatively small a Colony to have to pay, and it is unfortunate that Antigua, whose present debt is £95,511, or nearly twice as much as its revenue for 1907-08, has the least to show for its debt, the interest on, and the sinking funds for, which amount this year to £6,874.

It is a notable fact that what may be called the revival of prosperity in the Leeward Islands should have come just ten years after the establishment, thanks to the initiative of Mr. Chamberlain, of the Imperial Department of Agriculture. From its inception in 1898 the Department has been admirably organised and worked by Sir D. Morris and his able assistants, and to it the Colony of the

Leeward Islands is indebted, to no small extent, for the changes that have taken place in its position and prospects.

In 1903 an enterprise was taken in hand which has contributed largely to the improved position of the sugar industry. A company undertook, with the help of £15,000 lent by the Government, to erect a central sugar factory capable of making not less than 30 tons of 96 degrees grey crystals sugar per day, or 3,000 tons in the season, and arrangements were made with the planters and peasants to be supplied with sufficient cane. The enterprise has been a financial success, and has, we believe, given satisfaction to all parties.

BUSINESS NOTES.

Recent Improvements in the Working of Telephone Trunk Lines.

The ear is a marvellous organ which in some way that is little understood is an exquisite analyser of sonorous vibration and interprets speech amid the turmoil of considerable disturbances. But in long distance speaking over wires there are many factors which create difficulties, and to make the best of the system a certain amount of "telephonic education" both for the voice and the ear is necessary. Inventors are perpetually at work to make the task easier by reducing resistance, radiation and leakage. The first object is to prevent waste of energy; the second to direct the energy into a proper channel to maintain the amplitude and form of the waves. One expedient is by tuning—the circuit is broken up into a series of sections in which the energy flows in virtually simultaneous steps instead of being prolonged and damped down as it would be in a long submarine cable.

The "Pupin" coils are devised with this object, and very satisfactory results have been obtained in the United States from them, inserted in telephone trunk lines.

These coils are "inductive" and their function is to counterbalance the capacity effects which are inherent in long double lines of electrical circuits, and which interfere seriously with the transmission of speech over the circuit.

Broadly speaking, the effect of these coils is to more than double the length of line of any definite size of copper conductor over which speed is satisfactory. For instance, a conductor weighing 150 pounds per mile is, with the insertion of one Pupin coil every eight miles, equal in all telephonic respects to a conductor weighing 400 pounds per mile without coils.

Between New York and Chicago—a distance of about 1,000 miles—175-pound copper conductors are used with these coils inserted every eight miles, and the speaking is found to be quite as perfect as that over a 435-pound conductor circuit without coils.

At the present price of copper, £75 to £80 per ton of wire, a 1,000-mile two-wire line with 150-pound conductors and 125 coils, would cost between £13,000 and £14,000 excluding labour and poles, whereas 400-pound conductors would cost from £26,500 to £28,500.

For any well insulated metallic circuits with conductors, each weighing more than 100 pounds per mile, and for any distance above 200 miles, the one size of coil, placed at the same distance apart (namely every eight miles) has an equally good effect in improving the quality of speech. We are given to understand that these coils can be obtained for a price not exceeding £25 each, but probably somewhat less.

In the United States there are 25,000 miles of overhead lines equipped with Pupin coils, and over 100,000 coils have been supplied for underground lines, in which they are placed $1\frac{1}{2}$ –2 miles apart.

Motor-cars.

Complaints are made of spares being packed for export without waterproof lining in the cases, and without greasing or packing the articles in oiled papers. The result in such cases is that rust badly seizes the parts; thus pistons arrive with the rings rusted tightly on them. A little attention to this matter would make a great deal of difference in the reputation of a firm in the colonies, many of which are now importing motor-cars on a great and rapidly increasing scale.

It is found in hot climates that spring-controlled-valve type carburetters give too rich a mixture if set for easy starting, and are somewhat irregular in action, while owing to the heating arrangement sometimes embodied, they become excessively hot in running. The simple float type has proved superior for local conditions.

Great trouble is sometimes caused by failures of petrol and oil supply pipes, owing to the joints being soldered only instead of brazed.

The Ceylon Government are contemplating an extensive use of motor-cars for the use of inspecting officers and others. It is believed that this will effect a saving in transport. An Albion car has been run at a cost of 43 cents per mile (allowing 10 per cent. for depreciation), the distance covered being 9,460 miles; and on this basis travelling would cost only about half the present amount.

The questions of supply were referred to the Mechanical Transport Committee of the War Office, which recommended the 16 h.p. Albion for the larger car, and the 10-12 h.p. Humber for the smaller.

The Southern Nigeria and Uganda Governments have Albion cars fitted with the Cottrell carburetter, and cars run with paraffin fourteen miles to the gallon.

Cotton-gin.

The new "Universal" cotton-gin may prove a great boon to the colonies which are now producing cotton. It is designed to remove the seed from the cotton in such a way as not to damage either the staple or the seed. Very little power is required to drive it. The present machines have a knife or saw, and the seed and fibre are inevitably out and damaged. The "Universal" simply combs the seed from the fibre, and the cotton turned out has been valued at from one-eighth to one quarter of a penny per pound more than that gained by the old machines. We have received the following report on it by Professor T. W. Fox, Professor of Textiles, Municipal School of Technology, Manchester:—

"I have recently carefully examined, at the St. Ann's Iron Works of Messrs. Musgrave & Co., Limited, of Belfast, the 'Universal Fibre Gin,' and I proceed to report upon the condition and capabilities of that machine.

"Since my first inspection of this gin, as far as the mechanical features are concerned, it was not then so perfect as it is now. The ginning branch of the cotton industry has remained essentially unchanged. There is the same pressing demand for a gin which will clean without injuring the fibres, and judging from the slight changes which have been made during recent years, it would appear that the present types have reached their highest development. But if the gin is to assume its legitimate position in the industry, namely, to furnish the spinner with a sound staple and cease to convert into waste large quantities of a valuable commercial article, changes as radical as those which have been made in spinning, preparing and weaving machinery are necessary.

"Ginners have been subjected to much adverse criticism for continuing to use obsolete machinery, but it is not entirely their fault, for they can only select from available types, such gin as will be most economical and most adapted to their needs. Still, there is too great a tendency on their part to work for quantity rather than quality of output, partly because injury done to the fibre at this stage only remotely affects them.

"The 'Universal Fibre Gin' is the result of efforts to raise ginning to the level of other sections of the cotton industry.

"It is a machine in which the strong features of the 'McCarthy Gin' are combined with others of an entirely novel character, and the combination has, in my opinion, produced the most efficient gin upon the market.

"The essential difference between the 'Universal Fibre Gin' and the 'McCarthy Gin' consists in the method of constructing the ginning roller and in the use of a vibrating comb instead of a vibrating knife. There are also many minor differences which tell greatly in favour of the 'Universal Fibre Gin.'

"Great attention has been given upon the general design of the machine. The bearings are long and rigid, and, except at the combs, provision is made outside the framework for lubricating all moving parts. There is no risk of one being thrown into the cotton. All adjustments necessary for different staples can be made simply and accurately. Belts from a bottom shaft convey motion to all parts of the machine. Fire risks are reduced to a minimum. A damaged comb can be readily replaced. In my opinion the machine as a whole is efficient and not liable to get out of order. It treats short and long fibres with equal ease, by reason of the closeness of the bite and the firm grip of the roller. It cleans the fibres better than other gins because it rejects much foreign matter that other gins allow to pass. It is not so liable to bruise, cut, strain or stain the fibres as other gins."

A British-built Fire Boat.

On June 12th a new seagoing fire and salvage boat, built by Messrs. Merryweather & Sons, of London, for the Genoa Harbour Board, underwent its official trials on the Thames. A trip was made from Greenwich to Tilbury, where the pumping capabilities of the vessel were demonstrated. There are two monitors on deck, which can be moved in any direction, either laterally or vertically, so as to send a jet in the required quarter, and as evidence of what the pumps are capable it may be mentioned that a powerful 3-in. diameter jet was cast to a height of over 200 ft. With both monitors in action two jets, each 2½-in. diameter, were then brought into play, and afterwards, with the aid of flexible hose and branch pipes, as many as 12 jets were discharged simultaneously. The propelling and pumping tests were in every way satisfactory, and the vessel travelled over the measured mile at Long Reach at 10 knots an hour (one knot in excess of the contract speed). All present, including the representative of the Genoa Harbour Board, as well as representatives of various foreign embassies and navies, evinced the utmost interest in the proceedings. The vessel is called the "San Giorgio," and is 70 ft. long with 16-ft. beam, and draws 5 ft. of water. It is propelled by two double cylinder compound engines driving twin screws, and the fire engines are of the double cylinder "Greenwich" pattern, with a total pumping capacity of over a quarter of a million gallons per hour. For fire extinguishing the pumps take water through the side of the vessel, but for salvage purposes the suction is taken through two deck connections with 6-in. pipes. Two Merryweather quick steam raising boilers supply the steam, and by means of an oil fired header a low pressure of steam can always be maintained in one of the boilers, thus effecting a considerable saving of time in raising steam

for starting the vessel. A great feature of this boat is that the boilers, engines and machinery are all in duplicate, so that the vessel can be practically relied upon as being always in fit condition for service, as in the event of any part of the installation requiring attention or adjustment the corresponding section can be at once utilised.

Inks.

Where transport is difficult, liquid ink is often wasted by leakage, and it may be better to import ink powders. No doubt the ink produced from powder is never quite so good as the fluid ink, but the quantities ordered from the colonies are increasing, and evidently the article is found in some places convenient and satisfactory. It is sold in packets making one pint, and the price is from 1s. 9d. to 2s. 4d. per dozen packets, according to colour and quality.

Steel Rails.

Trouble both with corrugations on the head of the rail and with excessive wear is common, and has been materially increased in this country since the introduction of electric traction. On the Metropolitan Railway it has recently been reduced by the use of high silicon rails made by the Sandberg process, which in parts where the traffic is very heavy has been found to give an extra life of over 100 per cent. These high silicon rails have also been tried on the Great Northern Railway and on the South Eastern and Chatham Railway. Their price is about 10s. per ton above the ordinary market price of rails.

Mahogany.

The July number of the *Journal of the Royal Society of Arts* contains an article on mahogany, which prophesies that in the near future it will be found that the value of mahogany will be seriously enhanced. It is to be hoped, in the interests of West Africa and British Honduras, that this will be the case. In the former place, however, the business, though it has grown to gigantic proportions in recent years, is affected by labour troubles, as the natives find that work in the mines and other undertakings is more profitable and permanent. The following remarks on the virtues of mahogany are of interest to producers and buyers:—

“To the connoisseur mahogany possesses a beauty of appearance when of fine colour and richly figured, but extreme colour becomes a blemish, especially if the texture is not good. Another important and almost unique feature is that this wood with age mellows in appearance and attains a bloom of colour not evident when newly wrought. Possibly, with the exception of oak, it is the only wood possessing this trait. Rosewood and Padouk, when made up

and newly polished, have a charming appearance, but with age the colour fades, and the wood assumes a listless or dead appearance. Whether to place figure in mahogany before its colour is a point upon which experts may differ, but either in themselves make a log valuable; but, whilst nature is prolific, it is seldom that the combination of figure, colour and texture is found in one log. Where these three factors are blended they form a beauty much to be admired, and give a value to a log ranging from 2s. 6d. to 30s. per foot, whilst the cargo average may only be from 4d. to 6d. It will be understood that where logs realise the high prices stated they are used in veneer form, whilst the cheaper wood is used in the solid.

"Plain mahogany has a utility peculiarly its own, and its uses are almost illimitable; for ordinary furniture and for painting and enamelling it is without a compeer.

"*Size.*—Whilst the uses of many fancy woods are limited by their small sizes, mahogany stands out as a wood giving either extreme length or width, or both combined; hence for signs, fascia boards, counter-tops and panels for railway carriages it is unrivalled. Sometimes it is of hard texture, and in other cases of a mellow nature, making it suitable for carriage panels. Then mahogany, even when figured, does not possess that alternate hardness and softness of grain characteristic of many woods, which makes it so difficult to obtain an even surface on them in highly-finished work. Some woods, whose initial cost may be low priced, yet in their manipulation, after all the care possible has been spent upon them, show a ridgy face and lack a fine even surface, owing to their absorbent nature and uneven fibre; they will not compare in beauty even with an ordinary grade of mahogany.

"*Warping and Twisting.*—The great desideratum in high-class woodwork, if the cost of the labour is to be justified, is to use a wood which when wrought will stand—that is, neither warp, twist or shrink. Many fancy woods, even when reasonably seasoned, have these failings, but in mahogany they are absent in a marked degree; it can be readily seasoned.

"*The Cost.*—Of all the furniture woods available, if we except the few specially-figured logs, the average cost of mahogany is lower than that of many of its rivals, it is also less wasteful in conversion."

A self-docking floating dock, constructed by Messrs. Swan, Hunter and Wigham Richardson, was sent in tow for Lagos on August 8th. It will be able to raise a vessel of 400 tons displacement within an hour. The price of the dock, delivered in Lagos, was £12,350, and £490 was paid for galvanising the bottom, sides and end.

Atoxyl (for Sleeping Sickness).

This is a protected name and cannot be used by other manufacturers than Messrs. Greef, of Germany. The drug is, however, a well-known chemical composition, and can be made in England. "Atoxyl" has in some cases been attended with loss of sight by the patient. Other preparations, known collectively as atoxyl-derivatives, are coming into use, and it is claimed for them that they are equally efficacious, and do not produce symptoms of poisoning. "Soamin" is sold by Messrs. Burroughs & Wellcome at 4s. per ounce, as against 7s. 6½d., the price of "Atoxyl."

Windmills.

The following practical letter is extracted from the *Cape Agricultural Journal*.

"SIR,—Since the importance of irrigation by means of windmills very largely affects the South African farmer, and since the subject of windmills is frequently dealt with in your Journal, I venture to bring to the notice of farmers, through this medium, a few facts, concerning windmills in particular, which are sure to prove of considerable value to many unacquainted with the possibilities of windmills.

"Many look upon windmills as mere playthings, only suitable for pumping sufficient water for domestic purposes or small flower gardens. This impression arose from the large number of failures seen everywhere. These failures, in turn, are due to (1) An inferior mill incapable of doing its work when nature provides variable winds and working only in a particular wind velocity for which it was built. (2) An inferior mill incapable of resisting safely the variable stresses to which it is subject, even when not working, and hence necessitating continual repairs. (3) An inferior mill incapable of taking care of the pump, which it has to operate in high winds, thereby pulling or jarring the pump cylinder valves or rods to pieces, necessitating continual pump repairs. (4) An inferior mill incapable of taking the maximum energy from the wind and converting it to useful pumping work, thereby causing heavy loss of work done during any given period. (5) Inferior engineering and erection of windmill plants. In quite a large number of cases, windmills have been sold with pumps and erected where the pump is entirely out of proportion to the mill which has to drive it. In quite many cases, too, the persons responsible for the engineering of a windmill plant for a given locality have shown a marvellous lack of knowledge of wind velocities obtaining at that locality.

"Given a thoroughly good and reliable windmill and expert windmill-engineering skill to plan out and erect the plant, there is now no doubt left that the windmill is a most satisfactory motor for

driving pumps for irrigation purposes. A good windmill, correctly installed, will pump enough water—under average conditions—to properly irrigate from 3 to 8 morgen of cultivated land. When we consider that this amount of water is raised for the price of lubricating oil only, and that this lubrication is only attended to once in every six weeks, we see at once the great advantages of using good windmills and making sure that they are absolutely correctly installed by responsible and reputable firms.

“Without desiring to give any one firm or windmill a cheap advertisement, but merely for the benefit of the farmer, who may be in need of reliable pumping plant, these figures are given to show the average cost of maintenance of a first-class windmill, well engineered at erection, and since running continuously in all winds:—

“Mill. ‘Samson,’ erected in January, 1907, at the Government Farm, Potochefstroom, by Messrs. Malcomess & Co., Ltd. The ‘Samson’ was erected to replace another windmill which was erected on the same place by another firm in March, 1904. Since the erection of the ‘Samson’ in January last, it has been left open to work in all winds, and was never shut off once, except when oiling it. During the nine months its cost of maintenance was as follows:—

			s.	d.
To $\frac{1}{2}$ gallon lubricating oil	...	...	2	9
To repairs and spare parts	...	...		nil.
Total	...	...	2	9

The old mill, which first stood on the same place, showed the following figures for its cost of maintenance:—

March, 1904, to December, 1905, repairs ...	£19	9	0
December, 1905, to November, 1906, repairs		8	12
		<hr/>	
Total for 32 months ...	£28	1	0

Expenses in maintenance per month, 17s. 6 $\frac{1}{2}$ d.

Hence this mill costs more than six times as much to maintain for one month as the ‘Samson’ cost to maintain for nine months.

“Besides this ‘Samson’ mill belonging to the Government, we have here in this neighbourhood at least eight other ‘Samson’ windmills, none of which costs more to maintain at the most from 8s. to 10s. per annum, and these mills are all running continuously and have been for the past two years.

“There are several good windmills on the market, but it is safe to conclude that the would-be purchaser of a windmill will not be induced to buy a windmill unsuitable for his requirements if he uses ordinary care and the experience of those who have bought windmills, when selecting a mill.

"I have stated above that under average conditions from 3 to 8 morgen can be well irrigated by a windmill. This applies to the smaller plants operating over small boreholes. There are many 'Samson' windmill plants to-day irrigating very successfully as many as 20 morgen of land. In such cases the water is usually drawn from rivers, open wells or fountains.

"Another point which very often gives rise to doubt when the farmer contemplates irrigating lands by means of windmills, refers more to the supply than to the windmill. Briefly stated it is this: 'Which plan will answer better, one or two large and deep boreholes, with one or two large windmills erected over them, or several small boreholes with a small windmill erected over each?' Practical experience as well as theory at once reply that small 6-in. boreholes, sunk to moderate depths, with small windmills over them, not only cost less to instal and to maintain, but yield in proportion much more water than larger plants. A 9-in. borehole sunk in these parts cost £3 per foot to drill. It was drilled 1,100 ft. deep, and thus cost £3,300. At 100 ft. down water was struck which rose 20 ft. The supply was tested up to 5,000 gallons per hour. A windmill was erected and the pump placed 400 ft. down. The windmill pumps from 4,800 to 6,000 gallons per hour, according to the wind, but cannot reduce the water level in the borehole below 80 ft. from the surface. This windmill cost approximately £500 to instal. Hence for, say, 6,000 gallons per hour the initial cost was £3,800. Now if 5 boreholes, each 6 ins. diameter and 100 ft. deep, had been drilled instead, and over each a small windmill erected costing approximately £70 each, the total cost of boreholes and windmills would have been £850, and the quantity of water pumped would have been, under the same conditions, from 7,500 to 9,000 gallons per hour.

"The farmer must make sure to build a good reservoir—preferably of cement—in which to pump the water. To store the water before use is more than half the battle won."

The Tanjong Pagar Dook Board in the latter half of 1907 made a profit of \$864,968, and has accumulated a reserve fund of \$254,848, notwithstanding the charging of certain works of a capital nature to revenue. During the six months 1,270 vessels used the wharves and 136 were dry docked. The Board is to be congratulated on these satisfactory works. The work done is of enormous importance to commerce, and the Board itself is an interesting example of a body constituted by Government, but consisting mostly of unofficial members, and practically left without interference. On the 15th October the Board accepted the tender of Messrs. John

Aird & Co. for the construction of a wet dock and the reconstruction of the main wharf, all in accordance with the conditions and specification of the Consulting Engineers dated June, 1907, at a cost of £998,700, the time of completion being five years. Since that date a number of the engineers' and contractors' staff have arrived in the Colony and work has commenced. The area of the wet dock is $24\frac{1}{2}$ acres, and provides 3,837 ft. of quay wall, also 1,900 ft. of pitched slope; the depth of water at L.W.O.S.T. being 30 ft. The main wharf reconstruction covers a total length of wharf of $4,575\frac{1}{2}$ ft., of which 3,144 ft. will be in concrete block-work wall and $1,431\frac{1}{2}$ ft. wrought-iron cylinder construction, with a minimum depth alongside at L.W.O.S.T. of 33 ft.

The German Government are arranging for an International Commission to unify the international regulations for testing petroleum oil and products and facilitating the transport. The British Government have been invited to send representatives. Unification will do away with much uncertainty and confusion.

We have been requested to state that an international exhibition of industries and labour will be held in Turin in April-October, 1911, the fiftieth anniversary of the proclamation of the Kingdom of Italy. There will be a simultaneous exhibition at Rome of a historical, archæological and artistic character, and there is no doubt that the occasion will vastly swell the number of visitors to these cities. Exhibitors are particularly requested to send articles with a stamp of novelty and progress.

COLONIAL STAMPS.

A POINT of some interest to Colonies which issue stamps printed by the steel plate process has arisen since our last issue. It appears that owing to the numerous wettings undergone by these stamps, as explained on page 66 of our issue for June, 1907, so much distortion takes place that it is impossible to bind them into stamp books without an excessive spoilage. Besides this, all the plates used for this class of stamp have hitherto been made so as to print continuously, *i.e.*, not in panes of 60 stamps with a margin between the panes.

This will be more clearly understood if we explain the way in which the books are made. For this purpose we will suppose that each book is to contain eighteen 1d. and twelve $\frac{1}{2}$ d. stamps, and that the stamps are printed by the surface process. Three sheets of 1d. stamps and two of $\frac{1}{2}$ d. stamps, interleaved with waxed paper, are laid one on the top of the other, and at the top and bottom a sheet of stiff paper covers. A machine like a sewing machine "runs" the edges vertically once and the central "gutter" between the panes twice with wire. Then the whole is cut vertically between the two central sewings and horizontally below every second stamp. Each page thus contains six stamps, but, of course, half the books open with the hinge to the right of the opener instead of to the left. The alternative to this inconvenience is to have the card at the top and bottom printed with certain columns upside down, but the result of this is even worse than the awkward opening, as the stamps themselves will appear upside down when the book is opened.

The only way to obviate these difficulties is that adopted by the Imperial Government, *i.e.*, the purchase of stamp printing plates which print the fourth, fifth, sixth, tenth, eleventh and twelfth columns of stamps upside down, but the expense of this is considerable, and even if it is adopted the watermark of the above columns will be upside down.

The price usually charged to the public for a book such as that described above is $\frac{1}{2}$ d., but unless at least 5,000 books are required at a time they cannot be placed in the Colonies under that price.

The proposal of the Commonwealth of Australia to have an uniform issue of Australian stamps has not passed without a strong protest from New South Wales. The following extracts show the grounds of the objection, and the reply. It will be seen that the new issue has not been decided on :—

“SYDNEY,

“27th November, 1907.

“SIR,

“I have the honour to state that I am advised that the Board recently appointed by the Commonwealth Government ‘to consider and report on the best methods to be adopted to ensure a suitable issue of postage stamps that will be available for immediate use during the bookkeeping period, and thereafter for use as an issue for the Commonwealth without distinction as to States’ have reported in favour of (1) an uniform issue throughout the Commonwealth ; (2) printing in one office ; and (3) steel plates.

“Further, it has been announced in the press that Sir William Lyne has decided to have the postage stamps printed at one central office in Melbourne.

“In view of this announcement—and as it has not been contradicted it is assumed to be true—I wish, on behalf of the State of New South Wales, to protest strongly against such a proposal being adopted.

“Such a course will not be in the best interests economically of the Commonwealth, and its adoption will have the effect of ignoring the just claims of this State to consideration. Indeed, I make bold to say that the whole history of the proceedings in connexion with the appointment of this Committee evidences a want of consideration for this State.

“Now that the report has come to hand, which contains a proposal to use steel plate printing, Mr. Gullick, the State Government Printer, points out that the modern Power Plate Press for the printing of postage stamps on the lines suggested by the Board has been in use in the Government Printing Office, Sydney, for the past nine years, and in no other office in Australia, and although a sum of £2,000 would supplement the plant of this State to an extent sufficient to enable it to turn out the entire postal issue of Australia, the Board has recommended the Commonwealth to enter into an expenditure which is probably under-estimated at £30,000.

“The effect upon this State will probably be to render useless expensive plant which has been in operation for some years past, to throw out of employment a large number of men, to increase the cost to the taxpayer generally, and cause the transfer of the work from a responsible officer who has proved himself eminently fitted for these duties, to some other person whose qualifications cannot be higher, but will very probably be lower.

"Mr. W. Hull, the substitute for Mr. Bassett Hull, is of opinion that the purchases by stamp collectors will amount to a very large sum which will go largely to reduce the increased cost if the work was carried out in Melbourne. Other philatelists in this State, however, are of a different opinion, and state that Mr. Hull's figures are very largely over-estimated.

"For the reasons above mentioned, and in view of the fact that this State has in no way been consulted officially from first to last with regard to this matter, I would ask that the matter shall be re-opened, or at all events not finally determined until the views of this State and the capabilities of the Government Printing Office in Sydney are made known to your Government in detail.

"I have, &c.,

"(Sgd.) C. G. WADE.

"The Honorable the Prime Minister of the

"Commonwealth of Australia,

"Melbourne."

"MELBOURNE,

"7th February, 1908.

"Sir,

"In acknowledging the receipt of your letter of the 9th January, 1908, relative to your protest against any proposal to concentrate in Melbourne the printing of stamps for the various States of the Commonwealth, I have the honour, at the instance of my colleague, the Treasurer, to inform you that the report of the Stamp Printing Committee has not yet been considered by this Government, and that, even should it be decided to adopt the Steel Engraving process, it will be a considerable time—say two years—before the necessary designs would be approved, dies cut, &c. In the meantime there is no intention of making any fresh departure so far as your State is concerned.

"I have, &c.,

"(Sgd.) ALFRED DEAKIN.

"The Honorable the Premier of

"New South Wales,

"Sydney"

In our last issue we stated that the new $\frac{1}{4}$ d. CAYMAN ISLANDS stamps and postcards were for internal postage within Grand Cayman. We have since been informed that, though it was originally intended to confine them to local circulation, it has been found necessary, through lack of $\frac{1}{4}$ d. stamps, to allow them to be used for foreign postage. A further supply of both stamps and postcards of the farthing value is now in hand.

TRINIDAD has decided to complete the adoption of the new colour scheme by using the colours appropriated to the 4d., 6d. and 1s. values.

ST. VINCENT will issue stamps of the values of 6d. and 1s., of the design already seen in the lower values. It is intended to continue to use King's Head stamps for the 2s. and 5s. values, but all the above four values will conform to the new colour scheme.

THE STRAITS SETTLEMENTS will adopt the new colour scheme for all values except the 3 cents stamp. New plates are in hand for the \$25 and \$100 values. These stamps will be of large size, and will show the King's Head printed from the new large key-plate. The colours of these two values have not yet been decided on.

Other Colonies which have decided to adopt the new colour scheme without any alteration of design are NORTHERN NIGERIA and FIJI.

Of the impending changes mentioned in previous issues the following have appeared during the past quarter:—

BRUNEI.—1, 2, 3, 4, 5 and 8 cents.

NATAL.—2s., 5s. and £1 postage stamps; and 6d., 1s., 2s., 2s. 6d., 5s., 10s., £1, £1 10s., £5, £10 and £20 Revenue stamps.

CAYMAN ISLANDS.—6d. stamp, "Postage and Revenue."

SIERRA LEONE.—6d., 1s., 2s. and 5s.

The following will appear before our next issue:—

NORTHERN NIGERIA.— $\frac{1}{2}$ d. and 1d.

BRITISH HONDURAS.—2 and 5 cents.

ORANGE RIVER COLONY.—1s. postage stamps have been supplied for the first time on multiple watermarked paper.

MAURITIUS.—An entirely new issue of stamps has been arranged. As stated in our October, 1907, issue several corrections have been made in the Arms of the Colony. The following stamps will be printed from the new "Arms" Keyplate, the existing set of duty plates being used with it:—1, 2, 3, 4, 6, 8 and 15 cents. The following values will be printed from the old Universal King's Head Keyplate:—5, 12, 25 and 50 cents, R. 1, Rs. 2.50 and Rs. 5.

The colours of the above stamps will be those appropriated in the new Colour Scheme to the following values respectively:—Less than $\frac{1}{4}$ d., $\frac{1}{4}$ d., $\frac{1}{2}$ d., between $\frac{1}{2}$ d. and 1d., 1d., $1\frac{1}{2}$ d. and $2\frac{1}{2}$ d. for the Arms series, and between $\frac{1}{2}$ d. and 1d., 2d., 4d., 8d., 1s., 2s. 6d. and 5s. for the King's Head series.

The 4 cents stamp will be sage green with carmine label and the 5 cents stamp grey with carmine label. A supply of 2, 3, 4, 6 and 15 cents stamps will be sent to the Colony towards the end of the current year.

As we have frequently referred, and shall frequently refer in the future, to the new colour scheme, it may be useful if we give below the official descriptions of the colours used. The names are not intended as an accurate description of the shades of colour but will be sufficient to distinguish one from another.

Value.	Duty or Border.	Head.	Colour of Paper.
Under 1d. ...	Black ...	Black ...	White
1d. ...	Brown ...	Brown ...	White
1d. ...	Green ...	Green ...	White
1d. ...	Red ...	Red ...	White
1½d. ...	Orange ...	Orange ...	White
2d. ...	Grey ...	Grey ...	White
2½d. ...	Blue ...	Blue ...	White
3d. ...	Purple ...	Purple ...	Yellow
4d. ...	Red ...	Black ...	Yellow
5d. ...	Sage Green ...	Purple ...	White
6d. ...	Purple ...	Purple ...	White
7½d. ...	Yellow ...	Purple ...	White
8d. ...	Black ...	Purple ...	White
10d. ...	Red ...	Purple ...	White
1s. 0d. ...	Black ...	Black ...	Green
1s. 6d. ...	Blue ...	Green ...	White
2s. 0d. ...	Blue ...	Purple ...	Blue
2s. 6d. ...	Red ...	Black ...	Blue
3s. 0d. ...	Violet ...	Green ...	White
4s. 0d. ...	Red ...	Black ...	White
5s. 0d. ...	Red ...	Green ...	Yellow
8s. 0d. ...	Emerald Green ...	Purple ...	White
10s. 0d. ...	Red ...	Green ...	Green
£1 ...	Black ...	Purple ...	Red
£5 ...	Yellow ...	Green ...	White
£10 ...	Blue ...	Purple ...	White
£25 ...	Red ...	Green ...	White

REVIEWS AND NOTICES.

The Cradle of the Deep, an Account of a Voyage to the West Indies.—By SIR FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D. (*Smith, Elder & Co.* 12s. net.)

It is refreshing to find from this book that the great surgeon is blessed, amongst other gifts, with the heart of a schoolboy. The hero of the work is Drake, and the story is largely that of the buccaneering vendetta against Spain. Sir Frederick Treves describes the scenery and the manners of the islands with a vivid touch, but he regularly gets back to the pirates, and loves to conjure up old scenes, where the outlass and the brandy keg figure large. "The captain is enthroned on a stout sea chest. He is an execrable-looking villain. One of his eyes has been gouged from its socket, while the lid of the other is made to droop by reason of a sabre cut, which has left a pink streak across his temple. He is dressed in a green satin coat, with voluminous skirts, &c., &c." Then comes a fight, picturesquely described with imaginative details, and the Spanish galleon is captured by the filibusters, the captain crying, "Jesus bless us, are these devils or what are they?"

In the same vein pictures are drawn of the life on land during this merry period. At Port Royal "slaves trundling casks along the cobbled road would be brought to a stop by a hatless mariner lying full length in the path, with no sign of life in him beyond an occasional babble of unintelligible speech that issued from his baggy lips. Now and then a string of purple-faced revellers would lurch by arm-in-arm, rolling to and fro like linked beacons in a choppy sea, bellowing as they went the refrain of a ballad learnt ten years ago in England. In a by-lane might be seen a Jew haggling with a sister over the price of a crucifix, and in a dark corner, near by, the lank corpse of a man who had died of yellow fever." On the whole the extinction of romance seems not to have been without considerable compensation, but at a safe distance an adventurous and reckless epoch has a special fascination for a generation which is dogged at every footstep by a prosaic law.

The reader must not expect to find in these pages any dealing with current political or commercial subjects—the passing traveller is not obsessed by the federation of the group or the prospects of sugar. But the aspect of things is described with an extraordinary clearness. The account of the Kingston earthquake, “a record of ten seconds,” is a blend of the minuteness of Defoe and the word colour of Hearn.

The medley of races and manners is throughout well illustrated. We extract a story from the description of Montserrat, where the first settlers were Irish and the brogue is still preserved. An Irishman fresh from Donegal arrives at Montserrat, and leaning over the steamer's rail addresses himself to a coal-black nigger who has come alongside with provisions.

“Say, Cuffee, phwat's the chance for a lad ashore?”

“Good, yer honour, if ye're not afraid of worruk. But me name's not Cuffee, an', plase ye, it's Pat Mulvaney.”

“Mulvaney? And do yez mean to say ye're Oirish?”

“Oi do.”

“The saints dayfind us. An' how long have yez been out here?”

“A matter uv tin year or so.”

“Tin year. An' yez black as me hat! Save me sowl, I tuk yez for a naygur.”

The Canadian Annual Review of Public Affairs, 1907.—By J. CASTELL HOPKINS, F.S.S. (Toronto: The Annual Review Publishing Company. Cloth, 12s. 6d. ; morocco, 16s. 8d.)

Every country has its year-book in some shape, but we doubt whether any possesses so clear and readable a compendium of current history as this *Canadian Review*. All the material facts and statistics are given, but they are made vivid by being incorporated in lively descriptions of the controversies and discussions, in parliament and the press, which relate to them; each question is turned round and examined in the light of different opinions, and the reader easily gathers not merely the “what,” but—as is the object in scientific instruction—the “why.” Every subject of the year is handled—the financial stringency with which the U.S. troubles affected Canada, railway enterprises and problems, agricultural and mining conditions, the relations of capital and labour, the varied aspects of immigration, foreign relations, and the work of the federal and provincial legislatures. The work is interesting at every point. As an example of the treatment of subjects, we quote the following from “Problems of Immigration—English and Foreign.”

“In the present condition of Canada the problems of immigration and settlement have to do with race, language, character, local labour

conditions and local prejudices. Certain general difficulties came very much to the front in 1907—some of a surface character and merely irritating; others of a deeper kind and more serious. Amongst them was the coming of nearly 100,000 Englishmen marked by all the characteristics of their nation and with faults, in some cases, which met very sharply certain prejudices and ignorances which Canadians occasionally possess and vigorously express. Many of the Englishmen came expecting too much, believing all the promises of immigration agents and steamship solicitors, naturally ignorant of conditions in a country of vast expanses and infinite variety of climate and interests, hopeful very often of more sympathy and kindly or brotherly treatment than was accorded, ignorant of the hostility of Labour unions to an influx of possible competition, naturally unacquainted with customs and social ways in a country where everything was different from their own surroundings at home and where the people were Americans in personal character and habits although 'English' in allegiance and political sentiment. Some of them were undoubtedly black-sheep and too lazy to really work; others could not stand the hardships of a winter which even Canadians-born found a little trying; adjustment of points of view to new surroundings was not always instantaneous and should not have been generally expected; the financial stringency came suddenly and for a time stranded thousands of the newcomers.

"Canadians, on the other hand, were not as sympathetic as they might have been; prejudices bred, in part, from American influences which always under-rate, where they do not despise or detest, the Englishman, had an effect of frequently preventing his employment and more often in giving a cold or unpleasant tone to the reception of the immigrant; in the West the "remittance man" had created an unfavourable field for the new arrival, while the wealthier United States settler, usually owning his farm and possessed of money and goods, looked down upon the poorer Englishman who yet came from a wealthy and powerful country and who felt, not unnaturally, that in a vague way his people were the real rulers of the land he had come to and were certainly paying for its defence and international protection. The average Canadian keenly resented this latter attitude, forgot the limitations of an island-bred man of narrow personal opportunities, and expected him to be more familiar with the peculiar developments of new social and political conditions in Canada than was the Canadian himself with the centuries-old British system. Hence the friction which marked this great influx of immigrants from the Mother-land and filled a part of the press with mutual recriminations at a time when good-feeling and the helpful hand should have been everywhere dominant. The truth seems to be that the average Englishman expected to find in Canada—as Mr. C. F. Hamilton put it in an able article in the *National Review*, of

September—another England, differing in details but in the main similar and he found, instead, a divergent and diverse nationality more like that of the United States than the United Kingdom. There was ground also for complaint against farmers who hired their men for summer work, paid low wages and got rid of them as soon as the winter came; who sneered, too often, at their ignorance of the new ways of a new country and made too little allowance for the infinite difference between the easy-going life of an English farm-hand and the strenuous work of a Canadian farm. Out of these conditions and from the exceptionally low character of some of the immigrants came such a terrible crime as that of Gowland at Killarney, Man., in May, and that committed at Melbourne, Que., early in July. At a meeting in Toronto on November 14th, Brigadier Howell, of the Salvation Army, went so far as to say that something should be done immediately to protect immigrants from being 'ill-treated by farmers.' As to the alleged English lack of adaptability and Canadian prejudice in the matter the *Victoria Colonist* of November 29th dealt very well with the subject as follows:—

“The Englishman who comes to Canada is handicapped to a certain extent by his training and his traditions. When he goes to the United States he realises that he is in a foreign country, and of all the people in the world none can adjust themselves to conditions existing in a foreign country like Englishmen can. But in Canada they are different; they do not seem to feel under an obligation to adapt their ideas to their new surroundings. They are ready to recognise that there is an American way of doing things, and a French way and a German way, and any number of other ways of doing things, and which they drop into with a facility which makes them the best of all colonizers. They have not yet learned that there is a Canadian way, but they are finding it out, and bye and bye they will fall in with it with the greatest facility. On the other hand the Canadian is a little inclined to think his way the best, and he is not always as considerate as he might be in his way of putting it. He is not exactly bumptious, but he has had a hard fight to make his country what it is, and possibly the result has been to make him just a trifle too cocksure of himself. However this may be, we do not think anyone will deny that he is an exceedingly impatient person, and has not yet learned how to wait for anything. Rarely has the Canadian been trained in a groove, whereas nearly every Englishman has been.’

“The subject was much discussed in Sons of England lodges and in meetings of St. George's Societies during the year, and the consensus of opinion in these organizations was that Englishmen made the best settlers, but that there should be careful selection in the immigrants sent out, and that they should be prepared to go to

work on the farms when they reached Canada. In Toronto, on March 27th, the British Welcome League was formed at a public meeting, with Mr. Albert Chamberlain as President, and did good work during the succeeding year in looking after and helping thousands of immigrants who poured into the city, passed through, went to work locally, or found themselves unable to get work. Varied evidence was supplied to this organization and the press throughout the country as to deception in the kind of work available, the amount of wages, and conditions generally, which many of these men had encountered in the promises of emigration agents and bureaus in England. There was much fraud of this kind perpetrated, and Mr. Mackenzie King's visit to London in this connection was well advised. In December, 1907, stringent orders were given emigration agents, etc., in England to check emigration until February of all who did not have a little money in hand.

.

"The movement of United States settlers into the West was, on the surface, an easy problem. Usually well-to-do, frequently experienced farmers, often Canadians by birth, they came in an increasing stream of 26,388 in 1902, 45,229 in 1904, and 56,690 in 1907. With them they brought goods and effects which the Customs authorities valued at about \$5,000,000 annually, but which were probably worth \$10,000,000 or more. Most of these immigrants were permanent settlers and farmers, and the bulk of them came from the neighbouring Western States, although there was a proportion from all the agricultural portions of the Republic. The Dominion Government had for some time kept Immigration Agents at all the principal points in these States, and through them distributed a constant stream of literature and information throughout the country.

"In the distribution of this great army of incoming people—nearly a million in five years—friction was bound to occur between the old and the new, as it does occur in every line of life and development. Problems were certain to evolve, and not the least of them was the coming of the Japanese and the Hindu.* The former became an international issue and is dealt with separately; the latter was small in dimensions but big in talk and pregnant with Eastern possibilities. Only 2,413 of these East Indians were officially stated to have come in during the year, and yet British Columbia made a vehement and pressing public issue of the matter, while, curiously enough, 14,000 Galicians, 2,000 Bukowinians, 1,500 Hungarians, 2,500 Bulgarians, 1,500 Chinese, 1,200 Greeks, 6,200 Russian Jews, 13,000 Italians, 1,400 Finns, 2,200 Swedes and many other racial

* NOTE.—The commencement of this difficulty is dealt with in the 1906 volume of this work.

types of equally distinct and divergent kinds were coming into Canada without question and with hardly a reference in the press."

The history of the agitation against Indian immigration is given lucidly and impartially.

South African Agriculture.

The report of the Cape Department of Agriculture is particularly important when the last hope for a way out of the present depression lies with agriculture. There is a great opening for more skilful and energetic work, and the report indicates in plain terms some present shortcomings. The cows are largely of inferior quality, the yield of milk being deplorably low. As good beef can be grown in the colony as anywhere, but the farmer has to learn how to handle it. "Our conception seems to be that an ox, to qualify for the butcher, must spend a long probationary period at the yoke, and then we wonder why people should perpetually grumble at the quality of our beef. While recognising the necessity for the use of the ox-wagon in many parts of the county, I fail to see why such a large proportion of cattle should have to undergo this training before being slaughtered. I fear it will remain so until the purchasers of slaughter stock begin to differentiate in price very materially between a young animal, which has been more or less continuously fed, and one which is so old as to make it impossible to give us good carcasses. Speaking broadly, I should say that three-year-old beef should be worth to the consumer at least 25 per cent. more than the bulk of the commodity now put on the market, and so far as I am aware there is no difference made in the price paid for the two qualities at the present time. If the question of export should arise at any time, this is the first matter that must be attended to. As we have learned by bitter experience in other branches during the last two years, there is one way of making and retaining a world market, and that is by supplying only the best quality procurable."

The colony imported in 1907 £132,000 worth of bacon and ham, every ounce of which could be produced in the country and at a profit. The bill for breadstuffs was over a million sterling, and a large proportion of this should have been paid locally. What is wanted is more energetic preparation of the land and rotation of crops and "closer settlement."

The hopelessness of the "poor whites" is a painful feature which is brought out with unusual plainness in the following passage:—

"In the course of my work the urgency of the problem of the growing indigent white population has repeatedly been brought home to me. The fatuous content and the inherent unreliability of this class renders difficult the task of improving their condition. Philanthropic bodies such as the Church use drastic coercive measures

with good effect, but Government in all its varied guises they seem to regard as an institution for their support and fair game at all times. In irrigation schemes, in forest management, in land settlement and in relief works of an agricultural character, it would seem best to leave the confirmed poor white to the public charity. The State may then concentrate its endeavours upon those who, though not yet destitute, are tending towards this degraded state and who have still some farming aptitude, independence and energy left, but who lack sufficient means to embark unassisted on the risks of a farming venture. Prevention in this case is as worthy as cure, and rather more likely to be successful."

Trout Fishing in the Cape Colony.—By D. W. MANNING, F.R.G.S.
(*Argus Printing and Publishing Co., Cape Town*).

Trout acclimatization in Cape Colony has not only been accomplished, but has met with such extensive success as to add greatly to the attractions to travellers. Mr. Manning, of the Cape Civil Service, disavows the embellishments of the experienced journalist, but he draws alluring pictures of scenery and sport. The practical information which an angler requires is also fully given. The following description of the scene of the original stock conveys a vivid idea of the surroundings:—

"Nestling among trees and framed in a setting of smooth grass, the hatcheries at Jonker's Hoek are in themselves a perfect picture, the quiet waters mirroring the overshadowing landscape.

"Far away from the human hive no sound is heard save the hum of the dragon fly, the soft cooing of the ring dove, or the 'flop' of a frog as it rejoins its brethren in the cool deep waters after a siesta in the warm, glad sun.

"Until, as if by a magician's wand, the scene is changed. The water boils with the upward leap of golden speckled trout, as the fish, in their haste to secure a share of food, project themselves in the air, descending with a mighty tumult to renew the leap again and again, until all is done and the waters once more resume their normal aspect of placid calm.

"Away down beneath in the valley, below the green-leaved vineyard with its clustering branches of already purpling grapes, is the Eerste River, its surface hidden by dense foliage. The grateful shade of the oak trees on either bank provides a tempting refuge from the noon-day sun for the shrill-cried pheasant.

"In the glen beyond, up past the wooden bridge that spans the river, the water winds its way through marshy lands, where pink watsonias grow in bewildering confusion, the river sparkling like a thousand gems as it falls in a succession of cascades.

"The stream is fed by numerous springs and rivulets, having their origin in the oft snow-capped peaks of the distant mountains. The mother grijsbok will bring their young down the slopes as the sun declines, and with them graze on the short sweet herbage on the edges of the waters, while the brown-winged partridges dust themselves in the wagon road leading to the isolated and now forsaken thatch-roofed house high up the valley.

"Past the site for the artificial weir, the intake whence the life-giving fluid is drawn for the increasing population of the town of Stellenbosch, through bush and rock-bound steep, the headwaters of the main stream are reached, a deep dark basin far back in the side of the hill, where its moss and fern-cased sides glisten in the dim light with the spray from waters poured through a narrow opening high above. The roaring torrent and death-like stillness give rise to an eerie feeling as one rests on the clean-cut rock at the entrance to the cavern, after the toilsome, though surpassingly enjoyable, clamber along the mountain path.

"It was into this same pool at the foot of the waterfall that the first trout fry, hatched at Jonker's Hoek, were liberated, whence they have spread far down the river, through Stellenbosch itself, past homestead and farm, to find an outlet in the sea in False Bay, where, unless driven helter-skelter back by the bitter taste of the tidal waters, they became an easy prey to the shoals of 'geelbek' and other denizens of the deep, or are caught by 'trekkers' from the Muizenberg beach.

"But it is usually only the brown trout that venture thus to . . . their strength in the ocean's current. The silvery loch leuens love best to remain in the sweeter waters. Ensconcing themselves in some favoured, root-entangled spot, they exercise dominion over the smaller fry, and levy toll alike on frog and crab in the daylight hours and the gay-tailed firefly as it 'dips,' 'dips' to the water's surface in the midnight watches; until, at length, of great girth and exceedingly magnificent, the trout fall a prey to their lust of food and find themselves, though not without a mighty struggle 'gainst skill and patience, closely encircled within the clinging meshes of the angler's landing net, only to be released when safely borne to the clean-washed shingle or shining sand at the side of the stream.

"Truly from small beginnings do great things come. The trout fry, placed with such fostering care in the pool below the waterfall, were few in number, but they were the original stock from which the rivers and streams of the Cape of Good Hope and the adjoining Colonies of Natal, Orangia and Transvaal have drawn their supplies, reaching even as far as distant Salisbury in Rhodes' land.

"How far the hopes of those responsible for their introduction have been justified, we have endeavoured to set down in these pages—not, however, with the embellishments of the experienced journalist,

but soberly, and, with strict regard to facts, clearly stated and gleaned from authoritative sources or actual experiences."

We have received from the Liverpool School of Tropical Medicine, Vol. II., No. 3, of "Annals of Tropical Medicine and Parasitology." This number contains further articles upon different questions connected with Trypanosomiasis, or Sleeping Sickness, as well as papers on Cirrhosis of the Liver, on Dengue Fever, and on new species of *Culex*, collected during the anti-malaria campaign in Mauritius in 1908.

We have received copies of the undernamed pamphlets, which have been prepared and printed in Northern Nigeria.

"A Short Vocabulary of the Fulani Language," compiled by Captain E. A. Brackenbury, B.A., Assistant Resident.

"Gbari Grammar Notes and Vocabulary," by the Rev. W. P. Low, Church Missionary Society.

"Vocabulary of Okpoto Language," by Captain F. W. W. Byng-Hall, Assistant Resident.

"Vocabulary of Jukon Language," by W. K. Fraser, Assistant Resident.

These little works form the first steps towards the study of the vast body of unknown languages extending throughout the Northern Nigerian Protectorate. Up to the present Hausa is practically the only language which has received attention; now, officials and missionaries are beginning to turn their attention to other tongues, an effort in which they will receive every encouragement from this Administration. The present output is somewhat slight, but this is only to be expected of first beginnings, and it represents much patient work by the authors.

By the publication of such efforts the first step is taken towards something more solid, and encouragement is afforded to others. The Governor confidently hopes that these little works may be steadily enlarged and added to in number, until, in course of time, a respectable *corpus linguarium* may be attained. It is to be hoped that the interest will be enlisted of scientific philologists to aid the amateur efforts.

LETTER TO THE EDITORS.

LETTER II.

The Future of the West Indies.

5th September, 1908.

SIR,

Some encouragement is given to write to you again by the kindly notice of a letter written and published in your July, 1908, issue on the above subject, and by the indications apparent throughout the West Indies and amongst West Indians in other parts of the Empire of a trend of thought towards seeking some form of closer association by which objects such as were therein mentioned—common to the interests of all—may be secured.

Those who have studied questions of the nature of those under consideration, know that the Constitutions, as devised by and for the Dominion of Canada and the Commonwealth of Australia are those which appeal to British people, as leaving that freedom to British subjects which is so necessary for them, and if it be within the practical politics of the near future to consolidate the West Indies, and perhaps include the Bahamas, British Guiana and Honduras, it would seem that the gradual and spontaneous evolution of the Australian Commonwealth would be a guide to each of the several communities. Step by step that evolution might be studied and followed as far as could be with great advantage and progressive despatch, and the success following actual working and experience would invite absolute confidence.

The Constitution named would be found to be the most suited to the means of unification of the West Indies as preserving and securing to them all their present rights and liberties in respect of self-taxation and domestic legislation. There can be no re-modelling of forms of Government which does not preserve these Constitutional rights unimpaired, and it was subject to this *sine*

quâ non that the Australian Commonwealth was accomplished by impulse from within. What was done by the Commonwealth can be done by the West Indies, as to any student it is apparent that every West Indian Community has been well trained in legislative work, and the rights of self-taxation and Government—the bed-rock of Constitutional progress—have been well exercised by the several legislatures. Public-spirited and fearless, but factionless, discussion seems to have characterised these Communities, and if some inner impulse towards development should arise, the dawn of a new era in those rising Colonies will be looked for with hopefulness.

Should, therefore, public opinion in the West Indies gain ground in favour of Consolidation of common interests, a convention of delegates elected by each separate legislature might assemble in London for the purpose of discussing and formulating a Constitutional arrangement which might then be submitted to each of the separate Governments and Legislatures, and on adoption by them come into operation by an Act of the Imperial Parliament, and in this manner the West Indies would follow the course and procedure of the Commonwealth of Australia.

In conclusion it might be well to recommend, to those desirous of studying Canadian and Australian Constitutions, the perusal of an address on "Federal Constitutions within the Empire," delivered in May, 1900, by the Rt. Honourable R. B. Haldane, K.C., M.P., at the Royal Colonial Institute, and published in a book entitled *Education and Empire* by John Murray, London.

I am, Sir,

Your obedient Servant,

JOSEPH RIPPON.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. G. S. PODEVIN (retrenched from the South African Constabulary),
Assistant District Commissioner, Southern Nigeria.
- Mr. J. P. AULD, A.M.I.C.E. (Provincial Engineer, Southern
Nigeria), Superintendent of Public Works, British Honduras.
- Mr. A. VAN W. LUCIE-SMITH (Senior Puisne Judge, British Guiana),
Chief Justice of Trinidad and Tobago.
- Mr. E. A. SPEED (Attorney-General, Southern Nigeria), Chief
Justice, Northern Nigeria.
- Mr. E. T. PACKARD (Attorney-General, Sierra Leone), Puisne Judge,
Southern Nigeria.
- Mr. S. J. HOOD (Provincial Collector of Customs, Southern Nigeria),
Comptroller of Customs, Gold Coast.
- Captain C. E. RICE (late Adjutant of Volunteers, Transvaal),
Assistant District Commissioner, Southern Nigeria.
- Mr. K. M. LESLIE (late of the Gold Coast Survey), Assistant Com-
missioner of Police, Southern Nigeria.
- Mr. W. J. O'HARA (retrenched from the Department of Posts and
Telegraphs, Transvaal), Postmaster, Nyasaland.
- Mr. D. F. WILBRAHAM (Master of Supreme Court, Sierra Leone),
Attorney-General, Sierra Leone.

- Mr. F. A. VAN DER MEULEN (Assistant District Commissioner, Sierra Leone), Solicitor-General, Sierra Leone.
- Mr. M. H. BROWN (retrenched from the South African Constabulary), Assistant District Commissioner, Southern Nigeria.
- Mr. C. F. H. HENRY (retrenched from the South African Constabulary), Assistant District Commissioner, Uganda.
- Mr. H. F. WRIGHT (retrenched from the South African Constabulary), Assistant District Commissioner, Uganda.
- Mr. S. T. HARRISON, C.M.G. (late Treasurer of Northern Nigeria), Comptroller of Customs, Barbados.
- Mr. M. J. BERKELEY (Stipendiary Magistrate, Trinidad), Puisne Judge, British Guiana.
- Mr. A. HUDSON (Protectorate and Circuit Judge, Sierra Leone), Attorney-General, Gold Coast.
- Mr. T. D. MAXWELL (Commissioner of Lands, Southern Nigeria), Crown Prosecutor, Southern Nigeria.
- Mr. K. J. BEATTY (late Assistant Resident Magistrate, Transvaal), Master of Supreme Court, Sierra Leone.
- Major G. C. DE RINZY (Chief County Inspector of Police, British Guiana), Inspector-General of Police, British Guiana.
- Dr. G. THORNTON (late Medical Superintendent, Pretoria Hospital), Medical Superintendent, General Hospital, Colombo.
- Mr. H. E. GOODSHIP (Assistant Accountant, Railway Department, Sierra Leone), Assistant Chief Accountant, Uganda Railway.
- Mr. G. C. KEIGHLEY (retrenched from the South African Constabulary), District Superintendent of Police, Northern Nigeria.
- Mr. G. W. GIBBS (retrenched from the Transvaal Civil Service), Statistician and Accountant, Marine Department, Northern Nigeria.
- Mr. A. R. PENNINGTON (Puisne Judge, Gold Coast), Attorney-General, Southern Nigeria.
- Major W. N. BOLTON (late Resident Magistrate, Transvaal), Commissioner of Kyrenia, Cyprus.

Captain H. M. TUFNELL (King's African Rifles), Assistant District Commissioner, Uganda.

Mr. M. J. DE LA P. BERESFORD (2nd Clerk, Governor's Office, Grenada), Assistant in Secretariat, Northern Nigeria.

Mr. T. STONE (retrenched from the South African Constabulary), District Superintendent of Police, Northern Nigeria.

Mr. H. M. OSBORNE (retrenched from the South African Constabulary), District Superintendent of Police, Northern Nigeria.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ATKINSON, Dr. A. W. ...	10 Oct., '08	FURLEY, J. T. ...	16 Oct., '08
ARMITAGE, Capt. C. H., D.S.O. ...	4 Jan., '09	FOX, L. D'A. ...	10 Oct., '08
ADAMS, J. C. ...	5 Dec., '08	GRANT, W. A. ...	2 Nov., '08
ABBOTT, Corpl. E. G. ...	28 Dec., '08	GREEN, Miss E. F. ...	11 Oct., '08
BRYANT, S. ...	19 Dec., '08	GEAR, A. F. ...	28 Nov., '08
BEAVAN, R. A. G. ...	2 Oct., '08	GREENWAY, J. J. K. ...	7 Nov., '08
Constitutional Club, Bristol.		HOLLOWAY, J. H. ...	3 Oct., '08
BRECKENRIDGE, Capt. T. W. ...	8 Nov., '08	HUNTER, C. H., I.S.O. ...	23 Nov., '08
Junior Naval and Military Club, 96, Piccadilly, W.		HORN, Dr. A. E. ...	28 Nov., '08
CHURCH, J. W. ...	2 Oct., '08	HARRY, H. P. ...	8 Nov., '08
CLARIDGE, Sergt. G. ...	6 Oct., '08	JUPE, Dr. F. I. M. ...	2 Nov., '08
CARROLL, W. A. ...	24 Oct., '08	JAMES, J. A. B. ...	24 Oct., '08
CRAVEN, C. S. ...	21 Nov., '08	KITSON, Major A. W. ...	26 Nov., '08
COZENS-HARDY, E. W. ...	19 Dec., '08	LINDSAY, W. ...	23 Nov., '08
COLLIER, J. H. ...	17 Nov., '08	LYFORD, F. ...	28 Dec., '08
DOVE, E. ...	5 Dec., '08	LUNN, Dr. J. ...	17 Jan., '09
DUGON, Dr. T. H. ...	9 Nov., '08	Royal Societies Club, St. James' Street, S.W.	
DOCKRELL, Sergt. E. ...	28 Oct., '08	LANGLEY, Dr. W. H. ...	2 Jan., '09
ELGEE, P. E. L. ...	16 Oct., '08	MASKELL, W. T. ...	28 Nov., '08
FORD, A. G. ...	17 Dec., '08	MAYER, Dr. T. F. G. ...	23 Oct., '08
FLEURY, Capt. A. M. ...	29 Dec., '08	MARLOW, Capt. J. ...	2 Nov., '08
FRANCE, H. D. ...	23 Nov., '08	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
		O'BRIEN, Dr. J. M. ...	25 Dec., '08
		Royal Societies Club, St. James' Street, S.W.	

GOLD COAST—continued.

O'HARA MAY, Dr. H. ...	27 Nov., '08	READ, Capt. H. ...	18 Oct., '08
PALMER, R. ...	1 Nov., '08	SOUTTER, P. W. ...	8 Nov., '08
PENNINGTON, A. R. ...	23 Nov., '08	STANLEY, H. E. T. ...	2 Nov., '08
POTT, P. A. H. ...	27 Nov., '08	WATHERSTON, Lt.-Col.	
PACK, A. ...	5 Dec., '08	A. E., D.S.O., R.S. ...	27 Nov., '08
POPHAM, H. B. ...	13 Dec., '08	WHITTALL, P. F. ...	17 Nov., '08
PURKIS, Dr. D. W. ...	29 Dec., '08	Junior Naval and Military Club, 96, Piccadilly, W.	
ROBINSON, F. A. C. C. ...	13 Dec., '08	WHITTOW, A. ...	28 Nov., '08
c/o Messrs. Way & Co.,		WALKER-LEIGH, Maj. H.	17 Nov., '08
Billiter Buildings, Billiter Street, E.C.			
REW, Major C. E. D. O.	16 Oct., '08		

GAMBIA.

BANERLE, W. ...	20 Dec., '08	PRYCE, H. L. ...	30 Oct., '08
GREEN, E. J. ...	3 Oct., '08	PRITCHARD, W. ...	14 Oct., '08
HOPKINSON, Dr. E.,		STANLEY, Capt. W. B. *	1 Nov., '08
D.S.O. ...	2 Nov., '08	SANGSTER, G. H. ...	2 Nov., '08
KINGDOM, D. ...	16 Oct., '08	TOWNSEND, W. R. ...	28 Nov., '08
MERCY, Sergt. G. B. ...	31 Oct., '08	THOMAS, C. W. ...	24 Oct., '08
MCCALLUM, J. K. ...	2 Nov., '08	VAUGHAN, E. ...	6 Oct., '08
MEAD, F. W. ...	3 Oct., '08	WOODS, T. ...	13 Oct., '08

SIERRA LEONE.

ANDERSON, Maj. G. D'A.	3 Nov., '08	KEWLEY, T. E. ...	3 Oct., '08
c/o Hongkong and Shanghai Bank, Ltd.,		MURRAY, Capt. L. ...	10 Oct., '08
31, Lombard Street, E.C.		c/o Messrs. Cox & Co.,	
ALEXANDER, Dr. W. N.	20 Dec., '08	16, Charing Cross, S.W.	
ASHLEY, J. E. ...	12 Jan., '09	McLEOD, Miss A. ...	28 Dec., '08
BILL, J. F. ...	2 Nov., '08	NORMAN, Capt. C. C. ...	2 Nov., '08
BOWDEN, W. D. ...	4 Jan., '09	Ogilvie, A. N. ...	23 Nov., '08
COLE, E. A. ...	30 Nov., '08	New Club, Grafton Street, W.	
COPLAND, C. A. ...	14 Oct., '08	PAGE, G. W. ...	20 Oct., '08
CORRIE, J. S. M. ...	5 Dec., '08	PICKIN, J. J. ...	2 Jan., '09
c/o Messrs. Cox & Co.,		RENSHAW, S. ...	2 Jan., '09
16, Charing Cross, S.W.		ROBINSON, J. D. ...	24 Oct., '08
CLIFFORD, J. W. ...	2 Jan., '09	SKELTON, Capt. E. G. ...	13 Dec., '08
FAIRTLOUGH, Maj. E. D.		c/o Messrs. Cox & Co.,	
C.M.G. ...	16 Oct., '08	16, Charing Cross, S.W.	
GRAHAM, Dr. W. M. ...	27 Nov., '08	SPENCE, A. ...	15 Nov., '08
HENSTRIDGE, H. G. ...	2 Nov., '08	SHELDRAKE, J. H. ...	24 Oct., '08
HUNT, R. L. ...	30 Nov., '08	STEVENS, Miss J. ...	3 Oct., '08
JONES, A. ...	6 Oct., '08	SMITH, J. C. ...	19 Oct., '08

SOUTHERN NIGERIA.

ALDER, J. F. ...	13 Dec., '08	HARRISON, J. G. ...	5 Dec., '08
ADAM, Dr. T. B. ...	29 Oct., '08	HAMMETT, F. T....	2 Nov., '08
BLACK, F. H. ...	3 Nov., '08	HUBBARD, A. G. ...	2 Oct., '08
BLACK, J. H. ...	18 Nov., '08	HUGHES, F. J. ...	8 Nov., '08
BOSANQUET, G. A. I. ...	19 Dec., '08	HOPKINSON, Capt. C. R. T.	9 Oct., '08
BLATCHFORD, A. E. ...	3 Oct., '08	Junior Naval and	
BROUNGER, S. G. ...	11 Oct., '08	Military Club, 96,	
BYRNE, Capt. W. D. ...	15 Dec., '08	Piccadilly, W.	
BURT, F. W. ...	30 Nov., '08	HURFORD, J. ...	30 Nov., '08
BEVERLEY, Capt. W. H.	24 Oct., '08	HOLT, J. ...	2 Nov., '08
BURROUGH, Capt. H. S.	10 Oct., '08	HITCHENS, P. ...	17 Nov., '08
Auxiliary Forces Club,		HOSLEY, Capt. W. J. S.	21 Nov., '08
2, Whitehall Court,		Junior Naval and	
S.W.		Military Club, 96,	
BURN, J. ...	3 Oct., '08	Piccadilly, W.	
BELL, G. G. ...	10 Oct., '08	INGLIS, P. ...	5 Nov., '08
BIDDELL, A. W....	28 Dec., '08	JONES, Capt. L. O. W. ...	2 Nov., '08
CLARK, R. C. ...	28 Dec., '08	JACKSON, E. ...	10 Oct., '08
CURRIE, Dr. J. ...	28 Dec., '08	JONES, Sergt. T. ...	1 Nov., '08
CROSTHWAITE, C. H. E. ...	8 Jan., '09	KNOTTESFORD - FORTES-	
CLEMINSON, A. ...	24 Oct., '08	CUE, Capt. F. E. ...	22 Nov., '08
CAVANAGH, Sergt. B. G.	23 Nov., '08	KITSON, A. E. ...	
CROSSE, A. B. ...	3 Dec., '08	Imperial Institute,	
DIAS, C. W. ...	28 Dec., '08	S.W.	
DITCH, G. B. ...	6 Oct., '08	KEMPTHORNE, W. O. ...	9 Nov., '08
DOYLE, J. H. ...	24 Oct., '08	KESTING, R. F. ...	2 Nov., '08
DALE, C. E. ...	16 Oct., '08	KENT, J. ...	3 Oct., '08
DUNLOP, J. N. M. ...	10 Dec., '08	LOCKYER, P. ...	14 Oct., '08
DAY, T. E. ...	28 Feb., '09	LEEFE, J. B. ...	2 Nov., '08
DUNCAN, N. C. ...	28 Oct., '08	LEONARD, T. M. R. ...	27 Nov., '08
DENNKITT, R. E....	4 Oct., '08	LEIGH-LYE, F. M. ...	2 Nov., '08
c/o Messrs. H. S. King		MILNE-STEWART, J. D.	30 Nov., '08
and Co., 9, Pall Mall,		MAYNE, Sergt. E. A. J.	26 Oct., '08
S.W.		MOLINEUX, C. R. N. ...	23 Jan., '09
DAWES, G. W. P. ...	27 Oct., '08	MORRIS, E. H. ...	23 Nov., '08
EMERY, W. ...	1 Oct., '08	MOIR, S. R. ...	20 Oct., '08
ELSTOB, R. G. ...	3 Oct., '08	MARSHALL, E. T. ...	30 Sept., '08
EDWARDS, H. A. ...	8 Nov., '08	MILLIKEN, A. R. ...	12 Oct., '08
FORAN, Dr. P. F. ...		MARTIN, A. R. P. ...	7 Nov., '08
FOSBERT, W. F. W., C.M.G.	17 Nov., '08	MANDER, R. ...	30 Nov., '08
FLRMING, W. J....	30 Nov., '08	MANSFIELD, H. B. ...	28 Dec., '08
FANE, Capt. J. ...	10 Oct., '08	MATHEWS, C. W. ...	9 Nov., '08
New Club, Grafton		MORRIS, P. H. T. ...	30 Sept., '08
Street, W.		MORRIS, P. H. ...	3 Oct., '08
Fox, Capt. R. M. D. ...	26 Oct., '08	MACKINNON, D. D. ...	7 Dec., '08
GORHAM, G. W....	24 Oct., '08	MORLEY, G. S. ...	30 Nov., '08
GINGELL, S. J. ...	17 Nov., '08	NICHOLS, E. ...	17 Nov., '08
GARDEN, G. ...	24 Oct., '08	OSBORNE, E. W....	5 Dec., '08
GALLINI, A. M. D. ...	27 Oct., '08	OWEN, S. M. ...	
GOLDSMITH, Sergt. A. ...	21 Nov., '08	Imperial Institute, S.W.	
GREENWOOD, E. ...	6 Oct., '08	OWENS, J. ...	23 Oct., '08
HUGHES, Capt. I. L. ...	17 Dec., '08	PHILLIPS, M. L. ...	2 Nov., '08

SOUTHERN NIGERIA—continued.

PLOWRIGHT, J. T. ...	23 Jan., '09	STER, R. H. ...	17 Nov., '08
PARRY, Capt. J. L. R. ...	9 Oct., '08	STER, W. C. ...	18 Nov., '08
PYKE, C. C. ...	16 Oct., '08	Blenheim Club, St.	
PEAT, R....	28 Dec., '08	James' Street, S.W.	
PROSSER, J. A. B. ...	23 Dec., '08	STORY, W. ...	30 Nov., '08
PECK, R. W. ...	19 Dec., '08	THOMPSON, J. H. L. ...	30 Nov., '08
PURCELL, Capt. H. Y. ...	22 Oct., '08	TIPPER, Dr. E. H. ...	2 Nov., '08
PETRIE, W. V. ...	3 Nov., '08	THOMPSON, H. N. ...	21 Jan., '09
c/o The Bank of British		Royal Societies Club,	
West Africa, 17,		St. James' Street, S.W.	
Leadenhall Street, E.C.		TRENCHARD, Major H.M.,	
PEDDER, W. ...	8 Nov., '08	D.S.O. ...	28 Nov., '08
RAWLES, H. L. ...	13 Oct., '08	Caledonian Club,	
Junior Naval and Military		Charles Street, S.W.	
Club, 96, Piccadilly, W.		THOMPSON, P. G. ...	30 Nov., '08
RENDLE, A. R. ...	30 Nov., '08	Blenheim Club, St.	
ROWE, R. H. ...	17 Nov., '08	James' Street, S.W.	
ROSE, D. D. ...	4 Nov., '08	TAYLOR, J. E. ...	16 Oct., '08
RUTT, H....	30 Nov., '08	TEW, M. L. ...	2 Nov., '08
ROWLAND, S. ...	16 Nov., '08	TINSON, C. R. ...	2 Jan., '09
RUBIE, S. ...	11 Dec., '08	UNWIN, A. H. ...	10 Oct., '08
ROOTS, A. E. ...	2 Mar., '09	WINKFIELD, J. ...	3 Nov., '08
SCRUBY, C. B. ...	30 Nov., '08	WENNBERG, W. ...	30 Nov., '08
SMITH, W. ...	26 Oct., '08	WALTON, G. L. ...	24 Oct., '08
STEELE, W. M. ...	17 Nov., '08	WIGHT, R. H. D. ...	13 Oct., '08
SHARP, N. H. ...	9 Nov., '08	WERRY, Capt. F. E. ...	3 Oct., '08
STRAITE, W. ...	2 Nov., '08	WILLOUGHBY, OSBORNE	
SAMUEL, J. A. ...	6 Nov., '08	A. ...	31 Oct., '08
SEWELL, H. S. ...	17 Nov., '08	WILDE, J. L. ...	28 Dec., '08
		YOUNG, P. V. ...	23 Nov., '08

NORTHERN NIGERIA.

BROWNING, Sergt. F. ...	12 Nov., '08	CHESNAYE, Dr. F. W. ...	27 Oct., '08
BEST, J. D. ...	2 Nov., '08	CHAPMAN, R. S. ...	27 Nov., '08
BOOTH, Capt. C. A. ...	18 Jan., '09	CARLYLE, T. F. ...	20 Oct., '08
Junior United Service		COLLINS, Sergt. A. T. ...	13 Nov., '08
Club, Charles St., S.W.		CLAYTON, W. A. ...	8 Dec., '08
BAILEY, Sergt. C. ...	23 Nov., '08	CHARTRES, E. A. ...	2 Oct., '08
BERTRAM, Sergt. F. G. ...	20 Oct., '08	COCKS, E. W. ...	3 Dec., '08
BOSHER, A. E. ...	19 Nov., '08	DILLON, H. M. ...	29 Nov., '08
BRUCE, J. ...	16 Oct., '08	DIGAN, Capt. A. J.,	
BOWERS, H. M. ...	10 Oct., '08	D.S.O. ...	3 Oct., '08
BREMNER, Dr. A. ...	15 Nov., '08	DUNN, R. ...	29 Dec., '08
c/o Messrs. Way & Co.,		DUPIGNY, E. G. M. ...	30 Nov., '08
Billiter Buildings, Billiter		Royal Societies Club,	
Street, E.C.		St. James' Street, S.W.	
BEIRNE, Sergt. M. ...	16 Oct., '08	DOW, G. ...	2 Oct., '08
COSTELLO, Dr. C. F. ...	29 Dec., '08	ELLIS, Capt. R. F. ...	17 Dec., '08
CAVENDISH, Capt. J. S.,		FREMANTLE, Capt. J. M.	1 Nov., '08
D.S.O. ...	5 Dec., '08	FURST, Sergt. G. W. ...	15 Dec., '08

NORTHERN NIGERIA—continued.

FLOOD, Dr. B.	1 Nov., '08	MALCOLM, G.	13 Dec., '08
GILLATT, J. M.	23 Nov., '08	c/o Messrs. Way & Co.,	
Caledonian Club,		Billiter Buildings, Bil-	
Charles Street, S.W.		liter Street, E.C.	
GRIMLEY, H. B.	8 Nov., '08	McLEAY, C. W.	2 Mar., '09
c/o The Delhi and		MACKENZIE, Capt. S.	
London Bank, Bishops-		K. G.	18 Oct., '08
gate Street, E.C.		MATTHEWS, G. R.	4 Jan., '09
GRAHAM, A.	19 Dec., '08	MAXWELL, Sergt. C. E. ...	
GEPP, N. M.	14 Oct., '08	McALLISTER, R.	23 Oct., '08
GRIER, S. McG.	31 Jan., '09	MACLEOD, Sergt. W.	23 Nov., '08
GIBB, C.	24 Oct., '08	MILL, M.	8 Oct., '08
GRAVES, F. G. H. H. ...	24 Oct., '08	ORR, Capt. C. W. J.	22 Oct., '08
GALLAGHER, Capt. A. E.,		Army and Navy Club,	
D.S.O.	3 Oct., '08	Pall Mall, S.W.	
HALL, Dr. W. H. A. G.	18 Oct., '08	PITMAN, J.	2 Oct., '08
c/o Messrs. Grundlay		PAUL, A. H. D.	3 Dec., '08
and Co., 54, Parliament		New Club, Grafton	
Street, S.W.		Street, W.	
HIGGINS, Capt. T. C. R.	4 Nov., '08	PUCKLE, Capt. T. M.	6 Oct., '08
HOLLIS, D.	4 Jan., '09	RAY, S.	12 Nov., '08
HASLER, Lt.-Col. J. ...	1 Nov., '08	SHAW, B. E. B.	2 Jan., '09
c/o Messrs. Holt & Co.,		STONE, P. V. P.	25 Dec., '08
3, Whitehall Place, S.W.		SLOPER, M.	8 Nov., '08
INNESS, W. D.	24 Oct., '08	STEED, Sergt. R.	6 Jan., '09
INGLIS, Sergt. T.	28 Dec., '08	TRAILL, H. L. N.	23 Oct., '08
JONES, S.	3 Nov., '08	WEST, Capt. C. C.	13 Dec., '08
KELLY, G. C.	12 Oct., '08	WEATHERHEAD, Capt.	
LONGHURST, F. H. ...	18 Feb., '09	G. E.	10 Oct., '08
LOUGHLAND, C. V. ...	8 Jan., '09	WIGHTWICK, C.	10 Oct., '08
LECKIE-EWING, W. C. ...	19 Oct., '08	WATSON, E. C.	
LEY-GREAVES, J. A. ...	5 Dec., '08	Isthmian Club, 105,	
MERRON, P.	12 Feb., '09	Piccadilly, W.	
MCGRATH, Capt. A. T. ...	23 Nov., '08	WARD, Miss M. A.	20 Oct., '08
MACKENZIE, Lt.-Col. A.			
M. N.	30 Nov., '08		
Naval and Military			
Club, 94, Piccadilly, W.			

EAST AFRICA.

BIPPEN, E. H.	27 Jan., '09	HAMILTON, F. G.	14 Jan., '09
BENNETT, C.	27 Oct., '08	HYATT, G. O.	27 Nov., '08
BROADBENT, C. T.	27 Nov., '08	HOWARTH, S. E. J.	27 Oct., '08
BATH, J. W.	27 Nov., '08	HOPE, J. O. W.	27 Nov., '08
CAINE, L. E.	22 Oct., '08	Caledonian Club,	
CRUICKSHANK, A. E. ...	10 Nov., '08	Charles Street, S.W.	
CHURCH, A. F.	10 Nov., '08	HOLLIS, A. C.	2 Nov., '08
COLLYER, A. J. M.	27 Oct., '08	HOBLEY, C. W., C.M.G.	Steamer
EDMONDSON, R.	27 Jan., '09	sailing 17	
EVANS, W. J.	14 Nov., '08	Oct., '08	
GRANT, R.	27 Dec., '08	LANE, C. R. W.	5 Dec., '08

EAST AFRICA—*continued.*

MARTIN, A. L. G. L. ...		SMALE, Dr. R. ...	27 Oct., '08
MONSON, W. J. ...	27 Nov., '08	SMITH, Maj. G. E. ...	27 Oct., '08
MOON, J. L. ...	27 Oct., '08	TURNER, A. J. ...	27 Oct., '08
PIDCOCK, Capt. H. ...	27 Nov., '08	WATERS, Dr. E. W. ...	30 Nov., '08
SILBERRAD, H. ...	27 Oct., '08		

NYASALAND.

BEECHING, Capt. C. F. ...	26 Nov., '08	MILTHORP, B. T. ...	15 Nov., '08
COSGROVE, E. R. ...	13 Feb., '09	RYLEY, A. M. ...	24 Nov., '08
DOYLE, P. W. ...	8 Jan., '09	RHOADES, E. L. ...	24 Nov., '08
FIRRI, F. T. ...	2 Nov., '08	SANDER, F. W. ...	26 Jan., '09
HART, R. ...	25 Oct., '08	SWANN, A. J. ...	24 Nov., '08
HEARSEY, Dr. H. ...	15 Dec., '08	URQUHART, A. ...	6 Nov., '08
JONES, G. E. ...	4 Nov., '08	WOODARD, H. ...	13 Dec., '08
JERMAN, R. ...	13 Dec., '08	WELLS, J. S. ...	13 Dec., '08
MANNING, C. F. ...	26 Jan., '09	YOUNG, A. K. ...	11 Jan., '09
MACMORLAND, J. ...	24 Nov., '08	Isthmian Club, 105,	
MACDONALD, R. ...	6 Dec., '08	Piccadilly, W.	
Sports Club, St. James'			
Square, S.W.			

UGANDA.

CARTER, W. M. ...	11 Nov., '08	HUTCHINSON, Commander	
COOTE, J. M. ...	22 Dec., '08	H., R.N.R., ...	25 Nov., '08
EDWARDS, Capt. W. F. S.,		Sports Club, St. James'	
D.S.O. ...	27 Nov., '08	Square, S.W.	
GARRARD, Capt. P. ...	12 Nov., '08	LEAKEY, E. W. ...	11 Nov., '08
GRANT, T. ...	22 Dec., '08	LEAKEY, F. H. ...	12 Dec., '08
GOODLIFFE, Dr. J. H. ...	11 Nov., '08	RAWLINS, Capt. S. W. H.	27 Nov., '08
GREENWOOD, T. ...	13 Nov., '08	RUSSELL, W. A. ...	27 Dec., '08
c/o Messrs. Cox & Co.,		SPIRE, F. ...	27 Nov., '08
16, Charing Cross, S.W.		THORPE, H. W. ...	14 Jan., '09
HARRIES, H. M. ...	4 Dec., '08	VAN SOMEREN, Dr.	
		R. A. L. ...	11 Nov., '08

SOMALILAND.

BYATT, H. A. ...	24 Oct., '08	MALCOLM JONES, W. ...	9 Dec., '08
Sports Club, St. James'		National Liberal Club,	
Square, S.W.		Whitehall Place, S.W.	
BLOOMBURGH, Sergt.-Maj.		NORMAN, E. C. ...	30 Nov., '08
J. H. ...	30 Oct., '08	POWER, E. ...	4 Nov., '08
		SWIRE, Capt. W. ...	30 Nov., '08

BASUTOLAND.

BOSWORTH-SMITH, R. M.	15 Dec., '08	BARCLAY, J. ...	31 Dec., '08
BAILEY, A. T. ...	10 Nov., '08		

BECHUANALAND.

EDWARDS, E. ...	30 Nov., '08	|	REILLY, R. ...	3 Nov., '08
-----------------	--------------	--	----------------	-------------

SWAZILAND.

LAVERTY, Miss A. M. ...	31 Jan., '08	|	VINE, T. W. ...	29 Jan., '09
SWEETMAN, A. J. ...	14 Nov., '08	|		

JAMAICA.

ALEXANDER, T. ...	16 Oct., '08	|	KERSHAW, Lt.-Col. A. E.,	23 Oct., '08
BOURNE, H. C., C.M.G.	<i>Steamer leaving</i>		Junior United Service	
	3 Oct., '08		Club, Charles Street,	
COX, S. A. G. ...	11 Oct., '08		S.W.	
CRADWICK, W. ...	17 Oct., '08		KER, Dr. J. E. ...	3 Dec., '08
CARVALHO, L. G. ...	17 Jan., '09		LUMB, Dr. C. F. ...	17 Dec., '08
CAPPER, T. ...	16 Oct., '08		NUNES, R. E. ...	13 Nov., '08
c/o Army and Navy			RUANE, P. ...	30 Nov., '08
Co-operative Society,			SIMMONS, R. ...	15 Oct., '08
Victoria Street, S.W.			TURTON, Dr. R. S. ...	13 Nov., '08
EDWARDS, Dr. C. R. ...	29 Oct., '08		WORTLEY, G. M. ...	6 Nov., '08
FORD, J. C. ...	17 Oct., '08		WILLIAMS, J. R. ...	31 Oct., '08
HEYLIGER, W. A. ...	5 Nov., '08		WILLIAMS, Dr. D. J. ...	15 Jan., '09
HALL, C. H. V. ...	15 Oct., '08			
West Indian Club, Nor-				
folk Street, Strand, W.C.				

FIJI.

BARNETT, E. A. ...	29 Apr., '09	|	FRANCIS, Col. C. A. ...	
DOWSE, Dr. T. A. ...	7 July, '09	|	HEATON, W. HENNIKER	13 July, '09
EHRHARDT, A. ...	14 Mar., '09	|	MACDONALD, Dr. R. ...	20 Apr., '09

BARBADOS.

BARNETT, Rev. F. H. ...		|	CARTER, Sir G., K.C.M.G.	
CHANDLER, W. K. ...	12 Oct., '08	|	<i>Steamer leaving</i>	4 Oct., '08

MONTSERRAT.

DYETT, E. F. ...	31 Dec., '08	|	ROBSON, W. ...	30 Oct., '08
------------------	--------------	--	----------------	--------------

GRENADA.

LOCKHART, N. ...	19 Nov., '08	|	TUDOR, D. T., K.C. ...	21 Oct., '08
LEGGE, C. A. ...	3 Mar., '09	|		

LEEWARD ISLANDS.

BRANCH, C. E. St. J.	19 Oct., '08
--------------------------	-----	-----	-----	--------------

ST. LUCIA.

SHERIFF, P. M. C. ... 29 Oct., '08

ANTIGUA.

HUMPHREYS, H. L. ... 15 Nov., '08 | WEIGHAM, W. H., I.S.O. 31 Oct., '08
 KIRBY, A. H. ... 24 Jan., '09 |

ST. VINCENT.

SANDS, W. N. ... 11 Nov., '08 | TUDOR, D. T., K.C. ... 21 Oct., '08

VIRGIN ISLANDS.

BAYNES, E. W. ... 7 Dec., '08

ST. KITTS.

FRETZ, Dr. W. H. ... 12 Dec., '08

TURKS ISLANDS.

ST. AUBYN, G. P. ... 27 Oct., '08

BAHAMAS.

FRASER, C. A. ... 10 Nov., '08

DOMINICA.

JONES, J. ... 24 Dec., '08 | MASON, Dr. G. B. ... 3 Aug., '09

FALKLAND ISLANDS.

CAMPBELL, Capt. J. C., 27 Mar., '09 | THOMPSON, W. A., ... 29 Mar., '09
 c/o London and South | Royal Colonial In-
 Western Bank, Ltd., | stitute, Northumber-
 Kensal Rise, N.W. | land Avenue, W.C.

MALTA.

MEREWETHER, Sir E. N., K.C.V.O., C.M.G. ... 28 Oct., '08
 St. Stephen's Club, Westminster, S.W.

CYPRUS.

BEVAN, W. ... 16 Oct., '08 | NICOLLS, E. H. ... 23 Oct., '08
 HAYCRAFT, T. W. ... 31 Oct., '08 | PARLIDES, Dr. O. ... 1 Nov., '08
 HIGGINS, P. P. ... 29 Oct., '08 | WODEHOUSE, C. B. ... 2 Nov., '08

BRITISH HONDURAS.

HARRISON, Dr. J. H. H.	7 Nov., '08	SWAYNE, Col. E. J. E.,	
STRANGE, H. P. C.	12 Nov., '08	C.B.	8 Dec., '08
		c/o Messrs. Cox & Co.,	
		16, Charing Cross, S.W.	

TRINIDAD.

BURSLEM, W.	18 Dec., '08	LITTLEPAGE, C. A.	23 Jan., '09
FITZGERALD, E....	28 Feb., '09	MCCARTHY, R. H., C.M.G.	
GUPPY, G. E. L....	10 Nov., '08	MASON, R.	4 Nov., '08
GUISEPPI, Dr. P. E. H....	28 Nov., '08	ROGERS, C. S.	20 Oct., '08
GORDON, W. M....	30 Nov., '08	SAUNDERS, J. B.	24 Nov., '08
GUPPY, R. J. L....	6 Feb., '09	SLYNE, D.	31 Oct., '08
GIBBON, Dr. J. F.	20 Dec., '08	SALOMON, G. A.	15 Oct., '08

BRITISH GUIANA.

AGARD, F.	11 Mar., '09	DAVIS, C. G. H....	30 Nov., '08
BOURKE, S. G. T.	3 Nov., '08	Royal Colonial Institute, Northumberland Avenue, W.C.	
c/o Messrs. Woodhead and Co., 44, Charing Cross, S.W.		GAMBLE, J. S.	14 Oct., '08
BARNES, Dr. W. S.	15 Apr., '09	JOHNSON, E. F.	11 Dec., '08
BRUNKER, Capt. H. M....	30 Apr., '09	KERR, L. L.	Steamer leaving 3 Feb., '09
BARKLIE, T. W. S.	8 Jan., '09	LAW, Dr. W. F....	15 Oct., '08
Royal Colonial Institute, Northumberland Avenue, W.C.		University Club, Dublin.	
CHRISTIANI, H. P.	3 Jan., '09	LAWRENCE, L. D.	24 Jan., '09
CURRIE, W. G.	29 Oct., '08	POPE, T. A.	1 May, '09
COMACHE, C. A.	29 Nov., '08	RAYNER, Sir T. C.	15 Oct., '08
		ROWLAND, Dr. E. D.	12 Nov., '08
		SOLOMON, J.	15 Oct., '08
		VAUGHAN, S. V....	1 Dec., '08

MAURITIUS.

D'AVRAY, Rev. S. A.	22 June, '09	LORANS, Dr. H....	28 Nov., '08
GEORGE, H.	31 Dec., '08	MADELON, L. J.	20 Nov., '08
GREGORY, Bishop	9 May, '09	SHANKLAND, Miss R. M.	13 June, '09
GRIMAND, Rev. P.	25 Dec., '08	SCHOGGS, Lt. H. C., R.N.	11 Apr., '09
LARZEN, Rev. J.	18 Dec., '08	THOMPSON, A. S.	7 Nov., '08

HONG KONG.

BREWIN, A. W. ...	27 Mar., '09	JONES, E. ...	5 May, '09
BALL, J. D. ...	24 Jan., '09	McKAY, W. ...	2 Mar., '09
BOULTER, J. F. ...		LAMBLE, P. T. ...	10 Mar., '09
COLLETT, A. ...	15 Feb., '09	McDONALD, D. ...	20 Dec., '08
CURWEN, W. ...	28 Feb., '09	McKENZIE, D. J. ...	12 Dec., '08
CULLEN, W. F. ...	20 Nov., '08	MACDONALD, J. ...	31 Oct., '08
CRAIG, R. H. A. ...	14 Jan., '09	McDONALD, R. ...	1 Feb., '09
CLARK, Dr. F. W. ...	8 Mar., '09	PIESSE, F. A. ...	10 Mar., '09
DOBBS, W. ...	31 Mar., '09	RATCLIFFE, A. ...	25 Feb., '09
DOBERCK, Miss A. ...	11 Aug., '09	SINNOTT, J. J. ...	11 Feb., '09
FLETCHER, A. G. M. ...	28 Mar., '09	SOLLY, W. J. ...	5 June, '09
FOWLER, G. ...	1 Feb., '09	SAVAGE, R. A. J. ...	27 Mar., '09
GOURLAY, D. ...	1 Feb., '09	TOOKE, H. P. ...	6 Dec., '08
GRANT, J. ...	1 Feb., '09	WISE, A. G. ...	20 Mar., '09
GERRARD, W. G. ...	20 Dec., '08	WOLFE, H. W. ...	7 Apr., '09
HUNTER, Dr. W. ...	1 Oct., '09	WRIGHT, Dr. G. H. B. ...	7 Apr., '09
HOWELL, F. ...	8 May, '09	WOODCOCK, G. A. ...	11 Dec., '08
HAZELAND, F. A. ...	7 Apr., '09		

STRAITS SETTLEMENTS.

BATTEN, C. ...	20 Jan., '09	NAPIER, W. J. ...	4 Dec., '08
CHAMBERLAIN, A. B. ...	25 Mar., '09	NOLAN, J. ...	5 Feb., '09
CROUCHER, Dr. F. B. ...	29 Mar., '09	OUTRAM, D. ...	8 June, '09
DAVID, P. F. ...	Steamer leaving 13 Nov., '08	O'NEIL, M. ...	19 Mar., '09
DERRY, R. ...	24 Dec., '08	PATTISON, J. C. ...	30 June, '09
FOSTON, E. C. ...	28 Nov., '08	PIGGOTT, F. J. ...	11 July, '09
HALL, G. A. ...	4 Apr., '09	RADCLIFFE, Comm. C. A., R.N. ...	31 Dec., '08
c/o Messrs. H. S. King and Co., 65, Cornhill, E.C.		RODRIGUEZ, F. ...	31 Mar., '09
HUNT, W. ...	22 June, '09	RODESSE, M. ...	Steamer due 6 Dec., '08
HEATH, A. ...	2 Aug., '09	SWINDELL, Rev. F. G. ...	14 Feb., '09
HELLIER, M. ...	8 July, '09	SMITH-STEINMETZ, G. A. J. ...	5 Nov., '08
HASKINS, W. J. ...	12 Nov., '08	SHEEDY, A. J. ...	27 Mar., '09
KELLER, J. D. B. ...	25 Aug., '09	THORNTON, S. L. ...	27 Mar., '09
LUCAS, T. J. ...	4 Aug., '09	TROWELL, W. J. ...	13 Mar., '09
LITTLEDYKE, S. ...	19 Jan., '09	TOWNER, H. V. ...	18 Mar., '09
LUPTON, H. ...	17 Mar., '09	TRUSDALE, W. H. ...	20 Jan., '09
McNAMARA, J. M. ...	4 Aug., '09	TYRELL, J. ...	6 Nov., '08
McDOWELL, Dr. D. K. ...	4 Nov., '08	WAIT, O. H. ...	8 June, '09
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.			

TANJONG PAGAR DOCK.

BLAIR, W. B. ...	31 Mar., '09	MURRAY, J. H. ...	25 Jan., '09
KELSO, W. ...		RENNIE, J. S. M. ...	23 Dec., '08
MORRIS, J. C. ...	6 Feb., '09		

PAHANG.

MAXWELL, C. N., Sports Club, St. James' Square, S.W. ... 11 July, '09

PERAK.

ADAM, Capt. H. W. D....	10 Feb., '09	COLLINGS, H. B. ...	7 Nov., '08
ACTON, W. W. ..	11 May, '09	DONALDSON, C. E. ...	10 July, '09
Sports Club, St. James'		LANGSTON, S. H. ...	7 May, '09
Square, S.W.		MOSS, P....	4 Feb., '09
BIRCH, E. W. ...	14 Dec., '08	MELDRUM, Dr. W. P. ...	28 Oct., '08
BOWES, J. ...	5 Jan., '09	PEART, Dr. S. P. ...	21 May, '09
BLACKSHAW, W....	7 Nov., '08	REEVE, Miss G. R. ...	29 Nov., '08
COOPER, H. J. ...	29 July, '09	TOFT, J. A. A. ...	30 Apr., '09
COWAN, W. ...	11 Mar., '09		

SRI LANGOR.

GOUGH, A. E. ...	8 Sept., '09	SANGUINETTI, W. R. ...	31 Mar., '09
JACKSON, R. D. ...	3 Sept., '09	SWAN, H. E. ...	30 Nov., '08
LOTT, W. E. ...	Steamer due 7 Nov., '08	WARD, J. F. ...	3 Nov., '08

NEGRI SEMBILAN.

DEW, E. C. ...	28 Aug., '09	UPTON, H. H. S. ...	16 July, '09
McCAUSLAND, C. F.	Steamer leaving 10 Oct., '08		

FEDERATED MALAY STATES.

ALSTON, A. H. ...	3 Oct., '09	LEE-WARNER, W. H. ...	19 June, '09
BROWNE, E. G. ...	27 July, '09	MARSHALL, H. ...	26 Oct., '09
BENNETT, T. ...	31 Oct., '09	McDOWELL, Dr. D. K....	4 Nov., '08
COOK, E. A. ...	29 June, '09	MILLS, F. ...	3 May, '09
CARDEW, C. D. ...	8 Aug., '09	NEART, P. J. ...	31 Dec., '08
CAULDWELL, E. ...	8 Aug., '09	PHILLIPS, D. ...	27 July, '09
ELLIS, S. P. ...	9 May, '09	ROBILLIARD, H....	9 Feb., '09
EVANS, R. G. ...	30 Nov., '08	SMITH, J. ...	20 July, '09
FEENEY, J. ...	23 July, '09	STEELE, J. ...	20 June, '09
GLOVER, J. S. ...	18 July, '09	TOMES, J. ...	23 June, '09
HARGREAVES, W. ...	11 Nov., '08	TAYLOR, W. ...	23 July, '09
HOLLYWOOD, M. J. ...	19 June, '09	TALBOT, H. L. ...	1 Mar., '09
HIGHET, D. J. ...	15 Feb., '09	c/o Messrs H. S. King	
HAYNES, A. S. ...	7 Feb., '09	and Co., 9, Pall Mall,	
HANNIGAN, C. ...	10 May, '09	S.W.	
INNES, J. R. ...	Steamer leaving 6 Nov., '08	WHITLEY, M. H. ...	5 July, '09
KINSEY, W. E. ...	24 Oct., '09	WALKER, Lieut.-Col. R.	
LEGGE, R. H. ...	11 Sept., '09	S. F., C.M.G....	Steamer leaving 10 Oct., '08
LAIDLAW, G. M. ...	19 Jan., '09	WHITE, W. A. ...	7 Aug., '09

CEYLON.

ARMSTRONG, J. P. ...	30 Nov., '08	LEWIS, G. ...	<i>Steamer leaving</i>
BARTLAM, A. ...	12 Jan., '09		30 Oct., '08
BRAYNE, C. V. ...	7 Jan., '09	MORGAN, W. R. W. ...	3 Jan., '09
COLBERT, G. A....	<i>Steamer due</i>	MISSO, W. J. ...	31 Mar., '09
	26 Oct., '08	MONTAGUE, D. ...	<i>Steamer due</i>
CHALMERS, Dr. A. J. ...	25 Jan., '09		12 Dec., '08
National Club, White-		MARSTON, S. ...	9 Dec., '08
hall Gardens, S.W.		MACMILLAN, H. F. ...	1 Feb., '09
BEVEN, A. ...	12 Apr., '09	MIDDLETON, J. P. ...	24 Jan., '09
BRYANT, A. T. ...	7 Feb., '09	Royal Societies Club,	
CAMPBELL, J. H. ...	6 Nov., '08	St. James' Street, S.W.	
CUMBERLAND, C. R. ...	30 Apr., '09	MACREADY, W. C. ...	15 Apr., '08
COCKERILL, T. ...	31 Dec., '08	c/o Messrs. Barclay and	
COWLEY, F. ...		Co., Pall Mall East,	
CALDICOTT, A. E. ...	31 Dec., '08	S.W.	
DE KRETZER, J....	31 Oct., '08	PLANT, G. F. ...	11 May, '09
DREW, A. R. ...	31 Oct., '08	PIETERS, Miss S. ...	11 Nov., '08
DUNSTAN, J. T. ...	29 Jan., '08	PRICE, N. J. ...	6 May, '09
DE SILVA, Dr. W. A. ...	15 Nov., '08	ROTHWELL, A. ...	11 June, '09
c/o Messrs. Richardson		SIZER, Sergt. R. W. ...	12 Dec., '08
and Co., 25, Suffolk		SMITH, R. L. ...	30 Mar., '09
Street, S.W.		SANDERS, W. R. B. ...	7 July, '09
EBELL, Dr. J. H. ...	20 Nov., '08	TYRRELL, F. G. ...	26 Nov., '08
FOX, Dr. S. C. G. ...		TAYLOR, A. H. ...	31 Jan., '09
FARROW, W. J. ...	1 Dec., '08	TYLER, A. ...	2 Nov., '08
FINLAYSON, J. J. ...	2 Dec., '08	TEMPLER, G. O. ...	30 Oct., '08
GODDARD, E. ...	4 Nov., '08	VANE, F. W., D.S.O. ...	5 Nov., '08
GREEN, E. E. ...	14 Mar., '09	VAUGHAN, C. S....	28 Feb., '09
HILL, B....	16 Mar., '09	VAN TWEST, J. T. ...	30 Apr., '09
HANNAN, O. W....	24 Mar., '09	WIJESEKERI, Dr. W. ...	20 May, '09
HOWISON, J. ...	31 Oct., '08	WARREN, P. D. ...	9 June, '09
HARRISON, T. C. ...	1 July, '09	WEERAPERUMAL, Dr.	
JEFFREY, J. ...	29 Dec., '08	A. A. M. ...	26 May, '09
KEEN, G. E. ...	30 Dec., '08	WICKWAR, A. J. ...	31 Jan., '09
KYLE, J....	29 Dec., '08		
LUSHINGTON, C. M. ...	<i>Steamer leaving</i>		
	26 Nov., '08		

THE COLONIAL OFFICE JOURNAL.

VOL. II.

JANUARY, 1909.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE resignation of the Marquess of Ripon brings to an end a remarkably long and varied official career. He has been in Parliament fifty-six years and in office twenty-four; he has sat in thirteen Parliaments and held nine Ministerial appointments. He was, appropriately enough, born in Downing Street. His father, Lord Goderich, was then Premier, though he held the position for only seven months and without ever meeting Parliament. Lord Ripon was Secretary of State for the Colonies for about three years, from 1892 to 1895. He will carry with him in his retirement the regard and esteem of all his old subordinates, who will not readily forget either his kindness of heart or his sound judgment.

The Canadian elections have resulted in Sir Wilfrid Laurier being once more returned to power. His majority is reduced, but not seriously impaired, and the result is admittedly a severe disappointment to the Opposition, and to some extent a surprise to Sir Wilfrid's own supporters, who had anticipated a victory, but not such a substantial one. Sir Wilfrid has now secured the confidence of the electors at four successive general elections, and this circumstance must no doubt be attributed in great measure to the commanding

personality of one who is generally regarded as the first statesman in the British Dominions beyond the Seas. But the prolonged tenure of office by a single party is a far commoner feature in the political life of the Dominions than in that of the United Kingdom, and the Liberals under Sir Wilfrid Laurier's leadership have not yet equalled the record set up by the Conservatives under Sir John Macdonald. No such permanence of tenure has characterised the political history of the Commonwealth, where the development of the "three-party system" has inevitably rendered the conditions extremely unstable, but in New Zealand Mr. Seddon enjoyed a continuance of power which led many to compare his position to that of a monarch, and there is as yet no indication that the position of his successor, Sir Joseph Ward, has been seriously shaken, though the recent elections have diminished his majority; the seventh successive victory of one party at a general election is probably an event without parallel. A curious feature of Canadian politics is the tendency of bye-elections to turn in favour of the party in office, a tendency the exact opposite of that with which we are familiar in the United Kingdom. The feeling of the electors appears to be that a supporter of the Government is more likely to be in a position to secure favours or concessions for the constituency which he represents, whereas in the United Kingdom the Government of the day is saddled with responsibility for every misfortune and every disappointed expectation since their term of office began.

The General Election in Newfoundland has resulted in the creation of an extraordinary situation. The Government and the Opposition have each obtained eighteen seats in the lower House, and it remains to be seen with what degree of success party government can be carried on under such conditions. Additional piquancy was lent to the situation by the fact that the Minister of Fisheries was elected by a "small but compact" majority of one. There was a recount, but it only served to increase the majority to three, so that the two parties were left in an exact equality. In these circumstances the responsibilities of the Governor are increased to an embarrassing extent, and Sir William Macgregor deserves every sympathy in a situation in which he will necessarily be exposed to criticism from all sides. In ordinary circumstances the Governor of a responsibly governed Colony is practically immune from criticism so long as he follows the advice of his ministers. But when the position of ministers is in the highest degree precarious, he is placed in the position of a trustee for the electors of the Colony, and must to some extent rely on his individual judgment as to what is the real "will of the people." It is difficult for those outside the Colony to draw any particular moral from the result of the elections. The

manifestoes of the respective leaders were not wanting in vigour, but they did not disclose any broad divergences in policy. But it would seem clear that Sir Robert Bond's policy in the matter of the fishery question has not commended itself to the electors most directly interested, the Government having sustained serious losses in those constituencies which are controlled by the votes of the fishermen. The Government charged the Opposition with being favourably disposed to a scheme of federation with Canada, but the charge was strenuously repudiated. Federation, it is clear, is still very unpopular in Newfoundland, and, though the disinterested observer is apt to look at the map and pronounce it to be "natural" or "inevitable," there is no indication at present that it is coming appreciably nearer. Canada would welcome it and the Home Government would regard it as a convenient change, but it is a matter for Newfoundland to decide. If "Closer Union" comes about in South Africa, Newfoundland will be by far the smallest self-governing community constituting a separate unit in the British Empire.

After an adverse vote in the Lower House Mr. Deakin has tendered his resignation of the Premiership of the Commonwealth, and for the second time a Labour Government comes into power. Throughout the period during which Mr. Deakin's Government has held office his immediate supporters have constituted the smallest of the three Parliamentary parties, and have depended for their continued existence upon the support of the Labour Party. Mr. Fisher's Government will be similarly dependent on Mr. Deakin's support, so that no very substantial change in the policy of the Commonwealth Government need be expected, though it may be doubted whether Mr. Deakin's defence proposals will be carried out in their entirety. The most difficult question to be faced is that of the "New Protection" policy which the decisions of the Supreme Court, upon which we have commented on previous occasions, have declared to be *ultra vires*. The Labour Party is committed to this policy even more completely than Mr. Deakin, and they will doubtless adhere to the determination to seek an amendment of the Constitution so as to bring the matters in question within the jurisdiction of the Commonwealth Parliament. But at the present moment there will be a stout resistance, in which many who sympathise with the general policy of the Labour Party will join, to any proposal for the further limitation of the powers of the States, and there seem likely to be stormy times ahead in Australian politics.

Mr. Deakin made a great impression in this country when he attended the Imperial Conference last year, and his resignation from

office will be regretted as removing from the list of statesmen in power in the Over-sea Dominions one of the most striking personalities known to the British public. But it may be expected that his disappearance will only be temporary, and that he will still be reckoned with as a potent force in inter-Imperial relations. Mr. Reid's resignation of the leadership of the Opposition in the Commonwealth Parliament constitutes another serious loss to Australian politics.

The Closer Union Convention of the South African Colonies has been sitting at Durban and Capetown with closed doors, and very little information has been allowed to transpire as to the progress of the discussions. It is stated that even the delegates are not permitted to take copies of the resolutions passed out of the conference room, and the "special correspondents" have been reduced to supplying their newspapers with personal sketches of the delegates and accounts of the occasional festivities. But the mere fact that the deliberations have been prolonged is in itself a hopeful sign, and a general impression prevails that the members of the Convention have made more progress with their difficult task than even the most optimistic could have expected. There can be no doubt that the close co-operation of the representatives of different Colonies and opposing political parties will do much to promote the growth of a feeling of common South African patriotism. If the Convention brings its labours to a successful issue, it will then be necessary to procure the acceptance of the new constitution by the Parliaments of the different Colonies, and at this stage sectional interests are bound to make themselves strongly felt. Finally, the Imperial Parliament will no doubt be invited to pass a Constitution Act for South Africa. When Mr. Chamberlain introduced the Australian Constitution Act in the House of Commons he described it, in words which will be long remembered, as "a model of legislative competence." We believe that South Africa will show that it can lay claim to equal powers of constructive statesmanship, and the best of all trainings for the working of a constitution is the making of it.

The Report of a Queensland Royal Commission on the Pearl Shell and Beche de Mer fisheries is of considerable interest as an example of a somewhat extreme application of the "White Australia" policy. The Commissioners find that the industry is almost entirely in the hands of Japanese, and that in purchasing supplies and provisions they deal almost exclusively with their own countrymen. "It is the natural and laudable aspiration of Australians to conserve their country and their industries for men of their own race. At a time when the nations of the East are awaking and are looking

around for openings for the settlement of their surplus millions, it behoves Australians, with their vast territory and their handful of people, three-fourths of whom are situated in the south-eastern corner of the continent, to see to it that no Asiatic power is allowed to obtain a foothold on their shores . . . The patient industry, the uncomplaining endurance of hardships, and the generally law-abiding character of these Asiatic sojourners in our midst are admitted. In many respects they are not undesirable residents; but in no country in the world outside the British Dominions is any primary industry allowed to be monopolised by a race of aliens." The remedies proposed certainly deserve to be called heroic. No vessels are to be licensed unless built within the Commonwealth and by British subjects. A Training School of Instruction for White Divers is to be established, and within five years of its establishment the employment of alien divers is to cease entirely. It is hoped that the wages of white divers may be brought up to a total of £180 a year. "As aboriginals of the mainland, of Torres Strait, and of Papua have proved themselves suitable for tenders and crews, and as they have certain natural rights in the Northern Fisheries of Queensland, their employment in those capacities be continued." We are at present without information as to whether any steps have been taken to carry the recommendations of the Commissioners into effect.

A Select Committee of the Cape House of Assembly has presented a report on the question of Imported Contract Labour, the brevity of which is in amusing contrast with the enormous bulk of the similar reports which have emanated from the Transvaal. The principal reason for this is to be found in the fact that the Committee limited their investigation to the question of importing skilled labour under contract. They recommend that the importation should be prohibited "when such labour is available in the Colony." They admit that there may be some difficulty in determining the question of fact, and after dismissing a proposal that the duty should be entrusted to the Government Labour Bureau, they suggest "that the decision should rest with some body upon which employers and employes might be represented, such as a Wages Board." They state that they have had before them "evidence to show that importations of skilled labour at a lower wage than that usually paid in this country have taken place, and they regard this as inflicting hardship upon the people in the country, and often upon those imported." They state also that in consequence of the depression there is an abundant supply of labour of all kinds available. This circumstance really deprives the question of actuality at the moment. South Africa is, unfortunately, not at the present time a favourable field for emigration for any class

of white labour, and there is therefore little likelihood of the Committee's recommendations provoking much criticism in any quarter. But it must be recognised that the policy which they embody might lead to trouble in a period of expanding industrial activity. In such circumstances a policy of "South Africa for the South Africans" may commend itself locally as a means of retaining for the inhabitants the advantages of a run of prosperity with its usual concomitant of high wages. But an exclusive policy of this kind generally proves to be ill-advised in the long run, as some of the Australian States are beginning to realise, and it is to be hoped that when the emigration and immigration statistics of South Africa begin again, as they no doubt will sooner or later, to show a "balance inwards," the people of the country will welcome the circumstance as evidence of expanding prosperity, and not make of it an excuse for a narrow policy of exclusion.

Mr. J. Henniker Heaton's proposal for "penny-a-word" telegrams must cause some parts of the Empire, which are blessed with rates of 5s. to 7s. a word, to think furiously. His main ideas are to increase the land lines, so as to rely as little as possible on expensive cables, and to acquire a cable to Canada. The first is cosmopolitan in character, and it is not unreasonable to believe that international agreements for reduced through rates might be arrived at. At present Turkey, some people may be surprised to learn, sets the example. Whether we shall ever get down to 1d. is another matter, but it is a good thing to have an ideal and a battle-cry. The second idea is more strictly Imperial, and has been taken up vigorously by Mr. Lemieux. The question is, of course, mainly one of finance. Mr. Deakin is reported by telegram to have said that communications through the Pacific cable are greatly crippled by the excessive charges imposed by a combination controlling Atlantic cables. The Atlantic companies, however, give the Pacific cable a reduced rate, so that the charge from the United Kingdom to Vancouver is 1s., and under present circumstances it does not appear that any considerable reduction in this charge could be made by using wireless telegraphy, even if it were sufficiently reliable. Australia itself charges the Pacific messages with an inland rate of 5d. a word. Thus, even if the Pacific cable charged nothing, the out-payments amount to 1s. 5d. a word. The movement for a reduction of Australian rates is principally on behalf of press messages, and all classes are interested in the cheapening of these, and there would therefore be considerable justification for a special concession for this purpose. But the proposal for a Government Atlantic cable opens up the questions of interference with private enterprise and the subsidising of a part of the public.

The Earl of Rosebery in a recent speech has referred to "what used to be called the colonies" as the "Outer Britains." We are doubtful whether the latter term will commend itself overseas. It is no doubt the case that the settlements which have outgrown the original idea are now something more than colonies in the ordinary sense and do not care to be described by that name. But no one is concerned to dispute that all the possessions of Great Britain abroad are historically colonies, and in any reference to general political relations the name must be used. The consideration which has recently been urged and carried into effect is that a distinction for administrative purposes should be made between the colonies which are self-governing and those which are not. This is a division into species, but it does not affect the genus. The word colony as a general one remains, and nothing can be invented to displace it. The colonies, great or small, have their own character, are not new or outer Britains, and do not want to be described as such.

His Lordship proceeded, in his characteristically suggestive manner, to express an opinion that that State is most fortunate which achieves its own development by the character of its own citizens, and by their individual efforts, as little as possible supported and guided by legislation. But the keynote of most modern legislation is not an endeavour to develop resources or to increase wealth. It is rather a moral consideration—the desire to extirpate ignorance, vice, crime and disease. The experience is general that for these objects collective action is absolutely necessary. It is not enough to have an individual here and there on a high level in these matters; what is wanted is to bring up the general community to this level, and this can only be done by law. A new law in such matters reflects the general sentiment of the nation, but it sets up for uniform obedience a higher standard than that generally followed. Only by this process of picking out the best and applying it all round has mankind won a difficult way up from barbarism. At the present day the moral force which is shaping legislation is markedly strong, both in this country and the colonies. In the end, national greatness must depend on the character of the individual man and the individual woman, but if the weaknesses of human nature are not curbed by social efforts that character will not reach the highest possible level.

The depression of trade which is affecting the United Kingdom and many of the colonies is the inevitable result of a period of expansion. The supplies and demands of the world are so intricate that it is impossible to keep anything like an even balance between them. Even the experts in particular articles cannot foretell, except

VOL. II., No. 3.

in a very qualified and tentative way, what the relation between the two forces is going to be in the immediate future. The movements in silver, for instance, great as they are at times, defy prediction. The whole financial machine moves in mysterious ways. No one prophesied, or could have prophesied, at the beginning of this year that there would be a plethora in the money market in the autumn. This phenomenon was no doubt due to the fact that when trade is flat capital is hoarded instead of being employed in business. The explanation of such fluctuations is generally quite simple, after the event.

An interesting discussion has taken place between the Cape Government and the fruit exporters as to the modes in which this industry should be assisted. Opinion was divided on the question whether the Government should inspect and brand fruit. There is an increasing tendency for Colonial Governments to do work of this character, and the consumption is certainly greatly helped by the official certificate. It is urged, on the other hand, that the course is an interference with the rights of shippers, and this view found expression at the Cape conference. When there is considerable uniformity in the product, so that a fairly definite standard can be fixed and generally attained, there is great advantage in a system of Government supervision; when this is not the case, the control which is virtually granted would become troublesome and perhaps unfair. In short, the necessary condition is standardisation. In the case of fruit, it is easy to see whether the fruit is bad or decidedly below an understood standard. In South Australia, New Zealand and elsewhere a Government inspector has full power to forbid the export of bad fruit, and this keeps up the quality and the reputation of supplies. If there is no check of this kind, obviously a single consignment may do a vast amount of harm to the industry, for the buyer will be chary of running the risk a second time, and so the careful producer suffers. We think the fruit industry of the Cape, which is still in the experimental stage so far as export is concerned, would benefit greatly by a similar provision. There is a great business obtainable if the quality is kept up and the packing and seasons properly studied.

There was a time not long ago, it appears, when brandy was sold in Cape Colony at 2d. a bottle. In those Elysian days, a speaker at the Agricultural Union observed, the farmer could now and then afford to give his hands a glass, "he could not do that now, so that the farm hands went to the village for their drink and generally finished by being looked up." Apparently the Arcadian brandy has been displaced by "injurious spirituous compounds at present being

secretly manufactured and consumed in the country." Possibly the 2d. product erred on the side of being too innocent for the general taste. Whatever the reason, the wine industry of the colony is in a bad way. It is a great pity, as some two millions and a-half sterling are invested in it, and it employs much more labour than ostrich farming and such other substitutes. The only remedy is to improve the quality. Practically there is no export market, and until one is created there is little prospect of success.

Large areas in the Transvaal are suitable for tobacco growing, and a committee has considered how the industry can be promoted. The dark African types of leaf fetch only about 3d. per lb., but a bright leaf of the Virginian type brings 2s., and one Company has offered to buy a million pounds of this leaf whenever it is offered. The Transvaal farmers, however, have practically made no efforts to grow the best varieties. Tobacco growing is an intensive form of agriculture, requiring a great deal of labour and care, and the usual methods now employed are only good enough for local consumption, and not the best of that. Central warehouses and scientific instruction are recommended by the committee.

A good deal of work has been quietly done in the scheme for the preparation of illustrated lectures on the Empire. The first idea was to give colonial children, by means of "visual instruction," a clear understanding of the character of the United Kingdom. Various sets of lectures and lantern slides were prepared for this purpose by Mr. H. J. Mackinder. The compilation gives the journey from the colony to London, London, the scenery of the United Kingdom, historic centres, country life, the great towns, and the defences. The cost of these lectures was defrayed by the colonies. To provide for the lectures on the colonies for use in this country, a private subscription was set on foot, and, at the instance of H.R.H. the Princess of Wales, Lady Dudley and a committee of ladies secured nearly £4,000. Under these good auspices the work has proceeded in a satisfactory manner. Mr. A. H. Fisher, a member of the Painter-Etcher Society, has been commissioned to visit India and the Colonies for the purpose of obtaining sketches and photographs suitable for lantern slides. He has visited India, Ceylon, Somaliland, Aden and Cyprus, and in July commenced a second tour to take in Canada, the Straits, Borneo, Hongkong and Wei-Hai-Wei.

Much discussion has recently taken place in India with regard to the hoarded wealth of the natives. In a calculation made in 1884, the value of the gold and silver imported into India between that date

and the middle of the 16th century was put at some £800,000,000 ; but the process began many centuries before the latter period. It is proposed that some means should be adopted to educate the native mind up to the point of appreciating the blessings of investments. The process can only be a gradual one, for the habit of hoarding is primeval and can only be eradicated by a long course of experience in modern dealings. The same thing is observed in West Africa. There the silver pieces of British currency to a great extent silently disappear into the interior and never come back. This is a very profitable phenomenon for the British Treasury, which makes a profit of about 50 per cent. on the coinage. In this country the coins would be exchangeable for their face value in gold, and the Treasury, which is responsible for supplying the gold, is naturally entitled to the profit on the silver, or, as it is called, the seignorage. If, however, the silver disappears from sight, the Treasury takes its 50 per cent. and incurs no real liability. It has been proposed that the Treasury should pay over this or some of the profit to the colonies to which the coins are exported, but one difficulty is that no one can prove that the silver will not be returned for exchange, and in the meantime the Treasury is always theoretically liable. That department remains, therefore, entrenched in its position. When the silver coins are "token," i.e., marked and meant for some local currency alone, the Treasury has no liability, and the profit on the coinage should go to the colonies in which it is legal currency.

The Australian Commonwealth Government have, it is understood, decided to take over the coinage of silver and bronze coins. This work has hitherto been done by the Imperial Government. The average supply during the last ten years has been £111,859 in silver, and £61,342 in bronze. These coins will gradually be withdrawn by the Imperial Government, but probably about half the issue has been already drained away from Australia. The future coinage will be local and, therefore, more or less confined to Australia, and the Commonwealth Government would take the profit on the seignorage and the responsibility. It is proposed to do the coining at one of the branches of the Royal Mint in Australia by arrangement with the Imperial authorities. In connection with this matter the question of manufacturing small arms ammunition in Australia has been considered. It is obviously desirable that Australia should be able to supply herself with this material, and the work of making discs for coinage and cups for cartridges is similar, for in both cases alloys have to be made by melting and mixing the proper metals in due proportions, and these alloys have to be cast and subjected to annealing and rolling operations before the strips are punched out into the required form. The "Mint" at Birmingham does both classes of work.

Bronze coin is unpopular with the African native on account of its colour. Something brighter is essential.

In 1905 it was arranged to coin for local currency in Northern Nigeria a nickel bronze penny, equal in value to one-twelfth of a shilling, of the size of the British bronze penny, and an aluminium coin, equal in value to one-tenth of a penny, of the size of the farthing. The coins were to be perforated so that they could be strung together, and this practically necessitated the omission of the King's head, but for this there are precedents in the last and previous reigns. Moreover coins are better liked by Mohammedans if no pictures of men or animals appear on them. Two interlacing triangles, called "Solomon's Seal," were adopted as the device.

But it was found before any coins were issued that the nickel bronze tarnished quickly, and, it was evident, would be unpopular on that account. The coin also was heavy—as heavy, notwithstanding the perforation, as the British penny. The tarnishing was greater than has been found to be the case in the West Indies, but there the climate is not saturated with moisture. Moreover, the West African native does not wear trousers or use pockets, and the coins, therefore, are not kept bright by constant rubbing. The proportion of nickel to copper was accordingly increased (25 per cent. to 75 per cent.).

The aluminium coins were found to corrode quickly. The "tenths," as they were called, were extremely popular at first, but became dull and dirty in a few weeks, and the natives lost confidence in them. In some cases it was clear that this was due to contact with acids, probably contained in exudations from the human body. The loin cloth of the native is in fact more trying than any subjection to plain heat and moisture. The metal also appeared to be rather soft. It was necessary to resort to a nickel alloy similar to that of the nickel bronze penny. The drawback to this course is that this material is dearer than aluminium.

The West Indies will part with Sir Daniel Morris, K.C.M.G., with sincere regret. His colonial services began in 1877 in Ceylon, where, after investigating the coffee disease, he recommended the cultivation of tea, now, as everyone knows, carried on on an enormous scale. He was transferred to Jamaica in 1879, and paid visits to other members of the group and to St. Helena. In 1898 he was appointed to be the first head of the Imperial Department of Agriculture for the West Indies. He has worked indefatigably in that position and has shown the invaluable gift of inspiring others. The Department has now, it is hoped, become a permanent element in West Indian administration. It has won generous recognition even from those who were at first disposed to level against it the criticism which the "practical man" is so fond of levelling at the

"scientific expert." The revival of cotton growing has been largely due to Sir Daniel Morris, but his activity has extended to a great number of other products. The Colonial Office will, we understand, continue to take advantage of Sir Daniel's unrivalled knowledge and experience of tropical agriculture.

The Trinidad Dock and Engineering Company may reasonably expect to acquire a considerable business in time, but the process is slow and, in the meantime, the fixed charges are heavy. The Company is now in such a position that the Colonial Government may have to consider the question of taking over the undertaking. Under the contract the Government has power to do this by paying the amount spent out of capital, less depreciation and any subsidy paid; this amount, assuming that there is no depreciation, is £88,100. The fixed London charges amount to £8,330 a year, made up chiefly of the debenture interest at 5 per cent., the redemption policy and insurance. This is a heavy load to struggle against, and the small vessels which have hitherto used the dock are far from supplying the business required. It is true that the past year has been a very unfavourable one, and that a much greater tonnage may be hoped for in future.

The extensions of the British Empire are occasionally embarrassing from a topographical point of view. The New Zealand Government approved a proposal to open a post-office in King Edward VII. Land, and a notice was issued that a suitable surcharged stamp will be used. The lynx-eyed stamp collector was, of course, at once on the track, but the General Post-office at Wellington informed applicants that the stamps could only be obtained at the King Edward VII. Land Post-office. As the map failed to disclose the whereabouts of this territory, the information was not of much use; but a further official letter stated that "the Post-office at King Edward VII. Land is in the South Polar regions, and if you address a communication to the Postmaster it will be despatched in the mail to that office by the first opportunity, which will probably be about a year hence. Registered letters are accepted for transmission to King Edward VII. Land." Presumably the Nimrod expedition to the South Pole was at the bottom of this somewhat mysterious response. The gravity preserved by the Wellington Post-office in this matter is admirable.

The report of the Fiji Customs Commission, recently published, is an interesting study of the considerations which affect questions of taxation in a mixed community. The object is simply fiscal, and the main point is to secure fairness of distribution between the

different classes, but particular regard has to be paid to the importance of not imposing heavy burdens, which tend to check the development of industries. Increases of the taxes on certain food-stuffs are recommended, and it is pointed out that, while there are general objections to such taxes, it is essential in such a country as Fiji to impose them if a fair distribution is to be realised, as the industries are practically in the hands of a small proportion of the residents. All machinery imported by the sugar manufacturers is admitted duty free.

The Ceylon Government are contemplating a number of undertakings which will necessitate a loan for the equivalent of Rs. 51,552,800. Many of the purposes were discussed under Sir Henry Blake, and recent services which have been decided upon as requiring loan funds are the drainage of Colombo, survey, Colombo Lake development, irrigation, and motor traction.

A famine is a very rare occurrence in any part of the Colonial Empire, and in a tropical country there is seldom any real excuse for one. There was, however, a severe one in March-June this year in Usoga (Uganda), caused by a drought in 1907, the improvidence of the inhabitants in relying entirely on bananas, and depredations of crops by wild pig. Early in March men were collecting roots from the jungles and swamps, and women and children were said to be dying in large numbers. On March 20th 400 deaths from starvation were reported. Food was sent by the Government for the men working for it, but, strange to relate, the greatest difficulty was experienced in getting men to come in. Natives refused to have food sent to their families, and when employed at a wage of Rs. 3 per month they almost invariably deserted. The officials were at their wits' end to help people who did so little for themselves, and showed no appreciation for anything done for them.

In April some 24 tons of food were shipped from Kisumu to Jinja, but a new difficulty arose owing to a report to the effect that the Government was only distributing food with a view to seizing all the goats and live stock by way of compensation. Also, it was found that the natives often ate their grain raw, in which state it did more harm than good. In May the Secretary of State granted £3,000 to meet the requirements, and 37 distributing centres were established, with a kitchen at each. On May 18th it was reported that the deaths amounted to nearly 4,000, and that 70 per cent. of the population were starving and the remainder in want. On May 26th the Secretary of State sanctioned an expenditure of £8,000 on relief,

and offered assistance in supply of food or by opening a relief fund, but this increase proved unnecessary. May was the worst month, and in it 565 tons of food were shipped to Jinja. The rains continued, and at the end of June the earliest crops—chiefly sweet potatoes—could be depended on. The total deaths came to 6,000 to 7,000. By the end of June the famine was practically over. Transport was one of the chief difficulties; the people absolutely refused to help themselves or their starving brethren by carrying food, and the men preferred to be at home and starve rather than come for food to a distributing centre where they might be caught and sent to bring more food. The gross expenditure on the famine amounted to £13,700, but it is expected that the sale of accumulated rice will bring it down to £9,000. It is intended to recover the whole amount from the people next year, probably by a double hut tax or a poll tax of two rupees.

A redeeming feature in the story of the famine is to be found in the whole-hearted manner in which the Roman Catholic and Church of England missionary organisations co-operated with one another and with the Government in the task of relieving distress.

The palm nut of the tropics is familiar to the younger public at home as the monkey nut, and the exhibits at the Franco-British Exhibition will have made it well known to the public which has not ventured to make its acquaintance as an edible. It should, therefore, be realised that the collection is no easy matter. The work is laborious and not without danger, especially as snakes are fond of the thick foliage at the top of the trees, and from their position enjoy a tactical advantage over the climber. It rarely happens that more than two bunches of ripe fruit are found on one palm tree, and when these have been cut each fruit (about the size of a small plum) has to be separated by a cutlass from the strong husk in which it is embedded. A considerable time, therefore, is required for a native to get 80 lbs. (a heavy carrier's load) of severed ripe fruit ready for transport; generally it is nearly three days.

The geographical character of many of the British possessions eminently fits them for the position of distributing centres, and it is important that everything should be done to increase their value in this respect. The prime considerations are that every facility should be given for export, and that transshipment of cargoes should be made as simple and easy and cheap as possible. Ships are tempted to come in if a drawback on ship's stores is allowed, but a minimum tonnage should be prescribed to entitle ships to this privilege. In some cases drawbacks are not fully allowed unless the goods are in

their original packages; but this is not altogether reasonable and leads to trouble. It should, however, be required that the goods are in the same condition as when imported, and a limit of time should be fixed. The clerical requirements should be simplified as much as possible, and the transhipment charges clearly fixed by an inclusive tonnage charge. At the same time there is a limit to the freedom which should be allowed. In Malta steamers are allowed to begin discharging without notice, and the importer makes no formal entry. The revenue cannot be properly protected in this way. A detailed and instructive report by Mr. R. H. McCarthy, C.M.G., on the working of the Customs Department of Malta, has recently been published, and would be serviceable to any Government which has occasion to consider its customs arrangements.

Paragraphs have appeared in various papers that the little fish in Barbados known as "millions" destroy mosquitoes, and some colonies have asked for supplies. A reference has been made to the Zoological Society, who have kindly furnished the following report:—

"(1) The small fish known in Barbados as 'millions' (*Gerardinus paeciloides*) appear to be very hardy, and will live in quantities of fresh water from half a gallon upwards. They also multiply rapidly. Their food is any kind of small water flea, or larvæ. We have had some in a tank at the Gardens for several months, where they live upon a species of minute crustacean, which happens to be abundant in some of the tanks in our reptile house.

"(2) It is certainly the case that they eat greedily the larvæ of mosquitoes, and some persons at least are of the opinion that the freedom of Barbados from malaria is due to the presence of these small fish, which are abundant in the island, and which are kept in various ponds and tanks in private houses. I understand that the mosquitoes, which are the carriers of the malaria organism, almost invariably frequent any small pools or tanks near houses, and no doubt these fish, if kept in such tanks, would aid in keeping down the mosquitoes, although I am by no means convinced that this method would be as effective as the well-known method of keeping a film of paraffin, or some other oily material, on the surface of the tanks. On the other hand, it seems to me extremely improbable that the presence of 'millions' can be an effective agent in the reported freedom from malaria in Barbados, because in other islands, which are not free from malaria, different species of the same genus, but with similar habits, are abundant.

"(3) It would be easy for anyone going out to Mauritius, and who is prepared to take a little trouble, to take with him two or three hundred of these fish, which are from a quarter of an inch to half an inch in length, as they could be fed on small fragments of shredded

meat. I have every hope that our stock at the Gardens will live for some time, and I shall be glad to present to any agent of the Government of Mauritius a number of living specimens, and give him advice as to looking after them on the way out.

"I may add that some time ago we sent in this way a collection of specimens to Uganda, but I have not yet heard with what result."

We may observe that the example of Barbados is hardly conclusive, as the anopheles mosquito is not found there. A consignment of "millions" has been sent to Ceylon.

Lloyd's Annual Report for 1907-8 mentions that there is an increasing demand for steamers built for the carriage of oil in bulk. Probably this mode of shipment will in time almost entirely displace the expensive shipment in drums. The progress of the marine turbine is shown by the fact that the tonnage of these steamers was nearly double what it was in the previous year. There is a rapid increase in the number of yachts, &c., fitted with oil or petrol engines. Refrigerating appliances also show a large development.

A long-standing difficulty has been arranged, without much attention being attracted, by the arrangements under which the French and German Governments have practically assimilated their freeboard regulations to ours. This will enable the loadline certificates issued by both countries to be mutually recognised. The matter is specially noteworthy at the present time, when the Imperial Government is representing to Australia the importance of having approximately uniform standards. The correspondence (published in Cd. 4,355) has largely gone on questions of the power to legislate, but there can be no doubt from a practical point of view of the convenience of uniformity, however it is secured.

The functions of the Government Auditor are a matter of general interest to the Colonies, and a point which has arisen in Ceylon may be mentioned. It was proposed that in certain cases the Treasurer's recommendations for expenditure should, on their way to the Colonial Secretary, go through the Colonial Auditor, "to see if they are in strict order;" the object being to avoid mistakes from the outset, as, if the expenditure would not be proper, the Auditor would say so at the inception, and not when it had been approved by the Governor. The Secretary of State, however, did not agree. He observed that "the essential principle to be

kept strictly in mind is that it should never be possible for a public officer, when an account is being audited, to allege that the Colonial Auditor had already approved, or at any rate acquiesced in, a given payment. The system of sending papers to the Colonial Secretary through the Audit Office should not be adopted, since under it the Colonial Auditor will be liable, however wrongly, to be regarded as approving of anything which he does not definitely question, even though it was not one of the points on which his opinion was asked by the Government. If the Governor or the Colonial Secretary requires the opinion of the Colonial Auditor on the interpretation of a regulation, he should refer that definite question to the Auditor, and as far as possible keep the interpretation of the rule apart from the particular instance on which the inquiry arose."

As Colonial Governments from time to time enquire about authoritative publications dealing with customs tariffs and the classification of imports, a list of such papers may be useful.

(1) The Import and Export Lists of the United Kingdom, with appendices.

(2) "List of Countries, Ports and Shipping Places throughout the World" (Customs Department).

(3) Parliamentary Papers, Cd. 3,859, 1907, Foreign Import Duties; and Cd. 3,708, 1907, Colonial Import Duties.

(4) "Bulletin International des Douanes," issued by the International Customs Tariff Bureau and printed by Hayes, 112 Rue de Louvain, Brussels.

(5) The "Imperial Tariff," published by Eyre & Spottiswoode.

(6) The "Shipping World Year-Book," published by the Shipping World, Limited, Effingham Street, W.C.

The Colonies which participated in the Franco-British Exhibition came in for an abundant award of honours. This is satisfactory, and no doubt the prizes were well earned. But the system of judging does not seem quite proof against mistakes. We learn from the "West India Committee Circular" that in one case a bottle labelled "Cassava Farine" was awarded the grand prize for arrow-root. Subsequently it was found that the bottle contained neither the one nor the other, but merely powdered lime.

The G. P. O. annually gives instances of the way in which its patience and ingenuity are tried by the public, but it is hardly pressed so near to the verge of endurance as a New Zealand postmaster seems to have been when he posted up the following

notice :—"As all postmasters are expert linguists, the addresses may be written in Chinese or Hebrew. Persons are not compelled to lick their own postage stamps and envelopes ; the postmaster will do this for them. Persons are earnestly requested not to send post cards with money orders attached, as large sums are lost in that way. It is particularly requested that lovers writing to each other will please confine their gushing rhapsodies to the inside of the envelope. When watches are sent through the post, the sender should put a notice on the outside ; the postmaster will then wind them up and keep them in going order."

On the 9th of December the Earl of Crewe presented Sir W. Baillie-Hamilton, on his retirement after a service of forty-four years in the Colonial Office, with a three-quarter length portrait painted by Mr. W. E. Miller, and three large silver cups with covers, copies of originals of the period of George II. The testimonial was the gift of members of the Corona Club, which has owed its origin and much of its success to Sir W. Baillie-Hamilton. Sir C. Clementi Smith opened the proceedings, and both he and the Secretary of State warmly recognised the value of the achievement. The Colonial Office will miss the presence of an officer who has steadfastly striven to maintain the dignity and increase the popularity of the department.

AFTER THE BOER WAR.

THE Boer war is rapidly becoming ancient history. It is being blotted out of view by the constitutional settlement. It cannot by any means be claimed that everyone is satisfied, but it is clear at any rate that equilibrium has replaced instability. The grant of responsible government closed the dissensions which led to the war. Other questions succeed, but the matters which figured in the correspondence between President Kruger and H.M. Government are fast being relegated to oblivion.

Economically, however, substantial effects remain. War and the causes of war pass away, but no treaty of peace restores the waste. That the loss has to be made up is obvious, but few people can realise, until they have had an object lesson, how great and lasting the loss is.

The waste is, of course, greatest in the country which is the scene of operations. Not only is capital used up and labour diverted, but there are the ravages of destruction. In the Boer war these were exceptionally severe. The Transvaal Repatriation Department was constituted to deal with them. They found that at the declaration of peace on the 31st May, 1902, the whole of the country away from the railway lines had been cleared of everything, and was more like a wilderness than a country which should have been supporting some two hundred thousand people. All the farmhouses had been laid waste, many of the smaller towns had been destroyed, and scarcely a homestead remained intact. The system of "drives" which had been organised by Lord Kitchener had denuded the country of all live stock and supplies. In short, the Transvaal had been stripped of everything which was necessary to enable the country population to return to their homes and resume their occupations. Added to this, the stocks of supplies and merchandise in the hands of merchants and others in the large centres and smaller towns along the railway lines were so limited as to be of very little service in feeding or in any way equipping the large numbers of people whom the declaration of peace threw on the hands of the Government. In

consequence, nearly everything required for repatriating and restarting the country people had to be imported into the country. Added to the above-mentioned fact, the railways, which had been working at very high pressure during three years of war under conditions which prevented the maintenance of their permanent way and rolling stock at a proper working standard, were being strained to their utmost capacity in taking troops, which were being returned to England, to the seaports, in bringing up army supplies, in replenishing their own stocks of repairing and constructing material, and in bringing forward supplies for merchants and importers who had placed very large orders for supplies of every kind, so that it was only with the greatest difficulty and delay that the supplies required for repatriation purposes were brought forward.

Under the terms of settlement the Imperial Government provided £3,000,000 for the purpose of "assisting the restoration of the people to their homes and supplying those who, owing to war losses, are unable to provide for themselves with food, shelter and the necessary amount of seed, stock, implements, &c., indispensable to the resumption of their normal occupations." The work was taken in hand promptly, too promptly in fact for a proper consideration of the subject; but as the position was critical, there was no time for a philosophical survey of the case. The three millions were spent, and much more. The three millions went in free issues of money and supplies, and without any deduction for working costs; but, in addition, £5,481,753 was expended, of which £583,758 represented free issues, and the rest advances or supplies which were to be repaid.

The difficulty is now, as might naturally be expected, to get back the advances. There is, we might say, of course, a class which does not intend to repay till it is obliged and which clamours for the total remission of the debt. The matter is put plainly by a recent Committee. "Throughout the country there is a class of the farming community who in the past received assistance from the State—a class which constantly clamours for help, and, when given to it, invariably looks upon it as a free gift, because it comes from the State. This view of State assistance has now become conviction in their minds, and it will be difficult to remove it. This class consist of those of whom it has been said they took all they could get on credit from the Repatriation Department, openly expressing the opinion that they would never be called upon for payment. The energetic and advanced farmers of the country feel strongly on the matter, and many of them are withholding payment in order to see whether the class indicated are going to receive special treatment, which, if they do, they consider should apply equally to all. The thriftless class, it has been stated, possessed little or no stock before the war, but, in order to meet the requirements of the

Department and secure an issue of cattle, instances are known where small plots of farm lands were leased to give the applicants for assistance an appearance of financial stability. There seems to be no doubt that the sureties were aware of what was taking place, and they divided with the principal debtors the stock obtained. Thus we have the hard-working farmers making every endeavour to discharge their liabilities, but waiting to see whether Government will treat the thriftless agitator with the same leniency he is said to have received in the past at the expense of the State Treasury."

Government assistance of this kind is, in fact, to a great extent demoralising. The task was too big to be conducted with a scrupulous regard to the merits of each case. A great population had to be re-established, and no doubt some got too much and others too little. The crop failures of recent years have greatly increased the trouble. The Committee observe that in the agricultural districts a spirit of despondency and desperation is taking hold of the people at the prospect of being called upon to meet liabilities which they cannot provide for owing to financial distress caused by the failure of crops for three successive seasons. The grant of a period of years within which to meet liabilities would remove this feeling and be gratefully received by the deserving class. At the same time the Government will have to face many losses, which are sure to arise through insolvencies, death and emigration of both principals and sureties. Another danger which partly defeats the object State aid is meant to confer, and which has to be faced, is the seizure of the farmer's stock, goods and chattels by other creditors. These creditors are traders, who readily give credit so long as the farmer has a few tangible assets which can be seized and turned into cash sufficient to cover his liability to them with interest. The effect of the action of this class of trader is that many of those who have been assisted by the Government are gradually being pauperised and thrown back upon the State, and the money expended upon them can be looked upon as practically waste. As to whether or not the special circumstances under which the relief was given out of State funds would justify the Government even now to introduce legislation to protect debtors from this class of trader for a reasonable period of years is a matter upon which the Committee did not feel called upon to express an opinion.

Apart from these considerations, there are specific allegations that in some cases unreasonable prices were put on the things supplied. On the whole, it would seem that rations, seeds, building materials and farm implements were fair in price and quality. But, unfortunately, this is not clear in the case of horses and cattle. These were mostly supplied by the military authorities, and it is asserted that excessive prices had been given for them, and that many of them were in bad condition. No doubt the huge and

sudden demand sent up prices, and it cannot be shown that there was a market value at the time below that paid. The Committee are disposed to think that it would have been better to wait for better terms. "It is admitted that if the Civil Government had refused the military stock and purchased elsewhere, it would have delayed the work of repatriation for a few months, but the advantages to the Civil Government would have been apparent from the start. The extra cost of keeping people in camps already established would have been comparatively small, better animals would have been obtained, and the loss of time would not have been of great moment, as, after all, the month of September would have been a better month to repatriate people than the middle of winter. Against this it may be said that the clamouring of the people to get home did not admit of any delay. Your Committee are aware that the position was one of great difficulty, but the conditions of surrender clearly state that repatriation would be carried out 'as soon as conditions permit,' and it is felt, however trying it might have been for the ex-burghers, that the matter could have been satisfactorily explained to them by their own leaders. The result must, of course, remain a matter of conjecture, but it is fair to assume that the same amount of casualties would have occurred through disease, &c., and the sum of £641,000 for death of animals, which is exclusive of losses upon sales of surplus animals, and the amount recovered through raising prices would not have been a charge upon the guaranteed loan falling upon the Colony to-day."

This is reasoning in the cool of the evening, but at the time the urgency of the position seemed the predominant consideration. It is easy to see what complaints would have arisen, on the spot and in this country, if the authorities had kept the people in the camps in the hope that the prices of horses and cattle would go down. Commercial speculation is rather out of place in such a situation.

It is necessary, however, to recognise the fact that many of the animals were bad, and many people lost all their stock. There was undoubtedly much severe suffering, and many debts remain where the receiver got no benefit. Some leniency is called for, and the Committee recommend some remissions of the charges for stock and extension of time for repayments. The cost to the Transvaal would be £350,000.

EARLY COLONIAL HISTORY.*

THE early history of the British Settlements in America is a subject which the English reader cannot easily pursue with entire disinterestedness. His sentiments are inevitably coloured by a feeling of regret at the great catastrophe which cut off from the British Empire the most prosperous and populous Colonies which it has ever succeeded in establishing, and set up a second Anglo-Saxon nation in the New World. He does not always pause to reflect what revolutionary changes in English political, commercial and social life must have been brought about had the connection with the American Colonies never been interrupted. Australian and Canadian statesmen of to-day look forward to a time when the white population of the Commonwealth and the Dominion will exceed that of the British Isles. It is an expectation destined, in all probability, to be realized, and with its realization there must come about a fundamental change in Imperial relationships. But the time is still far distant, and it is not unreasonable to believe that our political institutions will show an adaptability and elasticity sufficient to fit them for new circumstances. But the development of the United States has been so rapid and so immense that it is hardly conceivable that any change in the mould of our constitution could have enabled the connection with the United Kingdom to be maintained. Nevertheless, even the inevitable may furnish a just ground for regret; and the grievous mistakes admittedly made by our eighteenth century statesmen, their alternation of recklessness and apathy, their short-sightedness and lack of imagination, as well as the downright incapacity which marked so much of their policy and administration, justify sentiments of a stronger nature than regret. But there was at one time a tendency to express far too general a condemnation of the early Colonial policy of Great Britain, and to represent the whole Colonial system as the outcome of selfishness and commercial

* *The Origin of the British Colonial System, 1578-1660.* By G. L. Beer.—The Macmillan Company.

greed. By the irony of circumstances it has fallen largely to American historians to destroy this fable, to show that the case for the mother country is far stronger than used to be supposed, and to prove that the Colonies were not solely animated by the motives of manly independence and resistance to oppression. In the present volume, Mr. Beer does not approach the period of acute controversy; his sketch of the development of the Colonial system is only carried up to the year 1660; but the story is already brought up to the point at which the main features of what became a more or less permanent Colonial policy are clearly discernible, and it is possible to form an opinion as to the merits and defects of that policy as a whole. There is an excellent analysis of the motives which inspired the foundation of the early settlements. The spirit of adventure and discovery counted for something; religious motives, especially important in the case of New England, perhaps for more; while there were also present those vague desires for an expansion of territory and a spread of British jurisdiction, which lie at the root of all Imperialist sentiment in all ages. But the really operative motives were economic. The idea that the Colonies would furnish valuable new markets for British manufactures, an idea familiar to us as an argument in favour of a "forward policy" in more recent times, was of comparatively late growth. In the first instance it was mainly as sources of supply that they were valued. England was to be relieved of the necessity of purchasing the commodities she required from her foreign competitors, and thereby the "drain of bullion," which the primitive economists of the seventeenth century dreaded, was to be avoided. There were hopes, constantly renewed and as constantly disappointed, that the precious metals would be discovered in the North American Colonies, which would thus become a counterpoise to the Spanish possessions. They were to supply the naval stores for which England was to a large extent dependent on the Baltic powers. They were to serve as a half-way house to the Far East, the trade with which was almost monopolized at first by Portugal, and subsequently by Holland. They were to furnish fresh fishing grounds in which England might hope to be independent of Dutch competition, which she had combated with small success in nearer waters. It was only in the expectation of tangible advantages such as these that the colonizing movement had been countenanced by the home authorities. "In permitting its subjects to settle America," says Mr. Beer, "the English Government assumed onerous obligations, in return for which it naturally expected that some compensating advantages would accrue to the mother country." For many years the history of the Colonies was largely one of disappointed hopes. The commercial "adventurers" who founded the colonizing companies expended large sums and received only meagre returns. The Government found that the

supplies on which it had counted were not forthcoming. The shorter route to the East proved to be a delusion. And there is another aspect of colonization which Mr. Beer sets forth with great lucidity. Unless the parent State has a larger population than she needs, the loss of citizens entailed by colonization is a serious matter, "If . . . the State has no surplus population, and is called upon to protect the dependency, then the mother country must, in her own interest, seek some means of deriving from the Colony compensating advantages, such as exclusive privileges in trade. Otherwise the parent State would be in a stronger position without the burdensome responsibilities arising from the possession of dependencies." Since the industrial revolution, Great Britain has had a rapidly expanding population, and a considerable overflow into other lands has been inevitable. That those other lands should be British and not foreign has been a clear advantage. But "prior to the completion of the industrial revolution diametrically opposite conditions prevailed. During the two centuries reaching back from that time to about the Restoration in 1660, England had no surplus population. During this long period emigration from England to America, although it was of slight dimensions, was viewed with great alarm. The prolonged duel with France emphasized the comparative smallness of England's population, even adding thereto that of Scotland and Ireland. Thus in 1670, a well-known economic and political writer, Roger Coke, said that 'Ireland and our Plantations do, in proportion to England, more exhaust it of men than the West Indies do Spain'; and that, while Spain gained new subjects in her Colonies, 'we, in our Plantations, wholly people them from ourselves.' Coke maintained that England's existing military inferiority to France was due to this emigration, and he pointed out that before the era of colonization, England had usually been successful in her wars against France and Scotland. Finally he said that 'Ireland and our Plantations rob us of all the growing youth and industry of the nation, whereby it becomes weak and feeble, and the strength, as well as trade, becomes decayed and diminished.'" Mr. Beer goes on to point out that, during the first half of the seventeenth century, there was a widespread impression that England was over-populated, and great use was made of this as an argument in favour of colonization. The language used sometimes recalls that of Mr. Rider Haggard or General Booth. A pamphlet of 1630, in favour of colonizing Massachusetts, represented that it was a great pity this land should remain "altogether unoccupied, when so many honest men and their families in old England, through the populousnesse thereof, do make very hard shift to live one by the other." Sometimes more cynical views were expressed. The Spanish Ambassador in 1614 wrote to his Government that though the Virginian Settlement had turned out

an expensive failure, the Government would not allow it to be abandoned, because "it was well to preserve that place, altho' it be good for nothing more than to kill people, and to afford an outlet to them from here; since in this Kingdom here they grow and multiply so as to be innumerable." But Mr. Beer finds that there was no real over-population, tested by the productive capacity of the country, during this period. There was a considerable increase in prosperity from the middle of the sixteenth century, which was attended by an increase in the complexity of social and industrial conditions, one feature of which was an increased inequality in the distribution of wealth and the establishment of pauperism as a permanent feature in English life. We have no doubt that Mr. Beer's view on this matter is correct; but we think that the supposed existence of a surplus population—that is, a population in excess of the productive capacity of the land—at the present time may be similarly explained. However that may be, it is clear that during the early years of colonization, the expatriation of a certain number of Englishmen was of no direct benefit to the mother country, and that, taking the narrow point of view of Imperial book-keeping, the Colonies were only valuable if the expenses and risks in which they involved the parent State were counterbalanced by solid commercial advantages. As Mr. Beer shows, and as we have indicated above, it was long before such advantages were realized. Looking at the other side of the account, we find that the advantages which the Colonies themselves derived from the Imperial connection were very real and substantial. It was only the certainty that English protection would be extended to them which prevented them from succumbing to the forces of France, Holland and Spain. They enjoyed a very large measure of local independence, the Imperial Government in many instances having not even a single resident official to represent it. And if they were compelled to export the bulk of their produce to the home market, they benefitted there at the expense of the English consumer by preferential duties, which, in some cases, conferred a practical monopoly, and by the actual prohibition of the cultivation of tobacco in England. Moreover, the restrictions imposed on their trade sometimes did little more than give legal sanction to limitations imposed by the force of circumstances. The title of England to her settlements was disputed by many rivals, and produce exported to those rivals would have suffered immediate confiscation. The English ports, too, were already important *entrepôts*, and it was at once more profitable and more convenient to send goods there than elsewhere. Mr. Beer illustrates his treatment of all these matters by a copious use of original authorities, and he shows great skill in maintaining the interest and lucidity of his narrative when dealing with masses of intricate detail. The history of tobacco, which figures largely in his pages, is diversified by much piquancy and humour. There is a

curious parallel between the seventeenth century attitude towards tobacco and the twentieth century attitude towards opium. King James's picturesque "counter blaste" is sufficiently well-known, but the intensity and wide prevalence of the disapproval of tobacco at this period is perhaps hardly so well realized. In Russia, the use of tobacco was prohibited by law. In India, the Mogul Emperor Jahángir wrote a treatise against it. In Massachusetts and New Plymouth smoking in public was punishable by a fine. In Connecticut "confirmed smokers" were specially registered as confirmed opium smokers are supposed to be in China to-day, and other persons were only allowed to use tobacco on the strength of a medical certificate. The development of tobacco planting in Virginia and Bermuda was a standing anxiety and annoyance to the proprietary companies of those Colonies, as well as to the home Government. Charles I. was much troubled that Virginia produced no substantial commodity, and was "wholly built upon smoke, tobacco being the only means it hath produced." The Privy Council reminded the West Indies, Bermuda and Virginia, that tobacco notoriously enervated "both body and courage." The Providence Island Company prohibited the cultivation of "that scurvy weed." The objection to tobacco was strengthened by economic considerations, its violent fluctuations in price being productive of distress in the plantations and despair among merchants at home. Nevertheless, the importance of the crop became so great that the history of the fiscal and trade relations between England and her Colonies in the seventeenth century is to a large extent a history of tobacco.

Mr. Beer's volume is mainly devoted to the economic side of Colonial policy. He gives a sketch of the growth of the administrative system, which, in its full development, was closely akin to that which survives in Bermuda to-day, but he is little concerned with the details of the internal history of the Colonies. The later volumes, which are to bring the story down to the outbreak of those differences which led directly to the war of independence, will be awaited with interest.

RACE CHARACTERISTICS IN MAURITIUS.

SOME critics, in the endeavour to keep the Imperial spirit within just bounds, are fond of pointing out the comparative smallness, in size or population, as the case may be, of some of our possessions. Thus, the white population of Natal will be airily compared with that of the town of Leicester. These arithmetical considerations are sound and instructive, but they do not detract from the special interest which is to be found in the history of a place which has had a separate existence and an individual career. Thus, Mauritius has an area rather less than that of the county of Surrey. The history of Surrey is practically merged in that of England, and its towns and fields have few special associations except for the archæologist. Mauritius, on the other hand, has in the past played a prominent part in the politics of the world and the destinies of nations. To-day she shows, with extraordinary force and distinctness for so small a place, the different qualities of the European, African and Asiatic races.

The first occupiers were the Dutch, who failed, and the first French settlers, under the French East India Company, did little better. France recognised the importance of Port Louis as a strategic base for naval operations, especially the capture of foreign trade, and eventually, on the bankruptcy of the Company, took over the administration—at an enormous cost, as usual on such occasions. It became, under the Napoleonic régime, a valuable unit in the wide-cast military scheme. “In the long struggle,” says Colonel Malleon, “with England which had followed the Revolution, the Isle of France had inflicted upon the English trade a ‘damage which might be computed by millions,’ whilst she herself had remained uninjured,—for eighteen years indeed—unthreatened. She had proved herself to be that which the Emperor had declared that Cherbourg should become,—‘an eye to see and an arm to strike.’ Protected for long, partly by the storms of the ocean, partly by the daring spirit of her children, partly by the timid counsels of the British Government, she had been, for the privateers who preyed upon the commercial marine of the East India Company, at once a harbour of refuge and a secure base of operation. She had been the terror of British merchants, the spectre which haunted the counting-house, the one

black spot in the clear blue of the Indian Ocean. The relief which was felt by the merchants of Calcutta was expressed in an address presented by them to Lord Minto, in which they offered their 'sincere congratulations on the capture of the only remaining French colony in the East, which has for so many years past been the source of devastation to the commerce of India, to a magnitude almost exceeding belief.'"

Under the British dominion Mauritius has rendered signal services in time of war. She promptly despatched troops to India in 1857 at the time of the Mutiny, to South Africa in 1879 on the occasion of the Zulu War, and again in 1900 during the Boer War.

The population is a peculiar mixture. Out of a total of about 373,000 there are some 5,000 of pure European descent. Almost all these are French. This element retains in a marked manner the most charming characteristics of *la vieille France*. It is extraordinary how tenaciously this small and detached community has preserved, not only its racial characteristics, but also the manners and culture of its country of origin. They faithfully represent at the present day the great French race which in the middle ages civilised Europe. We may well be proud to know that under our flag is conserved so characteristic a section of old times in the island of the romance of "Paul et Virginie."

The earliest imported labourers were those brought by the Dutch from Madagascar and Batavia, of mixed but mainly African origin. This element increased rapidly and proved exceedingly unmanageable. More Africans were introduced by the French in the slavery days. But all efforts to force or induce the Africans to do agricultural work have substantially failed. The case is one of those that go to show that the African in tropical countries is averse to steady work. He has other views of life, as was pointed out by a correspondent in a previous number, and the trait seems ineradicable except under very favourable circumstances.

For African labour, therefore, Mauritius has substituted Asiatic. Here we have a totally different element. In 1830 there were about 858 Indians and Chinese; now the Indians number 261,000, or 69.9 per cent. of the whole population. They are industrious and frugal, and have gradually acquired a vast number of small holdings, representing one-third of the whole cultivated area of the island; the process is growing every year. In addition they have secured almost the whole of the hawking and carrying trade. This development has been greatly assisted by the fact that from economic causes the trade of Mauritius has been diverted mainly from Europe to India.

The Chinese number about 3,500, of whom only 58 are women. Sir Charles Bruce, in a very vivid and suggestive address delivered before the Scottish Geographical Society and printed in their

magazine for January, made the following observations on their character and practices:—

“The Chinese are a peculiar people, and occupy a peculiar position in Mauritius, as elsewhere. They have served a useful purpose, and have always loyally submitted themselves to the regulations and wishes of the Government. But they have acquired a monopoly of the retail provision trade by methods which I have always regretted. They have made this branch of trade subsidiary to the retail liquor trade, of which they have also acquired a monopoly, and the profits of the liquor trade enable them to undercut competition in the provision trade. If the profits of the retail liquor trade were transferred from the Chinese to the Government for public purposes, it is probable that the Chinese immigration would cease, and the legitimate profits of the retail provision trade would be restored to the general community. I made a proposal in this sense before I left Mauritius, but I fear it has not met with encouragement. The Chinese perfectly understand that Mauritius affords a very limited area for their transactions, and that if they increased and multiplied, competition among themselves would reduce the small margin of profit with which they are satisfied, below a living wage. With rare exceptions, therefore, they never bring their womankind with them, and have no intention whatever of becoming permanent residents. They work ‘for all they are worth,’ to enable them to return home as soon as possible with what is to them a sufficient fortune. By arrangement among themselves—an arrangement with which the Government has nothing to do—about 10 per cent. repatriate themselves every year, and make room for others. This will explain the small percentage of females in the census return.”

This quiet, voluntary, but absolutely solid organisation is characteristic of the race. It is quite natural to find the Chinese acquiring the possession of trade for which deliberate planning and concerted action are required. They show the quality of diplomacy, not to say intrigue, in the handling of commerce. But they are and remain always aliens. Their intention is invariably to return home when they have amassed sufficient property. There is no sign here that the much-talked-of exodus from China is a matter to be reckoned with.

It may be asked how it is that with these diverse elements, containing as they do much ability and industry, Mauritius is in some financial stress. An extraordinary series of disasters in recent years—hurricane, fire and plague—goes far to account for the fact. The depreciation of sugar, the staple industry, has, of course, been a great blow. About 95 per cent. of the exports consist of this product. The public debt of the Colony, however, is small, and great efforts will no doubt be made to tide over the present period of depression.

THE ONE FATHOM BANK FERRO-CONCRETE LIGHTHOUSE, STRAITS SETTLEMENTS.

By Colonel the Honourable ALEXANDER MURRAY, V.D., M.I.C.E.,
F.R.C.I., Colonial Engineer, and Surveyor-General, Straits
Settlements.

TRAVELLERS in ocean-going ships have been accustomed for 30 years and more to notice in the Straits of Malacca, in about latitude N. $2^{\circ} 53'$ and longitude E. 101° , an iron Screw Pile Lighthouse on the One Fathom Bank. This structure served its purpose in warning mariners of the hidden dangers of sand banks and reefs in the vicinity, but the necessity being felt for a lighthouse of greater range to cover the more distant shoals it was decided by the Government of the Straits Settlements to erect on this exposed site a Ferro-Concrete Lighthouse, the first, it is believed, of its class constructed in the open sea in comparatively deep water (20 feet) on a sand bank subject to tidal erosion, and about 15 miles from the nearest land on the Malayan Coast. During the monsoons the strong tidal currents running over the One Fathom Bank at the ascertained rate of from 3 to 4 knots per hour cause an erosion of the sand bank to a depth of 12 feet, rendering the question of foundations one of special difficulty and expense. The range of the tide is as much as 14 feet.

The focal plane of the old Screw Pile Light was 55 feet above high water of ordinary spring tides. The focal plane of the Ferro-Concrete Light is 92 feet 6 inches above H.W.O.S.T.

The light is a Second Order Occulting White Light of 4 flashes in rapid succession at intervals of 15 seconds, with a range of 15 miles. Since the light has come into operation it has been reported that on dark nights the reflections of the flashes against the sky are clearly visible at a distance of 40 miles. The light, supplied from the works of Messrs. Chance Brothers of Birmingham, is of the

second order with an intensity of 64,000 candles, and of much greater illuminating power than the old first order light. The new light was brought into operation on January 12th, 1908.

The design for this special class of structure was prepared by Mr. O. P. Thomas, a ferro-concrete expert, and at that time agent in Singapore for the Colonial Ferro-Concrete Syndicate, Limited, and submitted to the author, who, after causing some alterations and additions in order to secure greater strength and rigidity, recommended the execution of the work.

The lighthouse site being in an exceedingly exposed position the full effects of the monsoon storms, or "*Sumatras*" as they are locally named, were experienced. This made all the submarine work of an exceptionally tedious, risky and difficult nature, the waves during the fiercest blasts rising to a height of 8 feet.

In July, 1904, several timber piles for the temporary staging were swept away by heavy seas in a severe monsoon storm. Bad weather continuing, the erection of the staging was postponed to January, 1905.

In October, 1904, the whole of the ferro-concrete piles (17) were completed. In June, 1905, a short stoppage of operations resulted from collapse of a part of the temporary platform, through a flaw in the heart of one of the main beams. Owing to adverse weather conditions, the extreme difficulty in inducing native labour to remain on the work, and the lack of sufficient reserve capital to push operations forward energetically, the contractor, Mr. O. P. Thomas, threw up his contract. In September following Messrs. Riley, Hargreaves and Company, engineers and contractors, Singapore, undertook to complete the work. In January, 1906, close upon midnight, the temporary quarters and workshed caught fire, which was at once extinguished. During this month the timber staging suffered damage from storms and heavy driving seas necessitating repairs, and in the following month during a heavy storm the contractors' tender, "*Bangkok*," dragged her anchor and drifted just clear of the staging. In July following the sinking and testing of the ferro-concrete piles was completed. Another severe storm was experienced, jeopardising the safety of the central iron cylinder, which was in position preparatory to sinking. The loosened lashings were made secure after considerable risk to life and limb. In September the sinking and filling of the central cylinder was completed. In July, 1907, during the prevalence of a severe storm the flagstaff of the old Screw Pile Lighthouse was struck by lightning, and in November following the worst storm during the whole period was experienced, during which the temporary quarters and workshed were destroyed. As the ample accommodation in the new lighthouse was now available it was made use of until the completion of work at the end of December, 1907.

The timber for the temporary staging was procured from the forest on the Malay Peninsula, and at one end of the platform of the staging an "attap" shed of jungle timber and palm leaf covering was erected for the occupation of the resident engineer, workmen, workshop, store, office, &c. The contractor's agent lived on board the s.s. "Bangkok," the tug launch employed on the work.

The ferro-concrete foundation piles, seventeen in number, were constructed on Pulo Gedong, a small island close to the Malayan coast and fifteen miles from the site of the new lighthouse. These are of steel rods laced together with steel wire, and of granite, metal, cement and sand. The concrete was in the proportion of 1 of Portland cement to $2\frac{1}{2}$ parts of granite broken to pass at all angles through a $\frac{3}{4}$ -inch ring and $1\frac{1}{2}$ parts of sand.

For the sake of lightness and facility of transport to site the piles were built hollow, each 50 feet 6 inches long—nine of these were 2 feet square and eight 18 inches square.

These were floated out to site attached to rafts constructed of barrels, and heaved into a vertical position preparatory to sinking.

The sinking to the necessary depth was secured by two water jets, actuated by a steam pump, playing at opposite sides at the foot of the pile. The piles were sunk to an average depth of about 15 feet into the sand bank in from three to four hours.

In view of the periodic erosion of the sand bank, resulting from the strong tidal currents, added to the comparative ease with which it was found the piles could be sunk through the sand by the above procedure, it was decided to lengthen one of the piles by $14\frac{1}{2}$ feet to ascertain to what further depth it was possible to sink them.

This pile was sunk to a further depth of 13 ft., making a total depth of 26 feet 8 inches, into the sand until a hard sub-stratum was reached.

Similarly, the remaining sixteen ferro-concrete piles were lengthened 13 feet, and sunk to an average depth of 26 feet 9 inches. The usual set tests were then applied with satisfactory results.

The foundation piles were arranged in octagonal form, the centre pile being a 5-foot diameter cylinder filled with concrete, an inner ring of 18-inch square piles (introduced into the design at the instance of the author) at a radius of 9 feet 9 inches, and an outer ring of 2-foot square piles at a radius of 20 feet.

The heads of the piles were connected by radial and ring beams at a level of 4 feet below H.W.O.S.T., the ends of the radial beams being clamped to the centre pile and bracketed to the piles by angle irons.

From each pile a ferro-concrete column was carried up to the level of the first floor, 21 feet above the main bracing.

Intermediate between the main bracing and first floor a ferro-concrete bracing was fixed of radial beams, strengthened by steel bars and shearing bars fitted between the tension bars.

The first floor is supported by ferro-concrete radial beams and by the inner and outer ring beams. The gallery, 5 feet wide, is carried on a continuation of the radial beams in the form of a cantilever.

The ferro-concrete floor is 5 inches thick, finished with a rendering of cement mortar.

The gallery is reached from sea level by a teak-wood ladder in two flights, the lower flight being hinged to a platform made of ferro-concrete and supported on one of the ferro-concrete columns.

The lower end of the upper flight is fastened to the concrete platform, and the upper end to the continuation of the main radial beam giving access to the gallery through a "well" protected by a wrought-iron grating.

From the first to the third floor, the intervals between the outer ring standards are walled in with ferro-concrete.

On the first floor two store houses are provided for oil, lamp stores, &c. The internal party walls radiate at a distance of 6 feet from centre of building. Two ferro-concrete water tanks store 1,000 gallons each, the water being collected on the third floor, which is graded to a gully at the head of the down pipe leading to the tanks below. Special provision was made for the rain water collected in the first few minutes to run to waste, ensuring as far as possible clean water for drinking and culinary purposes. Accommodation is provided on the first floor for kitchen, dining-room, bathroom and closet. The entrance from the gallery is through an archway.

The second floor is reached by a teak-wood staircase, continued to the third floor, and protected by a ferro-concrete hood over the "well" giving access to the third floor.

On the second floor sleeping quarters are provided for the lighthouse staff, also an office and visitors' room.

The third floor projects 4 feet beyond the lower floors, giving a width of 44 feet, with a curb round the outer edge. This floor serves as the rainfall catchment area for water supply. The floor is moulded to an average thickness of $4\frac{1}{2}$ inches.

At a radius of 24 feet from the centre, eight raking columns of reinforced concrete rise to a height of 30 feet to the level of the service floor. The radius at the top of these columns is 9 feet 3 inches.

The central column is 2 feet in diameter, and carried to the top of the building. It is moulded hollow above the third floor, to form a weight tube. An opening in the side is provided for convenience in placing or removing the weights.



THE LIGHTHOUSE COMPLETED.

Between the third and service floors two sets of reinforced concrete bracings tie the raking columns to each other and to the centre column. The service floor is reached by three flights of ladder steps, with a suitable platform at each bracing level. The floor is moulded 4 inches thick, and carried by eight radial beams. These overhang the raking columns, and support the gallery.

The heads of the raking columns and the outer ends of the radial beams are tied together by reinforced beams. Eight radial beams support the floor at the top level, and on this floor the cast-iron base of the lantern, 12 feet in diameter, is bolted by suitable hold-down bolts.

The total weight of the completed structure is about 1,000 tons, and the total cost \$246,900, or, at 2s. 4d. to the dollar, £28,805.

The work was supervised by the Public Works Department, under the general direction of the author. Mr. John Craig, of the Public Works Department, was the Engineer resident on the works, and Captain Walker the Contractor's Agent. Much credit is due to these two officers for the successful completion of the work, notwithstanding the difficulties referred to.

It is satisfactory to note that during storms the vibration at lantern level is barely appreciable compared to similar movement on the old Screw Pile Light.

A. MURRAY, Col.

BUSINESS NOTES.

Automatic Telephones.

This system does away entirely with the telephone operator. Mr. Llewellyn Preece, during a recent visit to Paris, inspected the Lorimer Automatic Telephone Exchange which is erected there for inspection purposes; the result enabled him to report favourably on this system, in the working of which all conversations are secret.

In its details and construction the system appears to be far superior to any other automatic system. Owing to the fact that practically all movements in the Exchange are mechanically made and electrically controlled, connections between the calling subscriber and the subscriber called are rapidly but firmly carried out, and, assuming that the called subscriber is disengaged, any call can be put through in about eight seconds.

Exchanges are constructed on a "Sectional" system, each section containing all the controlling apparatus for 100 subscribers, and being as a rule so arranged that 10 per cent. of the subscribers can be connected at one time. It is found that the average percentage of lines simultaneously engaged in America is 7 per cent. for ordinary Exchanges. If desired, however, the section can be so arranged that 15 per cent. of the subscribers can be connected at one time.

The sectional boards are constructed in five divisions, each one of which can be used for one connection; that is, each may be looked upon as replacing one "cord" circuit of an ordinary Exchange. Each division contains five connectors identical in construction though varied in the internal connections. One connector, the "primary," deals with the calling subscriber; the second connector with the intercommunications in the division selected; the third is required if the Exchange contains more than one section, *i.e.*, if there are more than 100 subscribers; the fourth connector, termed the "secondary," deals with the called subscriber; and the fifth transmits the signals from the calling subscriber through the primary connector to the called subscriber through the secondary connector.

Besides these divisions—which may be called the “cord” divisions—each section has one control division which has four connectors. The first receives the subscribers initial call; the second picks out the nearest disengaged “cord” division on the same section; the third controls the order of calling, should more than one subscriber make a call at the same moment; the fourth transfers the call from the control division to the “cord” division picked out by the second controller or connector. Three of these are of special design, but the fourth is identical in construction with the connectors used in the five other divisions, so that on a section of 100 subscribers there are only four forms of construction, and out of 29, 25 are identical.

The mechanical movements are worked by a small motor requiring $\frac{1}{10}$ th H.-P. for two sections, and of increasing size as the sections are multiplied. The motor drives a series of shafts by worm or spur gearing, which connect to gearing on each connector when electro-magnets are actuated, but only under such circumstances. One of the control division connectors is constantly rotating, except when a call is received, then it stops until the call is handed on to one of the five connecting divisions. All electrical control is done either by these electro-magnets, which hold or release the gears, or by relays, the armatures of which can make one or other of the two contacts.

The motor is driven by an accumulator of six cells, which also supplies all current required for the electrical controlling connections.

The system is entirely a central battery one, and the subscribers' instruments are quite simple.

Each subscriber's instrument contains—besides the usual transmitter and receiver—a set of small levers which are adjusted by the subscriber when making a call. One lever is for the unit of called subscriber's number, one for the 10, one for the 100, and one for the 1,000 (if necessary), and another can be added for the Exchange if more than one is in use. There is, further, a handle to which the subscriber gives a half turn on making a call, and within the apparatus is a contact maker which automatically transmits the necessary signals to the Exchange as soon as the instrument is connected to its primary connector in one of the “cord” divisions in the sections.

The subscriber has to set his levers to the correct number, give the handle a half turn, then wait until he hears a buzz (which means he is through) and press a button which rings the bell in the called subscriber's instrument. On finishing a conversation and returning the receiver to its hook, the Exchange automatically returns all apparatus to the normal position, and each subscriber is immediately free to make other calls.

This system should be kept in order without much skilled labour, as all moving contacts are well covered up and are positive

rubbing contacts. All connections are well within view, and should a connector break down it is an easy matter to take the whole division out and replace with a new one. Further, whilst the division is being replaced, the remaining four continue the work undisturbed.

At Peterboro, Ont., in Canada, one exchange of 500 subscribers has been working continuously for the last four years and giving satisfaction. Two others—one for 1,200 subscribers, the other 500—are also being erected in Canada.

The French Government are having an exchange for 300 subscribers now erected in Lyons (which will be at work within a week or so), and another for forty subscribers is in hand for Rome.

At present all apparatus is made in America, but the French company, which controls all European patents, are starting a factory in Paris to deal with work on this side of the Atlantic.

The cost of a section for 100 subscribers would be at present about £200-£250, but, when the French factory is working, this figure will be reduced. The subscriber's instrument at present costs from 20s. to 30s. and this figure will also be reduced.

The Lorimer Company are prepared to send out an expert to erect the apparatus and give full instructions how to maintain and superintend the working of the same.

The Sydney (N.S.W.) Fire Brigade and Motor Fire Apparatus.

The adoption of motor fire apparatus is on the ascendant in all parts of the world, and no city has realised its advantages to a greater extent than Sydney. Superintendent Webb, the chief officer of the fire brigade, already has three motor appliances in service, viz., a petrol driven fire engine, a petrol motor chemical engine, and a petrol motor salvage van. These three machines, which were all constructed by Messrs. Merryweather & Sons, of London, are just being supplemented by a fourth from the same firm. The new appliance, which has just been shipped from London, can travel at the rate of twenty to thirty miles an hour, and on reaching the scene of action, by the simple movement of a lever, the power of the motor can at once be transferred from the road wheels to the fire pump, which delivers 300 gallons per minute. Melbourne also possesses an engine of the same design, but of larger size, whilst, in the old country, Glasgow has three, and two are in course of construction for the London Fire Brigade. At a fire which occurred near Glasgow a few months back, one of these engines travelled a distance of sixteen miles in thirty-four minutes.

Rees Roturdo Pump.

The motor-driven Rees Roturdo pump which worked the cascade at the Franco-British Exhibition is so designed that it will adjust itself to any conditions of working without it being necessary to alter the speed.

The ordinary centrifugal pump must be run at practically a fixed speed, corresponding to the head and volume for which it has been designed. In places where the conditions of the supply of water are variable the self-regulating quality is very valuable.

Blue Oil.

Blue oil, officially known as "oil mineral preserving wood," has been found satisfactory in official trials, and it is believed that it will form an efficient protection for hard woods against the attacks of white ants. It can either be applied with a brush, in which case three coats should be sufficient, or the articles can be dipped in a tank of the oil, the surplus oil being allowed to drain off and the articles allowed to dry before a second dipping. The penetration of the oil below the surface of the wood varies with the wood, the temperature and time of immersion. As a guide to what may be expected, hard English oak dipped twice, and remaining immersed each time for about half-an-hour, showed an oil penetration of about $\frac{1}{2}$ in. The oil can be obtained for 6d. a gallon in quantities.

Osram Lamps.

It is claimed for these tungsten lamps that they are 70 per cent. more efficient than the carbon filament lamps, and this is borne out by a report of the Faraday House Testing Institute. But the resistance of tungsten to the passage of electricity is so low that it is not proposed, it appears, to introduce high voltage lamps of lower c.p. than 50, and in an installation of 200-volt 16 c.p. lamps there would be no saving by substituting 50 c.p. osram lamps. If, however, the current is an alternating one, transformers can be used to bring the voltage down to 25 volts, and then the 10 and 16 c.p. lamps can be used. The Civil Service Stores in Queen Victoria Street have adopted this plan, reducing their voltage and installing 4,000 25-volt lamps.

Small Printing Machine.

Enquiries are sometimes received for the price of a small printing machine suitable for light work, such as printing signatures on a number of documents. The platen machine "Excelsior" has been recommended for this purpose; the inside chase measurement is $7\frac{1}{2}$ ins. by $10\frac{1}{2}$ ins.; the price, for treadle, £21 15s.; treadle and power, £23 10s.

Vaseline.

This article is largely imported by the Colonies, but it does not seem to be generally known that it is not an ordinary name of a product, but a registered trade name for an article made by the Chesebrough Manufacturing Company and supplied by them only. If supplied as Paraffin Molle, P.B., with a similar melting point, the cost is much less.

Fire Extinguisher.

An enormous number of the "Underwriters" fire-extinguishers have been sold in the United States, and the apparatus is remarkably simple. There are no stop-cocks, valves or levers; it is only necessary to turn the machine upside down, and a stream of fire-quenching liquid 40 to 50 ft. long is poured out. Most extinguishers contain a glass bottle, which is broken in some way or other, and so allows the sulphuric acid to mix with the bicarbonate of soda solution and generate carbonic acid gas. This sets up an enormous pressure, and serious accidents have naturally happened. The "Underwriters" have a self-feeding stopper, which distributes the acid gradually. A good point is that the rubber tube is always kept straight, and thus takes longer to perish.

Oxy-Acetylene Process.

This method of repairing cracks in boiler plates (which are not in torsion) has been used considerably on the Continent, and is now being adopted by many firms in the United Kingdom. It is claimed that the process effects a saving of time and money and is more effective.

Removal of Tree Stumps by Dynamite.

This is an effective means of clearance, and often the most economical. A hole should be made with a crowbar or borer just under the stump in a slanting direction till the end of the trunk is reached; if the soil is dry, throw in a little water to soften it. A sufficient number of cartridges should be pressed, one at a time, into the borehole by means of a wooden rammer—and take care that it is wooden. Prepare a detonator by cutting the safety fuse in an oblique direction, so as to expose as large a surface as possible of the powder core, inserting it in the detonator and fixing it with nippers. The detonator should then be inserted to two-thirds of its length in the last cartridge, which is gently pushed home till it touches the next one. The remaining space in the borehole should be filled up with earth, or clay if available, each handful being gently pressed down with a rammer. Apply a light to the safety fuse until the powder

ignites, and then (it is hardly necessary to add) retire to a safe distance.

If the ground is light and loose, it is better to bore the stump, preferably in the strongest part.

Boulders can be broken up by this means, the charge being placed under the stone and in close contact with it.

Safety fuse burns at the rate of about ninety seconds per yard. There are a great many varieties, and different countries show a predilection for special kinds; in any case, the important points for the operator are to keep the fuse dry and cut it down just before using.

The detonator is really a large percussion cap charged with fulminate of mercury, which detonates the dynamite in the cart-ridge. Detonation is conversion into gas with such suddenness as to be practically instantaneous.

Concrete Reservoirs.

Some failures make it desirable to point out that concrete reservoirs with walls from 2 to 4 ft. thick will not hold water, which will quickly flow through at all points. The reservoir must be plastered internally with a non-porous lining of some sort, such as $\frac{3}{4}$ of an inch of sand and cement plastering, and over this a layer of pure cement plastering $\frac{1}{4}$ of an inch thick. The concrete is only to give sufficient strength and immobility to the whole. The angles formed by the walls and the floor should be filleted, and in these places the plaster should be much thicker. This renders damage less likely when the reservoir is being cleaned.

Suction Gas Plant.

A vaporiser of a suction gas plant is apt to crack unless the casting is strong. The inner pipe is exposed to a very high temperature, due to the gas in the inside, with warm air and vapour on the outside, and the shell to a much lower temperature, due to the cold air outside and warm air and vapour inside. This means a great difference of expansion between the inner pipe and the outer shell; they are one and the same casting, and therefore something must give, unless the casting is strong enough to bear the abnormal strain.

Stoneware and Iron Pipes.

These pipes are so brittle in transport that a large number of breakages occurs, but the cost of protecting them in a really efficient manner would be too great to be justified. Such packing in the case of stoneware might amount to 50 per cent. of the value, and

the breakages do not come to this, though cases have occurred where they have reached 10 per cent., and stoneware junction pipes are liable to a still greater rate. But stoneware traps, which are very fragile, might be packed in strong crates and protected. Iron pipes suffer more than stoneware, but the heavy losses which often occur are due to careless and rough handling. The ordinary labourer does not understand how brittle cast iron is, and intelligent supervision at the lighters and the wagons is necessary.

Timber.

No little difficulty is experienced from the fact that much of the beauty of a piece of wood may be accidental, and the observer may be misled into thinking that it is general. Figure in timber is in some cases "inherent"; the transverse section shows a number of fine lines, known as "medullary rays," radiating from the pith to the circumference. But the most beautiful specimens of figure are accidental. They come from any cause which makes the fibre irregular, such as capsun on one side, abrasions, sudden variations of temperature. Each species of tree, however, is apt to develop similar accidental figure.

One of the most beautiful of the accidental effects is where alternative streaks, suggesting light and shade, run with the grain the length of the log. This is called "roe," and if it is vivid and varied it gives a great value to the wood. "Mottle" is the mark which suggests something raised on the surface. In all cases expert knowledge is required for cutting in the proper way and obtaining the best results. (*Journal of the Royal Society of Arts.*)

Artesian Wells.

It is only possible to make these wells when there is a permeable or water-bearing stratum below an impermeable one. The former may be sand, gravel, shale or some such material capable of holding and storing water, *i.e.*, of the order of sedimentary or aqueous rocks, as distinguished from the igneous or intrusive rocks, such as granite, laterite or gneiss. Thus, if clay is found over granite, it is hopeless to look for water between. Another requisite is that the permeable stratum shall outcrop on the surface at an altitude above the site of the proposed boring.

Furniture.

"Dryad" furniture, about which an enquiry has been received, is made of natural pulp cane unbleached, and this material is said to be very suitable for the tropics, provided galvanised or non-rusting nails are used. America and Germany export a large quantity of

such furniture, and the manufacture has been begun in this country. Insects do not attack cane as they do other woods.

Accra Water Supply.

A scheme for a water supply for Accra has been prepared by Messrs. Middleton, Hunter and Duff. The dam would consist of a concrete wall 10 feet thick, built in a trench excavated in the sub-soil of the river bed. It is proposed that this trench be formed with steel piles driven on each side, similar to those which have lately been successfully used in connection with the construction of the new water works at Singapore, and which, in a different form, were used at Hodbarrow, on the coast of Cumberland. It was found at Hodbarrow that when the piles were driven down about 25 feet below the surface there was very little leakage of water underneath them, as the ground was firmly consolidated by the weight of the earth upon it. It is believed, therefore, that, by constructing the trench in this manner, pumping during the sinking of the trench and the building of the dam will not be excessive. The concrete wall will be carried up to the level of 32 feet above datum, and will be supported above ground by rubble backing having an easy slope, covered with concrete blocks 2 feet thick. The top of the embankment will be about 10 feet above the surface of the ground at its southern end, increasing to 16 feet at about the centre of its length. The construction adopted will permit the highest floods to flow over the top of the dam without injuring the work. At the north end of the dam it is proposed to provide four large "Stoney" sluices, each 26 feet high by 20 feet wide, which will serve the double purpose of allowing the main body of the floods to pass through their openings, and of preventing the silting up of the reservoir by the detritus brought down by the river.

The sluices will be constructed so that two men will be able to work them whatever may be the height of water in the reservoir. They are, moreover, designed of sufficient height to enable the capacity of the reservoir to be doubled by increasing the height of the dam by 4 feet, making the total height 36 feet above datum, which can at any time be done at a very small cost. The increased water storage thus obtained would enable additional turbines with an electrical plant to be installed at the dam site, which would provide for the lighting of the European quarters in Accra.

The estimated cost of the work is £190,450, including turbines for pumping and a light railway along the line of the main to the dam site for transport of materials. The capacity of the reservoir would be 1,500,000 gallons, and on the assumption that 500,000 gallons were supplied daily the cost is estimated at 1.68 shillings per 1,000 gallons.

The charge of the Rand Water Board to Johannesburg is 8s. per 1,000 gallons, and at Bloemfontein it is 5s. 6d. Accra would, therefore, fare well by comparison with these figures. The capacity could be doubled at a small expense, and power provided for an electric light installation.

Dredger for Lagos.

A pump hopper dredger has been ordered from Messrs. Simons and Co., Renfrew, at a cost of £86,065 for the vessel delivered at Lagos. The hydraulic machinery will be supplied by Sir W. Arrol and Co., who supplied it for the dredger "Egerton," in which its working has been satisfactory. The speed is 10 knots; length on deck, 291 feet; depth, 18 feet 9 inches; net capacity of hopper well, to about the level of main deck, not less than 36,000 cubic feet.

"Cedervall's" protection boxes will be fitted on the outer end of the propeller shaft; it is claimed that these provide a very efficient means of excluding sandy water from the stern tube, and would considerably mitigate, if not altogether avoid, the trouble usually experienced with vessels working in water heavily charged with sand.

Tanjong Pagar Dock New Extension Works (Messrs. John Aird & Co.'s Contract).

The main wharf is being reconstructed, and a dredger had in October bottomed up 150 feet of the foundation for the blockwork wall at the eastern end. A drilling barge put down 90 holes in a month, about 8 feet deep and 10 feet apart each way. Five pounds of gelignite are used for blasting in each hole, with the result that the shale appeared to be thoroughly broken up. Very little concussion was felt when these charges were exploded, but special precautions were taken to ensure the safety of the shipping during these operations. About 2,260 men are employed on the works.

Priestman Dredger.

A road has been constructed through the swamp at Belize by the aid of a Priestman dredger, which cut its way from a lagoon to the sea. The soil which it removed in making a channel for itself was used to form the roadbed, and proved of firmer material than had been expected. The channel at the side reduced the level of the water in the swamp and drains some land.

Road Tracer.

Mr. C. V. Bellamy, Director of Public Works, Southern Nigeria, has devised a new road-tracing instrument, which is being brought out by Messrs. Stanley & Co. It determines the grade of roads by measuring the angle between the axis of a sighting tube and a heavy pendulum, which always swings into a vertical position. An arc of a circle is adopted for the vernier, and the movement of the zero mark on the vernier from the index on the pendulum measures the inclination of the line of sight from the horizontal. The details are carefully designed, and if intelligently used the instrument is expected to give results nearly as accurately as the level or theodolite.

Imports and Exports.

The Trade Records Committee (Ed. 4,345 and 4,346) recommend that importers should be required to declare upon their entries the place from which the goods were first consigned to the United Kingdom, as well as the place of shipment, and exporters to declare on their specifications the places of final destination so far as they know them. At present, under the Customs Declaration Act of 1876, all imports are attributed solely to the place where they were put on board, and this, of course, gives an altogether wrong idea of the real trade. We do not want to know the stages of the journey, but where the goods are made or consumed. Traders would like to learn the ultimate destination of their goods so that they can as far as possible deal directly with the real customers. The manufacturer, however, who sells to a merchant at Hamburg or Rotterdam does not know where the goods are going, and the merchant takes care not to tell him, and this will always be a difficulty which is hardly recognised in the report. On the other hand, the obligation to state the original place of imported goods will undoubtedly go far to show the commercial world where their real competitors are, and this will put them on enquiry.

Cotton Growing.

The Commercial Intelligence Officer of Southern Nigeria in reporting on the trade of the country writes:—

“Cotton is already grown for local use in most of the districts which will be served by the railway now in course of construction, and it is cultivated so cheaply that in the north I bought seed cotton at a price which would permit of its being landed at Liverpool at 3½d. per lb., after allowing for the cost of ginning and rail and steamer freights, &c. Even on the borders of Southern Nigeria, pure coarse country cloths, made from cotton, grown, ginned, spun and woven locally, can be bought at a price which works out at only

10d. per lb. in the cloth. To anyone who has travelled through the country beyond the palm belt, and has given attention to the extraordinary low prices at which locally-grown produce and native manufactures are sold, there can be no doubt as to Nigeria having the handicap in its favour so far as labour values amongst the natives themselves are concerned.

"In the Lagos Province we have in the fifth year shipped a crop of 9,000 bales of 400 lbs., and it must not be forgotten that this has been produced in a country where there are strong competing industries which will not apply to anything like the same extent beyond Ikerun, and that only hoes and manual labour have so far been used on the farms, no draught animals being employed. In the open country which the railway is now entering, cattle and donkeys can live and thrive, and from the condition of the majority of the farms I saw in the north I consider ploughing will be feasible.

"The important points to be considered with a view to properly developing the cotton industry are, to my mind:—

"(a) The maintenance of staple buying rates.

"(b) Careful selection of seed, giving particular attention to the improvement of indigenous varieties.

"(c) Suitable rotation of crops bringing in something which can be exported—ground nuts for example.

"(d) Introduction of ploughs and other labour-saving implements, and

"(e) The presence on the spot of the merchants whose assorted goods will induce the natives to work."

There is a good deal in the last point. No doubt the goods must be varied to suit local tastes. In one village cloth may be esteemed, and beads scorned; in the next village it may be the other way about.

Motor-Cars.

The death of a chauffeur was reported in the F.M.S., but the report was, as Mark Twain put it, "greatly exaggerated." The incident, however, serves to show what some motor cars can do:—

"The man was not a driver, only a cleaner. He was told by the driver of another car not to attempt it, but presumably, seeing the other cars leaving, thought he would do so too. On arriving near the Rest-House, where the other cars were drawn up along the side of the road, he could not stop and, to avoid a collision with the Resident-General's car, turned the car into the ditch. The other occupants jumped off, but the driver went over with the car, which turned over in the drain, pinning him under it. Mr. Claud Severn and Captain Gay were snipe-shooting close by, and the former ran up and got the driver out, his head being just above mud and water

level, and sent him to the hospital. Later, the Assistant Surgeon reported that he had come round. He had a slight concussion, a cut on one hand from the broken glass and a badly bruised leg. The ditch was about five feet long and 18 wide, with almost a vertical side, down which the car went. The hood, splash-board and glass screen were wrecked, and the car coated inside and out with Krian mud. Mr. Severn and Captain Gay worked like Trojans, and with ropes and about 100 men got the car on to the road again. After tiffin Mr. Spooner set to work and with assistance succeeded in getting a cough out of the engine, which he could not turn at first, as everything was choked with filth. However, ultimately he got the engine to go, and, having had the cushions, &c., cleaned, took the car for a turn in the village. Mr. Spooner then went after the party, which had gone off previously in the other cars, and later drove H. E. Sir John Anderson back to Bagan Serai without a hitch, the car going splendidly. The car was the 24 h. p. Albion Railway Inspection Car, and it speaks wonders for its capabilities that after such an experience it should be in working order again within an hour or two."

Touring Exhibition.

An exhibition will be held at Olympia next year under the name of the World's Touring, Sport, Pastime and Travel Exhibition. A low rate for space is promised, and none of the bazaar element will be admitted. British Colonies can have a special rate of 3s. per square foot. It is suggested that Colonies should have cinematograph displays, as these are popular with the crowd and give a real idea of the countries; the cost of running one (if films are supplied) is £80 a month.

RAILWAY NOTES.

Uganda.

The Uganda Railway in 1907-8 did not do quite so well as in the previous year, the profit being £64,713, as against £76,763, but the climatic conditions were unfavourable, and a steady improvement may confidently be looked for, though it may not be considerable this year, as there has been a scarcity. The management is hoping for an increase of exports from the East Africa Highlands. At present, hardly anything is exported in large quantities, except potatoes, and the railway wants something more substantial and less perishable. Mr. Currie rests his hopes on wool, and urges concessions to encourage the importation of good stocks of sheep. No doubt the question of the immediate future will be the construction of feeder roads. The traffic area is confined mostly to a narrow belt, extending only a few miles on each side of the railway, and it would be no difficult matter to pick out several points at which tramways or motors could be enabled to run with great advantage to the line. The most striking feature at present is the vigour of the Lake trade; the steamers earned a dividend of $10\frac{1}{2}$ per cent. The "up" traffic on the railway is more than double the "down," building materials showing largely (17,000 tons); and a development of exports would be convenient to balance matters.

A party of Boers, numbering 260, and their families, recently arrived (by steamer) and made for the Highlands. Many more are expected, and we may very soon see a Boer province in East Africa. The land selected at Wasin Ginsho is very good, and suitable for cattle and sheep, and the Boers are said to be very pleased with their prospects.

"We may all live to see the commercial interests of Uganda valued in millions" (Governor's speech, 26th September). The

development is going on so well, that the case for a really Ugandan railway is strengthening rapidly. Lake traffic is the most remunerative, and the example of the Victoria Lake points to the prospect of a paying traffic from the Albert Lake. "Moreover," Mr. Currie observes, "such a railway would form an important link in our East to West through communication between the Indian Ocean and the Atlantic, which, as a commercial undertaking, has immense possibilities, infinitely more so than the much talked of Cape to Cairo Railway." The British public will perhaps not be easily shaken from its belief that the latter is the ideal project, and the sanctity of great names has been given to it; but on a mere business survey of the character and population of the lands to be traversed and the probable business, Mr. Currie is no doubt right.

Nigeria.

The line from Lagos is making good progress, and is expected to reach Jebba on the Niger by the beginning of the year, thus bringing this point two days' journey from Lagos. A bridge from the Northern Nigerian side to Jebba Island is being constructed; it will be 900 feet long. On the other side of Jebba Island, however, communication will for the present be made with the Southern Nigerian side by a steam ferry, which is now being constructed, but eventually a bridge will be put up. The other line from the Niger to Kano has been the scene of an extraordinary effort in getting the material up to where it was wanted during the flood season. It is not too much to say that the success achieved realised the best expectations. 150 miles of earthworks were completed in less than a year. 7,000 natives are employed. It is expected that the rails will reach the junction of the Southern and Northern system at She by June; the line from She, *via* Zungeru, to Jebba (100 miles) will then be taken in hand simultaneously with the extension of the main line from She to Kano, a distance of 230 miles. Kano should be reached early in 1911, 400 miles from Baro.

With this work may be compared the construction under contract of the German line from Morogoro to Tabora. The contractors undertake to have 700 kilometres of railway in working order by 1st July, 1914. They began working in July last, and are employing about 6,000 men; up to the end of September 121,000 cubic metres of earthwork had been excavated.

It has been no light task to get the material required this year for the Northern Nigeria Railway up to Baro. Eight steamers belonging

to Messrs. Elder, Dempster & Co. were chartered by the Niger Company and employed from 19th July to 16th October in the transport of railway material, during the high-water season, from Burutu to Lokoja and Baro. Each vessel was about 250 feet long, with a deadweight capacity of from 1,000 to 1,200 tons, on a draught of 10 to 11·6 feet. The first vessel to leave Burutu was the "Bassa," which unfortunately came to grief on 22nd July on a well-known rock two miles below Lokoja. She settled down in 14 feet of water, and during high water she was covered all but her funnel and masts; it is expected that the cargo will be recovered in January-March. Other vessels followed and reached Lokoja safely; three vessels tried to get to Baro, the depth of water at crossings being 11·6 to 12 feet, but they stuck on sand banks and had to be lightened by barges, which the Government fortunately possessed, and which were taken up by branch steamers. The first steamer to get through without mishap left Lokoja on 10th August and reached Baro on the following day; afterwards the river rose very rapidly and there were no more groundings; on 15th October there were 22 feet on crossings. The river had a phenomenal rise, the highest for sixteen years. The total tonnage landed at Baro was estimated at 18,976 tons.

Messrs. Elder, Dempster & Co. conducted the shipping arrangements to Burutu with unfailing energy and success.

Sir P. Girouard proposes that the Niger should be deepened to 5 feet all the way to Lokoja, and a dredger for this purpose is being constructed.

It might pay Northern Nigeria to acquire barges and tugs of its own and take delivery of the railway material at Burutu. The boats will always be useful, as the Baro-Kano Railway should have its own connection with the sea-board.

The Commercial Intelligence Officer of Southern Nigeria observes as follows on the prospects of the railway to Kano:—"Looking to the more distant future when—within five years, it is hoped—Lagos will be in communication with Kano by rail, an enormous field in the Upper Zaria and Kano Provinces will be accessible to our merchants. From the Ilorin Province up to Zaria town the population on the railway route is very scanty, but beyond there is a dense population—more than that of the whole of the Western Province of Southern Nigeria—and a very large business indeed may, in the course of a few years from the opening of the line, be reasonably expected from the northern section of the

railway. Superficially it may be thought that the Kano trade will be done *via* Baro and the Niger, and I agree in thinking that cheap produce—shea-nuts, ground-nuts, salt, &c.—will probably be worked by river, but I believe that the bulk of the trade in Manchester and other European goods will pass through Lagos, and that it is not improbable that a large proportion of down freights in the way of raw cotton will also come this way, for it must be remembered that the cotton crops are gathered at a time when the Niger is not in flood. At the same time, I think the Lagos produce merchants following the line will later on need to give consideration to the idea of having forwarding depôts at Baro to deal with coarse produce and salt. It will be remembered that the important trade centre of Bida lies between Baro and the junction of the Lagos Railway with the Baro-Kano line.

The improvement of the Lagos bar is rendered a more urgent matter by the Nigerian railway undertakings. Not only is the ocean freight high under the present conditions, but the transshipment at Forcados doubles the period between shipment and delivery, and constant and extensive damage is caused to goods from rough handling and exposure. Owing to the heavy seas which prevail from the west the sands at the harbour mouth are in constant motion, and the shelter which would be afforded by the western mole seems essential for the fixing of any deep-water channel which may be formed through the bar. This shelter would also be necessary for the protection of the eastern mole and of vessels entering the harbour during stormy weather. The eastern mole is in progress, and if anticipations are realised, about 5,300 feet in length should be completed towards the middle of 1910. Expenditure has recently been approved for the works preliminary to the commencement of the western mole, leaving the extent of the work and the amount to be spent to be decided later. In the meantime the policy is to anticipate and assist by dredging the deepening that may be expected from the construction of the moles.

The improvement of the bar leads to the question of increased wharfrage accommodation. It might possibly have been better in the beginning to have fixed the terminus of the railway on the mainland, but it seems too late in the day to consider that now; the increase of business, on the other hand, will render Iddo Island too small for the terminus, and probably new wharfrage accommodation will have to be provided at Marina and the railway brought across the lagoon to Lagos Island. A length of 1,400 feet could be provided for the wharves from the south-eastern extremity of the customs wharf, and a width of 15 feet between the front of the sheds and the face of the quay, allowing three lines of railway. A great

increase of trade to Lagos is sure to spring up, and the question of wharfage and handling facilities cannot be taken in hand too soon.

Gold Coast.

The receipts for the six months ended 30th June last were £80,634, and the expenditure £40,964. There has been a heavy decline of imported cement, coal, cotton goods and timber, which shows that the mining companies have not been very active, but it is hoped that this falling off will be rectified before the end of the financial half-year. On the other hand, it is a promising sign that substantial increases occurred in mining machinery and materials.

It is proposed to reconstruct No. 1 Jetty step by step, driving the piles to a lower level and about 52 feet seaward of their present position. At present the jetty is too high to be convenient. A portion of the jetty at its inner end would be cut off by the formation of a customs quay, and the length so cut off would be added to the outer end, so that little new pile material will be required. To avoid the trouble that has arisen from the rotting of the deal under the rails, it is proposed to use bearing-plates bedded on pieces of Callender's bitumen sheeting, making a watertight joint with the planks. The work would be a great improvement.

The contract for the construction of the Accra-Akwapim Railway has been let to Mr. W. M. Murphy, of Dublin, whose record leaves little room for doubt as to the satisfactory execution of the work. The price for the construction, not including materials, is £165,614, and this appears to be a reasonable figure. There will be other expenses, including the materials, the cost of the land—which will probably be about £16,000—the survey already made, and the rolling stock and equipment. Five tenders were received.

Gold Coast Mines.

The Gold Coast Government have agreed to construct and work for 20 years a branch railway from Tarkwa on the Sekondi Railway to the Prestea mines on the Ancobra River. If ever during the 20 years the net receipts fall short of 3½ per cent. per annum on the capital expended (this not to be put above £125,000), the Prestea Block A, Limited, contract to pay the difference to the Government. The Union of London Bank agree to advance £125,000 to the Colonial Government, as required, against Government certificates for the amount, the intention being that the certificates shall represent

allotment of inscribed stock if a loan is raised. The construction has been commenced. A further agreement provides for the laying of a branch from a point near the Ancobra to Broomassie, on a similar undertaking, the capital in this case being put at £10,000.

Under this arrangement the Company gets the money on cheap terms, i.e., those of the Government's credit, and the Government is indemnified to the extent of the sum named. It is probable, however, that the expenditure will exceed the original estimate, principally because the price of labour at Tarkwa has risen considerably.

Sierra Leone.

This railway was the first Government enterprise of the kind in West Africa, and was watched with special interest on that account. The profit in 1907 was £14,909, as against £10,624 in 1906. This is equivalent to $1\frac{1}{2}$ per cent. on the capital cost, but the customs receipts have been enormously increased. The line was described as follows by Mr. J. T. Alldridge to the Royal Colonial Institute on 24th November:—

“The line runs from Freetown to Baiima—220 miles—traversing country nearly due east. The greater part of the Protectorate, especially in a northerly and westerly direction, is not affected by it and remains practically *in statu quo* in regard to overland transport. This railway, the first, and as yet the only one, in the Colony, was only open to its terminus at Baiima in 1905, but it has already effected the most remarkable transformations even in the remote parts of the Protectorate. It would be quite impossible for me to describe the really extraordinary changes produced by this up-to-date Government railway; even now, although I have travelled by it several times, I cannot yet realise that I am being cheaply and safely carried over the very ground that it formerly took me three or more weeks of discomfort, peril, and expense to cover—a distance of 220 miles, that I can now do in a couple of days. The railway has completed the pacification of the Hinterland. It has penetrated the remote fastnesses of the chiefs who used to be constantly at war in regions they considered inaccessible to the white man. It has brought these regions, with their illimitable natural wealth, into touch with European markets, and it has afforded new fields for trading operations to numbers of Sierra Leoneans, and so, to a certain extent, has relieved the congested state of Freetown commerce. Around the stations along the line branch trading factories have been opened by the large European firms, and consequently the revenue of the Colony has increased at a very remarkable rate. Some idea of what this Government railway has already accomplished in the way of improving the exportations of the two principal articles of produce—palm kernels and palm oil—may be gathered from the fact

that whereas, in 1903, only five years ago, the exports of kernels from Freetown are scheduled as being 8,199 tons, they had risen last year to 20,431 tons; while palm oil had risen in the same period from 35,104 to 157,823 gallons; this marvellous increase being mainly attributable to the advantages of the railway communication. When we consider the extraordinary amount of manual labour that is involved in expressing the oil, and the enormous time that is occupied in breaking the shells of the nuts, one by one by hand, it is difficult to understand how the men, women, and children, who do the work, are able to get such large quantities together; but great as these quantities are, they undoubtedly might, and probably in time will be, hugely exceeded when science steps in and relieves the people of such tedious labour by substituting modern machinery for the primitive methods now in vogue."

Other people have not been slow to realise that the palm forests, scientifically treated, would well repay capital, and proposals have been put forward for concessions. It is necessary, however, to take care that the terms of any grant will not interfere unduly with the development of the whole territory.

British Honduras.

The Stann Creek line had been laid to 12½ miles in October, and the first section was formally opened on the 17th. No little trouble was caused by the regrowth of bush which had been cleared, and, in view of similar difficulties elsewhere, it is interesting to note that a weed-killer was found which effectually destroyed the roots.

The line crosses the river at the end of the first section, some 9½ miles from the pier, and shortly vessels drawing 24 feet will be able to come alongside the pier. It is to be hoped that liners will be ordered to do this, but as there is some doubt, mooring buoys will be provided.

We congratulate the Colony on the acquirement of a substantial line, which will certainly largely help on development. British Honduras is progressive, and a good case may before long be made out for a larger railway scheme. We should very much like to see it linked up with the cable system, but internal communication and transport are the first considerations.

In the construction of the new Canadian transcontinental line from Moncton, N.B., to Prince Rupert, B.C., during 1907, over 22,000 men and 6,000 animals were employed, and the expenditure on labour and material was about \$12,000,000.

Johore State.

This line, which has a special interest as having been built by the F.M.S. Government in a territory which is not technically under British protection, is $120\frac{1}{2}$ miles in length. Construction was commenced at the end of 1904, and at the end of 1907 6,792,128 cubic yards of earthwork had been executed out of an estimated total of 9,053,818, and the permanent way was laid for 86 miles; the sum spent to that date was \$7,780,798.

A train ran through successfully on 6th September, at an average speed of 20 miles, and it is understood that the work throughout has been highly satisfactory. It is anticipated that the enterprise will be completed within the estimated expenditure.

Railway Gradients and Curves.

In every railway construction scheme the question arises of the extent of curves and gradients which can be allowed. The increased cost of transport which is caused by sharp curves and steep gradients has to be set against the saving in construction. In a recent Colonial experiment it was found that, whereas 545 tons could be hauled on a 1 in 150 incline, it had to be reduced to 403 on 1 in 100, to 334 on 1 in 80, and 212 on 1 in 50.

The influence of curves on the hauling operations is shown as follows :—

Radius of Curves.		Load in Tons.		Percentage of Increase.
5 chains	... ..	814	... ..	—
10	„	1,062	... ..	30·4
15	„	1,178	... ..	44·7
20	„	1,246	... ..	53·0
30	„	1,320	... ..	62·1
50	„	1,387	... ..	70·4

It will be seen that the resistance is proportionately much greater between 5 and 20 chains, the reason being that as a curve decreases in radius, the frictional resistance increases in a very much greater proportion.

It is usual on railways constructed with sharp curves to ease the grading proportionately to the additional resistance due to curvature, so as to avoid having the two impediments simultaneously. But it is impossible by this means to neutralize the evil results of excessive curvature. Not only is the cost of haulage great, but the wear and tear of rolling stock is excessive. If possible, the minimum curve allowed should be 15 chains, with a minimum length of 4 or 5 chains of straight road between curves.

Stagger Jointing.

This method, which consists in breaking or alternating the jointing, so that each joint is opposite the centre of the corresponding rail, instead of both joints being even or opposite to one another, has been adopted in relaying part of the Federated Malay States Railway. The running has been found smoother and less noisy, and it is believed that the cost of maintenance will be less.

Steel Rails.

A certain "waviness" is sometimes noticed in rails, which does not follow any regular system. It does not occur at definite distances, such as might be expected if the section was too weak to support the load between the sleepers. Generally speaking, there is a drop at the ends of the rails, and this points to either imperfect straightening of the rails after rolling, or to unequal contraction when cooling.

MEDICAL NOTES.

Report on the Prevention of Malaria in Mauritius.—By MAJOR
DR. R. ROSS, C.B., F.R.S. (*Waterlow & Sons.*)

This full and lucid report gives in most interesting style the story of the discovery of the cause of malaria, and deals exhaustively with measures of prevention. The fever is, it appears, probably caused by a little poison which escapes from the parasites when they produce spores; this poison may be eliminated from the patient's system in from six to forty hours, and the fever then leaves him temporarily; but by this time another generation of parasites may be approaching maturity and may cause another attack in the same way. Besides fever, the parasites often produce anæmia and enlargement of the spleen. These parasites are never found in water, earth or air, but only in other animals, and it is a curious problem how they originated; probably, Dr. Ross suggests, they were originally free living animals, which by the gradual evolution of ages acquired the power of living in other animals. The anophelines can be distinguished from their less dangerous relatives by the fact that when the insect is at rest on a wall the tail projects outwardly, whereas with the *culex* it hangs downwards.

The continual increase and decrease of parasites, which result in successive relapses and recoveries, is due to the varying resistance of the corpuscles of the blood. Anything which weakens the resistance—fatigue, heat, chill, dissipation or other illness—tends to encourage the parasites and to precipitate a relapse. It is therefore necessary to keep the patient under observation for a considerable time—three months are recommended in temperate climates and four in the tropics.

The disease did not establish itself in Mauritius till 1866. In 1901 it had ravaged the coast and lower parts of the island so fearfully that "the wealthier residents had been driven out of these regions . . . everywhere the villages became more and more

deserted. Even the patient Indians sought the upper regions. . . . The population of Port Louis, which had always suffered most of all, began to fall. Even the houses were removed, and everywhere one sees the ruined basements, overgrown gardens, deserted fountains and mouldy gateways of the more prosperous past, now surrounded only by the poorest huts of Indians. It is the classical position of a great endemic epidemic. Plagues and cholera visit a country and vanish, but malaria and dysentery remain." In a similar way there is every reason to believe that ancient Athens and Rome were attacked; not war, nor famine, but the mosquito depopulated the shrines of classical civilisation.

The only effective and, in the long run, the least expensive and troublesome way of overcoming the evil is by draining the swamps and clearing the watercourses. Dr. Ross deals at length with the questions of cost and procedure, and his treatment of the subject will be valuable to every colony which is afflicted with this plague. He estimates the cost of the measures proposed for Mauritius at £9,000 a year.

The Committee on Ankylostomiasis, which has been sitting at the Colonial Office, has presented the following report:—

"The Committee, having considered the reports received from the several Colonies, recognize that the loss of labour caused by the prevalence of ankylostomiasis is very serious, and affects prejudicially not only the employers of labour but the community at large. Not only is there loss of life, direct and indirect, but also through the invaliding of labourers the charges for hospital and pauper expenditure are largely increased. This loss is, in the Committee's opinion, largely avoidable. Experience has shown that certain simple, well-understood and inexpensive measures can be adopted, which, if properly carried out, will reduce the evil effects of ankylostomiasis to a negligible quantity.

"The Committee think that the Colonial authorities have been inclined to exaggerate the difficulties of dealing with this question. They have argued that the complete eradication of ankylostomiasis is impracticable, and that the cost of preventive measures is prohibitive; and they have been content, with a few commendable exceptions, to do nothing in the matter.

"It cannot be too clearly understood, however, that provided that reasonable precautions are taken to prevent the constant re-infection of the labourers, the presence of a small number of ankylostomes, even in a large proportion of the population, may have no appreciable effect. Moreover, no elaborate sanitary appliances are necessary to guard against re-infection on a large scale. For example, latrine accommodation on estates is sufficiently subserved

by a hole or trench cut in the ground, provided that the contents are covered with earth from time to time. If it is assured that this accommodation will be used by the majority of the labourers, the fact that isolated cases of fouling the soil cannot be prevented is not of material importance. The main point is to guard against the fouling of the soil in places where, from the condition of the soil and the presence of numbers of labourers, it is clear that danger is to be apprehended.

" In these circumstances, the Committee think that no hardship can be involved in compelling estate owners, local bodies, and private persons to take such reasonable precautions as experience has shown will minimize the constant drain on the resources of the community which the existing state of affairs involves.

" The Committee therefore recommend, for the consideration of the Secretary of State, that :—

" (1) Wherever necessary, laws should be enacted enforcing the provision on estates, and elsewhere where numbers of labourers are collected, of simple, inexpensive, but efficient latrines, in places appropriate both as regards the convenience of the labourers and the health of the public.

" (2) A penalty should be imposed on persons found avoidably defæcating in any place where contamination of the soil or water would be likely to cause risk of infection.

" (3) Each Colony should be divided into convenient districts, in each of which should be appointed an Inspector responsible to the local authority, medical officer, or some other authority, who should be charged with the enforcement of sanitary regulations.

" (4) *An Inspector-General should be appointed by the Secretary of State, his salary being divided amongst the Colonies concerned, whose duty it would be to supervise the measures taken for the eradication of ankylostomiasis and to distribute advice and information. This appointment to be purely temporary, in the first instance at any rate.

" (5) In all schools object lessons on ankylostomiasis should, as far as possible, be given. Leaflets containing simple information on the subject should be distributed periodically. The Committee consider that the pamphlet prepared by Dr. Nicholls, of the Leeward Islands, would form a suitable model.

" (6) While the treatment for ankylostomiasis of the whole population is clearly impracticable, arrangements should be made for the distribution from convenient centres, such as schools, post offices, district nurse stations, &c., of anthelmintics at cost

* Mr. Grindle reserved his opinion on this recommendation, partly on the score of expense, and partly on constitutional grounds.

price, with simple directions for use. For this purpose beta-naphthol is the most suitable drug; thymol and other toric anthelmintics being only used under medical supervision.

"PATRICK MANSON.

"J. S. HALDANE.

"J. CADMAN.

"H. R. COWELL, Secretary.

"H. J. READ.

"28th October, 1908."

"G. GRINDLE.

The British Guiana Society for the Prevention and Treatment of Tuberculosis has issued its first report, covering a period of eighteen months (January, 1907, to June, 1908). Disappointment is expressed with the poor response to the appeal made for contributions, which has had the effect of seriously restricting the work of the Society, and emphasis is laid on the serious prevalence of the disease, especially in Georgetown.

"When the pages of the Registrar-General's Report are turned over, it is apparent to the most casual observer that year after year in regular succession 250 to 300 deaths are chronicled from phthisis alone. Were these deaths either from plague or yellow fever, not even the seething unrest of the last few months in this Colony would give any adequate idea of the outbreak of indignation against the supposed neglect of this or that authority. Yet the calm acceptance, by all who know, of a constant drain of 250 to 300 lives yearly from Georgetown, by a preventable disease, is difficult to imagine, were such not before our eyes. Neither yellow fever, plague, small-pox nor cholera has claimed so numerous victims as has tuberculosis."

The founders of the Society have been faced with the difficulties resulting from the attitude of leaving everything to the Government, which is characteristic of the Crown Colonies, and perhaps especially of the West Indies, and the Report comments on this with some bitterness:—

"It is a deeply-rooted impression amongst many that the question of tuberculosis in this Colony is one to be dealt with by the Government, financed by the Government, and organised by the Government. It should be recognised, however, that to throw the initiative and responsibility of all but most intimate private affairs on the Government or Municipality is an advanced condition of Socialistic Communism, at present repudiated by all English-speaking races, and represents the very antithesis of personal freedom; one must hesitate to regard such a feeling as characteristic of a young and rejuvenating Colony such as British Guiana is; one prefers to regard that opinion as merely a convenient formula with which to cloak repudiation of any interest in the spread or decrease of tuberculosis."

It has not yet been found possible to establish a model dispensary, as had been hoped, but a cottage dispensary was opened in January, 1908, and in the first six months was attended by 514 patients, but of these not more than 91 were actually suffering from tuberculosis, the objects of the dispensary not having been clearly understood by the public at first. It is to be hoped that the public spirit of those resident in or connected with the Colony will result in a more adequate provision of funds in future years.

The Trinidad Medical Report for 1907-8 contains particulars with regard to the occurrence of cases of yellow fever and plague in the Colony. Fortunately, neither of these diseases became widely prevalent, and the plague cases—the first recorded in the island—were only two in number. Of yellow fever the Surgeon-General writes as follows:—

“My predecessor recorded an outbreak of yellow fever in Port-of-Spain at the close of the last financial year, 5 cases being reported between the 31st January and the 31st March, 1907. The disease continued to recur at intervals in this financial year until the 20th August, when the 33rd case—the 38th of the series—was recorded and proved fatal on the 22nd August; the incubation period of 18 days having elapsed on the 9th September without any fresh case occurring meanwhile, it was a source of pleasure to be able to mark my official entrance into the Colony that day by the issue of clean bills of health. But the intermission was short lived; another case appeared in San Fernando on the 1st November, and 8 further cases at intervals up to the 1st March, the financial year closing with 47 cases in all from the first appearance of the disease fourteen months earlier.

“Of the total number of 47 cases, 39 occurred in Port-of-Spain, the remaining 8 being in outlying districts as far distant and separate as San Fernando, Gran Couva and Santa Cruz; in two cases reported in St. Joseph and Santa Cruz there existed a reasonable possibility of the disease having been contracted in Port-of-Spain, but careful inquiry failed to discover any connecting link between Port-of-Spain and the other outlying cases, while, although in perhaps 8 cases close together in Port-of-Spain infection might have been more or less directly conveyed—the other 31 cases were scattered about the town at widely separated places, and intervals of time, and offered only theoretical explanations of the source of infection.

“Fatal results attended 28 cases out of the 47 recorded—25 in Port-of-Spain and 3 in country districts, yielding a gross percentage mortality rate of 59·57 and rates of 64·1 and 37·5 for town and country respectively—a rather striking disparity when there are considered the advantages usually associated with treatment in

hospital as compared with treatment in private residences in country districts.

. . *

"The West Indies, where yellow fever is known to have prevailed during the last 250 years, is universally accepted as one of its endemic areas—if not, as Manson suggests, its actual source of geographical distribution; as Trinidad affords all the local conditions recognised as favourable to the production and dissemination of the disease, it becomes difficult with any degree of probability to exclude this Colony from liability to occasional outbreaks of yellow fever, apart altogether from direct and fresh importation of the infective material. In so far as the recent series of cases here did not present any recognised trace of imported infection (although such a possibility of origin should not be altogether excluded), and because the cases themselves in many instances were devoid of any apparent or discoverable connection, there is, I think, some colour for the other explanation of its source, and if this view be admitted as even a possibility, we may congratulate ourselves that the previous history of epidemic incidence here points to intervals of twelve or thirteen years between its recurrence, while at the same time we should persevere relentlessly with the destruction of the infection-carrying mosquito."

The following is the passage in the Report relating to bubonic plague:—

"The statistical returns from the Colonial Hospital for the year under review present for the first time records of two fatal cases of bubonic plague; this occurrence marks the beginning of an era in the public health history of the Colony fraught with a new danger, the ultimate issue of which it is impossible to forecast with any accuracy, and brings this country within the list of 52 that since 1894–95 have become infected by plague in its pandemic progress.

"It does not appear to have been possible to discover the origin of the infection in these two cases, which occurred in the persons of two native children, aged 8 and 9 years, residing at 63 Duke Street, Port-of-Spain; they were admitted to the Colonial Hospital on the 3rd June, 1907, and both died there within two days, the clinical, post mortem and bacteriological examinations yielding distinct evidences of the presence of bubonic plague.

"Measures directed against the spread of infection were put into effect, and on the 22nd August, 1907, regulations were passed by the Governor in Executive Council, endowing the Sanitary Authorities with wide powers to cope more efficiently with existing conditions and with any extension of the disease that might ensue. No further development of human plague was recorded here up to the close of the financial year."

Dr. A. E. How, of the West African Medical Staff, has written a report on an investigation which he conducted into cerebro-spinal fever in the Northern Territories of the Gold Coast in 1908. The report is published by the Gold Coast Government. The obscurity which still surrounds the causes and treatment of this disease renders the collation of scientific experience in different parts of the world of especial importance.

A report on Veterinary Bacteriological Work in the East Africa Protectorate during 1907-8 by H. G. Simpson, F.R.C.V.S., has been published in the Miscellaneous Series of Colonial Reports (No. 53. Price 1d.).

The first number of the Bulletin of the Sleeping Sickness Bureau, of which Dr. A. G. Bagshawe, of the Uganda Medical Staff, is Director, contains an elaborate article on the Chemo-Therapy of Trypanosomiasis. The second number opens with an article on the Diagnosis of Human Trypanosomiasis. The Bureau has also issued a Quarterly Report on the Progress of Segregation Camps and Medical Treatment of Sleeping Sickness in Uganda (December, 1907—February, 1908).

Studies from Institute for Medical Research, Federated Malay States.—Volume 3. (*Kelly & Walsh*, Singapore; *J. & A. Churchill*. 10s.)

It is pointed out that there is a curious contrast between Malaya and Central and East Africa, as none of the anopheles mosquitos in the one country are found in the other. In Malaya they are more easily dealt with. There are detailed notes on the culicidæ of Malaya and on various tropical diseases.

Reported cures of leprosy by Deyoke's leprosy preparation (Nastin) in America and New Zealand have caused enquiries. A lecture on the subject by Professor Deyoke, who is Director of the Imperial Medical School at Constantinople, was published in the *British Medical Journal* of 4th April, 1908. He has accepted an offer from the British Guiana Government to take charge of a leper hospital, and has also been invited to visit India. The extract is not a culture, but a fatty extract of streptothrise, cultivated from leprotic tissues dissolved in benzoyl chloride. This benzoyl-nastin solution is put up in ampoules containing each from 0.0005 to 0.002 nastin in sterilised olive oil, and one such dose is injected hypodermically once a week. It is said that in favourable cases the lesions disappear after some weeks or months. The material is prepared by Kalle and Co., and can be obtained in London.

REVIEWS AND NOTICES.

My African Journey.—By the RIGHT HON. WINSTON SPENCER CHURCHILL. (*Hodder and Stoughton.* 5s. net.)

This account of one of the most interesting of our possessions will be widely read and appreciated, not merely on account of the name and position of the writer, but for its fascinating style and practical suggestions. The scenery, the life and the sport of the countries traversed are vividly described. Mr. Churchill returned from the tour deeply impressed with the possibilities of East Africa and Uganda, especially Uganda, and with the importance of providing in time against any land system or want of system which would tend to check the coming of the small farmer. Whether English families would thrive in the highlands remains to be seen, but in any case there is no doubt that an immense production will take place in these territories. The principal lesson of the journey is the need for a prolongation of the Uganda Railway, and this idea will, we believe, prove before long to be economically sound.

The Far East Revisited.—By A. GORTON ANGIER, with a Preface by SIR ROBERT HART, G.C.M.G. (*Witherby & Co.* 10s. 6d. net.)

Sir Robert Hart remarks in the preface that "the East is up and awake, and the foundations are being laid for a fuller share in the work of the world, and for more intimate relations with all that concerns international intercourse and the influence one nation can exert on all others." At such a time of rapid change affecting moral and material forces, a statement of facts and impressions by an intelligent and experienced observer is welcome, and the editor of the *London and China Express* clearly brings to the task the habit of close examination and impartial judgment. China and Japan occupy the greater part of his space, but the notices of the Straits Settlements, the Federated Malay States, North Borneo and Hong Kong are full of information and graphically written, and we can

vouch for the up-to-date character of the particulars. It is indeed a rare thing to find, in the flood of works of travel, a volume which combines so much fullness and accuracy of detail with pictorial effect.

Mr. Angier's impression of Singapore was that it was not then in its happiest mood. "Something seemed to be now clogging the machine. People wore a more restless air, instead of exhibiting that calm contentment which has been the dominating feature of the Singapore I had known for nearly thirty years." But he does not doubt that the trade which has been diverted from her will be ultimately more than made up in other directions. It is true that some neighbouring ports have increased their business at Singapore's expense, and at present the place is affected by a world-wide depression; but the position is unrivalled, and as an emporium for the Far East its importance is as great as ever. Some comparatively local trade has been lost, but the development of the great countries of the Far East will more than make up for this. It may also be observed that much of Singapore's loss of business represents what the Federated Malay States have gained. Much business now goes direct to Port Swettenham which recently went to Singapore. However, the Tanjong Pagar Dock Board, which while created by Government rather prides itself on freedom from conventional Government methods, is doing really well, and the harbour improvements now in progress will vastly increase Singapore's advantages. In the meantime, it must be admitted that the diversion of trade is a serious matter for Singapore. It is no doubt partly due to unavoidable causes, such as the development of other ports and the conveniences of direct transport; but local opinion, which is not likely to be wide of the mark, puts it down largely to the Shipping Conference. In the annual report for 1907 it is remarked that "undoubtedly one effect of these Shipping Conferences has been to eliminate all chance of any sailing vessel obtaining cargo in the colony for the United Kingdom or Continent of Europe, and the same prohibition has, in effect, been placed upon the economically-run 'tramp' steamers, British mainly, which used to participate largely in the important over-seas carrying trade of this colony."

Mr. Angier dilates eloquently on the prosperity of the Federated Malay States. He suggests, indeed, that the revenues would admit of greater enterprise, and that "it is unnecessary to keep quite so tight a grasp on the purse strings when there are ways and means in which it may be profitably expended in developing the country. It has become the rule to keep them tightly closed, and one is constrained to wonder whether this policy is deliberately pursued in consequence of the financial necessities of the Colony of the Straits Settlements." It does not appear to us, however, that there is any definite ground for this suggestion. Mr. Angier freely recognises

the varied improvements which are being made, and it must be remembered that they are all paid for from surplus revenue. The States took up a large portion of the Straits loan, and in that way helped Singapore, but the investment was a good one.

The account of Hong Kong comprises a full and excellent statement of the public works, accomplished and in progress, and of the Chinese environs.

Mr. Angier makes some interesting observations on the silver currency, and expresses regret that the value of the Straits dollar was not fixed at 2s. 0½d., instead of 2s. 4d. Perhaps it would have been better if the figure had been put lower, but silver is constantly fluctuating, and no one can foresee its course; if it is necessary to value it in terms of gold, the administration can only take its value at the time. This was done, and silver rose higher still afterwards; since then it has come down heavily, but wisdom after the event is useless. The plain fact is that such countries as India and the Straits are in the difficult position of not having a gold standard, but of being compelled to maintain a fixed ratio as if they had. The Straits rate of 2s. 4d. is not statutory or in any way legally binding on the Colonial Government; but it is, of course, very desirable to maintain a fixed rate, and, in order to do this, the Government receives silver for gold at that rate, or a small fraction less. This is done either by issuing gold locally or by giving bills on London. The lowest price touched in 1907 for the telegraphic transfers was 2s. 3¼d., so that the rate may be said to have been well maintained. It may be argued, as Mr. Angier suggests, that it would be better to adopt a gold standard at once, and so do away with the somewhat cumbersome machinery for artificially regulating the rate; but the answer to this is that the operation is too vast, in view of the enormous mass of silver in the cast and the increasing demands for gold. At any rate, India would have to show the way.

The Fijians—a Study of the Decay of Customs.—By BASIL THOMSON. (*William Heinemann.* 10s. net.)

Mr. Thomson, who is a son of the former Archbishop of York, forsook several years ago the amenities of the Colonial service in favour of the Commissioners of Prisons, but he has since, in several productions, shown that Fiji and the South Seas retain a strong hold upon him, and he has now brought out a work which deals in a really masterly way with Fijian customs and the effect of European civilisation upon them. He begins with the observation that the present population of the world is believed to be about fifteen hundred millions, of which seven hundred millions are nominally progressive and eight hundred millions are stagnant under the law of custom. But no race now exists which has not to

some extent been touched by the influence of civilisation ; the old isolation is everywhere vanishing, and with it the old laws of custom are being driven out. Eventually civilisation will become, more or less, universal, and the result will inevitably be that special racial or local characteristics will be lost in an ever increasing uniformity. At the present time the feeling of race distinction is very strong, often amounting, in cases of colour, to antipathy ; but Mr. Thomson argues forcibly that this sentiment is neither primitive nor ancient. He considers that it dates only from the time of slavery in the West Indian colonies ; "and yet the Romans, the Spaniards, and the Portuguese, who were the greatest slave-owners in the world, never held marriage with coloured people in contempt." Throughout Europe itself there has been a vast mingling of races in old times. Mr. Thomson prophesies that in tropical countries the line of caste will soon cease to be the colour line, and that their wealth will create a new aristocracy recruited from men of every shade of colour. Perhaps he does not fully recognise the strength of the obstacles which at present lie in the way. As the feeling is at present admittedly strong, the argument that it is not primitive or ancient tends to show that it is the result of modern conditions, and is likely to have a long lease of life. It is, in fact, not diminishing, but increasing. The analogy of the ancient, or middle, ages is not really strong, as in them there was not the marked disparity of social ideas and practices which now distinguish civilised from uncivilised nations. But as this disparity diminishes—a sure result, however slow—no doubt race hatred will die down, and intermingling will occur more and more freely. Many will contemplate such a prospect with repugnance, but when it is considered how many millions of coloured men are British subjects, it is obvious that a great levelling up of their social position will enormously increase in future ages the strength of the British Empire.

The customs of the Fijians are set out by Mr. Thomson in considerable detail, and the statement is everywhere combined by shrewd comment. The Fijians show themselves slow to change, and their apathy and indolence seem almost proof against European influence. They are, therefore, a very favourable subject from the point of view of the law of custom. Still a change is taking place, and with the gradual alteration of communal institutions it will grow in force. We hope to recur to the subject in our next number.

From the Niger to the Nile.—By LIEUT. BOYD ALEXANDER.
(2 Vols. *Edward Arnold*.)

Lake Chad has in recent years been the object of political activities from Great Britain, France and Germany. It "has for years been the goal that has called forth the efforts of rival men and rival nations in the race of exploration, and round the subject of

this water desert, a history could be written of the ambition of man, of their strength and their weakness, of heroism, of honour, of failure and success." Most remarkable, perhaps, was the triple expedition which France organised in 1898, from north, south and west; of this, one branch started from Senegal, and the story of the leaders, Voulet and Chanoine, who seem to have become desperate and mad, and were eventually shot by their own soldiers, is one of the most regrettable in the history of African exploration. The lake itself does not possess the grandeur expected from an African lake. It is mostly shallow, muddy and reedy, the breeding place of myriad flies and rats. So flat is the country that the water, at the bidding of the wind, will advance as much as two miles, and recede again. But its vastness and light give it a peculiar charm, to which Lieut. Boyd Alexander often pays tribute, and it is the link of a river system from the Niger to the Nile. It is a curious fact that the fish in it are identical with those of the Nile. Its waters have been described as salt, but the taste is probably that of potash, of which the writer observes that, as an addition to water, it "makes it more palatable, and I always noticed on drinking it, after coming in from a long day's tramping, that its effects seemed more stimulating than other water." This peculiarity has been noticed even in this country.

Lieut. Boyd Alexander found that the lake is really in two distinct parts. He travelled onwards over the Shari-Ubangui watershed, and so to Gondokoro. His experience of the Congo State was that the Congo tribes, as a whole, are happier since the Belgians' occupation. The volumes, which are admirably printed and illustrated, are studded with passages interesting to the sportsman and the naturalist. They are a record of a well-planned and well executed journey, which, however, was saddened by the deaths of Capt. G. B. Gosling and Capt. Claud Alexander. We trust that his new expedition to the Kamerun will be a fortunate one.

Through Southern Mexico.—Being an account of the travels of a Naturalist, by HANS GADOW. (*Witherby & Co.*, 18s. net.)

The conditions of life in different tropical countries are so similar that the scientific examination of one place is valuable to all. This well-written and well-illustrated volume is filled with interesting descriptions of familiar fauna and flora, given with the skill and fullness of the trained naturalist, and also gives a vivid account of the ways of the inhabitants. A familiar case is set out as follows:—"The banana is now a barren fruit; it contains no seeds, or, at least, they have degenerated into tiny vestiges of seeds, which are attached to the grey central string which runs lengthwise through the fruit; consequently the plant can only be reproduced by suckers. This is a very remarkable thing. The striking-looking flower, delicately

mauve or pink, is there, with stamens and pistils complete, but the fruit is barren. There are still some species in the tropics of Asia which reproduce themselves by seeds, but the best edible kind, the *Musa Paradisiaca*, has never been known to do this, and, what is more, all knowledge of its original home is lost—hence its specific name. It has been from time immemorial propagated by roots only, and has, consequently, lost the sexual mode of reproduction.” This result is, no doubt, indicative of the extremely ancient cultivation of this plant. Long selection has led to softer and, ultimately, seedless varieties.

As an example of the studies of animal life, we may quote the following account of leaf-cutting ants:—

“In such forests our eyes are sure to be attracted by a procession of apparently migrating pieces of fresh green leaves, all neatly cut out and walking in an upright position, as each is held in the jaws of an ant. Let us follow this stream to its source. It comes down from the stem of an orange or lime tree in our host’s most cherished plantation. Thousands of ants are sitting upon the leaves, each holding on to the edge and scissoring out with its jaws a piece of the leaf, the cut forming part of a neat circle. This is allowed to drop, to be carried away by the other ants which are waiting below; or else the cutting ant jerks the load, which is many times larger and heavier than itself, on to its back and climbs down. Within a few hours that tree may be stripped of all its green, only the ribs of the leaves being left, and it will probably die unless the attack was made during the sprouting season, but in any case that year’s prospect of a harvest is gone. Now let us follow the procession along its well-beaten track, where nothing is allowed to grow, because of the millions of little feet which have trampled over it. It leads over many obstacles in a straight line for hundreds of yards until we come to a slight rise of ground in the forest, where we sink half up to the knee into a blackish-brown, smeary compost of rotten, ill-smelling vegetable matter. The mound may be a foot or two in height, and may measure several yards across. What we see is only the used-up or spent manure, the remains of the millions of bits of leaves which had been taken into the cavities in the ground, there to be further chewed into pulp, and then allowed to ferment in the countless passages and chambers of the mound, which is honey-combed in every direction. In the fermenting mass grows a fungus in profusion, and this forms the sole food of the ants and their larvæ. We have, in fact, walked into a huge, scientifically-constructed mushroom bed—a farm for the cultivation of mushrooms, and the nursery of the independent state of some species of *Eciton* ants. That the whole thing is in good working order is soon impressed upon us by the territorial army, the garrison of soldiers who are swarming out to attack, whilst the workers rush about in the well-

known style of disturbed ants. . . . Trees are liable to be visited by the attacks of leaf-cutting ants—especially introduced trees, which are quite unprepared for such conditions, while native trees have had time to hit upon some defensive plan. The best way of fighting ants is to get other ants to fight them. Lucky are the trees which possess such inducements to attract the mercenary ants, either by means of honey and other food, or by offering them shelter. Thrice lucky are the plants which can combine such attractions. Some acacias have managed it. Their twigs grow pairs of bull's horns, hollow spikes, modified stipules; ants bite a hole into the base and live in these fortresses; and on the tips of the pinnate leaflets is a little gland or other modification, full of honey, or a proteid, or some other stuff which is good to eat and can be spared by the plant. And these little bodies are beloved by the ants, which, thus receiving board and lodging, are content to stay, to garrison and to defend furiously the hospitable tree against any aggressor. The system answers well. How it has come about, whether by teleology or by natural means, is another question, the answer to which must depend upon personal inclination. There is no arguing in such matters."

King Edward's Ring: a West African yarn of adventure more or less true.—By PEREGRINE ATBUSH. (*East Anglian Daily Times*, Ipswich. 1s.)

The ring is a mysterious curio of the kind beloved of fiction of the Anstey and Haggard schools, but it serves as a means of introducing no small amount of lively description of the natives' customs on the West Coast. The *nom de plume* clearly conceals a writer who has had large opportunities of mixing freely with the natives and of studying their ways. Anyone who takes an interest in such matters will get in this little book an ample return for his shilling.

Nature Teaching, based upon the general principles of Agriculture, for the use of schools.—By FRANCIS WATTS, C.M.G., D.Sc. (*Imperial Department of Agriculture for the West Indies*. Price 2s.)

This is a second edition, enlarged and illustrated, of a work originally issued in 1901 by the Imperial Department of Agriculture for the West Indies, and written by Dr. Francis Watts, the well-known Superintendent of Agriculture in the Leeward Islands. Dr. Watts has received assistance in the preparation of the work from various officers of the Imperial Department, and Sir Daniel Morris contributes a preface. The book may be regarded as an admirable example of one side of the work which has been carried out by the Department since its establishment ten years ago. The

West Indies at that time suffered from the want of any means of centralizing and co-ordinating the agricultural work, both practical and scientific—and it must be remembered that in the sphere of agriculture, no less than that of industry, scientific research is in itself directly practical—which was being done in the different Colonies. Since that time, the scope and variety of such work has, mainly through the agency of the Department, been immensely increased. It has from the first been recognised that the work of agricultural development ought not to be limited to giving advice and assistance to planters, and discovering improved methods of cultivation and of dealing with disease and insect pests. In all these directions the Department has been active. But it may safely be said that none of its activities has been more valuable than that which has taken the direction of educational effort. It is now fully recognised that education of a purely literary or scholastic type is thoroughly unsuitable for a community ultimately dependent for its prosperity upon success in agriculture; and the study of agriculture has become a regular part of the curriculum of all West Indian schools, while special agricultural schools have been established in most of the Colonies. Doctor Watts' volume is designed for the use of teachers and of the older pupils who have received oral instruction in the subject which it covers. It deals, in a series of nine chapters, with the seed, the root, the stem, the leaf, the soil, plant food and manures, flowers and fruits, weeds and insects; and in every chapter the theoretical section is followed by instructions for practical work, including experiments which may easily be carried out. Doctor Watts writes in a simple and interesting style, and the book is notably free from that excess of technicalities which makes so many text-books on botany and kindred subjects abhorrent to the pupil. We are glad of the evidence of success given by the appearance of a second edition, and we hope that the volume may enjoy a wide circulation.

The Geology of the Goldfields of British Guiana.—By J. B. HARRISON, C.M.G. (*Dulau & Co.* 5s.)

This work gives the results of reconnaissances which went on from 1897 to 1905. The descriptions are based mainly on the rocks exposed in the channels of the river. The reason for this is that in such a country rocks in other places are covered by heavy forest growths, but during dry seasons the beds of the rivers become exposed over large areas, and their corners give excellent natural sections along which the structure of the district can be studied, especially at the rapids and cataracts.

Gold was not systematically searched for in British Guiana till about 1886, and the companies first in the field were unsuccessful, largely because mills were installed and crushing operations began

before a sufficient supply of gold-bearing quartz was found—a frequent error in the history of gold mining companies, which begin with capital and are anxious to start work as quickly as possible. In 1903, however, a very large auriferous reef was discovered on the Puruni River, and the land was purchased by an American syndicate. The prospects of this mine are very promising. A German company commenced working in 1903 with satisfactory results. In 1906, a syndicate located 2,000 acres on the Mazaruni River for diamonds, and there has been a rush to the district. By March, 1907, there had been found 731,240 diamonds, weighing 49,590 carats.

Mr. Harrison sets out with much detail and in clear style the physical features of the Colony, the petrography of the rocks, and the geology of the different districts. The Mining Ordinance is given.

There is undoubtedly an immense field here for future enterprise. The goldfields are extraordinarily extensive, and only a small part has yet been touched. The country is favourable for hydraulic mining and dredging.

A geological map is issued to accompany the work (5s. unmounted, 7s. 6d. mounted).

The Surveys of British Africa, Ceylon and the Federated Malay States.—THIRD ANNUAL REPORT OF THE COLONIAL SURVEY COMMITTEE. (Price 1s. 10d.)

This Report contains accounts of the surveys of the following territories:—Anglo-Egyptian Sudan, British East Africa Protectorate, Gambia, Gold Coast, Northern Nigeria, Nyasaland, Rhodesia, Sierra Leone, South Africa (General), Cape Colony, Orange River Colony, Southern Nigeria, Uganda, Ceylon and the Federated Malay States. The progress which has been made in the delimitation of British frontiers in Africa is shown in tabular form, and it is mentioned that three Boundary Commissions have been at work during the past year, viz., the Niger-Chad Commission (Anglo-French), the Uganda-Congo Commission (Anglo-Belgian), and the Yola-Cross River Commission (Anglo-German). An announcement of some interest is made with regard to the vexed question of the spelling of African place names:—

“The Secretary of State has approved of the following rules for the spelling of place names in British Tropical Africa:—

“(a) Established forms of spelling of well-known places are to be retained, *e.g.*, Coomassie, Accra.

“(b) The spelling of other place names is to be in accordance with the rules of the Royal Geographical Society. (Briefly, in this system, the consonants are as in English and the vowels as in Italian.)

"(c) The Director of Surveys in each Colony or Protectorate (or where there is no Director of Surveys, the Intelligence Officer), is responsible for the correctness of the spelling of the place names on field sheets sent home for reproduction. He will ascertain the true pronunciation from Commissioners and Residents.

"In any case in which it is doubtful whether a name should be dealt with under (a) or (b) he will refer the question to the Governor for decision."

Scenery Preservation in New Zealand.

A report presented to the New Zealand Parliament gives an interesting account of a side of Government work which many persons would be glad to see more extensively imitated in the United Kingdom. Under two Acts, passed in 1903 and 1906, the Lands Department had, up to March 31st, 1907, acquired 25,801 acres, which were reserved "for scenic purposes," and to this total an addition of 8,130 acres was made during 1907-8, the total area reserved thus amounting to 33,931 of private or native land specially acquired, exclusive of about 100,000 acres of Crown land similarly reserved under the Land Act. It is stated in the report that "although much still remains to be done throughout New Zealand to preserve the most attractive and frequented beauty-spots which would otherwise be in danger of destruction, yet there is no fear that this country, which is so richly endowed with picturesque scenery, will fail to retain uninjured the greater part of what visitors praise so highly." The report is accompanied by a series of beautiful photographs which indicate how well worth preserving the natural scenery of New Zealand is. The Dominion recognises that it is an obligation of Government to promote the amenities as well as the utilities of national life; and it would be gratifying if the British Government would accept a fuller responsibility for work of the kind, which is at present being performed, with sadly inadequate resources, by the "National Trust."

The Micmac Indians of Newfoundland.

The Colonial Office has published a report by the Governor of Newfoundland, Sir William MacGregor, on a visit which he recently paid to the settlement of the Micmac Indians at Bay d'Espoir on the south coast of the island. This little community consists of twenty-three families, or 131 persons in all. They occupy a Reservation which was laid out for them in 1872 by the Colonial Government, but they have never fulfilled the conditions under which their occupation licenses might have been converted into grants in fee, and their present condition and prospects are described

as far from bright. "Game, their principal food, is manifestly becoming more difficult to procure; their trapping lands are being encroached upon by Europeans; they are not seamen; they are not fishermen; and they do not understand agriculture." These Indians are a branch of the Algonquin Indians who inhabited Maine, New Brunswick and Nova Scotia. They first came over to Newfoundland exactly a hundred years ago, and, largely owing to their possession of fire-arms, they seem to have been mainly instrumental in crushing out of existence the unfortunate Beothuk Indians, whose only weapons were bows and arrows. This indigenous race is now entirely extinct. Sir William MacGregor states that he has not heard of any person in Newfoundland in whose veins flows Beothuk blood. The Micmacs, on the other hand, have a considerable admixture of European blood. The Governor remarks that they require special attention and treatment at the hands of the administration. It would not be difficult to find a location for them which would be more suitable, so far as cultivation is concerned, and equally good for hunting and trapping. They appear to be a fairly healthy community; they have their own church (Roman Catholic) and school, where good work is being done under discouraging conditions; and they select their own chief without regard to hereditary principles.

The Journal of the Society of Comparative Legislation.
New Series., No. XIX. (August, 1908; John Murray.)

This number contains an important judgment of the Supreme Court of Ceylon on *nudum pactum* in Roman-Dutch Law, an interesting article on the Market in African Law and Custom, a contribution by Professor Harrison Moore, of Melbourne University, on the Legal Relations of the States of the Empire, and a Gold Coast Judgment on the Status of Native Courts.

The Quarterly Bulletin of Miscellaneous Information issued by the Botanical Department of Trinidad (October), contains a very interesting collection of notes from various sources on agricultural and sanitary matters. A lecture is quoted, in which great praise was given to the high grade fats now made from the cotton plant, and, if mankind can be persuaded that vegetable fats are richer, purer and healthier than animal fats, a vast extension of the uses of cotton plants may be looked for. The cakes of the ancients were always made with vegetable oil, but animal fats have come in since simply because they are cheap.

COLONIAL STAMPS.

IN our last issue we gave the colours appropriated to stamps of all existing values in the proposed colour scheme. We may further explain that, although the colours of stamps printed from the old Universal King's Head Keyplate would agree exactly with the list given, they would be found reversed in the case of the 8d., 10d., 1s. 6d., 4s. and 8s. stamps printed from the new Universal King's Head Keyplate; *e.g.*, the 8d. stamp printed from the old keyplate would show the head and the words postage and revenue in purple, and the name of the Colony and the value in red, but the 8d. stamp printed from the new keyplate would show the head in red and the border in purple. It is also necessary to add that, although stamps bearing designs other than that of the King's head would be printed in the colours given in our last issue, it does not follow that the constant portion of each design will be in the colour given for the King's head, as this colour may be allowed to the border of the stamp.

A further point of interest in connection with stamp books arises out of the price paid by the public for them. It is often considered that 2s. 6½d. or 2s. 7d. is an awkward sum to charge, and it has been suggested that instead of this the charge should be 2s. 6d., but that the books should be one or two stamps short. It will probably be clear, on reference to our last number, that the labour of removing the stamps after the books are bound would be very great, apart from the difficulty of auditing a large number of single stamps. There are only two ways in which this difficulty can be overcome. That adopted by the Imperial Government is somewhat expensive, and would only be justified by a very large demand for stamp books. A special stamp printing plate has been made which prints a cross in place of the first stamp and every seventh subsequent stamp on a sheet. In making up the sheets of stamps preparatory to binding

one such sheet is put at the bottom of each batch, so that in each book the first stamp on the last page is a dummy. The other alternative is to print the stamps as usual but overprint a corresponding stamp to that described above with some such words as "Not for use." This method was tried by the Government of Natal, but did not give satisfaction, and the uneven charge was substituted for it.

We understand that the Imperial Government has decided to admit approved advertisements on the interleaves of stamp books. If this were done in the case of such articles in the Colonies, it would very likely be possible to sell them without a premium, the loss being in all probability more than made up by the proceeds of the advertisements. The stamp books would certainly be in largely-increased demand, and this would in turn be reflected by their increased value as an advertising medium.

ST. VINCENT has ordered a supply of 2s. and 5s. postage and revenue stamps to be printed from the Universal King's Head Key-plate in the colours allocated to their values in the list given in our last issue. The new 6d. and 1s. stamps were despatched at the end of November.

A NEW 1d. stamp plate is in hand embodying certain small improvements which will be found in the 6d. and 1s. stamps referred to above.

STRAITS SETTLEMENTS.—The colours chosen for the \$25 and \$100 values are blue and purple on blue paper for the former and red and black on blue paper for the latter. It has been decided to issue a new large-sized stamp value \$500, the colour of which will be yellow and purple on white paper. No order has yet been received for stamps of either of the above values.

TRANSVAAL.—The new 2½d. stamps, referred to in our issue for October, 1907, have been supplied; also some 2s. 6d. postage stamps printed on multiple watermark paper.

GOLD COAST has decided to adopt the new colour scheme, and 6d. stamps have been supplied in accordance with it.

LEEWARD ISLANDS and VIRGIN ISLANDS have decided to adopt the new colour scheme.

Messrs. Whitfield, King & Co.'s new catalogue states that the total number of stamps issued to date, as included in the catalogue, is 22,382, of which 6,849 belong to the British Empire and 15,533 to the rest of the world.

LETTER TO THE EDITORS.

LETTER III.

The Future of the West Indies.

24th November, 1908.

SIRS,

A reference to Letters I. and II. on the above subject will show that the lines laid down by the Commonwealth of Australia in the formation of their Constitution have been closely followed, and from current information it may be gathered that the Australian methods have guided the preliminary propaganda for the formation of a Constitution for a United South Africa, which resulted in the Convocation of the National Convention recently held at Durban and Cape Town. The meeting place was in the Colony, instead of, as suggested for the West Indies, in London. But it must be recognised that the several Colonies in South Africa already have, and are exercising in their respective Governments, the powers required by the West Indies as a whole.

The verdict of the authors of the work entitled *The Government of South Africa* is, that in the proposed Union reposes South Africa's only hope of fully realising her destiny. The unsparing efforts of a small band of enthusiasts, each an expert in his own domain, who for eighteen months have been engaged as an Unofficial Committee of Enquiry, and with the cognizance and assistance of the various Governments, in accumulating, sifting, classifying, and condensing an intricate mass of facts, figures and general information regarding the present Government of South Africa, have brought about and made possible the meeting of the South African Convention. In the case of the West Indies, if some similar method were followed, they would prepare the way for a Convention in London of delegates elected by each separate Legislature in the

West Indies. If such a band of workers for the West Indies could be formed and then dissolved when the Council meets, the most legitimate expectations of success might be entertained.

The Convention of the delegates of the various Colonies of South Africa shows that the fact of different nationalities with divergent opinions and interests, and the existence of the most complex questions, forms no bar to the policy of a Union. On the contrary, it has been proved that delegates so various as de Villiers, Merriman, Sauer, Malan, Beck, Jameson, Smartt, Stanford, Maasdorp, Van Heerden, Walton and Jagger for the Cape Colony; Botha, Smuts, Schalk Burger, De la Rey, Farrar, Fitzpatrick, Hull and Lindsay for the Transvaal; Fischer, Steyn, Hertzog, de Wet and Brown for the Orange River Colony; Moir, Greene, Smythe, Morcom and Hyslop for Natal; and, lastly, Milton and Mitchell for Rhodesia, can meet in a Convention and decide questions long the source of continuous conflict.

The West Indian question is not one so different as to be beyond the power of a like settlement, provided that the Colonial spirit exists, with the customary British way of adapting and strengthening the potential resources of the part of the world in which our countrymen find themselves placed.

As regards Jamaica, the formation last August of the Kingston Citizen's Association has some bearing on the question now discussed. The objects of this Association are (*inter alia*) "to create and keep alive public interest in public affairs." Similar associations already exist in other West Indian Islands. All of these might be subservient to the formation of a suitable Sub-Committee charged to collect data, &c. In conclusion, it would seem from the example of what has been done in Canada and Australia, and is about to be done in South Africa, that the West Indies might, without loss of independence, re-arrange their legislative and executive powers so as to make that independence within the Empire more effective than now in promoting objects of common interest to the West Indies as a whole.

I am, Sirs,

Your obedient Servant,

JOSEPH RIPPON.

BALLADE OF RED TAPE.

"HUMANI NIHIL ALIENUM."

Old England has gathered her thrones together
From the shores of the south to the land of the snow.
Her sailors on guard, come wind, come weather ;
Her soldiers ready to meet the foe,
Their hearts for the shock of battle aglow ;
And her civil servant plying his beat
From home to the office. The Colonies trow
It is all red tape in Downing Street.

He sits with his quill of the grey goose feather
By an inkpot ; to train his thoughts to flow
His freeborn soul to a desk they tether,
Whilst messengers entering in dumb show
Deposit the bundles, row on row,
For this dull-eyed hermit in his retreat.
Away from the field and the flowers that blow,
It is all red tape in Downing Street.

In his youth his footsteps trod the heather,
As he sang with the lark till the sun was low ;
He flew the kite and he chased the leather.
To-day he remembers the long ago,
And smiles as his pen glides to and fro
With its wise old scratch on the folio sheet.
Says the World, but it doesn't exactly know,
" It is all red tape in Downing Street."

ENVOI.

Clerk, if you find the office slow,
If the press with a gibe your labours greet,
Forget not the days of your boyhood, though
It is all red tape in Downing Street.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. H. B. WALCOTT (Treasurer and Collector of Customs, British Honduras), Collector of Customs, Trinidad.
- Mr. E. G. ROWDEN (Director of Education, Gold Coast), Director of Education, Southern Nigeria.
- Mr. R. C. GRANNUM (Chief Assistant Treasurer, Gold Coast), Receiver-General, British Guiana.
- Mr. F. G. CROWTHER (District Commissioner, Gold Coast), Director of Education, Gold Coast.
- Mr. A. J. CUNNINGHAM (Chief Accountant, Public Works Department, Southern Nigeria), Assistant Island Postmaster, Cyprus.
- Mr. E. H. WARREN (retrenched from the South African Constabulary), Clerk in Customs Department, Nyasaland.
- Mr. E. H. GOUGH (retrenched from the South African Constabulary), Assistant Superintendent of Police, Straits Settlements.
- Mr. J. T. WOOD (late Registrar of Mining Rights, Transvaal), First Grade Revenue Surveyor, Federated Malay States.
- Mr. J. W. C. O. GLENCROSS (late of Cape Police), Assistant Inspector of Police, Uganda.
- Dr. J. A. HARAN (Medical Officer, East Africa Protectorate), Medical Officer of Health, Mombasa, East Africa Protectorate.
- Mr. V. B. TAYLOR, A.M.I.C.E. (District Engineer on the construction of the Oshogbo Extension of the Lagos Railway), Provincial Engineer, Southern Nigeria.
- Mr. W. R. TOWNSEND (Chief Magistrate, Gambia), Protectorate and Circuit Judge, Sierra Leone.

- Mr. F. H. GOUGH** (Solicitor-General, Gold Coast), Puisne Judge, Gold Coast.
- Mr. C. H. BEARD** (Resident Magistrate, Jamaica), Junior Puisne Judge, Jamaica.
- Mr. G. P. ST. AUBYN** (Judge, Turks Islands), Resident Magistrate, Jamaica.
- Mr. A. K. YOUNG** (Attorney-General, Nyasaland), Magistrate, Port of Spain, Trinidad.
- Mr. C. A. HARRAGIN** (Second Class Supervisor of Customs, Gold Coast), Financial Assistant, Second Grade, Southern Nigeria.
- Mr. J. M. TATE** (late Veterinary Officer, South African Constabulary), Veterinary Officer, Uganda.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ABBOTT, E. G.	28 Dec., '08	GREENWAY, J. J. K. ...	7 Jan., '09
ASH, W. R.	19 Feb., '09	GOUGH, F. H.	5 Mar., '09
BUDGE, A. K.	11 Mar., '09	HUNT, Dr. E. L., C.M.G.	11 Mar., '09
Junior Naval and Military Club, 96, Piccadilly, W.		Sports Club, St. James' Square, S.W.	
BALSTONE, A.	11 Mar., '09	HARPER, Dr. F. S. ...	24 Feb., '09
BURNETT, W.	5 Mar., '09	HELLIS, C. E.	28 Jan., '09
BHUTTACHARJI, Dr. J. C.	17 Jan., '09	HASTINGS, Capt. G. H.	24 Jan., '09
BROWNE, R.	23 Feb., '09	JUPE, Dr. F. I. M. ...	
BRYANT, S.	19 Dec., '09	KEYWORTH, Capt. R. D.	28 Feb., '09
BAITER, E. G.	2 Jan., '09	LEE, Miss A.	28 Feb., '09
BURNS, R. E.	4 Jan., '09	LETT, R. E.	23 Feb., '09
BRANTINGHAM, W. ...	16 Jan., '09	c/o Royal Colonial Institute, Northumberland Avenue, W.C.	
BURBRIDGE, K. G. ...	10 Feb., '09	LYFORD, F.	28 Dec., '08
BROWNE, W. S.	7 Feb., '09	LUNN, Dr. J.	17 Jan., '09
CRAVEN, C. S.		LANGLEY, Dr. W. H., C.M.G.	2 Jan., '09
COZENS-HARDY, E. W. ...	19 Dec., '09	LE FANU, Dr. G. E. H.	16 Feb., '09
CONBROUGH, W. E. ...	23 Dec., '09	MILES, T.	31 Jan., '09
DOWNER, A. W.	27 Apr., '09	MATHIESON, G. V. ...	26 Dec., '08
DEACON, T.	13 Apr., '09	MORCOM, H. C.	14 Feb., '09
DUNN, J.	5 Jan., '09	McKELLAR, F. L. ...	31 Dec., '08
DAVIS, S. S.	31 Jan., '09	MICHELIN, W. P. ...	17 Mar., '09
DUGON, Dr. T. H. ...		O'BRIEN, Dr. J. M. ...	22 Jan., '09
ESPENT, R. W. A. ...	24 Jan., '09	ORAM, Miss J.	20 Mar., '09
FRASER, J. B.	23 Feb., '09		
FLEURY, Capt. A. M. ...	29 Dec., '09		

GOLD COAST—*continued.*

PETT, J. F. ...	15 Mar., '09	TWITCHEN, E. W. ...	20 Jan., '09
PURCELL, G. K. T. ...	14 Apr., '09	THRELFALL, J. ...	5 Mar., '09
POOLE, G. A. E. ...	22 Dec., '08	TRIMMER, J. ...	28 Feb., '09
PURKIS, Dr. D. W. ...	29 Dec., '08	THOMAS, S. H. ...	28 Jan., '09
RICHTER, A. H. L. ...	11 Mar., '09	VENNING, W. K. ...	14 Feb., '09
RABBETTS, G. W. ...	14 Feb., '09	WHEELER, Capt. H. T. C.	23 Feb., '09
ROWDEN, E. G. ...	28 Jan., '09	WHEATLEY, L. H. ...	28 Feb., '09
SWANBOROUGH, T. W. ...	3 Mar., '09		

GAMBIA.

BAUERLE, W. ...	20 Dec., '08	HOOD, Dr. T. ...	3 Mar., '09
HEELAS, P. J. B. ...	20 Feb., '09		

SIERRA LEONE.

ALEXANDER, Dr. W. M.	20 Dec., '08	HAM, P. ...	23 Feb., '09
ASHLEY, J. E. ...	12 Jan., '09	JACKSON-MOORE, Dr. J.	11 Mar., '09
BOULTON, C. H. ...	30 Mar., '09	MCLEOD, Miss A. ...	28 Dec., '08
BAILEY, Capt. H. E. ...	14 Feb., '09	PICKIN, J. J. ...	2 Jan., '09
c/o Messrs. Cox & Co.,		RENSHAW, S. ...	2 Jan., '09
16, Charing Cross, S.W.		STEWART, B. ...	2 Jan., '09
BOWDEN, W. D. ...	4 Jan., '09	SALT, A. H. ...	17 Mar., '09
CLIFFORD, J. W. ...	2 Jan., '09	VERGETTE, E. O. ...	20 Mar., '09
COMBER, J. R. W. ...	28 Feb., '09	VAN DER MEULEN, F. A.	23 Feb., '09
EDWIN, J. N. ...	28 Feb., '09	WILKINS, W. B. ...	7 Feb., '09
FORDE, Dr. R. M. ...	13 Mar., '09	WILLIAMS, Maj. R. H. K.	23 Feb., '09
HEARN, W. A. ...	24 Mar., '09		

SOUTHERN NIGERIA.

ANDERSON, H. ...	2 Jan., '09	BIDDELL, A. W. ...	28 Dec., '08
ARCHER, P. L. H. ...	12 May, '09	BAILEY, J. ...	24 Mar., '09
AINSCOUTH, F. ...	5 Mar., '09	BUTTERWORTH, Capt.	
BAKER, T. W. ...		A. W. ...	2 Mar., '09
BROWNING, F. S. ...	5 Mar., '09	BEALE-BROWN, Dr. T. R.	7 Feb., '09
BAILLIE, R. G. ...	28 Feb., '09	BOSANQUET, G. A. I. ...	1 Jan., '09
BENNETT, H. W. ...	24 Jan., '09	CHRIST, T. ...	5 Mar., '09
BEVERLEY, Capt. W. H.	25 Dec., '08	c/o Bank of B. W.	
BRIERLEY, Dr. R. H. ...	4 Feb., '09	Africa, 17, Leadenhall	
BOOTH, M. G. ...	11 Jan., '09	Street, E.C.	
BOURNE, A. ...	9 Jun., '09	COGHILL, Dr. H. S. ...	16 Feb., '09
BERGERSEN, S. H. ...	23 Feb., '09	COOKE, W. H. ...	12 Mar., '09
BEST, Dr. W. H. G. H....	14 Mar., '09	CROFT, T. ...	3 Feb., '09
BLACKWELL, Maj. L. N.	2 Jan., '09	CLARKE, W. F. ...	8 Feb., '09
c/o Messrs. Richardson		CURRIE, Dr. J. ...	28 Dec., '08
and Co., 25, Suffolk		CRAWFORD, Capt. H. R. H.	3 Apr., '09
Street, S.W.		Junior Naval and Military	
BURGESS, Dr. H. L. ...	25 Mar., '09	Club, 96, Piccadilly, W.	

SOUTHERN NIGERIA—continued.

COCHRANE, W. G. ...	11 Mar., '09	MORRIS, H. J. ...	14 Jan., '09
CROSSE, A. B. ...	3 Jan., '09	MACKAY, T. J. ...	31 Dec., '08
CORSELLIS, Capt. M. H.	9 Jan., '09	MACFARLANE, Dr. W. F.	7 Mar., '09
CLARK, R. C. ...	20 Dec., '08	c/o Royal Colonial	
CARTER, J. St. L. ...	11 Jan., '09	Institute, Northum-	
CROSTWAIT, C. H. E. ...	8 Jan., '09	berland Avenue, W.C.	
DANN, T. W. ...	7 Mar., '09	MACKINNON, Dr. D. ...	18 Jan., '09
DALLIN, T. ...	5 Jan., '09	MAPLES, Dr. E. E. ...	2 Mar., '09
DEKENTZON, A. H. ...	16 Jan., '09	OBORNE, E. W. ...	5 Jan., '09
DAY, Lieut. T. E., R.N.R.	28 Feb., '09	PEAT, R. ...	28 Dec., '08
DOUGLAS, K. J. ...	23 Feb., '09	POLLEN, Dr. J. M. ...	16 Jan., '09
DIAS, C. W. ...	25 Dec., '08	PECK, R. W. ...	26 Dec., '08
ELLINGHAM, C. ...	31 Jan., '09	PHILLIPS, P. H. ...	14 Feb., '09
FAIRWEATHER, J. H. ...	14 Feb., '09	PROSSER, J. A. B. ...	23 Dec., '08
FORAN, Dr. P. F. ...	13 Jan., '09	PINDER, J. H. ...	14 Feb., '09
FISHER, M. H. ...	31 Mar., '09	c/o Metropolitan Bank,	
FISHER, W. ...	5 Jan., '09	Oxford.	
GRAY, Dr. St. G. ...	21 Mar., '09	FLOWRIGHT, J. T. ...	23 Jan., '09
GRIFFITH, G. M. ...	20 Mar., '09	PRICE, D. E. ...	19 Jan., '09
Junior Naval and Mili-		RICHARDS, J. D. ...	6 Feb., '09
tary Club, 96, Picca-		ROBERTS, J. ...	30 Jan., '09
dilly, W.		RICHARDS, W. H. ...	
GRAY, E. A. S. ...		RAWLES, H. L. ...	31 Dec., '08
GRAHAM, Miss M. M. ...	9 Mar., '09	c/o Junior Naval and	
GREEN, E. C. ...	28 Feb., '09	Military Club, 96,	
Sports Club, St. James'		Piccadilly, W.	
Square, S.W.		RYAN, Dr. J. C. ...	16 Jan., '09
GOVIER, L. J. ...	2 Jan., '09	ROOTS, A. E. ...	31 July, '09
HEPBURN, Dr. F. C. ...	16 Jan., '09	SMITH, S. ...	18 Jan., '09
HANSON, S. C. ...	24 Jan., '09	SMITH, W. ...	28 Feb., '09
HARCOURT, A. G. B. ...	31 Jan., '09	STOKER, W. H., K.C. ...	31 Jan., '09
c/o Sir C. R. McGriger,		SMITH, H. H. ...	20 Mar., '09
Bart. & Co., 25, Charles		STEVENS, E. G. ...	11 Mar., '09
Street, S.W.		SHEPPARD, J. G. ...	7 Feb., '09
HENDERSON, J. ...	24 Jan., '09	SWANSTON, Major H. O.	21 Mar., '09
HARRIS, W. ...	4 Jan., '09	THORBURN, D. H. ...	23 Feb., '09
HODGSON, H. ...	21 Dec., '08	THOMPSON, H. N. ...	21 Jan., '09
HALLIWELL, W. S. ...		Royal Societies Club,	
HEWISON, C. L. B. ...	31 Jan., '09	St. James' Street, S.W.	
HUNGERFORD, Dr. G. ...	16 Jan., '09	THOMAS, C. W. ...	6 Feb., '09
HADDON-SMITH, H. B. ...	14 Feb., '09	TYSON, A. W. ...	31 Jan., '09
HISCOCK, Dr. R. C. ...	16 Jan., '09	TINSON, C. R. ...	2 Jan., '09
HANSON, A. E. ...	24 Jan., '09	WESSEL, T. H. ...	14 Feb., '09
ISHERWOOD, J. ...		WESTON, E. A. ...	5 Mar., '09
JAMES, H. P. ...	5 Mar., '09	Royal Societies Club,	
JOHNSON, C. E. ...	21 Mar., '09	St. James' Street, S.W.	
LEECH, C. J. F. ...		WOOD, B. G. ...	14 Feb., '09
LANG, J. C. ...	5 Mar., '09	WHITEHOUSE, A. A. ...	19 Jan., '09
LESLIE, J. C. ...		WRIGHT, J. ...	11 Mar., '09
MCLEAN, J. ...	20 Mar., '09	WHEELER, A. H. ...	11 Feb., '09
MANSFIELD, H. B. ...	28 Dec., '08	WALLACE, E. ...	7 Mar., '09
MORRIS, P. H. T. ...	21 Jan., '09	WALLER, F. H. ...	6 Feb., '09
MOLINEUX, C. R. N. ...	23 Jan., '09	WILDE, J. L. ...	28 Dec., '09

NORTHERN NIGERIA.

BURDON, Major J. A., C.M.G.	2 Jan., '09	GUINNESS, W. E. ...	28 Feb., '09
BROWN, A.	5 Feb., '09	GEDGE, A. H.	9 Mar., '09
BRYANT, E. C.	20 Feb., '09	GRAHAM, A.	26 Dec., '08
BREMNER, J.	8 Jan., '09	GRIER, S. M.	31 Dec., '08
BRATT, J. H. D.	25 Jan., '09	GOSLING, C. H.	31 Jan., '09
c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.		HOLLIS, D.	4 Jan., '09
BOYLE, L.	14 Feb., '09	INGLIS, T.	28 Dec., '08
BAILLIE, G.	2 Jan., '09	JOHNSON, W.	16 Jan., '09
BYNG-HALL, Capt. F. F. W.	28 Feb., '09	LUCKING, A.	7 Jan., '09
BOOTH, Major F. A. ...	18 Jan., '09	LOUGHLAND, C. U. ...	8 Jan., '09
Junior United Service Club, Charles St., S.W.		LEES, D.	2 Feb., '09
COLLINS, A. T.	13 Jan., '09	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
CARGILL, Dr. F., C.M.G.	8 Feb., '09	MATTHEWS, G. R. ...	4 Jan., '09
c/o Messrs. Grundlay and Co., 54, Parliament Street, S.W.		MCLEAY, C. W.	2 Jan., '09
CLARKE, Lieut. J. C. O., R.N.R.	27 Feb., '09	MERRON, P.	12 Feb., '09
CHANNELL, C. W.	31 Jan., '09	MILLER, H. S.	18 May, '09
CHISHOLM, G. S.	23 Dec., '08	MCGRATH, Capt. A. T. ...	2 Jan., '09
COSTELLO, Dr. C. T. ...	29 Dec., '08	MASSY, H. R. S.	2 Jan., '09
CHRISTIE, G. D.	10 Feb., '09	MIGEOD, C. O.	3 Mar., '09
CALL, F.	27 Feb., '09	Sports Club, St. James' Square, S.W.	
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		MIGEOD, G. E. H. ...	21 Mar., '09
CUNLIFFE, Lt.-Col. F. H. G.	28 Dec., '08	Sports Club, St. James' Square, S.W.	
Army and Navy Club, Pall Mall, S.W.		NEVILL, G. W. H. ...	5 Mar., '09
DOLMAN, A. J.	22 Jan., '09	PARSONS, Dr. A. C. ...	21 Mar., '09
DWYER, F.	2 Apr., '09	POLLARD, Dr. J. M. W.	8 Jan., '09
DUNN, R.	29 Dec., '08	PUGH, W. A.	2 Jan., '09
ELLIS, Capt. R. F.	17 Dec., '08	ROBERSON, E. L.	14 Feb., '09
FURST, G. W.	15 Dec., '08	SINCLAIR, F.	9 Jan., '09
FITZPATRICK, Capt. J. F. J. L.	18 Jan., '09	SCOTT, G. B.	26 Feb., '09
Scottish Arts Club, Edinburgh.		STONE, P. U. P.	25 Dec., '08
FENDALL, P. P. W., D.S.O.	26 Feb., '09	STEED, R.	6 Jan., '09
GOLDING, Capt. G. J. L.	31 Jan., '09	SMITH, R. S.	12 Jan., '09
Royal Societies Club, St. James' Street, S.W.		SEWELL, Capt. I. G. ...	29 Jan., '09
GIBBON, J. H.	8 Jan., '09	TWOOMEY, Dr. G. R. ...	6 Apr., '09
		c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.	
		VISCHER, H.	16 Mar., '09
		Royal Societies Club, St. James' Street, S.W.	
		WALLACE, Sir W., K.C.M.G.	5 Feb., '09
		WILLIAM, G.	9 Jan., '09

NYASALAND.

BARCLAY, Dr. A. H. H.	12 Mar., '09	WALLIS, H. R.	5 Mar., '09
COBGOVE, C. R.	13 Feb., '09	c/o Royal Colonial In- stitute, Northumber- land Avenue, W.C.	
DUFF, H. L.	19 Feb., '09	YOUNG, A. K.	11 Jan., '09
INGRAM, H. I.	9 Apr., '09	Isthmian Club, 105, Piccadilly, W.	
MANNING, G. F.	5 Feb., '09		
OLD, Dr. J. E. S.	23 Feb., '09		
SANDER, F. W.	26 Jan., '09		
TAYLOR, E.	15 Feb., '09		

EAST AFRICA.

BIFFEN, E. H. ...	27 Jan., '09	LEWIS, G. P. ...	27 Mar., '09
COX, E. W. ...	5 Apr., '09	LEIGH-MARTIN, A. G. ...	27 Jan., '09
DANN, W. R. H. ...	14 Jan., '09	OSBORNE, G. H. ...	27 Mar., '09
EDMONDSON, R. ...	27 Jan., '09	POWELL, H. ...	27 Feb., '09
GRAY, T. A. ...	27 Jan., '09	SMITH, Capt. G. E. ...	14 Jan., '09
HAMILTON, F. G. ...	14 Jan., '09	TANNER, W. H. ...	24 Feb., '09
JACKSON, W. B. ...	27 Jan., '09	WRIGHT, R. B. ...	27 Dec., '08

UGANDA.

HEIDENSTEIN, O. C. ...	14 Mar., '09	SPIRE, F.... ...	27 Mar., '09
LOWSLEY, Dr. L. D. ...	14 Mar., '09	THORPE, H. W. ...	14 Jan., '09
PETHERBRIDGE, Miss B.	27 Feb., '09	WILSON, G., C.B. ...	5 Feb., '10
RUSSELL, W. A....	27 Jan., '09	Royal Societies Club, St. James' Street, S.W.	

SOMALILAND.

ROSE, A. B.	8 Feb., '09
-----------------	-----	-----	-------------

SWAZILAND.

LAVERTY, Miss A. M. ...	31 Jan., '09	WARNER, B. H. ...	11 Apr., '09
VINE, T. W. ...	29 Jan., '09		

JAMAICA.

COOPER, E. G. ...	3 May, '09	MORRIS, P. H. ...	28 Feb., '09
CARVALHO, L. G. ...	17 Jan., '09	TENNANT, M. P. ...	7 Apr., '09
CRADWICK, W. ...	7 Jan., '09	TOOLE, B. ...	21 Feb., '09
LUMB, Dr. C. F....	Steamer leaving England 25 Jan., '09	WILLIAMS, Dr. D. J. ...	15 Jan., '09

FIJI.

BARNETT, E. A....	29 Apr., '09	HEATON, H. H. ...	13 July, '09
DOWSE, Dr. T. A. ...	7 July, '09	MACDONALD, D. R. ...	20 Apr., '09
EHRHARDT, A. ...	14 Mar., '09		

GRENADA.

LEGGE, C. A. ...	3 Mar., '09	TUDOR, D. T., K.C. ...	21 Jan., '09
------------------	-------------	------------------------	--------------

ANTIGUA.

KIRBY, A. H.	24 Jan., '09
------------------	-----	-----	--------------

VIRGIN ISLANDS.

BAYNES, E. W. ... 7 Apr., '09

ST. KITTS.

FRETZ, Dr. W. H. ... 22 Jan., '09

DOMINICA.

MASON, Dr. G. B., West India Club, Norfolk Street, W.C. ... 3 Aug., '09

FALKLAND ISLANDS.

CAMPBELL, Capt. J. C.	27 Mar., '09	THOMPSON, W. A.	29 Mar., '09
c/o London and South		c/o Royal Colonial In-	
Western Bank, Ltd.,		stitute, Northumber-	
Kensal Rise, N.W.		land Avenue, W.C.	

BRITISH HONDURAS.

STRANGE, H. P. C.	... 12 Mar., '09	WALCOTT, H. B.	... 22 Apr., '09
SISNETT, H. K. M.	... 19 Mar., '09		

TRINIDAD.

BURSLEM, W.	... 10 Jan., '09	LITTLEPAGE, C. A.	... 23 Jan., '09
FITZGERALD, E....	... 28 Feb., '09	MARSHALL, Col. R. S.	... Steamer due
GIBBON, Dr. J. F.	... 18 Feb., '09		28 Apr., '09
GORDON, W. M....	... 3 Feb., '09		

BRITISH GUIANA.

BUGLE, E. A.	... 7 Apr., '09	GAMBLE, J. S.	... 15 Jan., '09
BARKLIE, T. W. S.	... 31 Mar., '09	GILCHRIST, W. J.	... 4 June, '09
c/o Royal Colonial In-		KERR, L. L.	... Steamer leaving
stitute, Northumber-			3 Feb., '09
land Avenue, W.C.			
BRYNKER, Capt. H. M....	30 Apr., '09	LAWRENCE, J. D.	... 24 June, '09
DAVIS, C. G. H....	28 Feb., '09	POPE, T. A.	... 2 May, '09
c/o Royal Colonial In-			
stitute, Northumber-			
land Avenue, W.C.			

MAURITIUS.

BOYLE, Sir C., K.C.M.G.	16 Feb., '09	MONTY, Dr. S. A. R. ...	25 June, '09
D'AVRAY, Rev. S. A. ...	22 June, '09	SCROGGS, Lt. H. C., R.N.	11 Apr., '09
GREGORY, Rt. Rev. F. A.	9 May, '09		

SEYCHELLES.

BRADLEY, Dr. J. T.	7 May, '09
--------------------	-----	-----	-----	-----	-----	-----	------------

STRAITS SETTLEMENTS.

BATTEN, C. ...	20 Apr., '09	LUPTON, H. ...	17 Mar., '09
BRYANT, A. T. ...	7 Feb., '09	LUCAS, T. J. ...	4 Aug., '09
BRYDE, R. L. W. ...	22 Feb., '09	MCMAMARA, J. M. ...	4 Aug., '09
BUCHANAN, W. ...	10 Sept., '09	OUTRAM, D. ...	8 June, '09
CRUMMEY, H. G. ...	22 Sept., '09	O'NEIL, M. ...	19 Mar., '09
CROUCHER, Dr. F. B. ...	29 Mar., '09	PATTISON, J. C. ...	30 June, '09
CHAMBERLAIN, A. B. ...	25 Mar., '09	ROBINSON, F. ...	25 Dec., '08
DANE, Dr. R. ...	15 June, '09	RODRIGUEZ, F. ...	31 Mar., '09
FIRMSTONE, H. W. ...	23 Sept., '09	SHEEDY, A. J. ...	27 Mar., '09
FISH, E. W. ...	30 Aug., '09	SWINDELL, Rev. F. G. ...	Steamer due
GOTTLIEB, F. H. W. ...	12 Jan., '10		25 Feb., '09
HEATH, A. ...	2 Aug., '09	TROWELL, W. J. ...	13 Mar., '09
HELLIER, M. ...	8 July, '09	TOWNER, H. V. ...	18 Mar., '09
HUNT, W. ...	22 June, '09	THORNTON, S. L. ...	27 Mar., '09
HALL, G. A. ...	4 Apr., '09	WAIT, O. H. ...	8 Dec., '08
KELLAR, J. D. B. ...	25 Aug., '09		

TANJONG PAGAR DOCK.

BLAIR, W. B. ...	31 Mar., '09	NICHOLSON, J. R. ...	
MORRIS, J. C. ...	8 Feb., '09	NEILSON, J. ...	30 June, '09
MURRAY, J. H. ...	25 Jan., '09		

HONG KONG.

BALL, J. D. ...	24 Jan., '09	JONES, E. ...	5 May, '09
BREWIN, A. W. ...	27 Mar., '09	JACKMAN, H. T. ...	2 Aug., '09
BRYAN, J. J. ...	12 July, '09	LEE, Miss M. A. ...	6 Oct., '09
CARTER, A. ...	31 Aug., '09	LAMBLE, P. T. ...	10 Mar., '09
COLLETT, A. ...	18 Apr., '09	MCDONALD, D. ...	20 Mar., '09
CLARK, Dr. F. W. ...	8 Mar., '09	MCDONALD, R. ...	1 Feb., '09
CURWEN, W. ...	28 Feb., '09	McKAY, W. ...	2 Mar., '09
DOBBS, W. ...	31 Mar., '09	PIESSE, F. W. ...	8 Mar., '09
DOBERCK, Miss A. ...	11 Aug., '09	RADCLIFFE, A. ...	25 Aug., '09
FLETCHER, A. G. M. ...	20 Mar., '09	SAVAGE, R. A. J. ...	27 Mar., '09
FOWLER, G. ...	1 Feb., '09	SOLLY, W. J. ...	5 June, '09
GRANT, J. ...	1 Feb., '09	WODEHOUSE, P. P. J. ...	15 Aug., '09
GOUBLAY, D. ...	21 Mar., '09	WOLFE, H. W. ...	7 Apr., '09
HAZELAND, F. A. ...	7 Apr., '09	WRIGHT, Dr. G. H. B. ...	7 Apr., '09
HOWELL, F. ...	8 May, '09	WISE, A. G. ...	25 Mar., '09

PAHANG.

DELMEGE, Dr. J. R. ...	26 July, '09	MAXWELL, C. N. ...	11 July, '09
		Sports Club, St. James'	
		Square, S.W.	

PERAK.

ACTON, W. W. ...	11 May, '09	GREIG, G. E. ...	18 Dec., '09
BOWES, J. ...	5 Mar., '09	KYDD, J. ...	27 Jan., '09
COLLINGE, H. B. ...	7 Feb., '09	LANGSTON, S. H. ...	7 May, '09
CLARKE, C. H. G. ...	12 June, '09	MOSS, P. ...	4 Feb., '09
COWAN, W. ...	11 Mar., '09	MELDRUM, Dr. W. P. ...	26 Oct., '09
COOPER, H. J. ...	29 July, '09	MACKRAY, W. H. ...	24 Sept., '09
DONALDSON, C. E. ...	10 July, '09	PEART, Dr. S. P. ...	21 May, '09
ELLES, B. W. ...	11 Nov., '09	SATOW, P. A. ...	4 Jan., '10
FOX, Dr. S. C. G. ...		TOFT, J. A. A. ...	30 Apr., '09

SELANGOR.

BELFIELD, H. C. ...	29 Jan., '09	IRVING, C. J. ...	21 May, '09
Junior Carlton Club,		JACKSON, R. D. ...	3 Sept., '09
Pall Mall, S.W.		SANGUINETTI, W. R. ...	31 Mar., '09
GOUGH, A. E. ...	8 Sept., '09	WILKINSON, W. A. ...	21 Aug., '09

NEGRI SEMBILAN.

DEW, E. C. ...	28 Aug., '09	SHANKLAND, Miss R. M.	13 June, '09
JUST, A. W. ...	13 Nov., '09	UPTON, H. H. S. ...	16 July, '09

FEDERATED MALAY STATES.

ALSTON, A. H. ...	3 Oct., '09	LAIDLAW, G. M. ...	2 Sept., '09
BAKER, E. M. ...	1 Sept., '09	LEONARD, H. G. R. ...	2 Apr., '09
BENNETT, T. ...	31 Oct., '09	LEGGE, R. H. ...	11 Sept., '09
BROWNE, E. G. ...	27 July, '09	MILLS, F. ...	3 May, '09
CAULDWELL, E. ...	8 Aug., '09	MARSHALL, H. ...	26 Oct., '09
CARDEW, C. D. ...	8 Aug., '09	NOLAN, J. ...	5 Feb., '09
COOK, E. A. ...	29 June, '09	PHILLIPS, D. ...	27 July, '09
ELLIS, S. P. ...	9 May, '09	PARRY, O. G. ...	27 Jan., '09
FEENEY, J. ...	23 July, '09	STEELE, J. ...	20 June, '09
GLOVER, J. S. ...	18 July, '09	SMITH, J. ...	20 July, '09
HOLLYWOOD, M. J. ...	19 June, '09	TAYLOR, W. ...	23 July, '09
HIGHET, D. J. ...	15 Feb., '09	TALBOT, H. A. ...	1 Mar., '09
HAYNES, A. S. ...	Steamer due	TOMS, J. ...	23 June, '09
	18 Feb., '09	WHITE, W. A. ...	7 Aug., '09
HANNIGAN, C. ...	10 May, '09	WHITLEY, M. H. ...	5 July, '09
KINSEY, W. E. ...	24 Oct., '09		

CEYLON.

ADDISON, F. ...	25 Feb., '09	MISSE, W. J. ...	31 Mar., '09
ARMSTRONG, J. P. ...	31 Dec., '09	MACREADY, W. C. ...	15 Apr., '09
BEVEN, A. ...	12 Apr., '09	MIDDLETON, J. P. ...	24 Jan., '09
BARTLAM, A. ...	12 Jan., '09	MACMILLAN, H. F. ...	1 Feb., '09
CHALMERS, DR. A. J. ...	25 Jan., '09	PRICE, N. J. ...	6 May, '09
CUMBERLAND, C. R. ...	30 Apr., '09	PLANT, G. F. ...	11 May, '09
COCKERILL, T. ...	31 Dec., '09	ROTHWELL, A. ...	11 June, '09
COOK, A. M. ...	31 May, '09	SCHRADAR, L. W. C. ...	28 Aug., '09
CAMPBELL, T. C. ...	31 July, '09	SANDERS, W. R. B. ...	7 July, '09
DUNSTAN, J. T. ...	29 Jan., '09	SMITH, R. L. ...	30 Mar., '09
GILL, J. H. W. ...	21 Jan., '09	VAN TWEST, J. T. ...	30 Apr., '09
GREEN, E. E. ...	14 Mar., '09	VAUGHAN, C. S. ...	25 Feb., '09
HENMAN, O. W. ...	24 Mar., '09	WADE, E. H. ...	9 July, '09
HILL, B. ...	3 May, '09	WARREN, P. D. ...	9 June, '09
HARRISON, T. C. ...	1 July, '09	WEERAPERUMAL, Dr.	
JEFFREY, J. ...	22 Mar., '09	A. A. M. ...	26 May, '09
JOHNSON, O. ...	25 Apr., '09	WIJEYESKERE, Dr. W. ...	20 May, '09
KENTON, J. T. ...	23 Feb., '09	WICKWAR, A. J. ...	31 Jan., '09

THE COLONIAL OFFICE JOURNAL.

VOL. II.

APRIL, 1909.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

SIR CHARLES LUCAS, the senior Assistant Under Secretary at the Colonial Office, who is in especial charge of the Dominions Department, has been sent on an extended tour to Australia and New Zealand. His mission is an official one, but he has not been charged with the transaction of any special piece of business. The object of his journey is the furtherance of the policy of bringing the Colonial Office into closer touch with the great self-governing dominions, a policy in support of which all parties are agreed, though differences of opinion have shown themselves as to the best means for bringing about the desired end. Sir Charles will bring back with him to the Colonial Office a personal knowledge of Australian conditions acquired on the spot. He will also, it may be hoped, leave behind him in Australia a more complete understanding of the attitude of the Colonial Office, and of His Majesty's Government, towards the self-governing dominions. Personal intercourse is by far the best means of dispelling misunderstandings, and we feel sure that Sir Charles Lucas's journey will result in an improvement of inter-imperial relations. It may be regarded as an adoption, in the spirit, if not in the letter, of the proposal for an interchange of officials which was put forward by Lord Northcote at the banquet given in his honour, and which was very sympathetically received by Lord

Crewe. But while it is to some extent a new departure, we do not think it is generally realized how many members of the staff of the Colonial Office have been afforded opportunities of acquiring personal knowledge of the parts of the Empire with whose affairs they deal. It would appear from the attitude of the press that the general impression prevails that none of them ever leave their native shores, or at any rate that the Colonies remain outside the scope of their wanderings. This is far from being the case. But the volume of work devolving upon the office necessarily restricts the opportunities of detaching its members for prolonged terms of foreign service. Such arrangements have occasionally been facilitated by temporarily attaching officials from the Crown Colony service to the staff of the office, but it is not so easy to arrange for such an exchange in the case of self-governing dominions. But we believe that some means will be found of continuing and renewing from time to time the personal intercourse which Sir Charles Lucas's mission is to initiate.

There has been a good deal of openly expressed discontent in Canada at the discussion in the American press of the details of the International Waterways Convention before it had been communicated to the Dominion Parliament. *The Times* discharged a public service by pointing out in a leading article that in this case, at any rate, the villain of the piece was not Downing Street indifference to Colonial interests, but that much overlauded document, the United States Constitution. There never was an international agreement which was more thoroughly the work of a Colonial Government than the Waterways Convention. Mr. Bryce, we know, regards himself as not less the Ambassador of Canada than the Ambassador of Great Britain, and in this instance it is well-known that Mr. Gibbons, the Canadian representative, is primarily responsible for the text of the treaty. But unfortunately, whereas British adhesion to a treaty is complete—save for the necessity of subsequent ratification—when the British plenipotentiary has affixed his signature, American adhesion can only be given after the Senate has signified its approval. The Senate is a deliberative body, and in the course of its debates the details of an agreement which may be hanging in the balance are necessarily fully canvassed. For the suggestion that the Canadian Government was kept in the dark as to the terms of the treaty there is no sort of foundation; on the contrary, the terms were that Government's own handiwork. The Canadian Parliament was kept in the dark because the Canadian Parliament, like the Parliament of the United Kingdom, but unlike the United States Senate, is not invested with any share in the treaty-making power. *The Times* article was little more than an essay in comparative constitutional law. We are sorry that it has been resented in some quarters in Canada as a curtain lecture. The subsequent

publication of the official correspondence has, however, made it clear to everyone that there is no sort of grievance against the Imperial Government. The main source of the trouble is the leakage which inevitably occurs when a diplomatic document is under discussion by a deliberative assembly. The treaty was not published in the United States when it came before the Senate, but information as to its contents soon became public property through the instrumentality of the press, and Canadian newspapers, who are ill-served in the matter of Washington correspondence, acquired most of their information by means of telegrams from London which merely repeated news received from Washington.

General satisfaction will be felt at the successful conclusion of the prolonged negotiations with regard to the Atlantic Fisheries Convention, in which both Canada and Newfoundland are interested, and it may be hoped that the question will be settled by the Hague Tribunal in such a manner as to remove this old cause of friction, not only with the United States, but also between Newfoundland and the Imperial Government. At one time there appeared to be an imminent danger of the prospects of a settlement being wrecked by the complications resulting from the political crisis in Newfoundland, but it was found possible to send Mr. Kent to Washington, and his mission resulted in the introduction of amendments which enabled Sir Robert Bond to accept the treaty.

The report on the Emigrants' Information Office for the year 1908 draws attention to the great decrease in the number of emigrants to Canada, which fell to 81,211, as compared with 151,216 in 1907. This was partly due, no doubt, to the knowledge that the financial crisis of Autumn, 1907, in the United States of America had adversely affected industrial conditions in Canada; but it was largely the outcome of a direct policy of restriction adopted by the Canadian authorities. Upon this subject the report contains the following remarks:—

“ A noticeable feature of the year was the action taken by the Canadian Government to restrict the entry of classes of emigrants whose coming was considered undesirable by enforcing regulations requiring each emigrant to possess a prescribed sum of money on landing and by requiring that emigrants sent out by British charitable societies or by public funds should obtain certificates from the Canadian emigration authorities in London that they are suitable settlers. The effect of the latter requirement was immediately apparent in the marked reduction in the flow of emigration to Canada conducted by emigration societies and public bodies such as the Central (Unemployed) Body for London and Provincial Distress Committees. A further symptom of a new attitude in

Canada towards immigrants was the large increase in the number of families deported during the year under the terms of Sec. 33 of the Canadian Immigration Act of 1907, which provides that any emigrant who, within two years of landing in Canada has become a public charge, or an inmate of a penitentiary, gaol, prison or hospital or other charitable institution, may be deported, together with those dependent on him. The number of cases of deportation to this country increased from 339 in 1907 to 798 in 1908. The attention of the Committee was called to the subject in connection with deportations from Oshawa and Deseronto. They were led by the facts brought to their notice to make suggestions with a view to avoiding the unintentional infliction of hardship in the application of the law."

In a review of industrial and labour conditions in Canada during 1908, published in the *Canadian Labour Gazette* for January, it is stated that "the policy of rigid regulation adopted by the Dominion Government with regard to immigration, by curtailing the number of arrivals by over one half, assisted greatly in adjusting the labour market." There is little to be said against the policy of reducing the influx of immigrants at a time of industrial depression, but the policy of deportation is, we think, more open to criticism. A Bill has now been introduced to extend to three years the period after arrival during which an immigrant shall be liable to deportation, and where the sole ground for deportation is distress due to unemployment it appears to us that a real hardship is inflicted. Fluctuations in trade are, unfortunately, of constant, though irregular, recurrence in all commercial and industrial communities, and they necessarily bring with them periodic increases in the percentage of unemployment. But Canada has deliberately encouraged immigration in the past, and may reasonably be asked to accept responsibility, in slack times, for those whose services she has been glad to obtain in times of industrial activity—in other words, for those who are not really undesirable, but only unfortunate.

The results of the prolonged deliberations of the South African National Convention at Durban and Capetown have now been published in the form of a draft Bill for the union of the four self-governing Colonies in South Africa. It is a very remarkable document, which affords abundant evidence of the statesmanlike qualities of the delegates who framed it. The claim which has been put forward, that it represents the most perfect constitution yet known to the British Empire, is hardly an exaggerated one. Advantage has been taken of the unrivalled variety of experience in constitutional methods which the British Empire affords, and the recently estab-

lished constitutions of the Transvaal and the Orange River Colony, as well as that of the Australian Commonwealth, have been laid under contribution. The principle of equal electoral districts—from which a limited departure is to be admitted to meet local circumstances—and that of automatic redistribution are borrowed from the former. South Africa will thus, it is to be hoped, be saved from the unfortunate difficulties which attend the question of redistribution in the United Kingdom, where it is still left to the tender mercies of party politics, with the result that reforms admittedly urgent are indefinitely postponed. The question of redistribution has been the cause of acute differences both in Cape Colony and in Natal, and in each case the result of the new provisions should be a gain to the towns at the expense of the country districts. For the present, Natal and the Orange River Colony are to receive a rather larger measure of representation than they are entitled to on a strictly numerical basis, but as the white population grows this inequality will be redressed. The franchise at present existing in the different Colonies is to be preserved, and a special provision is made to safeguard the native franchise in Cape Colony. On the other hand, only persons of pure European descent are to be eligible for election. The adoption of the principle of proportional representation is an unexpected innovation, the results of which will be watched with deep interest all over the Empire.

There had been much speculation as to whether South Africa would follow, in regard to the general framework of union, the example of Australia or that of Canada. It turns out that the constitution goes considerably further even than that of Canada in the direction of centralization. In fact, it can be most accurately described as unification accompanied by a large measure of devolution. The provincial governments will only enjoy such jurisdiction as the central legislature allocates to them, and the central legislature may at any time alter the allocation originally made. There is thus no suggestion about the constitution of a treaty only alterable by the consent of the parties. The provincial governments will be carried on by committees elected in accordance with the principle of proportional representation by their local councils, together with an Administrator appointed by the central government. This will give us a system of local administration which appears to be entirely new, and will apparently preclude the possibility of any system of cabinet government in the provinces. A complete reconstruction of the system of local government in the United Kingdom cannot be very far distant, and the advantages of this new South African model will be worth studying in this connection. The new constitution hardly gives any recognition to the federal principle, except in the provisions relating to the Senate, to which each of the

provinces is to send eight members, the number being raised to forty by the addition of eight members nominated by the Governor in Council, of whom four are to have a special knowledge of native affairs. The provisions which are made to meet the possibility of a deadlock between the two houses are taken from the Transvaal and Orange River Colony constitutions, to which they were originally transplanted from the constitution of the Commonwealth. They are, in fact, becoming a part of the regular legislative machinery of the British Empire, though there is as yet no sign of their adoption at home, and though their efficacy has not yet been tested by actual working experience. Among the other provisions of the constitution may be noted with interest the proposed management of the railways by a non-party commission, by which surplus railway revenues will be applied to railway purposes, instead of being paid into the Treasury.

Thus the draft Act differs essentially from the Canadian and Australian models, in that it aims not so much at fixing the form of government once for all as at providing the means of unified government. We see that Mr. Watson, formerly Prime Minister of the Australian Commonwealth, has expressed his conviction that if Australians to-day had the choice over again they would unhesitatingly select a more concentrated constitution.

It is inevitable that sooner or later the protectorates of Basutoland, Bechuanaland and Swaziland, which are at present directly administered through the High Commissioner by the Imperial Government, should form part of the United South Africa of the future. The transfer is not to take place immediately, and it would be rash to assume that it must necessarily take place at an early date. But the conditions which are to govern it, when the time comes, are laid down in a Schedule to the Constitution Bill. The natives are guaranteed the enjoyment of their lands, the prohibition of the sale of liquor is to be continued, and the existing Native Councils are to be maintained. Legislation is to be by the Governor in Council, a provision which should afford a valuable guarantee against the evils of misdirected legislation by an imperfectly informed Parliament, which the report of the Natal Native Affairs Commission so strongly emphasized. The Commission, which is to advise as to the conduct of affairs in the territories, will supply the element of permanence in the administration, to which the natives everywhere attach great importance, and which frequent cabinet changes are apt to impair. Perhaps the most satisfactory feature of the scheme is the fact that it indicates that the honourable obligations of the Imperial Government to the inhabitants of the native territories are fully recognized by South African statesmen.

The provision of the new constitution which is most open to criticism on its merits is that relating to the capital. Capetown is to be the seat of the legislature, Pretoria that of the administration, and Bloemfontein that of the judiciary. This arrangement is a compromise in the truest sense of the term, for probably no member of the Convention would claim that it was the most desirable system. It has been adopted because it was the only scheme upon which agreement could be attained, and its adoption is characteristic of the spirit of "give and take," which has marked the whole course of the Convention's proceedings. We notice that there appears to be a laudable determination to make the best of it. Lord Curzon has been brought in to testify to the smooth working of the Indian system of division between Simla and Calcutta, and it is even being urged that the necessity of travelling from Pretoria to Capetown will have a widening effect upon the intelligence and sympathies of permanent officials. We doubt the force of these arguments, and we question whether those who have had experience of the working of Irish administration during the Parliamentary Session—a closer parallel than Lord Curzon's—would endorse them. But considerable practical inconveniences may be, and ought to be, endured, if rival claims, each founded on a substantial basis, cannot otherwise be satisfied and reconciled.

The prospects of South African Union becoming an accomplished fact in the immediate future appear to be very favourable. It would be a calamity to South Africa and the Empire if all the ability and strength of purpose which have been at work during the proceedings at Durban and Capetown should prove to have been in vain. At the moment, the one unfavourable symptom seems to be the opposition of Mr. Hofmeyr, who has so often shown himself to be the power behind the throne in Cape Colony. But there has been a substantial readjustment of party divisions in the Cape of late years, and it remains to be seen whether Mr. Hofmeyr will now carry with him so large a section of opinion as he once controlled. There is also undoubtedly strong opposition to the scheme in its present form in Natal, but if the other Colonies approve it, Natal will hardly elect to stand alone. The project will have no serious dangers to encounter in the Imperial Parliament, if it successfully passes through the local legislatures which are on the point of considering it. On the contrary, we believe that it will receive a cordial welcome from members of all parties.

It is satisfactory to find that contemporaneously with the proceedings of the South African National Convention, Southern Rhodesia has for the first time been able to balance its revenue and expenditure. Population is being secured, substantial progress is being made in

agriculture and mining, and railway development is in prospect. Every advance of this kind brings Rhodesia nearer to union with the rest of South Africa. The eventual settlement will be largely a matter of bargaining, and the more Rhodesia can bring into the pool the easier will be the arrangement. Colonel Grey, one of the elected members of the Rhodesia Legislative Council, has argued that Rhodesia's union should be with the North—Nyasaland and the other territories administered by Great Britain. It is difficult to believe that this is the destiny of Rhodesia. The northern territories can never be a white man's country in the sense that the southern colonies are; the labour, substantially speaking, will be black, and the method of administration and the economic situation will be moulded accordingly. Rhodesia, socially, politically and economically, must gravitate towards the neighbours which are like herself; she will look to the Cape rather than to Cairo.

The paper read before the Royal Colonial Institute by Prof. R. Wallace in January gave the results of a study of Southern Rhodesia by a recognised agricultural authority. Prof. Wallace spoke in vigorous terms of the enormous possibilities of the country for stock raising purposes and of the ready market which is available in this country. Of tillage he took a much less hopeful view. He considered that the good arable land is comparatively small, that the profits are likely to be unsatisfactory, and that the labour is poor and dear. In so vast a country the proportion of good arable land may seem small, but there is a huge quantity of it, and Prof. Wallace's anticipations may be far exceeded. Land is cheap and the attractions considerable, and excellent advice is at the command of young settlers. The time has arrived at last, after much disappointment and depression, when it can be said that Rhodesia is definitely going ahead. The new mining ordinances promulgated by the British South Africa Company have given a much needed impetus to this industry, and will help the farmers by creating a better local market.

Agriculture is one of the principal matters which stand to gain by the closer union of British South Africa. The country has not participated in the general advance which has been made in most of the European-inhabited countries during the last half-century. It stands in a backward position, and one result of the lack of care is that diseases of animals and plants have been allowed to spread until, to quote the words of Mr. F. B. Smith, the Transvaal Director of Agriculture, in a recent paper, "a collection of pests has been accumulated that for variety and virulence could scarcely be equalled and certainly not surpassed by any country in the world." The main cause of the trouble is the "easy-going, half-nomadic

half-pastoral life of the farmers" in past times. Whenever difficulties were encountered, they were avoided by trekking north and taking up fresh land. But this process is practically at an end, and farmers must make the best of what they have got. Agriculture is now a complicated art, and demands the best scientific advice. Researches and experiments cannot be conducted to any great extent by farmers themselves; they have neither the means, the time, nor the qualifications. The State must help, but it may easily waste its work. "The relation of the State to agriculture," Mr. Smith observed, "and the best methods of promoting the industry . . . constitute a science in themselves." It is said that probably during the past twenty years more money per head has been devoted to the assistance of farmers in South Africa than in any country in the world. But not only is there little to show for all this expenditure, but in some ways actual harm has been done by discouraging independence and initiative. A central parliament and central department of agriculture would not only undertake the work in a more comprehensive manner, but would stand above individual appeals for financial assistance or exemption from regulations as to contagious diseases of animals and plants. From every point of view collective action by all the colonies is necessary for the protection and education of the farmer. "Contagious diseases pay no respect to arbitrary political boundaries, and . . . it may happen that the laxity of a single colony or territory may endanger, or perhaps ruin, the whole of the others." Cattle disease is continually being introduced from one South African colony into another, and common action is clearly essential on this ground alone.

The Boer farmer lives on primitive principles. He grows himself nearly everything that he and his dependants require. He buys very little, and what he does buy is usually by barter. It is said that there are many beginners in the Transvaal whose expenditure in money or barter does not exceed £20 for the whole family; this sum is provided by the sale of some mealies, forage, wool and cattle. The staple food is Boer meal or mealie meal, and occasionally a sheep is killed or a buck shot. Their coffee consists of more roasted mealies than coffee beans, and it is not sweetened. The life is simple indeed, but to an European working man it would be squalid poverty. Natives are usually paid for their labour by the use of land, or in stock and grain, not in money. The produce available for sale is remarkably small. Particulars are given in the *South African Railway Magazine* for October last of a farm of 4,000 morgen which yielded only £70 by sales in a year, and half of this was due to firewood out from the bush. The system produced a strong and remarkably self-reliant race. The man who produces

himself almost everything that he requires is taught to be self-sufficing, and is free from the servility which inevitably attacks some classes in countries where the economic conditions are complex. But there are signs of a coming change. It is fairly clear that by no means the best use is made of the land. The standard of comfort is rising, and, for better or worse, the advantages of the division of labour will assert themselves. Scientific education, co-operation and State help will hasten the development.

There is now actual proof that South Africa can produce cereals at a profit for export. Mealies and oats have been shipped and readily sold at good prices. For the former the climate and soil are excellent. Lucerne has proved invaluable as a fodder during drought, and deserves to be grown much more extensively. There is a general advance in farming prospects, and, though South Africa has been called a hard country for the farmer, if the natural conditions are studied in an enlightened manner, he can achieve success. Agricultural education is greatly wanted, for if ever there was a country in which a knowledge of nature is necessary it is South Africa, and the old European school methods, based on very different circumstances, will surely before long give way to a system which will teach the country boy the marvels of plant growth and the purposes of tillage.

The reason why South Africa imports so much foodstuff, which it is quite capable of producing, is not because there is not enough suitable land, but because labour is bad and transport defective. Much can be done to improve the land, and irrigation works of moderate dimensions, such as have been recommended by the Inter-colonial Irrigation Commission, would be a great boon. But the character of the labour and transport is the great difficulty. It is due to the vastness of the area and the fewness of the inhabitants. The country is not ripe for big schemes. The Kaffir is a very slow worker, and the Commission say that as an agricultural labourer he does not do a tenth of the work of an European labourer. The soil itself requires a good deal of labour, as it is deficient in phosphates and nitrates, and must be well manured. The improvement of the Kaffir as a labourer is a very important condition, and if by education and other influences he can be raised to a higher plane the economic gain will be great.

On the subject of native education, a Select Committee of the Cape House of Assembly, of which Mr. H. E. S. Fremantle was Chairman, has presented an interesting report. Of the general advantages of education to the native, and of his capacity to benefit by it, the Committee entertain no doubts, as the following passage in their report will show:—

"The witnesses are generally agreed that education has the effect of making the native more intelligent, more civilized, and more loyal, and of increasing his wants. It is also widely, though less generally, admitted that education makes the native more moral and more industrious. Your Committee can, however, find no evidence in support of the theory that education has a tendency to induce crime. Your Committee submit that the primary objects of native education must be the development of intelligence, the training of character, and in particular the promotion of industry, and that if these objects are duly kept in view throughout, and nothing is done to force development unnaturally, native education cannot fail to be to the advantage of the whole country.

"Your Committee find that the belief in the inability of the native to develop at a normal rate beyond a certain stage is not supported by facts, and that any definite assertion as to the capacity or limits of the native mind must at present be regarded as a deduction from insufficient evidence."

They advocate the provision of increased funds for educational purposes, and the devotion of greater attention to moral and religious teaching, to instruction in hygiene, and to manual and industrial training; and they suggest that the curriculum for native schools should be discussed at a Conference to be attended by representatives of the various missionary bodies, the Transkeian General Council, the native training institutions, and the Education Department, as well as by leading natives who are interested in educational matters. It appears that there are considerable divergences of opinion on this point. Some authorities favour the institution of a special curriculum for native schools; others fear the results of too marked a separation between Europeans and natives in this matter. On the subject of higher education for natives the Committee's recommendations are substantially in advance of existing practice:—

"There is at present no great demand for the higher education of natives, and no provision is made for such education by the State, which assists normal classes but gives no grants for a high school course for natives Your Committee consider that the question of the provision of such higher education as may be required is part of the question of the attitude of the State towards the proposed Inter-State College.

"The establishment of a native college has been recommended, partly in order to provide for the higher education of natives, and partly to prevent natives from going out of the country in search of it. The evidence shows that upwards of a hundred South African natives have in recent years gone to colleges in the United States and elsewhere; that there may be some opening for natives with a college education as professional men among their own people and as headmen, and that there is a demand for higher education, but

that it is not large. It also appears that many natives enter the normal course solely because there is no alternative course beyond the elementary standards. Your Committee regard this as undesirable, since the normal course is designed only for training teachers. In view of all the circumstances, they consider that the demand for higher education should not be artificially stimulated, but that when shown to be genuine it should not be refused, and recommend that after Standard V. there should, where necessary, be alternative courses (leading up to secondary, normal and industrial work); that the scale of fees be similar to those of the fees charged in European colleges; that grants for secondary and higher work be made to the native college on terms similar to those on which grants were made to other colleges in the earlier days of higher education in South Africa; that the Government be adequately represented on the governing body of the native college; that the work up to and including the matriculation course be subject to the usual Government inspection; that manual training be an integral part of the college course, and that the university standard of work be strictly maintained."

Some day or other South Africa will be faced with the necessity of a vastly-increased expenditure on the education of her immense native population, but the time is not yet. Even as matters are, Cape Colony is in advance of the rest of the sub-continent in this matter.

Mr. Sydney Webb, formerly of the Colonial Office, has mentioned in a recent speech the surprise he felt on finding that the native children in Sierra Leone were taught the names and doings of the Anglo-Saxon Kings of England. It is obvious that any absurdity of this kind is due to the ignorance of the schoolmasters, who, all the world over, are inclined to teach only what they have been taught themselves. Education should be founded on the needs of each country. In a primitive community it should be largely industrial; not so much because the results are practically useful, as because this method opens the native mind most effectually. The European child also, in countries which demand the elementary forces, must be largely stimulated by work in which he will take an active interest.

An example of what could be effected, and undoubtedly will be in the future, to improve land, is afforded by the case of the territory known as N'gamiland, in the Bechuanaland Protectorate. "There," it is observed in the last annual report, "a great river, the Okovango, flowing from the north, enters the Protectorate and gradually loses itself in marshes of vast extent. The annual volume of water which the Okovango carries is enormous, and to-day this element, so precious in South Africa, disappears in the middle of the sub-continent as completely as though it were discharged into

the ocean. It is not too much to suppose that in the days to come the flow of the Okovango will be controlled, and that by a system of canals that region, to-day a desolate swamp, and many hundreds of square miles bordering upon it, may become land capable of the highest cultivation. Some day N'gamiland may be known as the Egypt of the South."

Much concern has been caused by the action of the South African Union Conference in increasing the freight on ore exported from South Africa to Europe, and introducing the system of rebate in this business. The rates on all ores have been fixed as follows (to London and Hamburg):—

Value up to £20	per ton, 15s., and 10 per cent.
„ £20-£50	„ 20s., „
„ £50-£100	„ 25s., „
Over £100	„ 30s., „

Hitherto an uniform rate has been charged for ores irrespective of their values, and we understand that certain Transvaal exporters of base metals have been charged 15s. per ton on ores of the value of £100 or less per ton. Under the new tariff tin will pay 30s. per ton, plus 10 per cent. primage, which will be refunded to shippers who confine their shipments to the ring.

The discovery of an old Jewish coin, believed to date from the last year of the revolt, under a heap of soil at Marianhill, Natal, has excited the speculations of the antiquarians who discuss the locality of Ophir and the sources of King Solomon's gold. That king conquered Elath and Ezion Geber, on the Ælanitic Gulf of the Red Sea, and he and Jehoshaphat used these places as naval centres. But they remained in the possession of the Jews only a short time, and it is not likely that the Jews were adventuring so far afield in the critical time to which the coin belongs. The South African ruins themselves point to a much earlier period. The *Jewish Chronicle* concludes that the coin was dropped in quite recent times, "not necessarily by a Jew, although Jewish expeditions to South Africa for gold did not cease with the age of Solomon!"

The Northern Nigeria report for 1907-8 contains a striking summary of the administrative work which has been accomplished in this interesting possession. The territory was taken over by the Crown from the Royal Niger Company in 1900, largely because a political situation had arisen which made it practically necessary for the Home Government to step in and assume directly the responsibilities attaching to the occupation. For a time the territorial question with France was acute, and might easily

have led to grave trouble on the spot. Common sense and moderation on both sides averted the difficulty. The next problem was to deal with natives of very different degrees of advancement and spread over great areas. The general policy, the report observes, has been to support native rule and rulers, their councils and courts, customs and traditions, when not repugnant to our ideals. The Residents are to be administrators in the true sense of the word, not direct rulers. "By their sympathy, patience and knowledge of language and customs, it was hoped not only to utilise existing machinery, but gradually to improve it, and thereby better the condition of the people." The progress may be slow, but the policy is sound, and an interesting feature of it is the special care which is now given to the education of the officers in the practical matters with which they are concerned.

The effective administration has been extended in a remarkable way in the few years which have elapsed since the transfer. In 1900 some 30,000 square miles were controlled; in 1908, 220,000.

The Baro-Kano Railway follows the measures which have been taken to suppress slave raiding and organised robbery. The native Emirs take the greatest personal interest in the works and constantly visit them, and the undertaking has clearly a great educational as well as an economic influence. The line, from about mile 20 to mile 60, passes through a continuous shea-butter belt; the value of this oil is about the same as that of soft palm oil. This product will bring considerable freight to the cars from the outset.

The Hongkong Government has published the original Chinese text, with illustrations, together with a translation, introduction and notes by Mr. Cecil Clementi, of the article on the poppy from the "Compendium of Literature and Illustrations, Ancient and Modern." This mighty work, which is in 10,000 books, was published in 1726. Mr. Clementi remarks "since my own set was sunk to the bottom of Hongkong harbour in the typhoon of September, 1906, the only copy existing in this Colony is that recently purchased by the Registrar General's Department." He adds that the British Museum possesses what is probably the only copy in the United Kingdom. Mr. Clementi considers that the article conclusively proves that the poppy and its qualities were well known in China at an early date. As early as the ninth century a writer speaks of the poppy fields of the Ssü-ch'uan province as the characteristic feature of the landscape. Opium is mentioned in the fifteenth century, and before 1578 A.D. it had acquired a popular name in addition to its scientific one. "Nor is there any hint in this article of the names 'foreign medicine' and 'foreign earth' which were subsequently

invented to describe the drug. On the contrary, it seems clear that, though the Arabs first taught the Chinese their knowledge of opium and the way to extract it, yet for several centuries previously *papaver somniferum* had been well known in China. In fact, all that the Chinese learnt from the Arabs was a means of extracting further profit from their already existing poppy fields."

The Blue book is interesting as an example of Government enterprise in the field of research, and also in that of printing. Mr. Clementi, whose attainments as a Chinese scholar are now widely known, was appointed as one of the technical advisers to the British delegates at the recent International Opium Conference at Hongkong.

The Federated Malay States, although affected by the general depression in the East, showed a revenue for 1907 exceeding that of the preceding year by \$1,570,270. The progress of rubber is marked by a falling off in the production of both sugar and coffee. The exports of Para rubber nearly doubled in quantity as compared with 1906.

The growth of the East Africa Protectorate in the sense of the spread of administrative control is evidenced by the best of proofs—the increase in the sum collected by licenses and taxes. In 1907–8 the hut-tax, which had been cautiously estimated at £3,298, realised £16,228, and will certainly increase more as the paper jurisdiction is converted into actual government. This tax has not caused the trouble in East Africa which it has occasioned in West Africa; in Sierra Leone it had much to do with the memorable outbreak which occurred a few years ago, and the administration was freely criticised for imposing an unpopular tax which invaded the domestic privacy of the native. No doubt where the native is highly suspicious of the tax collector and prone to misunderstand his functions it is politic to tax him in a way which does not suggest interference with his family circumstances. In East Africa fortunately the natives are not so suspicious, and a pleasing sign of their trustfulness is shown by an increasing willingness to come for treatment in the European hospitals.

It is satisfactory to find that the abolition of the legal status of slavery has been carried out without any disturbance. Under the ordinance a master may claim compensation for damages caused by its provisions, and in the first six months 431 applications were received and compensation paid to the amount of £450, a small sum for such a reform.

Sportsmen will be glad to hear that bigger bags of lions have been made than usual, and that there has been a good increase in the numbers of eland, buffalo, giraffe, ostriches, zebra and hartebeest.

Side by side with this plenty, the future of farming with graded stock, both cattle and sheep, is assured over large areas of the Highlands. Evidence of the industrial activity is given by the institution of a quarterly Agricultural Journal.

Recently published Blue-book reports afford very welcome evidence of the revival of prosperity in the smaller West Indian islands. The case of the Leeward Islands is especially remarkable. The local revenue of Antigua amounted to £50,620, the largest which has been collected for nineteen years, and exceeded the expenditure by £3,652. This is the first occasion since 1892 when there has been a surplus, and all the Presidencies of the Leeward Islands are now relieved from dependence on the Imperial Grant in Aid of Deficiency of General Revenue. The process of reinstating the finances of these islands has been a gradual one, but it has been practically continuous throughout the ten years which have elapsed since the West India Royal Commission, and the work of administration will in future be less affected than in the past by the thankless but imperative duty of retrenchment. Sugar as well as cotton has contributed to the improved state of affairs in Antigua, and the central factories established some years ago have thoroughly justified their existence. St. Kitts-Nevis has continued to enjoy a fair degree of prosperity, in spite of some adverse circumstances—drought and a severe storm of almost hurricane force—while the trade of Dominica has actually doubled during the past ten years. Montserrat has added fruit-preserving to its other industries, and the new venture has been highly successful, and bids fair to expand. In Grenada the revenue was the highest ever collected, while the value of the Colony's exports reached the unprecedented total of £410,000, almost double the figure of the preceding year, a result largely due to the high price of cocoa. The sorely stricken island of St. Vincent also had a very satisfactory year, cotton cultivation having proved particularly successful. A useful innovation in the Grenada and St. Vincent reports is the inclusion of clearly-printed maps.

British Guiana in 1907-8 increased its shipments to Canada, sugar being almost entirely responsible for this result. The United States, which at one time took a very large proportion of the Colony's sugar, are now practically closed, owing to the preferential terms given to Cuba and the Philippines, but Canada has stepped into the breach in a remarkable manner, taking no less than 87·11 per cent. of the whole. These figures, and others of the same kind, explain the great interest which is taken in the West Indies in the question of a commercial arrangement with Canada and the satisfaction which was shown at the Earl of Crewe's announcement,

made at the dinner given to him by the West India Club, that a Royal Commission would be appointed to consider the subject.

The Report of the Canadian Board of Trade Commission which recently visited the West Indies contains an interesting note on the export of sugar to the Dominion :—

“Owing to the British Preference tariff, the exports of sugar from British Guiana and the British West India Islands have increased very materially; so much that they supply almost the whole of the raw material used by refiners situated in Eastern Canada. Statistics show that 165,000 tons were imported into Canada from the British West Indies and British Guiana during the year ending June 30th, 1906. In many of the places visited the idea seemed prevalent that growers of sugar in the West Indies were not securing as much benefit as they were entitled to from the working of the British Preference tariff. This question was discussed fully, and it was explained that the principle of this tariff was simply to throw open the Canadian market to British products on more favourable terms than to those of foreign origin, and that it had become a question of supply and demand as to the prices paid by Canadian buyers to West Indian producers. The correctness of this view was generally accepted, it being realized, however, that Canadian buyers must be ready to pay fair prices, as otherwise the West Indies would look to the United Kingdom for their market.”

In the British Guiana report for 1907-8 it is pointed out that sugar and its products represent some 73 per cent. of the total export of the colony, and the diminution in the demand is, therefore, a very serious matter. With this may be contrasted the case of Grenada, which, in 1907, had an unprecedented export, due almost entirely to cocoa, the value of which more than doubled; this result is no doubt largely attributable to the provision on all the best plantations of apparatus for drying the leaves by hot air; a machine made in London is said to be the favourite.

The Colonial Bank has been authorised to increase its note issue to £600,000. This increase was considered necessary, not from an expectation that the total circulation would reach that figure, but because the Bank is compelled to allot to each branch a maximum amount much in excess of the legitimate necessities of the place, owing to the use made of the notes as a means of remittance from one colony to another—a practice of which the Bank has complained.

Lord Crewe has appointed, with the concurrence of Viscount Morley, a strong Committee to consider the question of Indian

VOL. II., No. 4. FF

immigration into the Crown Colonies and Protectorates. The scope of the Committee's enquiry is not limited to indentured labour, and they will be at liberty to consider whether the introduction of "free immigrants" into any Colony is worthy of encouragement. The way in which such a movement of population affects India is to be taken into account, and the Indian Government has nominated Mr. S. H. Freemantle, of the Indian Civil Service, to represent them on the Committee. Lord Sanderson, for many years Permanent Under Secretary at the Foreign Office, is the chairman of the Committee, which has already begun its sittings.

A Royal Commission is also to be appointed to conduct an enquiry into the financial situation in Mauritius, which has for some time been far from satisfactory, and has been the cause of much anxiety, both to the Government and to the planting and commercial community. The appointment of the Commission is the outcome of a direct request from the Legislative Council of the Colony.

The Secretary of State has appointed a Committee to ascertain the actual facts with regard to the consumption of spirits by natives in Southern Nigeria. Sir Mackenzie Chalmers is to act as Chairman. The question is one which has been repeatedly raised in Parliament, and there have been acute differences of opinion, both as to the extent of the liquor traffic, and as to its effect on the West African native. The Committee will be able to express a semi-judicial opinion on the facts, and its report will no doubt serve as a safe basis for future policy.

Some interesting comparisons as to the cost of growing wheat in different countries were made at a recent discussion before the Royal Society of Arts (February number of the Society's Journal). In England in a representative case the cost of cultivation for wheat was found to be £6 8s. per acre, which sum includes £2 0s. 6d. for rent, rates, taxes, tithe and interest on capital. The yield was 35 bushels per acre. On the other hand, in New South Wales the cost of production, excluding rent and interest, is put by the Agent-General at from 15s. 6d. on large farms with first-class appliances to 27s. on small farms; and the Agent-General for Victoria put it decidedly lower, viz., 11s. to 12s. per acre. In any case it is clear that the Australian figures are extraordinarily low as compared with the English, and, as was observed, "showed that the Australian farmer was a practical man, who was able to get a profit out of an incredibly small return." In Canada the whole cost, including an item for something in the nature of rent, has been estimated at 36s. per acre. The yield per acre in England is very high comparatively, and the explanation for the falling-off in the cultivation must

apparently be sought for in the rent, the methods of cultivation and the quality of the wheat. Roughly speaking, suitable land in the colonies can be got for 50s. to 60s. per acre, whereas in this country it costs, say, £30. The methods of cultivation and harvesting are often primitive. The wheat generally grown is of rather poor quality, but, although this is a real difficulty for which climate is largely answerable, a much superior wheat has recently been produced.

The international grain market is a sort of pool, into which exporting countries put their surplus produce, and the international value of this grain, plus the cost of carriage, settles the value in the importing country. Competition is wide and the margin for profit small; three halfpence per quarter, it is said, is enough to decide the destination of any wheat from the pool. Thus, if any country imposes any tax or duty on wheat it is the buyer who pays it. On the other hand, the grower whose grain is not subject to the tax will get an extra price, over and above the international value, equal to the amount of the preference, and this advantage will be comparatively greater where the cost of working per acre is low. Thus, if a duty, say 2s. a quarter, were imposed in this country on foreign but not on colonial wheat, the English wheat grower would at present gain 8s. per acre, the Canadian 4s. 6d. and the Australian 2s. 4d., and, having regard to the small margins of profit per acre in the colonies, it follows that the effect would be greater there than here.

The report of the committee of enquiry into the organization of the Crown Agents' office has been presented to Parliament, and will no doubt lead to considerable changes. It establishes clearly the principle that the office is a government office, and the staff government officials. The constitutional genesis and character of the office make any other view untenable, but the principle has been somewhat obscured by the long-continued practice of leaving the Crown Agents to make their own domestic arrangements. In future, appointments to the general staff will be made through the Civil Service Commissioners, and a definite classification and rates of pay will be introduced. The practical recognition of the principle will no doubt affect those branches of the business which have hitherto been conducted on the lines of mercantile agencies. If the Crown Agents can concentrate into their own hands various processes which are now carried on outside, they would be in a better position to deal with complaints of every kind, and the acceptance of a fuller responsibility would greatly help the settlement of questions. The recommendations of the Committee are all in this direction, and efforts will no doubt be made to give effect to the general spirit of the report in a thorough and consistent fashion.

THE CESSION OF MALTA.

THE way in which Malta passed into the hands of the English illustrates a fairly frequent feature of British policy. England at the beginning of the nineteenth century was certainly not hankering after Malta. In 1801 she refused an offer of the sovereignty. But she was resolved not to let France have it. Napoleon was equally resolved to have it. He declared that he would rather see England in possession of the Faubourg St. Antoine than of Malta. "Peace or war depends on Malta," he said in 1802 to the British Ambassador. Over this question war began in 1803 and went on till 1814, during which period England added to her national debt £421,000,000 and lost some 300,000 men. In the opinion of Nelson himself, Malta was of no use whatever to Great Britain. In December, 1802, he wrote to the Rt. Hon. Henry Addington: "It must never belong to France; England does not want it;" and in January, 1804, to Captain Fremantle, "as to Malta, it is a perfectly useless place for Great Britain, and as a naval port to refit in. I would much sooner undertake to answer for the Toulon fleet from St. Helena than from Malta; I never dare venture to carry the fleet there." But in the hands of the French it constituted a serious menace to the British navy. It was then one of the best fortified strongholds in the world, practically impregnable. Neutral, it would not have mattered; as a counter in the game, it was of the utmost value. Later on, when Malta had been acquired by England, its value was better appreciated. In 1803 Nelson, after for the first time entering Valletta, wrote to Mr. Addington, "I consider Malta as a most important outwork to India, that it will ever give us great influence in the Levant, and, indeed, all the southern parts of Italy. In this view, I hope we shall never give it up."

In 1798, the year of Aboukir Bay, the French were in possession of Malta, but they had only just obtained it. Up to that year, from the time when the Emperor Charles V. granted the island to the

Order of St. John, subject to the shadowy suzerainty of the Kingdom of Sicily, Malta was virtually an independent state. In 1798, the Knights, who were mostly Frenchmen, aided by a Maltese party which was infected with the glamour of the French revolution and the fame of the great Napoleon, handed the island over to the French. Whether the gift was a lawful one or the occupation effective enough to constitute sovereignty are fine questions which it is hardly worth while to pursue; it is enough to say that certain judicial decisions have decided them in the negative. In any case the occupation was quickly disputed.

On the 28th August, 1798, news reached Valletta of the destruction of the French fleet at Aboukir Bay, and five days after the Maltese rose in rebellion, to shake off the "tyrannical despotism of the French." They notified the King of the Two Sicilies, whom they acknowledged as their sovereign, but it does not appear that they received any promise or support. Simultaneously they sent to Nelson for help, and help was at once sent. Nelson himself arrived on the 24th of October. The Maltese in the meantime had borne themselves manfully, completely blockading the French in Valletta and the three adjacent cities, but they were grievously hampered by want of weapons and food. The whole country rose, armed mostly with agricultural implements; they lost a great number of lives during the blockade, and the nobility mortgaged lands to procure corn from Sicily. The blockade went on for two years, and finally the French, reduced to extremities, surrendered to the British. By the Treaty of Amiens, 1802, Great Britain was to evacuate Malta, but she refused to do so until France fulfilled her obligations under this treaty. War was renewed, and, on the downfall of Napoleon, under the Treaty of Paris, 1814, England, while surrendering her conquests in the East and West Indies, regained Malta "in full property and sovereignty."

There is little question about the facts, but much warmth has been shown in discussing their constitutional aspect. Is it correct to say, as has been said, that England acquired Malta by conquest? The question is vastly important from the point of view of Maltese national pride, and the deep interest still taken in it is shown by the long series of letters and articles which has this year been issued from the *Daily Malta Chronicle* Office, under the title of *The Sovereignty of Malta and the Nature of its Title*, by Mr. A. Bartolo.

The Colonial Commissioners of 1830 seemed to lend some support to the theory of acquisition by conquest by reporting that "these islands came into our possession by capitulation in 1800." But the remark will not bear analysis. The capitulation did not in fact and did not profess to do this. It was an agreement of a purely military character, marking the evacuation of a fortress by the French. It did not and could not imply that the French had any

power to cede Malta. *Nemo dat qui non habet*. Clearly neither the Maltese nor the English admitted that the French were the sovereign power. The claim, if there was one, was disputed by war, and the Maltese and the English were allies.

Nor could England have acquired the sovereignty of Malta by the Treaty of Paris alone. The engagement was between Great Britain, France, Austria, Russia and Prussia: Malta was not a party to it. The only effect of the treaty in this matter was to show that France renounced any pretensions in favour of Great Britain. The actual cession came from Malta itself, and was merely confirmed by the treaty. The offer was not formally accepted till 1813, but the acceptance, when given, was on the footing of the terms specified in the original proposal.

Mr. Bartolo's articles show considerable controversial vigour, and his object in vindicating the courage and independent spirit of the Maltese throughout the great war is one with which we entirely sympathise. But we do not think that he or any one need have any apprehension that the part played by Malta is misjudged in this country. All recent official utterances have done full justice to the real character of the original compact.

TROPICAL HOUSES.

Every style of bungalow that has been built on the West Coast of Africa for occupation by Government officials has been adversely criticised, and with the view of collecting the information and experience of tropical countries, reports have been obtained from various quarters as to what is considered the best style of building in such places.

The suggestions that have been made in the correspondence received are extremely varied, and probably there is no recommendation made by one contributor which does not run counter to the opinion of someone else. Representations are made that it is a waste of money to raise bungalows much above the ground, and that it is most important to do so; that wide verandahs are necessary, and that they are superfluous; that galvanised corrugated steel is almost the best material for roofing, and that it should never be employed; that all houses should be made mosquito-proof, and that this makes houses unendurable. Probably most of the divergence of opinion is referable to differences in local conditions and the habits of the writers. Condemnation of particular materials may also be due to some imperfect use of them.

The first thing to consider is the question of coolness, and the treatment of this point turns largely on the climatic circumstances. If, for instance, the nights are cool, the building should be designed so that the occupants can live in a natural breeze, and materials, such as wood for walls and shingles for roofs, which rapidly cool down after sunset, are more suitable than masonry, which absorbs heat in the day and gives it out all night. If, on the other hand, the nights are hot, the object is to cool the hot air and use punkahs to make a breeze.

But, of course, white ants, wherever they exist, attack every piece of wood, and innumerable insects find convenient homes in the joists. Bricks are more durable and cleaner, and though they cost usually about 10 per cent. more than steel framing and timber, the

upkeep is less and the life much longer. In such countries as West Africa masonry walls are clearly the best. Frequently the question is not so much what is the best material as what is available locally, and the prevalence of wood and iron houses is due to the fact that they can be put up quickly and cheaply. The construction of strong but thin and light slabs of reinforced concrete will probably cause this material to be largely employed in future. But thick masonry walls keep out the heat well, and cannot be surpassed in localities where the materials are available. Where there are white ants masonry in lime or cement mortars should be used.

Corrugated steel (formerly corrugated iron) is the most prevalent material for roofing. Whenever it is so used it is essential that there should be a good air space between it and the ceiling. Ventilators should not be placed in the ceiling, but in the upper part of the walls; they should also be provided in the steel roof to let out the hot air which accumulates above the ceiling. In Australia double corrugated steel, with an air space between, is used with satisfactory results. Slates and tiles keep out the heat better than iron, but are breakable and expensive to transport. Eternit slates and uralite have been put on the market as a substitute, and appear to contain a large amount of asbestos; they are in use in Lagos.

There is a "refrigerating" composition which can be used in metal or tile roofs, and in a recent trial by a Colonial Government it was found that the temperature of roofs so treated during the full heat of the sun did not rise above blood heat, and the roofs were always cool to the touch when other roofs were too hot to touch. Where there are no white ants, matting over the ceiling, with a mud plaster over it, makes a cool roof.

In India some experiments have been made of reinforced concrete roofs. At Cawnpore a reinforced roof 6 ins. thick was placed over a 5-in. jack arch roof, with an air space between: on 1st May the temperature in this room was found to be 90°, as compared with 105° in a building with only a single jack arch roof.

There is a good deal of difference of opinion whether the bungalow should be well raised above the ground or not. But in cases where it is necessary to keep it open so as to cool it by the breeze, and there is dry, dusty soil about, it is absolutely necessary to raise the floor well above the ground. It is as well to raise them some eight feet, so that a man can get in to keep the space clean, or otherwise the space must be enclosed, and thus there is a temptation to use it as a store-room, in which case it is likely to become a nuisance.

There is a strong body of evidence in favour of making houses mosquito proof by the use of gauze, but it must be admitted that in a hot and damp climate there is a great temptation sometimes to

let the breeze in. It is said that not one European in twenty in West Africa will live in a mosquito-proofed room. It is generally believed that fever can be avoided by living in a mosquito-proof house from sunset to sunrise, but it is not often possible to do this, and as a matter of fact the anopheles does sometimes bite during the day time, especially in shaded spots. The best remedy, therefore, against malarial fever is the destruction of mosquito-breeding grounds near houses, and gauze netting is only necessary till this has been done. The best way is to put the gauze round the verandahs and to have porches where entrances into the house are required. *The Panama Canal Record* says that "the wire should be No. 18 mesh of bronze or brass. The presence of 1 per cent. of iron in the brass alloy has been found, in many instances, to result in the corrosion and destruction of the screening."

In the West Indies verandahs are generally dispensed with on account of the hurricanes, but in West Africa they are necessary and are largely used as part of the house. The extent to which they are used depends on the climate. If one is only required to shelter the walls a narrow one suffices, but if it can be used to sit or sleep on for a great part of the year it should be 10 ft. wide or more.

In any case, for the sake of airiness, the sleeping room should contain as little furniture as possible; a dressing room and a store-room should be provided.

It is generally considered that rooms in which punkahs are to be hung should not be less than 11 ft. high.

Where there is a cooling breeze the building should be faced so that the wind may blow through it; where this is not the case, the best plan is to make the length of the house run east and west, and the front and back north and south, as then when the sun is low it strikes as little of the house as possible.

The direct sunlight is too powerful to be admitted with comfort, and it is desirable, therefore, to arrange for the lighting to be independent of the openings into the verandah. It can be admitted through clerestory windows below the verandah roof, or if above, screened from the sun. The ceiling and upper parts of the walls should be whitewashed so as to increase the light, and this can be done without detriment to the appearance if the whitewashed surface is treated as a deep frieze.

THE MODERN HARBOUR.

DEPTH.

SHIPS are continually increasing in size, and the increase would be greater if it were not checked by the limits to the depth of channels. Everywhere, therefore, efforts are being made to increase this depth, and harbours which take no part in the movement are sure to lose business.

From materials recently collected it appears that for the North Atlantic trade New York and Liverpool are preparing for a depth of 40 ft. at low water; Halifax has naturally deep water; Southampton, St. Johns (New Brunswick), Baltimore, Boston, New Orleans, Portsmouth (New Hampshire), and the Panama Canal have now, either at present or are providing for, a depth of 35 ft. at low water. At the French ports provision is being made at the Transatlantic Quay at Boulogne for 38 ft.; at Brest, for 36 ft.; and at the Naval Port of Toulon, for 34 ft. 9 ins. Cherbourg and Marseilles have considerable natural depths. The depth of the New Commercial Harbour at Dover is to be 38 ft. at low water. The navigation of the St. Lawrence is to be forthwith deepened to 30 ft. as far as Montreal, but it is confidently hoped that they can eventually obtain a depth of 35 ft. The depth which has been fixed for the navigations at Philadelphia and at Pensacola in Florida is, however, only 30 ft. at low water.

Mexico has fixed the minimum depth to which its ports are to be constructed at 32 ft. 9 ins., a depth which has also been chosen by Valencia, in Spain, for the new works at Genoa, for the North Sea Canal to Amsterdam, whilst Cuxhaven, in Germany, Cadiz, in Spain, and Bizerta, in Tunis, now have that depth at low water.

The ports of Copenhagen, Esquimaux, Galveston, Montevideo, Newcastle-on-Tyne, Odessa, Plymouth (England), Revel, St. John's (Newfoundland), Santiago de Cuba, Vancouver (B.C.), Vladivostok, Yokohama and London have now either 30 ft., or have works in hand to obtain that depth at low water.

Capetown and Colombo have depths of 34 ft., but Fremantle, the first port of call in Australia of many steamers trading to

Melbourne, has only an available depth of 32 ft. Wellington (New Zealand) has a depth of 42 ft. in its channel and 34 ft. in its deep-water berths. Sydney Harbour is stated to have a depth of 36 ft. at the entrance, whilst the entrance to Melbourne through the Port Phillip Heads is nominally 37 ft.

The depth of the Suez Canal is at present 29 ft. 6 ins., but it is intended to provide eventually for 36 ft.; whilst the depth to be provided in the works of the Panama Canal is to be 35 ft.

Whilst there is no governing limit to the draught of vessels trading between Australia and Great Britain by the long sea or Cape routes, the dimensions of the larger number of the vessels trading to Melbourne will be ruled by the draughts permitted through the Suez and Panama Canals. From the evidence taken some years ago by a Commission appointed by the directorate of the Suez Canal, it appeared that the pilots responsible for the navigation and the captains of the largest steamers navigated through the Canal required a depth of not less than 3 ft. under the keel of the steamers to ensure safe navigation by a prompt obedience of the vessel to the helm; but Mr. W. Ferguson, in his report on the Port of Melbourne, considers it probable that on the completion of the large extension of waterway, both in width and depth, that have been completed and are now in progress in the canal, a less amount of clearance would now be demanded.

"It is true," he observes, "that the regulations of the Manchester Ship Canal permit a draught of only 6 ins. less than the minimum depth over the sills of the docks, and a draught of only 15 ins. less than the depths in other parts of the canal; it is clear that such a small margin is quite exceptional, and, though permissible in the sheltered land-locked water of the Manchester Canal, is quite inadmissible in open exposed channels. So far as I have been able to ascertain, the depths permitted in other navigations leave a clearance varying from 1 ft. 6 ins. to 3 ft. 3 ins. As the Suez Canal is to be deepened to 34 ft. 6 ins. coincidentally with a large increase in its sectional area, I think that it is only reasonable to anticipate that before many years have elapsed we may have vessels passing through both the Suez and Panama Canals drawing 32 ft. to 32 ft. 6 ins."

The general result is that a first-class port should be able to admit at low water vessels drawing 32 ft. 6 ins., and for this purpose a depth is required in the berths and sheltered waters of 35 ft., and more wherever in a navigable channel there is the possibility of a scend.

SANITARY CONDITIONS.

It frequently happens that under the wharves a foreshore or bank, in some cases quite dry at high water, in other cases partly

uncovered by the falling tide, has been permitted to remain. The timber sheet piling at the back of the wharves is possibly not closely driven, with the result that the combination provides an ideal habitation for the wharf rat. The garbage and filth from the watercourses and from the vessels using the river floats in and lies upon the banks, and is added to by the sweepings from the wharf and sheds, with the result that a most insanitary and unsatisfactory combination exists. In some places if the rats once became diseased there would be a great risk of trouble.

To prevent such a result the wharves, and also the stores, should be built of reinforced concrete, and the foreshores cleared away as much as possible.

HARBOUR WALLS.

The walls should be at least 10 ft. above water level, so as to save unnecessary hoisting; goods can then be wheeled on trucks in and out of the ship or head carried on gangways. With a low wall this is impossible and much time is lost.

The usual width in modern docks between the quay walls and the sheds is 36 ft. This allows for two lines of railway and one line for travelling cranes.

SHEDS.

The roof should be strong enough to allow the use of hydraulic or electric jiggers. These are serviceable in stacking cases or in loading. It is desirable to have closed sheds to prevent pilfering, but volatile liquids, green hides and other goods which might affect food products should be excluded. A shed is intended for the first reception and customs examination of goods, and not for storage, and to prevent congestion and delay removal should be required within the shortest reasonable time. It may be convenient, however, to provide an upper floor for the storage of goods which are not very heavy, with an outside gallery.

GEAR.

The essentials to be considered in connection with a heavy crane are that it shall either be capable of being taken to the side of the vessel, as in floating cranes, or that the largest vessel can be brought alongside it at a place where the crane has command of a good road and of a railway siding. The berth for the large crane should be such that when either a small or a large vessel is in possession no interference exists with any other berth.

On the gallery on the dock side a rail can be laid flush with the covering of the upper floor and gallery, which would probably be asphalt. This rail would serve to carry the wheels of the landward end of a one-legged gantry, whose seaward end would be carried on wheels running on a rail laid parallel. This gantry would be

movable by hand gear to suit the varying position of the hatchways of the vessels, and would carry on it either an hydraulic or an electric crane or a traverser gear. The advantages of a traverser gear over a crane is that the load is shifted along the shortest route, the diameter of the circle, in place of, as in a rotating crane, being swung round on its circumference. The traverser also has this convenience : that, where the spacing of the hatches of the vessel permit it to be brought in a line with permanent traverser paths fixed in the building, the slings of cargo can be run direct from the vessel's side into the upper floor in place of being deposited on the gallery, to be either picked up again by the internal traverser in the shed, or to have the slings broken down and the component packages trucked by hand into the store. The traversers would be either worked with a traveller, driven electrically, and carrying a man or boy with it, or by means of ropes or other mechanical or electrical arrangement. The best method to be adopted requires careful study, but in order to obtain quick despatch for vessels and cheap handling of the goods when landed, it is necessary that mechanical appliances should be adopted, and that the gear provided by the vessel itself should be supplemented by shore appliances capable of moving loads of moderate weight between the vessel and the wharf, or railway trucks standing on the wharf and the downstairs doors of the stores, or on to the gallery of the upper floor.

Expensive equipment, however, should only be provided where mail steamers call or other large vessels whose time is of much value. An ordinary steamer can handle its own cargo.

On the 17th of December, Colombo harbour contained forty-one ocean-going steamers, including the American fleet of sixteen battleships and four auxiliaries. On the departure of the fleet, sixteen battleships and two auxiliaries were taken out, and a mail steamer taken in, in one hour thirteen minutes—a remarkable performance. The American despatch vessel, the first American vessel to use the graving dock, was docked, cleaned, painted and undocked in twenty-four hours. The occasion shows what may have to be done in an up-to-date port.

REVIEWS AND NOTICES.

The Cambridge Modern History. Vol. XI. (*Cambridge University Press.*)

THE Cambridge Modern History, which is the joint work of a number of writers based upon a plan conceived by the late Lord Acton, has now reached its eleventh volume, and is brought down very nearly to contemporary events. The general title of the new volume is "The Growth of Nationalities," and the period covered is in most cases the years 1840 to 1870, a few chapters covering the longer period from 1815 to 1870. In a volume which endeavours to deal with the whole of the civilized world it has naturally not been found possible to devote a very large amount of space to the British Colonies, and the chapter of 48 pages which deals with them makes no attempt at a detailed narrative of events. It consists of four short essays. The first, "The New Colonial Policy, 1840-1870," is the work of Mr. H. W. V. Temperley. Mr. Stuart Reid deals with "The Federation of Canada," Mr. Archibald Colquhoun with "The English and Dutch in South Africa, 1815-1870," and Mr. J. D. Rogers with "The Development of Australasia" during the same period. It is somewhat unfortunate that no account is given of the development of the Crown Colonies beyond references to Hong Kong in Sir Ernest Satow's chapter on the Far East, and a bare mention of Singapore in the chapter on India. Even an event which reacted so powerfully upon home politics and opinion as the Jamaican rebellion of 1865 escapes all reference. It is possible that some of the gaps may be filled up in a later volume, the divisions of the work being based upon subject classifications and not upon strict chronological order. Of the four essays above-mentioned the most satisfactory is that of Mr. H. W. V. Temperley, which gives a clear, if necessarily somewhat sketchy, account of the development in English opinion which led to the concession of steadily increasing powers of self-government to the component parts of the Empire. He rightly gives the credit for the original inspiration of this new policy to Lord Durham's historic report on Canada. Mr. Reid and Mr. Colquhoun supply

interesting, if rather colourless, narratives of Canadian and South African history, but Mr. Rogers's account of the development of Australasia tends to become a mere catalogue of occurrences, and we doubt whether any reader will rise from its perusal with a clear and orderly conception of the subject in his mind. We have noted a certain number of inaccuracies which should be removed if a second edition is published. British Bechuanaland became a part of Cape Colony in 1895, not in 1885. The reference to "the principle that the Home Government had a right to be treated as the most favoured nation in all commercial treaties which the Colonies might make" seems to imply the enjoyment at an early period of a full treaty-making power which the self-governing dominions do not even now possess; and Mr. Rogers seems to suppose that the main obstacle to the grant of preference by Australia to the United Kingdom before 1895 lay in the terms of the Australian constitutions, and not, as was actually the case, in British treaty obligations to foreign powers. The Governor-General of Canada does not "hold office for five years." The term of his appointment is not limited by his commission, and the full normal period is six years. The Canadian Senate consists of 87 members, not 83. In the account of the Canadian provinces, which professes to be brought up to date, the creation in 1905 of the Provinces of Saskatchewan and Alberta is overlooked. The statement that the Cape franchise "remains the most liberal in South Africa" is not true, in so far as the white population is concerned, since the establishment of the Transvaal and Orange River Colony constitutions on a basis of manhood suffrage. The account of the position of Basutoland appears to imply that the annexation to Cape Colony in 1871 is still in force, the Disannexation Act of 1883 being apparently forgotten. It will be noticed that the majority of these errors occur in connection with events of later date than the period specially dealt with by the authors, and they may perhaps be ascribed to an omission to verify facts which are only the subject of chance reference. There is a convenient bibliography of the principal works relating to Colonial affairs in the period dealt with.

The Fijians.—By BASIL THOMSON (second notice).

The name of Mr. Basil Thomson is already well known to all who are interested in the Pacific Islands, their history and their inhabitants; and also, we hope to many who have no particular interest in that part of the world. To anyone who wishes to combine a certain amount of instruction with a very large amount of amusement, we can confidently recommend *The Diversions of a Prime Minister* or *The Indiscretions of Lady Azenath*. Mr. Thomson's present work displays all the qualities which made

those books so full of delight—great knowledge of and sympathy with the native mind, a pure and graceful style, and a sense of humour which never fails to charm and refresh. Quite apart from any other merits it is "better reading" than ninety-nine out of a hundred novels.

But if we are not mistaken it is not primarily its literary merits by which the author himself would wish it to be judged. It is a solid contribution to knowledge; in it there is a great deal for the ethnologist and the student of comparative religion, something for the historian, something even for Schools of Tropical Medicine. The mere titles of some of the chapters will make the anthropologist lick his scientific lips:—"Cannibalism," "The Marriage System" (wherein the reader will find an extraordinarily interesting discussion of the question of consanguineous marriages), "Customs at Birth," "Traits of Character." The long chapter on religion contains the pathetic and grotesque myth of the spirit-path, by which departed souls travel through toil and danger to their resting-place at Nakauvandra—a myth which often recalls famous parallels in Homer and Virgil. The chapter entitled "The Age of History" tells of "old, unhappy, far-off things and battles long ago," of the rise and fall of empires, of heroism and treachery, Charles Savage and Naulivou, Ratu Mara and Thakombau—all to be succeeded by the unromantic rule of the white man.

Yet the history of Fiji, during the thirty-five years since its cession to the British Crown, is in one way peculiarly interesting; for it raises in an acute form a question of the highest moment to the philosopher, and not only to him, but to all who are concerned in the work of governing non-white races. What Mr. Thomson tells us of the Fijian under British rule is, in substance, the same as many competent observers tell us of other coloured races—that in making life in tropical countries more secure for the native inhabitants, we have also made it less worth living. "Wheresoever in the world a people has passed under the sway of England, their lives, in becoming more abundant, have ceased to satisfy their ideals. We have broken in upon the secular calm of ancient civilizations, and over minds which once reposed in a passive and inourious contentment we have cast the spell of our own unsatisfied longings. The savage whom we tame unlearns his simple delight in Nature, and gains access only to our coarser and viler pleasures in its stead." Every thoughtful mind must recognise that in these words, written by one who was certainly not a "Little Englander," there is an uncomfortable measure of truth. Mr. Thomson's book, we fear, will do little to dispel such misgivings; for Fiji, with all its peace and prosperity, remains still an unsolved problem. The natives make a most practical, though unconscious, protest against the white man's government—they will not live and

multiply under it. The native population does not decrease as fast as it did; in one recent year it even remained stationary. But the views of those who know it best can be judged from a recently published despatch of the present Governor, in which he referred to the time when, by the dying out of the natives, the Crown will become *ultimus heres* of their lands.

What then, apart from purely selfish interests, commercial and strategic, is England's justification for imposing on the Fijian a government which only too literally "bores him to death"? This is the great question of principle raised by Mr. Thomson's book—to give it a definite answer (if one is possible) did not, unfortunately, lie within the scope of his work. It is absurd to discuss it within the brief space of a review; but perhaps it may be suggested that we have ultimately to admit, in this case as in others, an example of a kind of moral selfishness which is nearly inseparable from a strongly marked character. Certain things are repugnant to the white man, and, therefore, oblivious of the fact that other races may not share his repugnance, he will not suffer them to exist anywhere where he has the power to stamp them out. If we search our own hearts, we must in the last resort admit that it is for our own comfort, and not (as we usually imagine) for the comfort of our weaker brethren, that, consciously or unconsciously, we destroy their own poor tabernacle of custom, and set up in its place the temple of Western civilization.

But it would need a volume adequately to discuss these questions. We can only hope that Mr. Thomson may find time to write it. It would equally need a volume to deal with each of the other fascinating problems which peer out of the pages of his book. To go no further than the introduction, his views on the "colour question" in general, and the future amalgamation of white and coloured races, positively clamour for debate. In spite of his authority, and the reasons he urges for his opinion, we cannot believe that any such great amalgamation is conceivable without some extraordinary change in human conditions and character. The whole tendency of modern life seems to us against it; for the more clearly white and coloured races have come to know each other and themselves, the more steadily have they drawn apart in the one essential particular of intermarriage. We do not say that the barrier between them is primarily a physical one; for it does not exist, or is at least far lower, in the case of the Japanese—the one non-European race which has triumphantly adopted more than the trappings of Western civilization. But we believe that for an indefinite time to come the physical distinction will in the main correspond to a sharp distinction in intellect and character which will separate the races far more effectually than causes purely material.

These rather wandering remarks on two of the wider questions raised by Mr. Thomson's book at least serve the purpose of showing

the interest of the problems with which it deals. It is quite unnecessary, we feel certain, to describe its contents in detail; for everyone who can obtain it will hasten to read it for himself. We need only repeat that, though it is the work of an official, it is as full of information as a blue-book ought to be, and as full of entertainment as a blue-book is generally destitute of that quality. When the reader finishes it, his only regret will be that it is but one volume, and his first hope that its author has not exhausted the materials which he collected in his note-books and his memory during his residence on the other side of the world.

My Experiences of Cyprus.—By BASIL STEWART. (Revised Edition : *George Routledge & Sons, Ltd.*)

The British possessions have been acquired in a straightforward way by actual settlement or by force of arms, with one exception. In 1878, on terms which few people have ever understood, and for a political consideration which no one now wishes to remember, we "occupied" Cyprus by leave of Turkey. There had been no previous discussions or enquiries which led up to this step. We had no interests in Cyprus, nor the slightest knowledge about it. The act was entirely diplomatic in character, and was clearly designed with a view to theatrical effect. This effect it undoubtedly had. At home it was received with vociferous enthusiasm; abroad it was keenly resented. In fact, however, there was little occasion for either applause or suspicion. No deep design underlay the act. Perhaps its importance was magnified by the glamour of the classical and scriptural associations of the island. And, no doubt, the ancient reputation of Cyprus held out possibilities of development which would be worthy of the British Crown and heighten our prestige throughout the Mediterranean. There were not wanting writers who prophesied that Great Britain would use the opportunity of showing how superior her methods were to those of Turkey, politically and economically. After some thirty years of occupation a much more modest tone would now be taken. Nothing would be said of increased prestige. It is realised that Cyprus is, on the whole, far from being a healthy place. If it had valuable mines and forests in old times, the mines have been exhausted and the forests destroyed. But, principally, it has been realised that the financial bargain made with Turkey was a bad one. It is impossible to pay away out of the country the full "tribute" taken by Turkey (some £93,000) and at the same time to have the slightest chance of a surplus for developing the resources of the island. The "tribute" was obviously the most that could be extracted, and, in fact, was vastly more, and it was certain that British methods of administra-

tion, however more laudable in principle, would cost more money. The result has been an annual grant in aid from the Imperial Parliament, carefully framed to meet the precise deficit. That deficit has until quite lately been kept down to the lowest possible figure by rigid economy and avoidance of enterprise. No colonial estimates have ever been so minutely scrutinised and restricted as those of Cyprus. Other grants in aid will, it is hoped, be reproductive; there was no chance of this in the case of Cyprus. In these circumstances the only means of doing some substantial work of improvement was for the Imperial Government to arrange for a special grant, covering at least three years, which would enable some work to be undertaken. This was frequently proposed, but was never done till 1907, when Parliament was asked to vote £50,000 for three years, and the railway was undertaken.

Mr. Basil Stewart knows the island well, and describes its beauties with spirit and its antiquities with care. His book is not the less instructive because it has not the generally laudatory character common in works of travel. Cyprus, he says, is "without doubt the most unhealthy place in the Mediterranean." He does not see that anyone benefits from the occupation. The great commercial difficulty is that there are five ports, and that their claims stand in the way of creating one principal port. Probably in the future this question will be settled by the growth of the trade with Egypt.

A History of the United States and its People.—By E. M. AVERY.
(16 vols. *The Burrows Brothers Company, Cleveland.*)

This sumptuous work appeals at once to the eye with its wealth of illustration. Old portraits, documents, maps and plans are reproduced with extraordinary fullness, and certainly at every point stimulate the interest of the reader in the story told. No other country, we imagine, would support a work dealing so lavishly and minutely, for popular use, with the records of its past. The history itself is correspondingly painstaking. The style is admirably clear and the matter full. The second volume deals with the early period of the British Colonies, and a striking feature of it is the fair-mindedness of the author, and the allowances which he makes, in common with some other recent American historians, for errors and follies which it is easy to criticise from a modern standpoint, but which were natural enough at the time and common to all countries. Mr. Avery's views on these matters by no means interfere with his doing justice to the spirit of American institutions. The history of the United States, in fact, gains greatly by the rejection of intellectual and ethical standards which belong to later periods. Told, as Mr. Avery tells them, in close relation with the living ideas

of the times, the various stories of the early settlements are full of human interest to readers of any nationality.

We append two characteristic extracts:—

“Here it need only be said that, whether the regnant power was Stuart, parliament, or protector, the underlying notion was that the true purpose of English colonies was to foster the trade of the mother country. The home government was building up a British empire of which the English colonies in America were a part. Imperial control was one of the legitimate and essential functions of such an empire. In the strengthening of the imperial system English statesmen doubtless made mistakes. Some of the specific rights conveyed by charters granted by the king in council were disregarded, and Englishmen who had settled beyond the seas were sometimes forced to wonder if it had been forgotten that they were flesh of the flesh and bone of the bone of those who remained at home. But Americans of our generation who studiously ponder upon the errors of their fathers in the decade following 1865 will, perhaps, not insist that all unwisdom is born of ill will. The navigation acts were directed against the naval supremacy of Holland rather than the prosperity of English colonies, but the attempt to wrest the carrying trade from the Dutch involved no little injury to Englishmen beyond the Atlantic. It was more difficult for those who then suffered than it is for us to see that these ordinances were not framed in a spirit of conscious hostility to the colonies. The passage of the suffering has not always brought the cleared vision.”

“The migrations from the Old World to the New differed largely from those that had changed the character of European society, in that they were individual rather than tribal. Having been led across the ocean by their common love of liberty, Catholic and Protestant, Churchman and Puritan alike, they left old political forms in the old places and applied their cherished principles in a way and to an extent peculiar to themselves. Students have devoted much time and learning to tracing the germs of some of our institutions back into the depths of ancient German forests, but the truth still stands that the ideas and institutions that characterize the nation are essentially peculiar to the nation. Some of the separate principles were undoubtedly transplanted, as were the religion, language and manners of the immigrants; but from the new soil they grew with new strength and new significance and developed into a political entity different from anything that the world had before known. In the words of Professor Frederick J. Turner, ‘the wilderness has been the melting pot and the mould for American institutions.’ In the New World these Old World ideas developed along two lines—the line of local self-government and the line of union. Of these, one led to the town and state; the other led up to the nation.

The idea of local self-government was historic when Raleigh planted and Brewster prayed. As has been pointed out by many, it was a leading principle of the primeval polity of the Goths; but in the England of King James and Queen Elizabeth this idea was a tradition rather than a living political force. The crown had undermined the ancient freedom of the hundreds, burghs, counties and shires, and deprived the people of the power of local government. But while the seventeenth century was still young, Englishmen out of England were governing themselves, testing their own decisions, and correcting their own judgments. Plymouth had her covenant, Massachusetts and Connecticut their town-meetings and Virginia her house of burgesses. Old germs had brought new fruits that were essentially original and that fairly may be called American. The natural product thus evolved was a cluster of distinct and essentially free communities. The idea of joining these communities for common defence and general welfare grew so naturally under the then existing conditions that the resultant notion of a republic may with equal propriety be called American. This blending of these two lines of polity, union and local self-government, was first realized in the New England confederacy."

Unemployment: a Problem of Industry.—By W. H. BEVERIDGE.
(*Longman's*. 7s. 6d. net.)

Mr. Beveridge's book on Unemployment is by far the most valuable work which has yet appeared on what is admittedly the principal social and economic problem of to-day. He analyses, in a lucid and instructive manner, the facts with regard to seasonal and cyclical fluctuations of trade and their effects on the demand for labour. But the lesson of outstanding importance which he draws from his consideration of the modern conditions of industry is, that Unemployment is not an occasional and temporary feature of modern industry, but a constant and permanent one; that its importance is due to the existence of a vast number of persons casually employed or permanently under-employed; and that the supply of the under-employed is artificially kept up and maintained by the hopelessly unsystematic methods of recruiting labour, which are still largely in vogue. Instead of having one "labour market" in each industry, we have one for each employer, and reserves of labour have to be maintained which would be unnecessary were proper means of information and interchange established, and which preclude the possibility of any regularity of employment in the industries which maintain them. We cannot deal fully here with a book which succeeds in presenting a closely-reasoned argument, with abundant statistical illustration, in an admirable literary form. But the author has been the first to expose the roots of the evil of Unemployment,

and so prepare the way for a constructive policy, and his book should be read by all who are interested in social and economic questions.

Report on the Work of the Imperial Institute, 1906 and 1907.—(Cd. 3729-48: 4d.)

Since the management of the Institute was transferred to the Colonial Office in 1907, new collections have been added to the exhibition galleries and a considerable increase of work has taken place. The work done by the Scientific and Technical Department is recorded in considerable detail in these pages, and the record testifies to the unremitting energy of Professor W. R. Dunstan and his staff, which now consists of twenty-eight members, all technically qualified. The report contains detailed notes on the minerals and products of the colonies. It will interest rubber planters to read that "In connection with the present extensive planting of the Para rubber tree (*Hevea brasiliensis*), the fact that the abundant seeds of this tree can be utilised as the source of a valuable oil may become a matter of commercial importance in the near future, when the seeds will be available in quantities far in excess of those required for planting. The investigations conducted in the department have proved that this oil, which resembles linseed oil, will probably command about the same price as the latter commodity, whilst the residue of the seeds from which the oil has been expressed may prove to be serviceable locally as a feeding stuff for cattle. It is, therefore, possible that a valuable subsidiary industry may arise in connection with rubber planting."

L'Agronome Tropicale: organe Mensuel de la Société d'études d'Agriculture Tropicale (Bruxelles).

This new publication begins with an interesting summary and comparison of the efforts which are being made simultaneously in England, Germany and France, *à battre en brèche le monopole cotonnier des États-Unis*. The movement proceeds from the same considerations in all the three countries. The United States produce 65 per cent. of the world's total, and 75 per cent. of the cotton used in the European factories. This marked preponderance has led to abuses which are widely felt. The American speculators have not failed to take advantage of it, and the sharp and unexpected fluctuations of price which their operations have brought about have caused Europe serious losses. The situation has been aggravated recently by combinations of the growers, with the result that the price has been raised to a point double the cost of production.

England absorbs nearly half the American crop, Germany about one-quarter, and France about one-eighth. In each country a powerful propagandist association has been founded to encourage the

production of cotton in its own colonies, and in this way Europe is banded together to secure independence from the American groups of growers and dealers. It cannot be said that the United States are, so far, materially affected, but the results attained in a few years are substantial. Everywhere some apathy on the part of spinners has been encountered, but much tenacity has been shown in the work of overcoming this indifference. The operations of the associations are summed up. The greatest effort made by England is in Egypt, and the great strides made in that country are referred to as an admirable result of the British occupation. The German association was founded before the English, and received in 1908 Government subsidies of 110,000 marks and 90,000 contributed by industrial bodies. The French budget reaches 175,000 francs.

The number reviews various recent agricultural publications, British and foreign.

Travel and Exploration.—(A monthly illustrated magazine, 1s. net. *Witherby & Co.*)

This magazine is well got up and will appeal to the large class of readers who are interested in exploration for sport or science. The first number (January) contains among other articles an interesting sketch of British New Guinea and an account of tropical Peru. The latter country is, no doubt, destined to share in the general advance which South America is making, and its enormous resources will then come into play in the world's commerce. Mention is made of a projected expedition, which, no doubt, would be of the first importance, into the interior of Dutch New Guinea; the scheme is due to the initiative of Mr. W. R. Ogilvie-Grant of the Natural History Museum. The February number contains an article by Mr. F. C. Selous on "Hunting in Central Africa."

The great hunter deploras the fact that the rapid spread of civilization throughout Africa has "naturally exercised a disastrous influence on the game in many parts of its once limitless hunting-grounds. The chief charm, the great distinction of Africa, has always been the vast wealth and variety of the animal life, which once lent so much of interest and beauty to an otherwise dreary, sun-scorched wilderness. In many parts of the country the game is gone, and for evermore the land will remain as dull and colourless as a flower-bed in winter."

These sentiments will appeal to the sporting mind, but to the ordinary farmer and trader the "beauty and interest" of the lion and elephant are not so apparent. The process is inevitable everywhere, and most Europeans are thankful that it was finished up in their part of the globe by their ancestors. For those who are still searching for such pastime the article gives good advice on outfit.

If they want a better "flower-bed" than Central Africa supplies, we may mention that in the Federated Malay States an ample supply of ferocious beasts may be guaranteed. In 1907 we notice that 61 tigers and 1,112 crocodiles were destroyed as "noxious animals," on the prosaic principle of giving reward in money at the police stations.

The Royal Navy List and Naval Recorder (No. 125 : January, 1909. *Witherby & Co.* 10s., post free).

The special feature of this work is the record of services of officers. Material as well as men has its place in this respect, as the services of ships are also individually recorded. A bibliography of naval literature makes its first appearance and will no doubt be appreciated.

A book on the Falls of Niagara, issued by the Canadian Department of Mines, excellently written and illustrated, abounds in geological interest. The age of the Falls is put at the respectable figure of 39,000 years. The full diversion of the water under the present active franchise will reach 40 per cent. of the low water discharge.

A handbook for use in Nyasaland has been written by Mr. H. R. Wallis (*The Resident's Handbook*), which sums up in a very convenient way, under subject headings in alphabetical order, the provisions of the ordinances and the standing rules and regulations. An officer will immediately find in this little book a summary of the action required in any administrative function and a reference to the regulations affecting it. The volume is interleaved and would well serve as a model for such handbooks.

BUSINESS NOTES.

Shipment to the Federated Malay States.

We have had occasion to refer to the fact that some of the shipping business which used to go to Singapore has been diverted to the Federated Malay States. During the last few years the arrangements for the conveyance of railway and other stores to the States have undergone considerable alteration. Prior to 1905 all goods for the Native States were shipped to Singapore and forwarded thence to the port of destination by coasting steamers or lighters. In 1905 the shipments of rolling stock, etc., for the Kuala-Lumpur-Gemas end of the railway became heavy, and after prolonged negotiations a few shipowners were induced to allow their vessels, as a tentative measure, to proceed direct to Port Swettenham. Experience showed that the accommodation at the port for ocean-going steamers and the landing facilities were satisfactory, and shortly afterwards all the lines in the Conference consented to call when sufficient inducement offered. Since that date a regular direct service has been carried on, and during 1908 some 30,000 tons of cargo were landed for the Governments of Selangor, the Negri Sembilan and for the railway. By this arrangement the Federal Government saves the expense of transshipment at Singapore and the freight and insurance on coasting steamer and lighter shipments to destination.

It has also been found possible to arrange for direct shipments to Johore Bahru, at the Johore end of the railway, but only where full cargoes are concerned. The s.s. "Den of Airlie," which took out supplies of permanent way material in 1906, was the first ocean-going steamer to call at this port, but discharge was carried out without a hitch.

Lagos Harbour Works.

An estimate of the cost of dredging and training walls on the bar and of the harbour works amounts to nearly £1,500,000. It has

been urged that the wharfage and warehouse accommodation provided for is inadequate for the large increase of trade expected, and that some £2,800,000 will be required. It is proposed that the dredging of the bar and harbour should be carried ultimately to 30 ft. Three schemes have been put forward and each appears to have its body of supporters. The comparison is largely a question of cost, and steps are being taken to obtain an approximate estimate for each scheme. The engineering problem is similar to that which presented itself at Durban.

The draught of the bar has been raised by dredging to 13 ft., the highest on record; in February, 1907, it was only 9 ft. The 13 ft., however, is not a constant quantity.

Colombo Harbour.

The history of the recent schemes for the improvement of Colombo Harbour is given in a Ceylon paper (No. 57 of 1908). The south-west breakwater, which was commenced in 1873 and completed in 1885 at a cost of over £700,000, is being extended for 2,000 ft., under a scheme proposed by Captain Legge, and it is anticipated that this arm will shut out the whole of the sea passing through the southern entrance during the south-west monsoon. The estimated cost is £440,000, and the completion is to be in 1913, but it is now believed that protection will be secured by a rather shorter length and in 1911. It has been proposed to increase the accommodation by the construction of steamer jetties, but the estimated cost (£700,000) for two jetties, of solid blockwork, 1,230 ft. long and 200 ft. wide, is considered too heavy to admit of the adoption of the scheme for the present.

Nyasaland Tobacco.

The export of tobacco from Nyasaland increased largely last year, and this was due principally to the establishment at Blantyre of a factory by the "Imperial Tobacco Syndicate" (of Great Britain). This company sent an expert to the Protectorate to report on the local prospects of tobacco, and his report was so entirely favourable that they decided to go to a considerable expense in the hope of encouraging the cultivation of good grades, which they propose to purchase and cure on the spot. Their factory was completed last June, and they were busy during the rest of the season in dealing with the crop. It is understood that they are quite satisfied with the quality of Nyasaland tobacco and look forward to a great increase in its growth. They are encouraging the planters to extend the industry by offering good prices, averaging about 3d. to 5d. per lb., according to quality, and spot cash is paid.

Alcohol for Motor Cars and Boats.

1907 was the first year of the operation of the free alcohol law in America, and 4,242,001 proof gallons were completely denatured and 2,063,302 gallons specially denatured. This result shows that there is at once a great demand for the product, and now that it is procurable at a low price its uses will be greatly extended. A gallon of alcohol can be produced from three gallons of molasses, and as the value of molasses to planters is often nominal the production would open up an easy way to increased profits. The difficulty is usually that of excise; the alcohol must be made impossible for drinking purposes and issued under supervision. The following statement as to denaturing has been received from the Board of Customs:—

“Wood naphtha, if sufficiently impure, is eminently suitable for denaturing ordinary alcohol as it not only renders the latter nauseous to the taste, but the two cannot be separated by any practical method; its presence can also be readily detected even when in small proportions.

“Wood naphtha has not the offensive odour of pyridinum, neither does it affect appreciably the industrial value of ordinary alcohol in the numerous manufacturing processes in which the latter is used.

“As a further precaution against the passing into consumption of spirit mixed with wood naphtha in the case of small quantities sold, three-eighths of one per cent. of mineral naphtha is added.” Printed regulations have been issued as to the conditions under which the issue of such alcohol is permitted in this country.

On the other side the extended use of alcohol will enormously facilitate the exploitation of difficult territories, where unaided human labour is of little avail against the difficulties of nature. “It is no good,” Mr. Winston Churchill writes in *My African Journey*, “trying to lay hold of Tropical Africa with naked fingers. Civilization must be armed with machinery if she is to subdue these wild regions to her authority. Iron roads, not jogging porters; tireless engines, not weary men; cheap power, not cheap labour; steam and skill, not sweat and fumbling; there lies the only way to tame the jungle—more jungles than one.”

Alcohol versus Petrol.

The substitution of alcohol for motor cars would be greatly in the interest of sugar, in the manufacture of which it is one of the principal by-products, and in the countries which produce sugar it is reasonable to expect that this use will eventually be made of it. Alcohol can also be produced from the sweet potato. The difficulty is that of excise and this is probably capable of solution. But there

are no mechanical impediments, though slight adaptations of the usual mechanism would be necessary. Alcohol requires no air for combustion, and therefore none need be supplied at the carburetter. The valve springs would have to be adjusted so as to admit a freer supply to the engine. The substitution would be good for the consumer as well as for the producer as the price would be about half that of petrol.

Paper from Megass.

The October number of the *Bulletin of Miscellaneous Information*, Trinidad Botanical Department, records that various samples of wrapping and white paper have been produced, prepared mainly from megass. It is believed for every ton of sugar a ton of megass is available, and if the attempts to make satisfactory paper succeed—and this should be quite feasible with some lines—an important subsidiary industry will be established in aid of cane growing.

Cane can also be utilised to yield wax, when cane juice in the process of clarification is treated with sulphurous acid and lime. The wax is valued at 1s. 6d. per pound.

Cylindrical Boilers and Wood Fuel.

Complaints occur that on lake or river steamers the backs of the combustion chambers of the boilers bulge and the stay heads burn off. This is attributed chiefly to want of circulation in the boilers, but probably this is not the principal cause. Every fuel develops its maximum temperature at a certain well-defined point in its course through the boiler, and the best fuel is that which develops this maximum temperature immediately after entering the tubes on its return journey to the smoke-box, the horizontal surface of the tubes being far more efficient than the vertical surfaces of the combustion chamber. With wood or quick-flaming coal the highest temperature is obtained sooner, and it is likely in this case that it occurs just after egress from the furnace, the flame impinging directly upon the plates opposite. This would be intensified by the constant opening of the furnace door, which is necessary when firing with wood.

This trouble can be greatly reduced by building a supplementary brick bridge between the combustion chamber and the back of the furnace.

Circulation can be improved by the use of circulators ("Hotchkiss").

Electric Light.

Suction gas plants are giving satisfaction in most cases, but their success depends largely on the supply of a suitable anthracite coal and the maintenance of a fairly constant output. The standard oil engines give general satisfaction and the capital cost is somewhat less.

The new metallic filament lamps take much less energy than the carbon lamps, and therefore a smaller plant would be sufficient. No doubt they will soon be exported, but at present the filaments are brittle and liable to be damaged in transit, and the cost is high.

Acetylene Gas Lighting.

This gas is excellent for laboratory, optical and photographic purposes. It can also be used in bunsen burners for purposes of chemical analysis and in a blow-pipe for glass working. The Incants system has been installed and found successful in the Gordon Laboratories, Khartoum. The cost of an installation for about 18 lights is from £25 to £30, and the annual cost of carbide £10 to £15.

Charcoal as Fuel.

The Director of Irrigation of Cape Colony in his report for 1907 foreshadows the use of charcoal for suction gas plants when he says, at page 33: "It has been satisfactorily demonstrated by actual practice in this country that such plants can be successfully and economically run on charcoal burnt by farmers on their own farms from Mimosa, Kameeldoorn, Guarrie and other woods. Where this can be done the fuel costs are absurdly low." There being an abundance of wood available, it was determined to run the suction gas plant with charcoal, and this has now been done with complete success. The following details with regard to the process employed for making the charcoal and experiments in connection with it may prove of interest:—The wood is cut into lengths of 18 ins., and logs of over 6 ins. diameter are split lengthwise. A central chimney 1 ft. square is built of crossed sticks 6 ft. high, and round this chimney the wood is packed on end in four tiers, making a hemispherical heap 12 ft. diameter and 6 ft. high. The heap is then covered with wet clay all except the chimney at the top, and into this some glowing coals are thrown. As soon as the wood is well alight, the chimney is closed and a ring of holes about 1 in. diameter is made with a crowbar, about 3 ft. from the top. As carbonisation proceeds, the top of the heap caves in and must at once be thickly covered with sand, and other holes made lower down, so that in about 36 hours the process is complete. This is simply the ancient way of making charcoal in heaps.

A number of such heaps were all ignited on the same day and afterwards exposed to exactly the same conditions, and it was with this charcoal that the following experiments were made:—The different kinds of wood were carbonised in separate heaps. All the charcoal worked excellently in the producer; good gas could be got in four minutes with fire previously lighted, or in 15 minutes starting all cold. The gas is colourless, odourless and tasteless, thus requiring a little more care than with anthracite to avoid its poisonous effects when inhaled, but from its being practically free from sulphuretted hydrogen and tar it has less deleterious effects on the engine than even good town gas. The clinker is brittle and friable, causing no trouble in the boshes or on the firebars of the producer, so that much poking is not necessary, and once in 12 hours is quite often enough to open fire door for removal of clinker. In short, good gas can be maintained with less trouble than with anthracite, in spite of the more frequent filling of the hopper, owing to the greater bulk of charcoal.

Among the different kinds of charcoal tried was that made from willow wood, and it was found to possess certain useful properties.

Light Buoys.

The lighting of channels is so important to the colonies that the new departure in the adoption of acetylene buoys will be watched with much interest. The International Marine Signal Company of Ottawa and London introduced an automatic acetylene gas buoy, which has been tried at New Brighton by the Mersey Docks and Harbour Board. After six months, during which no attention whatever was given to the buoy, it was found that the burners were as clear as when the light was first started, and the flashing had worked perfectly in all kinds of weather. The light in this case is 340 candle power, and the smallest lantern made is 140. The usual power of an oil-gas buoy is only 26. A world-wide demand is springing up and, to give one instance of progressive spirit, Korea has ordered six buoys.

Purification of Water.

Water can be largely purified by aeration and filtration, but a substantial proportion of organic matter often remains. A more powerful process is necessary for waters containing organic matter of vegetable origin relatively resistant to oxidation. One of the processes which has proved itself effective in the treatment of this class of water is that dependent on the use of iron, commonly known as the Anderson process, but a very thorough treatment with iron is necessary to oxidise the organic matter. By working at a temperature

above the ordinary an excellent purification can be effected. The process is to treat the water with steel turnings, decant and aerate; the iron oxide is then separated through an ordinary paper filter. With works designed for the thorough application of the iron treatment there should be no difficulty in preparing an unexceptionably good supply.

Concrete Barges.

No such barges are at present made in this country, but they are used in Italy and elsewhere and have proved cheap and efficient for small floating docks, floating bridges and pontoons. They are built with a steel framework covered with expanded metal, the concrete being worked over this and covering the metal entirely. The surface is finished smooth and offers slight resistance to towing. As the metal work is entirely embedded in the concrete the cost of upkeep is small, and the structure is found to resist ordinary shocks fairly well. The weight compared with that of the ordinary steel barge of heavy construction is about 30 per cent. more. The cost in Italy is about the same as that of ordinary heavy barges in this country. Repairs would not be seriously difficult.

Mr. Roosevelt has ordered the patent pump filter, made by Messrs. Doulton & Co., for use in his forthcoming East African tour.

Photography.

Travel and Exploration discusses the various causes which prevent the ordinary amateur from obtaining sharp and clear pictures, even with an expensive apparatus. The recommendations are, shortly, (1) test the accuracy of the focussing scale, and for moving objects use the Reflex type of camera; (2) clean the lenses frequently; (3) see that the lens is not of too short focal length—it should usually be twice the diagonal of the plate to be covered; (4) use a large stop, so as to get “atmosphere”; (5) use well-backed plates; (6) use an actinometer to ensure that the exposure is correct; (7) usually the developer is much too strong.

RAILWAY NOTES.

HOW RAILWAYS DO NOT PAY.

A report issued by the Board of Trade shows that the railway shareholder is gradually losing dividends on his capital more and more. The railway returns reveal no little waste which one would think might be avoided by better management. A goods wagon it appears is in motion, on the average, for $52\frac{1}{2}$ minutes in the 24 hours; in this time it travels $17\frac{3}{8}$ miles and carries 2 tons. Thus $3\frac{1}{2}$ per cent. of time is taken up by travelling at the sedate speed of 20 miles an hour, and the remaining $96\frac{1}{2}$ per cent. is represented by loading, unloading and (more particularly) idleness. Two tons represent one-fifth of a load, so that apparently as often as not the wagon travels empty. The waste is probably due to the absence of proper system in loading, unloading and clearing goods, and this is a matter deserving the close attention of all railway managers.

No British railway, however, has "gone under" during the past year, and this is much more than can be said of the United States, where no fewer than twenty-three railroads went into receivers' hands, the aggregate mileage being 8,000 and the capital about £126,000,000.

NIGERIAN RAILWAYS.

The decision of the Government to construct the Baro-Kano Railway, and to extend the Lagos-Ibadan line to a junction with it near the latitude of Zungeru, and the steps which are being taken to carry the work to a rapid completion suggest the consideration of the general principles on which such works should be executed and administered. The subject has been discussed by the railway authorities with clearness and force, and some observations which have been made may be reproduced. It has been owing to the absence of adequate restrictions and safeguards that in Australia, South Africa and some other British possessions, some Government railways have become a continuous burden on the taxpayer, and extraordinary measures have had to be taken to secure more satisfactory results. In times of prosperity railway deficits may

perhaps be met without much hardship from general revenue, but in normal years the "indirect advantages" are but a poor consolation. Indeed, in adversity, the burden may prove so great that the whole financial stability of the colony may be endangered and great retrenchments have to be made in useful expenditure. Such a condition of affairs exists in the Cape to-day, where the annual deficit amounts to some £300,000. This deplorable position is traceable chiefly to (1) the construction of unprofitable branch lines, (2) the provision of railway facilities at rival ports, (3) inadequate rates, chiefly for local produce, (4) concessionary fares to various privileged bodies or persons. In Natal the lines are just paying their way, but this is largely the result of good fortune rather than the verification of expectations, for had not the development of the Natal coalfields taken place, a factor which could not have been foreseen, the railways would be working at a loss. In Rhodesia it appears that the deficit in 1907 was about a quarter of a million sterling.

The financial progress of the Lagos railway (*i.e.*, from Iddo to Oshogbo, 186 miles) has been satisfactory. This line passes through a region where the palm kernel flourishes, and there was good reason to anticipate that it would more than pay its way. This anticipation has been fully realised. But the zone of the palm tree ends some twenty miles north of Oshogbo, and there can be no doubt that the country through which the extension beyond passes is much less rich than that served by the original section. Yet, with all its advantages, the Lagos-Ibadan line suffered for years annual deficits amounting to such considerable sums as to hamper the resources of the old colony of Lagos. This was largely due to the low rates at first charged, which barely covered working expenses and did not represent the value of the service given. These rates have since, generally speaking, been more than doubled, and the trade can very well bear the increase. The financial resources of Southern Nigeria are, it is true, large when compared with those of the colony of Lagos, but the railways for which it has assumed responsibility are seven times the length of the original line. The moral is that the rates should be fixed in accordance with the principle laid down by Mr. T. R. Price, the General Manager of the Central South African Railways, in an annexure to his report for 1906, that "In cases of districts where the financial working results are unfavourable and the rate of freights substantially higher and facilities of transport less, the charging of higher rates of fares and freights is authorised until the revenue exceeds the expenditure, including cost of working, depreciation, interest on capital and other charges."

The position in Southern Nigeria is complicated by the fact that there will be two lines which will compete with one another. At Baro, situated as it is on the banks of the Niger, the waterway of

the Niger is connected with one of the lines, to the detriment of the other. It is clear that the two systems must be worked in co-operation. There is ample promise for the future, but for the first years the situation will be a trying one. As soon as construction is completed the interest on some five millions of capital will have to be met, and later on, no doubt, large expenditure will be necessary on renewals and rolling stock.

The progress on the extension of the Lagos railway cannot be considered satisfactory. The work was started more than a year ago, and the earthworks on the short length of thirteen miles to the south of the Niger were not completed at the end of 1908. This is attributed chiefly to the inadequate labour supply.

Federated Malay States.

The profits for 1907 were at the rate of 3·60 per cent. The proportion of working expenses to gross receipts was 70·34 per cent. 6,772,340 passengers were carried—a striking figure. The year witnessed the introduction of coal as fuel for the engines in the Northern Division; bakan firewood continues to be used in the Southern Division. 122,533 passengers were carried by the motor service, which yielded a profit of 4·83 per cent.

With the completion of the Johore State Railway, railway communication is established between Prai on the mainland, opposite to Penang, and Singapore Docks, the only interruption in this distance of 493 miles being the Johore Straits, about three-quarters of a mile in width, which will be crossed by a wagon ferry.

Nyasaland.

The Shiré Highlands Railway has been working for some months. The bridge over the Shiré river at Chiromo has been completed, and trains now pass in one day from Port Herald to Blantyre, a distance of 113 miles. The line was of great benefit during the last dry season, and without its help it is doubtful whether the large crop of cotton, tobacco and coffee could have been moved out of the country, as the condition of the Lower Shiré river makes navigation above Port Herald practically impossible.

British Guiana.

An interesting correspondence has taken place on the subject of a proposed railway in British Guiana to the Brazilian frontier. Col. J. W. Link put forward a scheme for the construction of such a railway, the length of which would be about 200 miles. The

maximum cost was estimated at £8,000 per mile, so that the cost of construction would be about £1,600,000. Col. Link asked that the Colonial Government should guarantee $3\frac{1}{2}$ per cent. on this sum during construction and for ten years afterwards, and also for a grant of ten square miles, in alternate blocks on each side of the line of one mile in frontage, for every mile of railway. Thus the Colonial Government would pay during some thirteen years the sum of £668,500, a distinctly large proportion of the capital sum considering that the company would remain in full possession of the line and of some 2,000 square miles, or 1,280,000 acres. The Colonial Government would receive shares of a face value equivalent to the sums paid over, but whether these would be valuable would, of course, depend upon circumstances. As to the financial prospects of the undertaking there is rather a singular absence of information. Apparently no attempt was made to estimate the traffic or receipts which might be obtained. The proposer himself remarked that the line would be built "into practically unknown country with virtually unknown and undeveloped resources." He attached great importance to the through traffic from Brazil, but it is evident that Brazil would not be disposed to favour diversion of trade from her own territories to British Guiana. There is no reason to suppose that a railway in Brazil to meet the British Guiana line is projected or would be allowed. The scheme, therefore, it has been decided, has no basis, and is not entitled to consideration. It attracted, however, a good deal of favourable notice in the colony, and the Government was freely condemned for not promptly supporting it. There is a good deal of human nature in this, as a scheme which would undoubtedly be one of public improvement naturally commands much sympathy, and it is pleasant to look at the rosy side of things, especially when the undertaking implies the spending of a large sum of money to the benefit of the present generation.

The Benguella-Katanga Trans-African Railway.

The Tanganyika Concessions are situated in the Belgian Province of Katanga, on the plateau between the sources of the Congo and the Zambesi, and the railway will run to them from Lobito Bay, a fine harbour near Benguella in Angola on the West Coast. The Portuguese Government granted a concession for a railway, carrying a width of 70 miles of land on either side. No great distance from the starting point a gorge had to be negotiated, $1\frac{1}{2}$ miles long, with an ascent of 400 ft., and here the rack principle was adopted, as on the Delagoa Bay-Pretoria line; the system is the Riggerback, largely used in Switzerland, and the gradient is about 1 in 16. The work was pushed on with despatch for a time, but we understand is not progressing quickly at present. Messrs. Pauling

have contracted to construct the extension of the Rhodesian line northwards *via* Broken Hill to Katanga and the Star Mine.

Mono-Rails.

An interesting discussion is recorded in the December number of the *Journal of the Royal United Service Institution* on the strategical use of the mono-rail for the rapid concentration of a force. A number of advantages were claimed for the Isopede mono-rail, the principal being :—

(1) The running way is reduced to a single rail at a cost approximately one-half of a double-rail track.

(2) The rolling stock is provided with single carrying wheels running on the mono-rail, and equilibrium wheels resting and running on the ground. The mechanical union between these two types of wheels is such that the load is borne almost entirely by the centre rail.

(3) Any irregularity in the side-wheel track is not communicated to the vehicle.

(4) The Isopede will take with ease a circle described within a radius of 15 ft., and very steep gradients.

(5) A long train can be made up.

(6) The cost of laying the track is about £300 per train mile.

There is no question that such a line could be economically laid on a road or other level surface, but if there were much of a slope from side to side it would be necessary to make the ground approximately level, as for a two-line track. The expectation that the trucks would go round curves of 15-ft. radius is rather illusory. Mr. R. Elliott-Cooper, M.I.C.E., pointed out that "no doubt a single wheel will go round such a curve, but in order to get the tractive power that would enable it to carry anything more than about its own weight you would have to couple together a certain number of wheels." You then get a rigid wheel base, say, 8 ft., which clearly would not go round such a curve. Furthermore, the one rail has to carry twice as much weight as one in a two-line track, and must therefore be twice as strong. Nothing therefore is gained in this respect. As feeders for trunk lines such systems have the great disadvantage that the passengers and cargo have to change on meeting the lines, and special rolling stock would be necessary: for strategic purposes this objection seems fatal. On the other hand, the cost of construction and maintenance would probably be very much less than with any other system, and this vital consideration is enough to determine the matter in places where feeders are wanted and a break of gauge is comparatively unimportant.

The Isopede is a Belgian invention, and has been set up at Louvain.

Chilled Iron Wheels.

There is a temptation to use these wheels, as they are much cheaper than steel, and are used in America and some of the Colonies. A report from the Lagos Railway is decidedly adverse to their employment, notwithstanding the saving in cost. A considerable number on that railway have to be condemned. If through careless application of the brake a wheel is made to skid so that a flat is worn, this means a new pair of wheels with all the attendant work, whereas a flat worn on steel tyres can be turned out, unless the tyre is too thin. The cast-iron wheel, possibly owing to the fact that it cannot be turned up after being bored and pressed on the axles, presents on parts of its circumference slight irregularities on which the brake-shoe readily catches, with the result that the wheel is continually braked at the same spot; and, if any undue application of the brake is made, the wheel skids and a flat ensues, which is continually increasing in size. With a better class of brake-boy this might be partially avoided, but on such lines it is impossible to secure that the brake is not unduly applied. As soon as a slight flat is noticed the wheel should be ground up by a grinding machine, but defects are apt to escape notice until they are too serious.

Welch Patent Long Burning Oil Signal Lamp.

This lamp is now being largely used in England as it only needs to be trimmed weekly and burns for that time at least. The consumption of oil is small. But the lamp must be kept under observation for at least half-an-hour when trimmed, so as to see that the flame is at the right height when the lamp is warm. The cost of oil is estimated by the makers at 6s. 6d. per annum; the lamp is 14s. and the case 15s.

MEDICAL NOTES.

THE Sleeping Sickness Bureau has issued a pamphlet containing Observations by Dr. A. D. P. Hodges, Principal Medical Officer in Uganda, on The Transmission of Sleeping Sickness in Uganda, The Distribution and Bionomics of *Glossina Palpalis* and Clearing Measures. Dr. Bagshawe, the Director of the Bureau, contributes a number of notes.

From the same Bureau comes a pamphlet entitled "Sleeping Sickness: how to avoid Infection," which is intended for the use of travellers and residents in tropical Africa. It contains illustrations of *Glossina palpalis* and other biting flies, and instructions are given for the recognition of the carrier of Sleeping Sickness, for the precautions to be taken to avoid infection, and for the recognition of the symptoms of the disease. Missionaries and others are invited to spread knowledge of the facts among the natives, and to assist in the collection of data and specimens of biting flies.

The concluding paragraphs are as follows:—

"It is very important that the flies which convey the infection should have no opportunity of sucking the blood of the sick. Infected persons must therefore be moved well out of the fly range to places where *Glossina palpalis* has no chance of reaching them. Owing to the habitat of the fly (edge of water) this would not usually involve difficulty or hardship. As, however, it is possible that other species of tsetse fly may occasionally carry the disease, a spot should be chosen free from all tsetses. One infected person within a fly area may cause the infection and destruction of a whole village. These proved facts should be explained to native chiefs and the more intelligent natives. They should be warned of the danger arising from the bites of the flies. If they are obliged to visit fly areas for the purpose of drawing water, the visits should be made early or late in the day when the flies are not active. Fishing, if carried on throughout the day in places where flies are present, is a dangerous occupation.

"If it is necessary that European houses remain within the fly range they should be protected by wire gauze, which need not be of fine mesh. Native water carriers should not be allowed to enter, for the flies are known to accompany them for long distances. Steamers which ply on fly-infected rivers should be provided with wire-gauze cages into which Europeans can retire. Europeans can protect themselves by gloves, veils, etc., but few would have recourse to these in the tropics in the heat of the day; they can, however, avoid going about with bare arms and legs. There is little doubt that the wearing of white clothes gives some protection, as the fly is attracted by dark colours.

"Europeans should be on the look out for the disease in their servants, for there can be no doubt that the constant presence of an infected person is a danger; biting insects exist everywhere in tropical Africa, and it may be that in rare instances the disease is conveyed by insects other than tsetse flies."

The principal features of the third Bulletin issued by the Bureau are an article on the present state of our knowledge of the Tsetse Fly (*Glossina palpalis*) and an article on the Prophylaxis of Sleeping Sickness. The latter will be found to be of great interest even to the lay reader. "If it were possible," says the writer, "to return to the status existing at the middle of the last century, when the tropical portion of the African continent had not been 'opened up,' when each tribe was at war with its neighbour, and no man went more than a few miles from his home, we could stay the extension of the disease, but this is obviously impossible; nor can we exterminate the fly throughout tropical Africa by wholesale measures of clearing. It is possible, indeed probable, that a chemical substance will be discovered which will kill, without injury to the tissues, all the trypanosomes in a human body, but even with such a substance in our hands the Sleeping Sickness problem is not solved, for it would be very difficult to treat all infected persons and to treat them at an early stage of the disease: moreover, we have every reason to believe that there is no immunity, and that persons cured would be liable to reinfection. It is therefore irrational to suppose that under present conditions we can suppress Sleeping Sickness throughout Africa; we can, however, delay, or in some instances prevent, its extension to those *palpalis* areas yet uninfected if we make use of the knowledge which we have acquired of the natural history of the disease."

The general conclusions of the author are summarized as follows: "Broadly speaking we may say that the means for preventing or checking the spread of Sleeping Sickness are these:—Clearing; segregation and treatment of infected persons in places free from

fly; removal of villages from fly areas; and instruction of the native. The efficiency of clearing depends on our knowledge of the natural history of the fly. More work and more workers are needed in this field; when we have acquired sufficient knowledge of the breeding habits and of the natural enemies of *Glossina palpalis* we shall be in a position to control its multiplication, and perhaps in the neighbourhood of habitations or important roads to exterminate it. There is one important and urgent task before us: to map out fly areas as yet uninfected, and by persuasion, or compulsion if need be, to secure the removal of native villages there situated. Without native co-operation we can do little, but unless the African is made to see the reasons for the measures proposed we cannot expect his help. The first essential then for the prevention of Sleeping Sickness is to teach the African native about it, and in this work all Europeans should assist—missionaries and traders, as well as officials. He is by no means a stupid person where his own interests are concerned, and if he can be led to see for himself the means whereby he can avoid the disease, and the simplicity of those means, he will himself take the necessary steps. It is recorded from various parts of tropical Africa that the natives know that their cattle die if bitten by tsetse flies; it should not be difficult to induce them to apply the same reasoning to themselves. Meantime we must increase our knowledge of the natural history of the fly and the trypanosome in order to improve the efficiency of our prophylaxis."

The same issue of the Bulletin contains notes on Preventive Measures in Uganda and in North-Eastern Rhodesia, where the disease has recently made its appearance in the extreme north.

The fourth issue of the Bulletin contains a number of recent papers dealing mainly with methods of treating the disease.

The Institute for Medical Research in the Federated Malay States has issued a pamphlet on Surra in horses, cattle and other animals by Doctors Fraser and Symonds. It is illustrated by diagrams and photographs, and a note on the distribution of certain species of biting flies in the Federated Malay States by Mr. H. C. Pratt, Government Entomologist, is appended.

We have received from the Liverpool School of Tropical Medicine Vol. II., No. 4, of *Annals of Tropical Medicine and Parasitology*, which contains articles on Sleeping Sickness, Malaria and Goundou, and a curious study by Dr. Jeans of the artificially produced deformity of a Chinese woman's foot. The articles are illustrated by a number of plates.

The report of the Advisory Committee for the Tropical Diseases Research Fund for the year 1908 has been published (Cd. 4,476. Price 1s.). The income of the fund was £3,400, and the expenditure £3,583 6s. 8d., made up as follows:—

	£	s.	d.
Grant to London School of Tropical Medicine	1,333	6	8
„ Liverpool School of Tropical Medicine	1,000	0	0
„ University of London	750	0	0
„ Cambridge University	100	0	0
„ Australian Institute of Tropical Medicine	400	0	0
	£3,583	6	8

The last-mentioned item is a contribution to the initial cost of a new institute to be established at Townsville, in Northern Queensland, from which valuable work is expected. The appendix contains a number of reports on work done in the past year at the Tropical Schools and the Universities and in the Colonies.

The medical expedition sent to Jamaica by the Liverpool School of Tropical Medicine in November last returned in January. Dr. Prout has reported that there is an appreciable mortality among the negroes from malaria, a very large expenditure on indentured coolies suffering from malaria, and a very large amount of inefficiency and waste of labour on the banana and sugar estates. Practically nothing has been done in the way of anti-malaria measures, and the attention which has been drawn to the economical waste caused by the disease will no doubt strengthen the hands of the authorities in dealing with the tests of prevention.

Danysz Bacillus.

The Lister Institute of Preventive Medicine have reported that, although this bacillus presents the closest resemblance to organisms which have been responsible for outbreaks of food poisoning, it is entirely different from the bacillus which occasions typhoid fever. The suspicion therefore which has arisen in some places that outbreaks of typhoid fever are due to the virus is without foundation. It is not, on the other hand, proven that the Danysz bacillus, if introduced into the alimentary canal, would be harmless to man. A few instances have been recorded which have led to the suspicion that the employment of this and similar viruses has been responsible for small outbreaks of acute and even fatal diarrhoea in man, but the evidence has not conclusively established the viruses as the causative

factor. The extensive employment of the virus in many places without ill result to mankind shows that the danger of human infection, if it exists, is small.

"Ratin."

This preparation has been tried by the Cape Department of Public Health, but the trial resulted in failure. Rats in confinement fed with the preparation consumed it with great greed. No results followed, and the rats remained still alive and looked well. The preparation was also strewn about in the unclaimed goods shed at the Cape Town Docks, with no better results. Several pieces of the Ratin were found to have been eaten or carried away, but no dead rats have been found, and, so far as could be judged, the number of rats in the shed has in no way decreased.

COLONIAL STAMPS.

WE have had occasion in previous issues to refer to the attention which has been given in philatelic circles to certain surcharges on postage stamps, and a correspondence has been recently published in Jamaica which is interesting both from the philatelic and administrative point of view. The Commissioner of the Islands reported that a large foreign order had reduced his stock of $\frac{1}{2}$ d. stamp to 17 sheets, which at the ordinary rate of sale would last eight weeks; and he accordingly requested that 40 sheets of penny stamps, of which there was a good stock, should be surcharged $\frac{1}{2}$ d. The Jamaica Government agreed to do this, but directed that none of the surcharged stamps should be sold except across the counter, and that in future the speculative demands of dealers should be refused in such circumstances until a new stock could be obtained.

The correspondence which we print below gives some entertaining specimens of the efforts made to secure supplies of surcharged stamps.

“CAYMAN ISLANDS.

“COMMISSIONER'S OFFICE,

“GRAND CAYMAN,

“April 30th, 1908.

“No. 164.

“Sir,

“I have the honour to acknowledge receipt of your letter No. 3537/3903 of April 6th, 1908, with enclosure from Messrs. Whitfield, King & Co. of Ipswich.

“2. I observe this firm, resident in the eastern part of England, commence their letter with the assertion that the recent issues of surcharged stamps were ‘unnecessary’—I am assuming the issues referred to are the ‘halfpenny’ on 1d., the $\frac{1}{2}$ d. on 5s. and the 1d. on 5s. as they do not mention the actual ‘provisional stamps’ to which they refer.

“With reference to the ‘halfpenny’ on 1d., my letter No. 143 of June 11th, 1907, clearly shows that this issue was more than necessary.

" With reference to the surcharges $\frac{1}{2}$ d. on 5s. and 1d. on 5s. At the time their surcharges were made I had for the supply of the whole Dependency one sheet of halfpenny stamps and not a single penny stamp. Both stamps were on order but had not arrived. The previous order would have been sufficient for two years had not stamp dealers bought in larger quantities and the law requiring so many legal documents to be stamped been passed. It is worthy of note in this respect that on one occasion I had to have some 5s. stamps surcharged 1d. in order that legal receipts might be given by parties receiving money from the Government.

" The number of sheets surcharged: (a) $\frac{1}{2}$ d. on 5s. was fifteen, on the following date, November 22nd, 1907. (b) 1d. on 5s. was fifteen, on the following date, November 22nd, 1907, and three sheets on December 9th, 1907.

" 3. With reference to the remark 'local speculation therein,' again I feel entitled to wonder from whence and how did this firm in England gain the information authorising them to make the statement. They certainly made it without any support whatsoever, I knew nothing of 'local speculation' until I was informed this very firm, Whitfield, King & Co. of Ipswich, England, were making enquiries for their surcharges. By the people here these surcharges were treated in just the same way as ordinary stamps were treated, and it was not until the stamp dealers themselves put the idea into the minds of the people that any 'local speculation' took place. Again I respectfully submit that the people here are as much entitled to speculate in the stamps of the Cayman Islands as Whitfield, King & Co. are in England. Through the action of this firm and others 'local speculation' will now not only continue but develop, to the great advantage of the Caymanians but to the great disadvantage of stamp dealers.

" 4. Referring to the application of the firm for His Excellency's enquiry into the matter, I attach a letter from the postmistress on the matter. In their great desire to make things look as black as possible against us, it is worthy of note that the letter sent by them on February 20th, 1908, had not even been received at this post office when they wrote their letter, viz., March 10th, 1908.

" 'Replies to the first three are long overdue.' Here again these people make an assertion without supporting it in any way. A reply to their letter of December 10th, 1907, might have been a few days overdue, but even that I doubt. The other two were not even due on March 10th, 1908. And if these were not even due the remainder certainly were not.

" 5. In what way to reply to the scandalous assumption contained in the remainder of the sentence in this letter I hardly know, viz.: 'and it is our opinion that the stamps are being kept back in order to create a scarcity and so enhance their market value to collectors,

thus encouraging speculation on the part of the officials in the Cayman Islands.' I think in view of what I have said in previous sections, Messrs. Whitfield, King & Co. should be called upon for the names of the officials they refer to in their charge. It is an easy matter to 'assume' but I think they will find it a very difficult matter to prove that assumption on any person employed in the service of the Government of this Dependency.

" 6. Referring to the last sentence of the letter in which this firm ask for so much protection and assistance from His Excellency, I can only say that this firm has always received at the hands of the postmistress the same consideration as other firms have received. This firm always sends money by cheque, which I instructed the postmistress not to receive as cheques on English banks are useless to us here, besides they are not 'cash.' Though Miss Parsons, the postmistress, received after my giving her these instructions cheques from the firm she held herself responsible for the cash in order to oblige them. A few weeks ago I again informed her that no cheques unless first approved by me would be accepted at all, and as a result of this warning Messrs. Whitfield, King & Co. have during the past month had returned to them some £74 worth of cheques with a request that cash not cheques must accompany their orders. No other merchant or even private collector I am informed ever sends cheques, so if Messrs. Whitfield, King & Co. find they cannot supply their customers with all the Cayman Islands stamps they require, it is entirely their own fault, because they were warned, nearly a year ago.

" 7. It appears easy to see that Messrs. Whitfield, King & Co. feel aggrieved that they have not had the whole of the business in the Cayman surcharges and so vent the matter by means of assumptions wholly unfounded, and accusations against the characters of officials they know nothing whatsoever about.

" 8. I would respectfully request that this matter be pushed to the end, as the accusations made by this firm against the honour, honesty and probity of the officials of this Government is not only very painful to me and my subordinates, but must remain a reproach to us for some time unless this firm are called upon to substantiate and prove the charges they make.

" I have the honour to be,

" Sir,

" Your obedient Servant,

" GEORGE S. S. HIRST,

" Commissioner.

" The Honble.,

" The Colonial Secretary.

" CAYMAN ISLANDS.

" COMMISSIONER'S OFFICE,

" GRAND CAYMAN,

" No. 229.

" June 10th, 1908.

" Sir,

" I have the honour to acknowledge receipt of your letter of June 3rd, No. 5711/6385.

" 2. The stamp dealers realising that our stock of stamps is small do everything in their power to buy up all the stamps we have and then make objectionable statements when we are driven to surcharge, or curtail their orders.

" I have the honour to be,

" Sir,

" Your obedient Servant,

" GEORGE S. S. HIRST,

" Commissioner.

" *The Commissioner Cayman Islands to the Colonial Secretary.*

" Copy.

" CAYMAN ISLANDS.

" COMMISSIONER'S OFFICE,

" GRAND CAYMAN,

" No 391.

" October 15th, 1908.

" Sir,

" I have the honour to forward herewith for His Excellency's information copies of—

" (a)* A letter from the Postmaster, Georgetown.

" (b) Copy of a letter found by him in the Post Office on taking over duty there.

" 2. I respectfully submit that the letter marked B should if possible be further enquired into as it appears to me little less than a gross attempt on the part of a stamp dealer, which fraternity appears so anxious to have nothing but honest transactions, to induce an official of this Government to commit a felony.

" 3. The writer of the letter lives in the United States of America and therefore there might be some difficulty in dealing with him.

" 4. Fortunately Miss Parsons and the present postmaster are above such transactions, but had this inducement fallen into the hands of less conscientious officials considerable harm would have resulted.

" I have, etc.,

" (Sg.) GEORGE S. S. HIRST,

" Commissioner.

" The Honble.,

" The Acting Colonial Secretary.

" Copy B.

" PURITAN OIL MINING COMPANY,

" Incorporated under the laws of the State of California.

" Capital Stock, \$1,000,000,000. Divided into 50,000 Shares of \$20,000 each.

" President and Manager: BREWSTER C. KENYON.

" Vice-President: GEORGE C. FLINT.

" Secretary and Treasurer: KENYON COX.

" LONG BEACH, CALIFORNIA,

August 28th, 1908.

" Miss GWENDOLYN PARSONS,

" George Town, Cayman Islands.

" Dear Madam:—As a collector of postage stamps for nearly forty years I am naturally interested in the stamps of your islands and as I also speculate some in provisional issues, beg leave to make you the following proposition and give you my word as a mason that all correspondence on the subject will be strictly confidential. My proposition is—to purchase of you £10 worth of 1d. stamps which on receipt by myself I will have surcharged 'Halfpenny' in a certain type and return same to you,—you to officially record the issue of the £10 worth as ½d. stamps just on sale the day of receipt by you, and register me a letter of that date bearing some of the stamps in prepayment of postage. At the time I return the surcharged stamps to you I will also enclose another £10 for your trouble in the transaction. I trust you will receive this in the spirit in which I wrote it, as a strictly legitimate proposition, and believe, as I have said, that the whole matter will be considered entirely between ourselves.

" Very truly yours,

" BREWSTER C. KENYON.

" P.S.—If accepted on what office shall I draw P.O. order, or would you prefer the money in some other form? I regret that I have no other return postage than the 3d. Jamaica.

" B. C. K.

" *From the Colonial Secretary to the Commissioner, Cayman Islands.*

" Copy.

" COLONIAL SECRETARY'S OFFICE,

" 30th November, 1908.

" No. 12027/13404/08.

" Sir,

" I am directed by the Governor to acknowledge the receipt of your letter No. 391 of the 15th ultimo, enclosing a copy of a letter from Brewster C. Kenyon of the Puritan Oil Mining Company of California to the postmistress at Grand Cayman making suggestions for surcharging certain Cayman Islands stamps.

" 2. In reply I am to inform you that a copy of your letter and its enclosures has been sent to the Secretary of State for the Colonies, as an illustration of the methods of action of the class of persons who have been complaining that they cannot get surcharged stamps from the Postal Authorities at Grand Cayman. I am to say, however, that His Excellency fears that no profit would result from any attempt to take legal action against the writer of the letter to Miss Parsons.

" I have, etc.,

" (Sd.) ROBT. JOHNSTONE,

" Assistant Colonial Secretary.

" HIS HONOUR

" The Commissioner of the Cayman Islands,

" Grand Cayman.

Extract from letter from Harry E. Huber to the Postmistress of the Cayman Islands, Grand Cayman.

" No. 5,913 RIPPEY STREET,

" PITTSBURG, PENN'A, U.S.A.

" My dear Miss Parsons, please, would it not be possible for you to make a provisional 2½d. stamp out of the 4d. brown and blue, of the 'Postage' issue, which I am sending you, by surcharging it in the same manner as was done with those on February 12th? I'm just about frantic to get one of these stamps, and as an extraordinary favour please will you not grant it? There being so few issued makes it impossible for me to get a copy anywhere and for that reason I beg you to please do me this great favour, if it is at all in your power.

" Copy.

" RENVILLE, MINN.,

" August 23rd, 1908.

" Miss GWENDOLYN PARSONS,

" George Town,

" Cayman Islands.

" Madam,

" I would like to have you send me from 5 to 10 sets of any new issues of stamps from your part of the country and I will give you 5 per cent. commission on same. I was very much interested in the account of the Provisionals in Markets trade Circular. I would gladly buy any old issues if you should have them.

" Yours,

" FLOYD REID.

*Extract from letter from Whitfield, King & Co. to the Postmistress,
Cayman Islands.*

" IPSWICH,

" 29th September, 1908.

" Miss PARSONS,

" Postmistress,

" Cayman Islands, *via* Jamaica.

" Madam,

" *Private.*

" We assume from this that you are expecting another lot of the farthing stamps and that you will send us the 4,800 which we asked for on August 4th, if not, kindly let us know and we will order other values instead of them, but we should like to point out to you that your refusal to supply these to dealers will only lead to increased local speculation, as the dealers will get them somehow, even if they have to pay agents in the Cayman Islands a commission to buy them.

" Yours faithfully,

" (Sgd.) WHITFIELD, KING & Co.

" Copy.

" *The Secretary of State for the Colonies to the Governor, Jamaica.*

" JAMAICA—No. 373.

" DOWNING STREET,

" 6th November, 1908.

" Sir,

" I have the honour to acknowledge the receipt of your despatch No. 302 of the 30th of June last, transmitting copies of correspondence with the Commissioner of the Cayman Islands, with regard to certain complaints respecting recent issues of stamps in that Dependency.

" 2. A letter has now been addressed to Messrs. Whitfield, King and Company, which I have reason to believe effectually disposes of their representations.

" 3. I am of opinion that Mr. Hirst has successfully replied to the allegations made by the dealers, and I approve of your communicating with him in the sense proposed in the second paragraph of your despatch.

" I have, &c.,

" (Sgd.) CREWE.

" GOVERNOR SIR SYDNEY OLIVIER, K.O.M.G.,

" &c., &c., &c."

There have been extensive forgeries in Paris of British North Borneo Company stamps. About 2,000,000 forged stamps were seized on the premises of a printer, and correspondence was found which it is stated showed that an order for them had been given by a London firm. The Paris police also found evidence that Transvaal and Fiji stamps had been forged.

The following Colonies have recently agreed to adopt the new colour scheme, viz., DOMINICA, GIBRALTAR, JAMAICA, ST. HELENA and SOUTHERN NIGERIA.

STRAITS SETTLEMENTS.—A supply of orange 5 cents stamps and purple 25 cents stamps has been despatched, the labels in the latter case being in singly fugitive and the centre in doubly fugitive ink. The 30 cents stamps will in future be printed in purple and yellow and the colour selected for the \$500 stamps, when required, is yellow with a purple centre. It will be remembered that the last-named stamp will be of large size and the value is one to which no colour is appropriated in the colour scheme. Besides the above, \$5 stamps in red and green on green paper have been supplied.

TRINIDAD.—The large 5s. and £1 stamps will not be altered to conform to the new colour scheme, although, as stated in our October issue, all the other values will follow it.

ST. VINCENT.—A supply of the new 1d., 2s. and 5s. stamps, described in our last issue, was despatched early in February.

NATAL.—In the latest printing of 6d., 1s. and 2s. 6d. Revenue stamps the colours of the centre and border of each has been reversed so that the border of each is in the doubly fugitive colour. The 10s. stamps were printed in the existing colours but on yellow paper. The centre and border of the 2s. stamps will be reversed when they are next printed. 6d., 1s., 2s. 6d. and 10s. postage stamps have been supplied in the new colours on unsurfaced paper. The last named are of large size.

GOLD COAST.—2d. and 3d. stamps in the new colours have been supplied.

SOMALILAND PROTECTORATE.—1 anna stamps, printed entirely in red, have been supplied; also $\frac{1}{2}$ anna stamps in singly fugitive ink and 2 annas stamps for the first time on surfaced paper.

GIBRALTAR.—6d., 2s. and 4s. stamps in the new colours have just been shipped.

If any proof were necessary of the vitality and seriousness of Philately we have it in the two first volumes of *Melville's Stamp Books*, which are now before us. Vol. I. deals with "Great Britain :

Line-engraved Stamps" and Vol. II. with "British Central Africa and Nyasaland Protectorate." The interesting character and artistic get-up of the books do the greatest credit to Mr. F. J. Melville, President of the Junior Philatelic Society, which recently opened at Clifford's Inn Hall a most instructive exhibition of the processes of paper making as connected with the printing of stamps. The exhibition included a working model of a paper-making machine which was, at the time of our visit, turning a diminutive vat of pulp into wove paper suitable for printing stamps.

"Great Britain: Line-engraved Stamps," by Fred J. Melville; published at 47 Strand, price 6d. net.

"British Central Africa and Nyasaland Protectorate," by Fred J. Melville; published at 47 Strand, price 6d. net.



LETTER TO THE EDITORS.

LETTER IV.

The Future of the West Indies.

26th February, 1909.

SIRS,

Returning to this very interesting subject it will be found that my first letter, published in the *Colonial Office Journal* of July last, was intended to show how the existing Executive and Legislative bodies in the West Indies could constitute a Central Council representing themselves, to which they could delegate executive and legislative powers over certain defined subjects and matters of common interest, and be thus enabled to deal with those subjects more effectively than by independent action.

A second letter, written in October, indicated the principles of the Australian Constitution as a model, and suggested London as the first meeting place of a Convention of Delegates to be elected by the local legislatures for the purpose of formulating a draft scheme; and, finally, a third letter, dated January last, pointed out how the difficulties of consolidating separate Colonial Governments for purposes in common had been overcome by other Colonies, and the manner in which preliminary steps had been taken to accumulate information, and arrange a meeting of a Convention.

I propose in this letter to suggest that the Executive and Legislative Councils in the Colonies should take the first step by passing a measure having for its object the selection and summoning of members for the deliberative Convention, as there appears to be no doubt that there is a general agreement as to the necessity of providing that matters common to all the islands might be legislated for centrally, whilst leaving all local matters to be dealt with expeditiously on the spot and without any other than local authority. If, therefore, it is agreed that "Union is Strength," it is becoming more and more apparent that it is incumbent on the Governing

bodies of the West Indies to come to an agreement that subjects of common interest should be dealt with by a central and representative authority.

The best means towards effecting this would be a meeting in London of representatives of each Colony, so as to bring together in one place all the persons most capable of deciding what is necessary to carry out the work which in previous letters has been shown is the preliminary necessity, and the Imperial Government might assist by inviting representatives to meet in London. Thus we see there would be no difficulties about the preliminaries towards effecting the above objects for the mutual benefit of the whole of the West Indies.

Before closing this letter it would, perhaps, be as well to state one, if not the most important, question upon which a common agreement should be arrived at, viz., the settlement of uniform inter-Imperial import duties throughout the whole of the West Indies. Such uniformity has an immediate and practical bearing upon the trade relations between the West Indies and the rest of the Empire. Canada, for instance, could not deal effectively with the West Indies if each island required separate treatment because its tariff differed from the others. The preference Canada could give us is to one and all alike, and, therefore, each and every one of the islands must be prepared with a common tariff and a schedule which will meet the views of the finance ministers of Canada. In any tariff arranged to meet the views of Canada, the mother country and all British Colonies must share.

It is for the above reasons, and those contained in previous letters, that I venture to suggest that West Indians might usefully study and follow on simple lines, the principles which have developed in the Commonwealth of Australia.

I am, Sirs,

Your obedient Servant,

JOSEPH RIPPON.

ULTIMA THULE.

HIGH up by Tristan's rugged wall
The lonely exiles dwell,
Where naught but the restless seabird's call
Disturbs the brooding spell;
And the gathering weed-beds rise and fall
In the long Atlantic swell.

They take no toll of the passing days,
Of the fruits of eons past;
But they welcome the sight of a ship in stays,
Or a syren's raucous blast;
And they pray, as their boat slips down her ways,
For news of the world at last.

Like the saints of old the little band
Toil for the common weal;
The eldest rules with a mild command
Where all are true and leal;
They trust in God and the Motherland
And the power of faith to heal.

And now and again there comes a day
When the look-out man espies
The smoke of a war ship under way,
And the coded welcome flies
To the grey-clad cruiser from Simon's Bay
As she swings to her anchors, trim and gay,
And in the roadstead lies.

The tale of the nations' toil and strife,
Of the progress of the age
Unfolds in their dull, sequestered life
Like a wondrous fairy page,
Till young men chafe and the wish is rife
For an ampler heritage.

Someday the counsel of the rest
With the elders will prevail;
Someday their boat will mount the crest
Of the waves to a ship in hail,
And all will abandon the isle in quest
Of a life within the pale.

Then an echo from the rugged wall
Will repeat their last farewell
To the rock where naught but the seabird's call
Disturbs the magic spell,
And the gathering weed-beds rise and fall
In the long Atlantic swell.

W. E. J.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Mr. P. C. CORK, C.M.G. (Administrator of S. Lucia), Colonial Secretary of Jamaica.

Mr. E. J. CAMERON, C.M.G. (Administrator of S. Vincent), Administrator and Colonial Secretary of S. Lucia.

The Honourable C. G. MURRAY (Acting Second Class Clerk, Colonial Office, and formerly Assistant Native Commissioner in the Transvaal), Administrator and Treasurer of S. Vincent.

Mr. BERNARD SENIOR, I.S.O. (Colonial Auditor, Ceylon), Colonial Treasurer, Ceylon.

Mr. D. S. MACGREGOR (Auditor-General, Mauritius), Colonial Auditor, Ceylon.

Mr. E. A. GRANNUM (Local Auditor, Cyprus), Auditor-General, Mauritius.

Mr. H. H. J. GOMPERTZ (First Magistrate, Hong Kong), Puisne Judge, Hong Kong.

Mr. C. E. GOODY (Assistant Auditor, Southern Nigeria), Junior Assistant Treasurer, Gold Coast.

Mr. E. H. BIFFEN (District Station Master, Uganda Railway), Assistant Traffic Manager, Northern Nigeria Railway.

Mr. H. G. MONTGOMERIE (late of the South African Constabulary), Assistant District Commissioner, East Africa Protectorate.

Mr. A. J. BRACKENBURY (late of the Transvaal Civil Service), Third Class Resident, Nyasaland.

- Mr. W. E. MAY**, A.M.I.C.E. (late Engineer in Charge of Protectorate Road Construction in Sierra Leone), Senior Provincial Engineer, Southern Nigeria.
- Mr. L. W. LA CHARD** (Keeper of Gaols, Northern Nigeria), District Superintendent of Police, Northern Nigeria.
- Mr. J. D. MONTAGU** (late of Transvaal Town Police), Assistant Commissioner of Police, Southern Nigeria.
- Mr. K. W. MATURIN** (late of Transvaal Town Police), Assistant District Superintendent of Police, East Africa Protectorate.
- Mr. W. D. MAGILL** (Natal Police), Assistant Inspector of Police, Uganda.
- Mr. J. O. R. ISAACS** (retrenched from South African Constabulary), Assistant Inspector of Police, Uganda.
- Mr. EDWIN TAYLOR** (Clerk in Public Works Department, Nyasaland), Treasury Assistant, Uganda.
- Mr. C. H. WALKER** (retrenched from Transvaal Civil Service), Clerk in Treasury, Nyasaland.



OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ASH, W. R.	30 Apr., '09	KILBY, R. N.	2 June, '09
ASHTON, T.	4 May, '09	LEES, Capt. W. E. ...	4 May, '09
BLY, W. A.	27 May, '09	MAXWELL, J.	14 May, '09
BERNEY, A. J.	29 Apr., '09	MACDOWELL, R. H. L...	2 June, '09
CARLAW, Dr. H. ...	20 May, '09	MCDONALL, Dr. J. C. S.	16 Aug., '09
c/o Messrs. Way & Co., Billiter Buildings, Billiter Street, E.C.		NASH, G. W.	
COPE, Dr. R.	13 June, '09	OPIE, G.	5 May, '09
CHARLTON, F. H. ...	12 May, '09	PHILLIPS, J.	8 Apr., '09
COGILL, F.	29 May, '09	PALK, D. S.	5 May, '09
Craggs, C. H.	5 May, '09	PHILLIPS, J.	20 Apr., '09
COLLINS, E. V.	12 June, '09	POPE, P. N.	17 June, '09
DENNY, Capt. H. de C...	23 Apr., '09	PACKWOOD, G. H. ...	7 July, '09
DAVIS, F.	5 May, '09	RALPH, Dr. C. H. D. ...	2 June, '09
DAVSON, Dr. J. B. H. ...	25 June, '09	STOKES, R. G.	
ELDRED, Dr. A. G. ...	24 June, '09	SHELLEY, C. V. N. ...	
FENN, J. C. D.	10 Apr., '09	SIMMONDS, Dr. F. M. ...	21 June, '09
FISHER, H. D.	2 Apr., '09	SODEN, Capt. G. W. C...	29 May, '09
FOUNTAIN, J. T.		SATHBRIDGE, W. G. ...	2 June, '09
HARPER, C. H.	5 May, '09	SAICH, H. C.	19 May, '09
HARRIS, J. B.	8 May, '09	SMITH, R. Bonham ...	25 Apr., '09
HUTT, W.		WEBB, Dr. W. S.	30 Apr., '09
JACQUEST, F. G.	8 June, '09	WHIGHAM, Capt. R. D....	3 Apr., '09
		WHYTE, Dr. F. W. W....	14 May, '09
		YOUTHED, S. H.	

GAMBIA.

BRANDFORD-GRIFFITH, H. M., C.M.G. ...	23 Apr., '09	BRACKEN, T. B. ...	30 Apr., '09
Constitutional Club, Northumberland Avenue, W.C.			

SIERRA LEONE.

ADDISON, W. ...	3 Apr., '09	LE MESURIER, Maj. F. M. ...	29 May, '09
ARBuckle, Dr. H. E. ...	11 June, '09	MOORBY, L. ...	11 June, '09
BETTINGTON, D. R. A. ...		MORGAN, W. ...	30 Apr., '09
BARKER, E. G. ...	7 July, '09	MORISON, R. J. ...	27 May, '09
BOWDEN, J. ...	22 May, '09	MURPHY, Dr. J. C. ...	8 May, '09
BODDY, A. W. ...	16 Apr., '09	NECK, F. A. ...	
BERNE, J. L. ...	3 Apr., '09	OWEN, J. W. ...	17 June, '09
BOULTON, C. M. ...	30 Mar., '09	PROUDFOOT, J. ...	18 Apr., '09
CALLAWAY, H. N. ...		REANEY, C. T. ...	
Du BOULAY, E. ...	8 Apr., '09	REID, J. M. ...	22 Apr., '09
EVELYN, E. E. ...	8 Apr., '09	SWAINSON, J. ...	18 Apr., '09
HOBBS, G. ...		WARD, Dr. J. F. ...	17 June, '09
HEARN, R. W. ...	30 Apr., '09	WILSON, C. F. ...	3 Apr., '09
JENKINS, E. D. ...			

SOUTHERN NIGERIA.

ARCHER, P. L. H. ...	12 May, '09	CULLEN, G. ...	2 Apr., '09
ANSON, F. C. M. ...	12 May, '09	COX, P. ...	15 Apr., '09
ARTHUR, S. H. ...	7 May, '09	DENSHAM, A. ...	2 June, '09
AINSCOUTH, F. ...	5 Apr., '09	DYSON, J. F. ...	
BAILEY, R. F. ...	7 May, '09	ELLIS, A. J. ...	3 June, '09
BLAIR, Capt. A. H. ...	2 June, '09	ELLIS, Dr. H. R. ...	2 June, '09
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.		FITZPATRICK, M. ...	11 June, '09
BURROWES, T. F. ...	14 May, '09	FIRMIN, C. H. ...	24 Apr., '09
BIRTWISTLE, C. A. ...	17 June, '09	FIRTH, N. A. St. J. ...	4 Apr., '09
BROWNE, Dr. A. J. A. ...	15 Apr., '09	GREENWAY, J. A. ...	12 May, '09
BAILEY, W. ...	27 May, '09	c/o Messrs. Cook and Sons, 81, King's Road, Brighton.	
BLY, J. E. ...	5 May, '09	GREEN, E. C. ...	16 Apr., '09
CUTHBERTSON, W. R. ...	15 Apr., '09	Sports Club, St. James' Square, S.W.	
CAMERON, A. D. ...	2 June, '09	GOODWIN, H. H. ...	10 May, '09
CUMMINS, E. O. ...	14 July, '09	GREWER, Miss J. ...	22 June, '09
CLARK, F. ...	30 Apr., '09	GLADSTONE, H. S. ...	25 Apr., '09
CLINCH, F. A. ...	30 Apr., '09	c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.	
CRAWFORD, Capt. H. R. H. ...	3 Apr., '09	HAYDEN, A. ...	12 May, '09
Junior Naval and Mili- tary Club, 96, Picca- dilly, W.		HAZELL, C. G. ...	27 May, '09
COCKBURN, Maj. W. A. C. ...	17 May, '09	HOPKINS, Dr. F. G. ...	17 June, '09
Cavalry Club, 127, Piccadilly, W.		HARWARD, F. H. ...	30 Apr., '09

SOUTHERN NIGERIA—continued.

HARGROVE, R. ...	27 May, '09	RAVEN, R. M. ...	27 June, '09
HOUSTON, J. A. ...	17 June, '09	ROBERTS, R. A. ...	27 June, '09
JOHNSON, F. E. G. ...	20 Apr., '09	RALSTON, W. ...	2 June, '09
JOHNSTON, J. ...		ROSS, R. J. B. ...	30 Apr., '09
KLEE, A. E. ...		Royal Societies Club, St. James' Street, S.W.	
LAMB, E. ...	17 Apr., '09	ROSE, B. ...	17 June, '09
LARBALESTIER, Dr. W. R.	24 June, '09	SKULL, Miss M. ...	4 July, '09
Royal London Yacht Club, King's Street, St. James', S.W.		SARGANT, C. F. G. ...	2 June, '09
LYNCH, W. ...	24 June, '09	SPENCER, H. ...	15 Apr., '09
LAWRENCE, Capt. C. T. ...	25 Apr., '09	SAYERS, G. W. ...	2 Apr., '09
MARSHALL, E. R. ...	8 Apr., '09	STIRLING, W. A. ...	17 July, '09
MANNION, J. ...		SMARTT, Maj. J. P. ...	23 Apr., '09
MATHER, W. ...	23 Apr., '09	STEVENS, E. G. ...	25 Apr., '09
MOORHOUSE, Maj. H. C.	13 Apr., '09	SCOTT, W. G. ...	11 June, '09
MEIKLEJOHN, J. R. C. ...	8 Apr., '09	SAYER, E. ...	
MACDONALD, P. H. ...	22 May, '09	SHEPPARD, H. St. J. ...	15 Apr., '09
MAXWELL, T. D. ...	30 Apr., '09	TYSON, D. ...	24 June, '09
MOULE, L. H. D'O. ...		TATLOB, Dr. W. I. ...	24 June, '09
MOORS, J. ...	1 Apr., '09	Sports Club, St. James' Square, S.W.	
MOORE, E. V. ...	5 May, '09	TURNER, A. E. ...	5 May, '09
MEILANDT, H. S. ...	30 Apr., '09	UNIACKE, E. W. P. ...	12 May, '09
O'CALLAGHAN, J. H. ...	11 June, '09	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
O'DEA, Dr. M. E. ...	3 Apr., '09	WEBB, R. A. ...	20 May, '09
PARKIN, A. W. ...	21 June, '09	WILLIAMS, J. L. ...	
PERKINS, J. E. ...	12 Apr., '09	WADLEY, H. ...	6 May, '09
POE, J. H. L. ...	27 July, '09	WILLIAMS, T. ...	2 Apr., '09
PINKETT, F. P. ...	3 Apr., '09	WHIPPLE, H. C. ...	
PRYCE, H. F. F. ...	15 Apr., '09	WRIGHT, W. ...	21 June, '09
RICHMOND, F. G. ...	30 Apr., '09		
RAE, A. C. ...	2 May, '09		

NORTHERN NIGERIA.

ADAMS, Dr. E. C. ...	16 May, '09	DOYLE, P. J. ...	14 May, '09
Sports Club, St. James' Square, S.W.		DYER, Capt. T. W. P. ...	18 June, '09
ARNETT, E. J. ...	25 May, '09	c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.	
ARSCOTT, C. M. ...	27 May, '09	DWYER, F. ...	2 Apr., '09
BISHOP, G. H. ...	27 May, '09	ELLIS, H. ...	15 May, '09
BRADLEY, L. R. ...	5 May, '09	FOWLER, Capt. W. M. ...	13 Apr., '09
BRACKEN, Capt. R. G. ...	9 Apr., '09	FAGAN, Dr. J. P. ...	23 May, '09
BROWNE, Capt. J. G. ...	24 May, '09	FOT, Dr. H. A. ...	14 July, '09
CUPIT, G. ...	22 June, '09	c/o Messrs. Cook and Sons, Ludgate Circus, E.C.	
CUNNINGHAM, C. A. ...	25 May, '09	GORRING, C. ...	19 May, '09
CRIPPS, Lieut. A. E. W., R.N.R. ...	10 Apr., '09	GODDEN, S. ...	19 May, '09
CHURCH, R. J. ...	8 Apr., '09	Junior Constitutional Club, Piccadilly, W.	
DWYER, Dr. P. M. ...	8 June, '09		
Royal Societies Club, St. James' Street, S.W.			

NORTHERN NIGERIA—*continued.*

GOODWIN, A. E. ...	17 July, '09	PARSONS, Dr. A. C. ...	21 Apr., '09
HASTINGS, A. C. G. ...	8 June, '09	ROBERTSON, N. B. ...	3 Apr., '09
St. Stephen's Club, S.W.		SMALLEY, T. ...	22 Apr., '09
JONES, A. E. ...	30 Apr., '09	SHOTT, H. H. ...	18 Apr., '09
KNOWLES, S. ...	30 May, '09	Junior Naval and Mili- tary Club, 96, Picca- dilly, W.	
LYNCH, J. E. ...	30 Apr., '09	STRATH, A. M. ...	14 Apr., '09
LAFONE, A. M. ...	22 Apr., '09	THOMPSON, H. C. ...	10 May, '09
MCKINLAY, W. ...	4 June, '09	TOMLINSON, G. J. F. ...	14 June, '09
MARQUIS, F. A. ...	8 Apr., '09	TRUMPER, Dr. W. A. ...	24 June, '09
MAXWELL-LYTE, J. M. ...	12 May, '09	TWOOMEY, Dr. J. R. ...	6 Apr., '09
MATTHEWS, Miss J. Y. ...	19 May, '09	c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.	
MILLER, H. S. ...	18 May, '09	UNIACKE, G. L. ...	18 Apr., '09
MILLER, J. ...	18 May, '09	WILLIAMS, Dr. R. F. ...	28 June, '09
OLIVER, G. B. ...	5 May, '09	WOOLLEY, H. M. ...	25 Apr., '09
OLIVER, T. E. ...	5 May, '09	WILLIAMS, G. F. ...	24 June, '09
OLIVER, G. ...	17 June, '09		
PIKE, R. N. ...	17 May, '09		
POPE, C. ...	25 Apr., '09		

NYASALAND.

GRANT, C. ...	22 June, '09	TURNBULL, A. M. D. ...	22 June, '09
HUGHES, C. H. ...	22 June, '09	TRISCOTT, L. E. L. ...	8 May, '09

EAST AFRICA.

BOWEN, C. ...	27 Apr., '09	MINSHALL, G. H. ...	27 June, '09
BOYCE, A. E. ...	27 Apr., '09	PARKINSON, J. W. H. ...	27 Apr., '09
COX, E. W. ...	26 July, '09	PEABSON, E. L. ...	18 June, '09
FARRANT, R. G. ...	27 May, '09	RICHARDSON, G. W. ...	16 May, '09
GRANVILLE, R. K. ...	27 June, '09	ROSS, Dr. P. H. ...	27 Apr., '09
HICKIE, C. F. ...	18 July, '09	SKENE, R. ...	27 May, '09
MARSHALL, Miss M. ...	7 May, '09	TRAILL, F. S. F. ...	7 June, '09
MACDONALD, W. ...	27 May, '09		

UGANDA.

BOWRING, W. A. ...	17 May, '09	SPEKE, A. G. ...	10 May, '09
IREDELL, Capt. S. M. L. ...	30 June, '09	WRIGHT, W. S. ...	27 May, '09
KNOX, Capt. R. B. ...	30 June, '09	WILKINSON, R. J. ...	7 June, '09
MANARA, V. M. ...	9 May, '09	WALLACE, Capt. W. T. E. ...	27 June, '09
REYNES-COLE, Capt. W. E. ...			

SOMALILAND.

O'NEILL, Capt. H. de B. ...	26 Apr., '09	ROSE, A. B. ...	24 July, '09
-----------------------------	--------------	-----------------	--------------

Colonial Officials on Leave.

359

BECHUANALAND.

DANIEL, Capt. R. M. 23 May, '09

BASUTOLAND.

HODGSON, F. 30 June, '09	WILLIAMS, T. A. 20 June, '09
MOORE, J. 30 June, '09	

JAMAICA.

COOPER, E. G. 3 May, '09	MORRIS, P. H. 31 Aug., '09
MARVIN, Miss A. 28 Aug., '09	SOLOMON, M. C.... .. 18 May, '09

TRINIDAD.

BOWEN, H. T. 7 June, '09	MARSHALL, Col. R. S. ... <i>Steamer due</i>
MONCKTON, C. C. F.	United Service Club, 28 Apr., '09
	Pall Mall, S.W.

BRITISH GUIANA.

BRUNKER, Capt. H. M.... 30 Apr., '09	LAWRENCE, J. D. ... 24 Apr., '09
BARKLIE, T. W. S. ... 30 Apr., '09	OZZARD, Dr. A. T. <i>Steamer leaving</i>
Royal Colonial Institute, Northumberland Avenue, W.C.	31 Mar., '09
ENGLISH, E. W. F. ... 25 June, '09	POPE, T. A. 2 May, '09
GILCHRIST, W. J. ... 4 June, '09	POWER, Capt. W. le P. ... 28 May, '09
Royal Colonial Institute, Northumberland Avenue, W.C.	

VIRGIN ISLANDS.

BAYNES, E. W. 7 Apr., '09

DOMINICA.

MASON, Dr. G. B. 3 Aug., '09

FIJI.

BARNETT, E. A....	... 29 July, '09	FARRINGTON, Dr. J.	... 26 Nov., '09
DOWSE, Dr. T. A.	... 7 July, '09	HEATON, H. H.	... 13 July, '09
ERHARDT, A. ...	... 14 June, '09	THURN, Sir E. im	...
FRANCIS, Col. C. A.	...		

MAURITIUS.

D'AVRAY, Rev. S. A.	... 22 June, '09	MONTY, S. A. R.	... 25 June, '09
GREGORY, Rt. Rev. F. A.	9 May, '09	NEMORIN, R.	... 12 Oct., '09
LESCURE, Rev. L.	... 25 Nov., '09	O'LOUGHLIN, Very Rev.	
LINCOLN, G.	... 24 Dec., '09	Canon L.	... 13 July, '09

SEYCHELLES.

BRADLEY, Dr. J. T.	7 May, '09
--------------------	--------	------------

STRAITS SETTLEMENTS.

BUCHANAN, W....	... 10 Sept., '09	HEATH, A.	... 2 Aug., '09
CHEVALLIER, H.	... 14 Sept., '09	HUNT, W.	... 22 June, '09
CUXADEN, W. A.	... 19 Jan., '10	HELLIER, M.	... 8 July, '09
CRUMMEY, H. G.	... 7 Oct., '09	KEITH, Dr. R. D.	... 30 June, '09
CHAMBERLAIN, A. B.	... 17 May, '09	KELLAR, J. D. B.	... 25 Aug., '09
CROUCHER, Dr. F. B.	Steamer leaving 13 Apr., '09	LUCAS, T. J.	... 4 Aug., '09
DENNYS, S. E.	... 30 Apr., '10	LIVINGSTONE, A. D.	... 17 Nov., '09
DANE, Dr. R.	... 15 June, '09	MICHELL, W. C.	... 2 Feb., '10
DEWAR, Capt. A. R. J.	... 30 Oct., '09	M McNAMARA, J. M.	... 4 Aug., '09
EBDEN, L. P.	... 4 Oct., '09	OUTRAM, D.	... 8 June, '09
FISH, E. W.	... 30 Aug., '09	PATTISON, J. C.	... 30 June, '09
FIRMSTONE, H. W.	... 23 Sept., '09	RODRIGUEZ, F.	... 31 July, '09
GOTTLIEB, F. H. V.	... 12 Jan., '10	ROBINSON, F.	... 24 Dec., '09
HUMPHREYS, J. L.	... 3 Sept., '09	SETH, G. G.	... 1 Mar., '10
		WAIT, O. H.	... 8 Dec., '09

TANJONG PAGAR DOCK.

BLACK, R.	... 29 July, '09	TONGUE, H.	... 1 Dec., '09
NEILSON, J.	... 30 June, '09		

HONG KONG.

BRYAN, J. J.	... 12 July, '09	HOWELL, F.	... 8 May, '09
CARTER, A.	... 31 Aug., '09	JONES, E.	... 5 Nov., '09
DOBERCK, Miss A.	... 11 Aug., '09	JACKMAN, H. T.	... 2 Aug., '09
HIGBY, W.	... 12 Oct., '09	LEE, Miss M. A.	... 6 Oct., '09
HAGGARD, H. E. Y.	... 7 Aug., '09	LYON, J. A.	... 3 Nov., '09

HONG KONG—continued.

LYONS, Capt. F. W. ...	5 Nov., '09	SOLLY, W. J. ...	5 June, '09
LEE-JONES, J. W. ...	11 Dec., '09	WOLFE, H. W. ...	7 July, '09
McHARDY, D. ...	8 Oct., '09	WILLS, R. H. ...	11 Sept., '09
PARR, H. V. ...	8 Oct., '09	WATSON, A. ...	25 Oct., '09
SAVAGE, R. A. J. ...	27 June, '09		

PAHANG.

DELMERGE, Dr. J. R. ...	26 July, '09	MAXWELL, C. N. ...	11 July, '09
-------------------------	--------------	--------------------	--------------

PERAK.

ACTON, W. W. ...	11 Aug., '09	KEILICH, D. ...	31 Dec., '09
CLARKE, C. H. G. ...	Steamer due 17 June, '09	LANGSTON, S. H. ...	7 May, '09
COOPER, H. J. ...	29 July, '09	MOSS, P....	8 May, '09
DONALDSON, C. E. ...	10 July, '09	MELDRUM, Dr. W. P. ...	26 Oct., '09
ELLES, B. W. ...	11 Nov., '09	MACKRAY, W. H. ...	24 Sept., '09
FAITHFULL, F. F. ...	27 Jan., '10	PEART, Dr. S. P. ...	21 May, '09
GREIG, G. E. ...	18 Dec., '09	SATOW, P. A. ...	4 Jan., '10

NEGRI SEMBILAN.

DEW, E. C. ...	28 Aug., '09	SUMNER, H. L. ...	3 Apr., '09
JUST, A. W. ...	13 Nov., '09	UPTON, H. H. S. ...	16 July, '09
SHANKLAND, Miss R. M. ...	13 June, '09		

SELANGOR.

GOUGH, A. E. ...	8 Sept., '09	MARKS, H. J. ...	5 Aug., '09
GREY, R. C. ...	13 Feb., '10	PERRY, O. G. ...	28 May, '09
IRVING, C. J. ...	21 May, '09	WILKINSON, W. A. ...	21 Aug., '09
JACKSON, R. D. ...	3 Sept., '09		

FEDERATED MALAY STATES.

ALSTON, A. H. ...	3 Oct., '09	LEGGE, R. H. ...	11 Sept., '09
BAKER, E. M. ...	1 Sept., '09	LAIDLAW, G. M. ...	2 Sept., '09
BENNETT, T. ...	31 Oct., '09	MARSHALL, H. ...	26 Oct., '09
BROWNE, E. G. ...	27 July, '09	MILLS, F. ...	3 May, '09
COOK, E. A. ...	29 June, '09	MOODY, R. J. ...	30 June, '09
CARDEW, C. D. ...	8 Aug., '09	PHILLIPS, D. ...	27 July, '09
CAULDWELL, E. ...	8 Aug., '09	RUSSELL, J. ...	31 Oct., '09
CONLAY, W. L. ...	30 May, '09	STURROCK, A. J. ...	14 Feb., '10
CADMAN, C. G. ...	31 Oct., '09	SMITH, J. ...	20 July, '09
FEENEY, J. ...	23 July, '09	STEELE, J. ...	20 June, '09
GLOVER, J. S. ...	18 July, '09	TOMS, J....	23 June, '09
HOLLYWOOD, M. J. ...	19 June, '09	WHITE, W. W. ...	7 Aug., '09
KINSEY, W. E. ...	24 Oct., '09	WILLS, A. E. ...	11 Apr., '10

CEYLON.

ANDREWS, A. ...	25 Aug., '09	SMITH, R. L. ...	30 Apr., '09
BICKMORE, W. ...	30 May, '09	SANDERS, W. R. B. ...	7 July, '09
BARTON, F. ...	9 Aug., '09	SHIPTON, L. ...	4 Feb., '10
CUMBERLAND, C. R. ...	<i>Steamer due</i>	SCHRADER, L. W. C. ...	28 Aug., '09
	5 June, '09	SAXTON, G. S. ...	2 May, '09
COXON, T. ...	9 Aug., '09	SLATER, A. R. ...	4 Nov., '09
CAMPBELL, T. C. ...	31 July, '09	VAN TWEST, J. T. ...	30 Apr., '09
COTTLE, H. C. ...	12 July, '09	WIJESEKERE, Dr. W... ..	<i>Steamer due</i>
CRAWFORD, H. L., C.M.G. ...	21 May, '09		24 May, '09
DE SILVA, M. ...	4 Jan., '12	WARREN, P. D. ...	9 June, '09
DANIEL, J. H. ...	1 Oct., '09	c/o Messrs. H. S. King	
DENNISS, A. W....	24 Sept., '09	and Co., 65, Cornhill.	
GREEN, C. ...	28 Sept., '09	E.C.	
HILL, B....	3 May, '09	WEERAPERUMAL, Dr.	
HARRISON, T. C. ...	1 July, '09	A. A. M. ...	26 May, '09
HYLAND, W. ...	25 May, '09	WADE, E. H. ...	9 July, '09
HARTLEY, C. ...	13 Dec., '09	c/o Messrs. Richardson	
JOHNSON, Dr. O. ...	25 Apr., '09	and Co., 25, Suffolk	
MADDOCK, A. E. ...	31 July, '09	Street, Pall Mall, S.W.	
MACREADY, W. C. ...	15 Apr., '09	WYLIE, T. A. ...	24 May, '09
MISSE, W. J. ...	30 June, '09	WHITE, H. ...	20 Aug., '09
PLANT, G. F. ...	11 May, '09	WOOD-RENTON, A. ...	<i>Steamer due</i>
PRICE, N. J. ...	6 May, '09		26 June, '09
ROTHWELL, A. ...	11 Dec., '09		



INDEX TO PRINCIPAL SUBJECTS IN VOLS. I. AND II.

GENERAL.

ALL-RED ROUTE, I., 6 ; II., 1.

ASIATIC IMMIGRATION, I., 285 ; II., 3 ; II., 18.

AUDITOR, FUNCTIONS OF, II., 209.

AUSTRALIA :—

Labour movement, I., 68 ; old age pensions, I., 70 ; immigration, I., 206 ; II., 100 ; II., 168 ; naval defence, I., 287 ; New Hebrides convention, I., 289 ; "new protection," I., 298 ; tropical possessions, I., 344 ; financial problems, II., 116.

BRITISH COTTON-GROWING ASSOCIATION, II., 105.

CANADA :—

Payments to Provinces, I., 114 ; immigration, I., 206 ; I., 291 ; II., 2 ; II., 285 ; old age pensions, I., 239 ; trade with, I., 349 ; I., 156 ; capital in, II., 98 ; nationalism, II., 175 ; elections, II., 193 ; waterways convention, II., 285.

CEYLON :—

Rubber cultivation, I., 159 ; Colombo Harbour, II., 324.

COINS, II., 202.

COLONIAL HISTORY, EARLY, II., 215.

COLONIAL JUDGMENTS, II., 8 ; II., 26.

COLONIAL OFFICE, SECTIONS OF, I., 113.

CROWN AGENTS, II., 114 ; II., 301.

CYPRUS, II., 316.

EAST AFRICA, AFFAIRS OF, II., 297.

EMIGRATION AND THE E. I. O., I., 135.

EXTRATERRITORIALITY, I., 223.

FIJI, NATIVES OF, II., 313.

FRENCH METHODS IN WEST AFRICA, I., 147.

GOVERNMENT ORDERS, LORD CROMER ON, II., 27.

Vol. II., No. 4.

GROWTH OF EMPIRE, I., 363.

HERBERT SPENCER ON COLONISATION, II., 14.

IMPERIAL CONFERENCE, I., 2.

IMPERIAL FEDERATION, I., 69.

IMPERIAL ORGANISATION, I., 121.

INCOME TAX ON COLONIAL OFFICIALS ON LEAVE, I., 9.

INSTITUTE OF COMMERCIAL RESEARCH IN THE TROPICS, I., 74.

LABOUR PARTY AND THE EMPIRE, I., 313.

LUCAS, SIR C., VISIT TO AUSTRALIA.

MALTA, CESSION OF, II., 203.

MARINE INSURANCE, I., 212; II., 141.

MAURITIUS, RACE CHARACTERISTICS, II., 221.

NATAL, NATIVE AFFAIRS, I., 227.

NEWFOUNDLAND:—

Elections, II., 194; Micmac Indians, II., 265; fisheries convention, II., 285.

NEW ZEALAND, TRADE WITH, I., 349.

PACIFIC CABLE, I., 126.

RHODESIA, PROSPECTS OF, II., 289.

SHIPPING FREIGHTS CONFERENCE, I., 4; II., 257.

SOUTH AFRICA:—

Union of, II., 25; II., 196; II., 286; outlook, II., 129; agriculture, II., 172; II., 290; immigration, II., 197; war losses, II., 211; native education, II., 292.

STATE AS LANDLORD, I., 316.

STEAMSHIP SUBSIDIES, I., 213.

STRAITS DOLLAR, II., 258.

STRIKES, PREVENTION OF, I., 305; II., 6; II., 102.

TELEGRAMS, CHEAP, I., 198.

TRAINING FOR TROPICAL CAREER, II., 9.

TRANSVAAL, CONSTITUTION, I., 12; Native affairs, I., 15.

VISUAL INSTRUCTION, II., 201.

VOTES FOR WOMEN, I., 79.

WEST AFRICA:—

Cotton-growing, I., 211.

Gold Coast, Accra water supply, II., 235.

Lagos harbour works, II., 243; II., 323.

Northern Nigeria: Administration, I., 23; development, I., 143; II., 295.

Southern Nigeria: Mineral resources, I., 233; natives, II., 70; railway, II., 330.

WEST INDIES:—

Cotton-growing, I., 210.

Federation, I., 295; I., 323; II., 7; II., 37; II., 78; II., 176; II., 269; II., 350.

Jamaica: Grant and loan to, I., 7; rebuilding, II., 106.

Leewards, finances, II., 149; II., 298.

Riots in, I., 7.

Sugar, II., 298.

Tobago, geology of, I., 72.

BUSINESS NOTES.

- AGRICULTURE, TROPICAL, I., 78.
 ALCOHOL IN LIEU OF PETROL, II., 325.
 BLUE OIL, II., 231.
 BOOTS, I., 87.
 BREAKWATERS, LIGHTS ON, I., 88.
 BRITISH GOODS IN COLONIAL MARKETS, I., 139.
 COALITE, I., 169.
 CONTRACT WORK, I., 91.
 COTTON-GINS, II., 154.
 COTTON-GROWING, II., 71 ; II., 237.
 DISINFECTANTS, APPARATUS, I., 84.
 DREDGING, II., 236.
 FERRO-CONCRETE, I., 327 ; II., 47 ; Lighthouse, II., 223.
 FRUIT, EXPORT OF, II., 64 ; II., 200.
 HARBOURS, MODERN, II., 308.
 HOUSES, TROPICAL, II., 305.
 INKS, II., 60 ; II., 156.
 LIME IN AGRICULTURE, II., 62.
 MAHOGANY, II., 156.
 MONO-RAILS, II., 334.
 MOTOR-CARS :—
 In Congo, I., 85 ; wheels, I., 254 ; II., 60 ; boats, I., 355 ; II., 153 ;
 Albion, I., 239.
 MUNTZ METAL, I., 254.
 OILS, I., 358.
 PAINTS, I., 83 ; I., 358 ; II., 58.
 PAPERS, PRESERVATION OF, I., 175.
 REFRIGERATING MACHINES, I., 168.
 ROOFING MATERIALS, I., 171.
 ROOT CLEARERS, I., 170.
 ROPE, I., 253.
 RUBBER, I., 74 ; I., 76 ; I., 248 ; Prospects of, II., 147.
 TANJONG PAGAR DOCK BOARD, II., 160.
 TELEPHONES, I., 252 ; II., 152 ; Automatic, II., 228.
 TENDERS, PUBLICATION OF, I., 89.
 TIMBER, II., 234.
 VASELINE, II., 432.
 WINDMILLS, II., 158.
 WIRELESS TELEGRAPHY, I., 216.

RAILWAY NOTES.

- B. HONDURAS, II., 246.
 BLUE OIL FOR SLEEPERS, I., 47.
 CAPE, II., 134.
 CENTRAL SOUTH AFRICAN RAILWAYS, II., 138.
 CEYLON, I., 55 ; I., 258.
 COLONIAL RAILWAYS, FINANCIAL RESULTS, I., 256.
 CONSULTING ENGINEERS, I., 261.
 CYPRUS, I., 259 ; I., 367.

GOLD COAST, I., 57; II., 43; II., 139; II., 244.
JOHORE, II., 247.
LAGOS, II., 139.
LOCOMOTIVES, BRITISH v. AMERICAN, II., 57.
MANAGEMENT OF GOVERNMENT RAILWAYS, I., 51.
NATAL, II., 137.
NIGERIA, I., 56; II., 241; II., 330.
NYASALAND, I., 259.
RENARD TRAIN, I., 261.
SIERRA LEONE, I., 57; II., 245.
SLEEPERS, I., 44; I., 170.
STANDARDISATION, I., 44.
TIMBER FOR RAILWAYS, I., 47.
UGANDA, I., 258; II., 110; II., 139; II., 240.
WASHAWAYS, I., 185.

MEDICAL NOTES.

ANKYLOSTOMIASIS, I., 265; II., 250.
ATOXYL, II., 158.
CENTRAL AFRICA, EXPEDITION TO, I., 58.
LEPROSY, II., 255.
MALARIA IN MAURITIUS, II., 249.
MALTA FEVER, I., 263.
"MILLIONS" FISH, II., 207.
MOSQUITO NETTING, I., 167.
PLAGUE, I., 360; II., 254.
SLEEPING SICKNESS, I., 178; I., 362; II., 68; II., 336
RAT POISONS, I., 362; II., 340.
TROPICAL DISEASES RESEARCH FUND, I., 59.
TUBERCULOSIS IN BRITISH GUIANA, II., 252.
YELLOW FEVER, TRINIDAD, II., 253.
WEST COAST OF AFRICA, HEALTH ON, I., 60.

STAMPS.

COLOUR SCHEME, II., 165; II., 267.
MANIPULATION, PREVENTION OF, I., 329.
STAMP BOOKS, II., 162; II., 267.
SURCHARGING, I., 340; II., 53; II., 341.
TECHNICAL PROCESSES, I., 63; I., 162; II., 162.



THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,

R. V. VERNON, of the Colonial Office.

VOL. II.

JULY, 1908.

No. 1.

CONTENTS.

EDITORIAL NOTES

The "All-Red" Route—Immigration Questions—South African Federation—Colonial Judgments—The Public and the Civil Service

HERBERT SPENCER ON COLONISATION

LORD CROMER ON GOVERNMENT ORDERS

FEDERATION OR UNIFICATION

SOME MINOR ASPECTS OF COLONIAL TRADE AND THE EXECUTION OF COLONIAL JUDGMENTS

By the Chief Justice of Hong Kong.

NOTES ON WEST INDIAN FEDERATION

By R. McCarthy, C.M.G.

GOLD COAST RAILWAYS AND HARBOUR WORKS

FERRO-CONCRETE BUILDINGS AND EARTHQUAKES

By J. S. E. de Vesian, M.Inst.C.E., M.I.M.E.

COLONIAL STAMPS

BUSINESS NOTES

MEDICAL NOTES

REVIEWS AND NOTICES

LETTERS TO THE EDITORS

The Future of the West Indies—Votes for Women

RECENT APPOINTMENTS

COLONIAL OFFICIALS ON LEAVE OF ABSENCE

85

GOLD COAST, I., 57; II., 43; II., 139; II., 244.
JOHORE, II., 247.
LAGOS, II., 139.
LOCOMOTIVES, BRITISH v. AMERICAN, II., 57.
MANAGEMENT OF GOVERNMENT RAILWAYS, I., 51.
NATAL, II., 137.
NIGERIA, I., 56; II., 241; II., 330.
NYASALAND, I., 259.
RENARD TRAIN, I., 261.
SIERRA LEONE, I., 57; II., 245.
SLEEPERS, I., 44; I., 170.
STANDARDISATION, I., 44.
TIMBER FOR RAILWAYS, I., 47.
UGANDA, I., 258; II., 110; II., 139; II., 240.
WASHAWAYS, I., 185.

MEDICAL NOTES.

ANKYLOSTOMIASIS, I., 265; II., 250.
ATOXYL, II., 158.
CENTRAL AFRICA, EXPEDITION TO, I., 58.
LEPROSY, II., 255.
MALARIA IN MAURITIUS, II., 249.
MALTA FEVER, I., 263.
"MILLIONS" FISH, II., 207.
MOSQUITO NETTING, I., 167.
PLAGUE, I., 360; II., 254.
SLEEPING SICKNESS, I., 178; I., 362; II., 68; II., 336.
RAT POISONS, I., 362; II., 340.
TROPICAL DISEASES RESEARCH FUND, I., 59.
TUBERCULOSIS IN BRITISH GUIANA, II., 252.
YELLOW FEVER, TRINIDAD, II., 253.
WEST COAST OF AFRICA, HEALTH ON, I., 60.

STAMPS.

COLOUR SCHEME, II., 165; II., 267.
MANIPULATION, PREVENTION OF, I., 329.
STAMP BOOKS, II., 162; II., 267.
SURCHARGING, I., 340; II., 53; II., 341.
TECHNICAL PROCESSES, I., 63; I., 162; II., 162.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. II.

JULY, 1908.

No. 1.

CONTENTS.

EDITORIAL NOTES

The "All-Red" Route—Immigration Questions—South African
Federation—Colonial Judgments—The Public and the Civil Service

I

HERBERT SPENCER ON COLONISATION

14

LORD CROMER ON GOVERNMENT ORDERS

20

FEDERATION OR UNIFICATION

24

SOME MINOR ASPECTS OF COLONIAL TRADE AND THE EXECUTION OF COLONIAL JUDGMENTS

26

By the Chief Justice of Hong Kong.

NOTES ON WEST INDIAN FEDERATION

37

By R. McCarthy, C.M.G.

GOLD COAST RAILWAYS AND HARBOUR WORKS

43

FERRO-CONCRETE BUILDINGS AND EARTHQUAKES

47

By J. S. E. de Vesian, M.Inst.C.E., M.I.M.E.

COLONIAL STAMPS

53

BUSINESS NOTES

56

MEDICAL NOTES

68

REVIEWS AND NOTICES

70

LETTERS TO THE EDITORS

78

The Future of the West Indies—Votes for Women

RECENT APPOINTMENTS

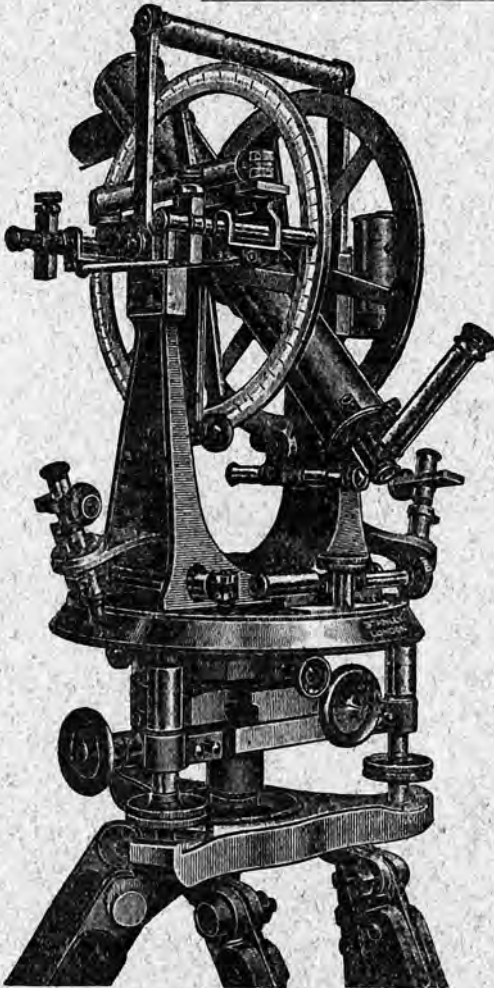
83

COLONIAL OFFICIALS ON LEAVE OF ABSENCE

85

ADVERTISEMENTS.

STANLEY, LONDON.



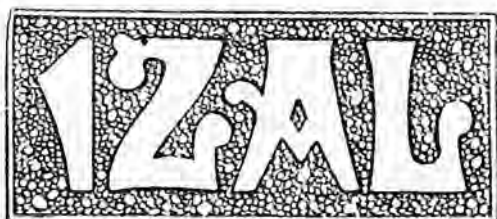
LARGEST
MANUFACTURERS
OF
**SURVEYING
& DRAWING
INSTRUMENTS**
IN THE WORLD.

CONTRACTORS TO
INDIA OFFICE,
CROWN AGENTS FOR
THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.

*Please send for the
new edition of our*
J60 CATALOGUE
*just published
(Post Free), and com-
pare our prices with
those of other*
FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,
Great Turnstile, Holborn,
LONDON, W.C.

Show Rooms:—286, High Holborn, W.C.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

STANLEY, LONDON.



LARGEST
MANUFACTURERS
OF
**SURVEYING
& DRAWING
INSTRUMENTS**
IN THE WORLD.

CONTRACTORS TO
INDIA OFFICE,
CROWN AGENTS FOR
THE COLONIES,
COLONIAL GOVERNMENTS,
&c., &c.

Please send for the
new edition of our
J60 CATALOGUE
just published
(Post Free), and com-
pare our prices with
those of other
FIRST-CLASS MAKERS.

W. F. STANLEY & CO., LTD.,
Great Turnstile, Holborn,
LONDON, W.C.

Show Rooms:—286, High Holborn, W.C.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

**VERY HOT
AND
VERY COLD
CLIMATES**

WHERE EXPOSURE
TO SUN AND
EXTREMES OF
TEMPERATURE MAKE
ORDINARY PAINTS
AND VARNISHES
CRACK, CHIP, CRAZE
AND PEEL OFF,
SCARCELY AFFECT
THE LASTING
PROPERTIES OF

Velure.



THE PERFECTED PAINT.

elure

There is no paint on earth
SO ELASTIC as Velure,
nor, **BECAUSE OF THIS**,
so perfect in surface, so
free from flaws, cracks and
blisters, so easily kept clean
or so durable for indoor or
outdoor painting, especially
if exposed to sun & weather
which quickly destroy ordinary
paint but leave Velure unaffected
for years. No varnish required
ITS SECRET IS ELASTICITY.

PROVED BY LETTERS FROM HUNDREDS OF USERS.

Send for Handbook
with full particulars to **C. Chancellor & Co.,** 13, Clerkenwell Rd.,
LONDON, E.C.

Name this publication.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph
Office, or at the Offices of any of the Atlantic Cable
Companies, which register addresses free. No charge
for the words "Via Pacific."

Queen Anne's Chambers,
Westminster.

MERRYWEATHERS' **LONDON-MADE** **"DUB-SUB" CANVAS HOSE**

WOVEN AT

Merryweather & Sons' Works, Greenwich Road, London, S.E.



THE BEST TO WITHSTAND CHAFING.

In order to meet the demand for a

SPECIALLY STRONG CANVAS HOSE,

necessitated by the more general use of Steam Fire Engines and High-pressure Hydrants, Messrs. Merryweather & Sons have introduced their "Dub-Sub" (Double Substance) Canvas Hose.

This Hose is made of specially selected long flax of the very highest quality, and woven on greatly improved looms, which enable a hose of great strength to be manufactured, and with 15 strands instead of the 9 or 10 usually employed, and each individual thread is extra stout and strong. It is

CAPABLE OF STANDING GREAT PRESSURE,

and is therefore suitable for the most powerful Steam Fire Engines and Pumps. It represents the very

LATEST & BEST PRACTICE IN WEAVING CANVAS FIRE HOSE.

The special stoutness of this Hose ensures for it a very much longer life than that of ordinary Canvas Hose, as it is much better adapted to withstand the effects of the chafing and rubbing unavoidable in course of ordinary work.

The "Dub-Sub" (Double Substance) Hose, when first used, allows the water to pass through the pores somewhat freely, but after it has been in use a short time it becomes as tight as more finely woven hose.

MERRYWEATHERS' INDIA-RUBBER-LINED "DUB-SUB" HOSE

Is a Watertight Hose of the Very Highest Class.

CAUTION—See that the name "MERRYWEATHERS," as well as the brand, appears on every length. Indent for MERRYWEATHER HOSE.

MERRYWEATHER & SONS, **GREENWICH ROAD, S.E., and 63, LONG ACRE, W.C., LONDON.**

Telegrams: "Merryweather, London."

ADVERTISEMENTS.



Silver Medal,
Sydney, 1878.



Registered
Trade Mark.



Awarded First-Class Medal for
Prismatic Compass & Stand, 1893.

Cable Address :
"Altazimuth."
London."



Second Award
Melbourne, 1880.

HIGHEST AWARDS FOR COMPASSES, BAROMETERS, AND SUN-DIALS.

Instrument Makers
TO
**THE ADMIRALTY,
WAR OFFICE,
INDIA OFFICE,
&c.**

Makers of

Abney's Levels,
Abney's Levels and
Prismatic Compass
Combined, Barker's
Patent.

Aneroid Barometers, for
Pocket, Surveying and
Mining, with Barker's
Registered Altitude
Scales.

Box Sextant & Prismatic
Compass Combined,
Barker's Patent.

Box Sextants.
Clinometer Rules.
Clinometer and Sight
Compass Combined,
Barker's Improved.

ESTABLISHED 1848.

BARKER'S PATENT ALTITUDE INSTRUMENT AND PRISMATIC COMPASS COMBINED.

(PATENT 1,026)



As Altitude Instrument
and Clinometer.

Made in 3 and 4 inch sizes, with Card Dial or
Aluminium Ring.

With this Instrument Horizontal Angles,
Compass Bearings, and Rise and Fall of
any surface in degrees or inches per
yard, can be obtained with accuracy and
despatch.

Prices and further particulars sent upon application.
Full directions for use sent with each Instrument.

Barker's new Patent Surveying & Mining
Aneroid in Aluminium, with Vernier
reading to 1 foot: full particulars upon
application.



As Prismatic
Compass.

Instrument Makers
TO
**LONDON COUNTY
COUNCIL,
GOVERNMENT
LABORATORY,
&c.**

Makers of

Ediographs.
Levels, all kinds.
Levelling Slaves.
Pentagraphs.

Prismatic Compasses (a
speciality).

Protractors, all kinds.
Range Finders.
Rules, Parallel and
Rolling.

Sun-Dials.
Thermometers of every
description.
Theodolites, &c., &c.

A.B.C. CODE USED.
5th Edition.

F. BARKER & SON,

SUN-DIAL HOUSE, 12, CLERKENWELL ROAD, LONDON, E.C.,
Makers of Drawing, Surveying, and Scientific Instruments of every description.

ILLUSTRATED BOOKLET AND PRICE LISTS SENT POST FREE UPON APPLICATION.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Viaduct Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations
and Companies.

ADVANTAGES: — Monolithic Construction, | Light, Durable,
Economical, Fireproof, | Vibrationless, Sanitary.

More than 14,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories,
Grain Silos, Coal Hoppers,
Reservoirs, Wharves, Jetties,
Retaining Walls, Piers, Bridges
up to 200 ft. clear span, Water
Tower, Swimming Baths, Water
and Sewer Pipes, &c., &c., are
now in use.

A LARGE NUMBER OF
WELL-MATURED FERRO-
CONCRETE PILES OF
DIFFERENT LENGTHS AND
SECTIONS KEPT IN STOCK
AT OUR HULL DEPÔT READY
FOR IMMEDIATE SHIPMENT.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



**PAINT, COLOUR, and
VARNISH
MANUFACTURERS.**

CONTRACTORS TO:—

**The Lords Commissioners of the Admiralty.
The War Office.
The Crown Agents for the Colonies.
The India Office and Principal Indian Railways.
&c., &c.**

CLAYTON MACHINES.



FUMIGATION AND DISINFECTION.

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

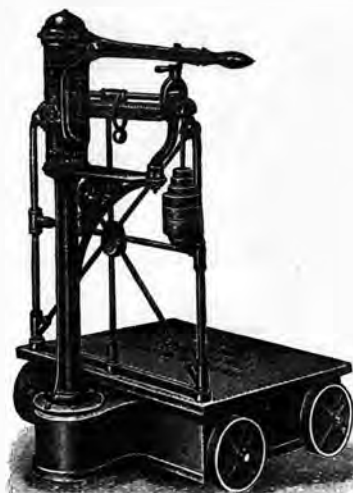
**Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.**

**Tel. : Gerr. 3232. Code :—A.B.C. 4th and 5th Editions.
Tgms. : "Unconsumed, London."**

**CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.**

ADVERTISEMENTS.

HENRY POOLEY & SON, LIMITED.



Manufacturers of every Description of Weighing Machinery.

Head Office:—TEMPLE STREET, BIRMINGHAM.

Telegrams :—Pooley, Birmingham.

TORBAY PAINT.

*THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.*

One Quality Only.

**The Best Paint for lasting, durability, and
covering power.**

PARTICULARS FROM—

**THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.**

BENSON'S



"EVERLASTING"
"EMPIRE" PLATE

FOR
HOME AND COLONIAL WEAR.

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER & TEA SETS, &C.
Guaranteed 50 years' wear.

"Empire" Plate Spoons and Forks supplied
separately from 17s. per dozen.

"EMPIRE" PLATE looks and wears like Solid Silver,
and excels in quality all other
makes of Electro-Plate Ware.

"The Times" System of Monthly Pay-
ments of £1 is available at Cash Prices.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles.

Mention "Colonial Office Journal."

"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of *Al Quality* "Empire"
Plate and Real Ivory Cutlery.
A service for 12 persons.

Price £19 (Others £3 12s. to £100).

62 & 64, LUDGATE HILL, E.C.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

**29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.**

Suppliers of all kinds of Provisions, Camp
Equipment, Medical Stores, Wines, Spirits, and
Mineral Waters, &c., for Exploring and Mining
Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and
made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

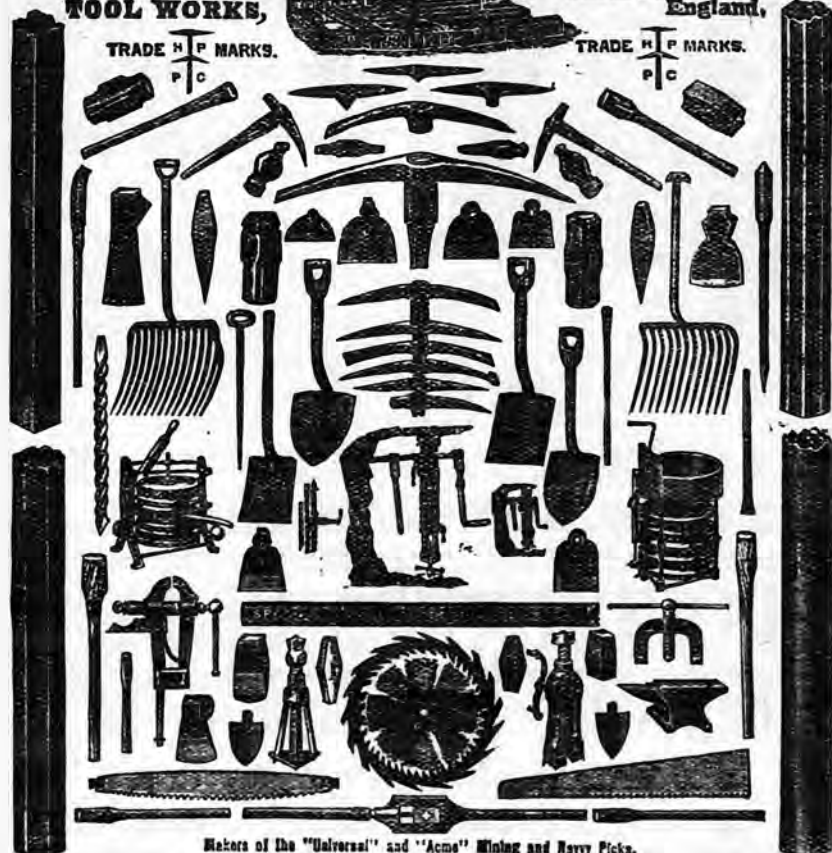
Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

THE HARDY PATENT PICK CO. Ltd., MINING TOOL WORKS, SHEFFIELD, England,



Makers of the "Universal" and "Acme" Mining and Heavy Picks.

HAND & POWER BORING MACHINES for ROCK & COAL.

PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS.
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Rasps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

**Simplest and most durable machines extant
for Mines and Quarries.**

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

JULY, 1908.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

London Office :



9, VICTORIA ST., S.W.

CAMMELL LAIRD & CO. LTD.

Head Office : **CYCLOPS WORKS, SHEFFIELD.**

Works :

Grimesthorpe Ordnance, Steel, Tyre and Spring Works,
Sheffield.
Yorkshire Steel and Iron Works, Penistone.
Derwent Iron and Steel Works, Workington.
Lowther Iron Works, Workington.
Solway Iron Works, Maryport.
New Oaks Collieries, near Barnsley.
Clyne Valley Colliery, Swansea.
Shipyard and Engineering Works, Birkenhead.

Manufacturers of

STEEL RAILS AND FISHPLATES,

Tyres, Straight and Crank Axles, Springs, Buffers,
Wheel Centres and Castings for Locomotives, Carriages and Wagons,

Spring Steel

Billets

Blooms

Bars

MARINE CASTINGS AND FORGINGS FOR TURBINES,

And all other purposes.

Any Size or Weight. In the Rough or Machined.

Sole Licensees & Makers in the United Kingdom of the "ART" System of Rack Railway
for Steep Grade Lines.

ARMOUR PLATES, GUN SHIELDS, PROJECTILES,

HIGH SPEED STEELS.

CYCLONE

"H.R.D."

"0172."

ALL CLASSES OF TOOL AND MINING STEEL.
SHOES AND DIES. FILES AND RASPS.
Special Manganese Steel for Mining Machinery Parts.

Makers of

BATTLESHIPS, CRUISERS, DESTROYERS, PASSENGER AND CARGO STEAMERS, MARINE ENGINES & BOILERS.

Contractors to Admiralty, War Office, Crown
Agents and Foreign Governments.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Billiter Buildings, Billiter Street,
LONDON, E.C.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Accounts collected, Salaries drawn, Family and other remittances
made, and general Banking facilities granted.

Complete Equipments purchased and deferred payments arranged on special terms.

BAGGAGE &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

WAY & CO. act as buying Agents for Firms on lowest possible Commission.

All kinds of Insurance effected:

LIFE (with special rates for Africa), **FIRE, MARINE, AND ACCIDENT.**

"The African" Liqueur Whisky,

**SPECIALLY BLENDED FOR THE TROPICS,
OVER 9 YEARS OLD.**

WAY & CO. Ltd.,

Sole Agents for East and West Africa for the Distillers, John Haig & Co. Ltd.

(ESTABLISHED OVER 200 YEARS).

"THE AFRICAN" COOK'S BASKET.

"THE AFRICAN" LUNCHEON BASKET.

The "Handy-Cosy" Bed.

Very suitable for Ambulance purposes: can be used as a STRETCHER.

It is a folding Portable Bed.

It can be set up or taken down in one minute without bolt or screw.

It is neat in appearance and light in weight, being only 28 lbs.

It is a giant in strength.

It is rigid.

A Light Steel-frame Portable Folding Bed.

It does not squeak or become shaky. It is very comfortable to sleep on. It can be changed
into a hammock in twenty seconds.

HANDY-COSY BED CO.,

49, LEADENHALL STREET, LONDON, E.C.

ADVERTISEMENTS.

BLAGDEN, WAUGH & CO.,

50 & 51, LIME STREET, LONDON, E.C.

Contractors to Admiralty, War Office and India Office, also to Colonial and Foreign Governments.

Tar, Ammonia, and other Chemical Products.

					To-day's prices, ex works, England.	
Coal Tar Pitch	...	...	...	...	20s. 6d.	per ton, in bulk.
Creosote	...	...	...	...	2½d.	" gall.
Naphthaline	...	...	...	...	£6	" ton, in bags.
Carbolic Acid, B.P.Xtals	...	...	...	...	4½d.	" lb.
Ditto Liquid, 85/99%	...	...	...	...	11d.	" gall.
Disinfecting Fluid, soluble in water	...	...	...	...	7½d.	" "
Sheep Dip	...	...	...	...	10d.	" "
Refined Tar	...	...	...	...	12s.	" barrel.
Sulphate of Ammonia, 24½%	...	...	...	...	£12	" ton.
Carbonate of Ammonia	...	...	...	...	3½d.	" lb.
Liquid Ammonia	...	...	...	...	3d.	" "
Potassium Cyanide, 98/100%	...	...	...	...	7½d.	" "
Sodium Cyanide	...	...	...	...	7d.	" "
Prussiate of Potash, Yellow	...	...	...	...	4½d.	" "
Arsenic, 99% White, Powdered	...	...	...	...	£16	" ton.
Black Varnish	...	...	...	...	6d.	" gall.

SPECIAL ATTENTION GIVEN TO COLONIAL ORDERS.

Enquiries solicited for Chemicals.

EMPIRE TYPEWRITER.



STANDARD VISIBLE MACHINE.

UNIVERSAL KEYBOARD.

EASILY LEARNED AS IT IS SIMPLE IN CONSTRUCTION.

NO TROUBLE TO KEEP IN ORDER.

QUITE PORTABLE.

Price £13 2s. 6d.

Fitted with Tin, Canvas, or Leather Travelling Case.

The EMPIRE TYPEWRITER Co., Ltd., 77, Queen Victoria St., London, E.C.

CROSSLEY & CO. (Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

COLONIAL POSTAGE STAMPS.

WANTED TO PURCHASE
Stamps from all British Colonies in large or small
quantities, used or unused.

PROVISIONALS and HIGH VALUES particularly desired.

Accumulations from Firms' Correspondence, Government Remainders, &c.,
purchased. No quantity too large for me to handle.

All offers are promptly attended to and the best prices paid. Goods sent
instead of cash if preferred.

*Old issues especially wanted, used or unused. Extra high prices paid for
Stamps in complete sheets or large blocks.*

Residents in all parts of the world should send me any Stamps
they may wish to dispose of. Satisfaction Guaranteed.

Newly issued Provisionals purchased at a good percentage over face value
if sent to me within a few weeks of issue, while they are still novelties.

Highest references, Banker's or otherwise, given if desired.

ALL KINDS OF STAMPS BOUGHT, SOLD AND EXCHANGED.

Publisher of "The West-End Philatelist." Price 1/6 per
annum, post free. The best paper for stamp collectors.

D. FIELD,
4 & 5, The Royal Arcade, Old Bond Street,
LONDON, W., England.

ESTABLISHED 1884.

NESTLÉ'S

CONDENSED MILK



—
The
Richest
in
Cream.
—

**FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.**

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.**

MANUFACTURERS OF

**Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).**

**Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.**

Galvanized Wire Netting.

**Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.**

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.**

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY AND FARMER
LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896
SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. II.

OCTOBER, 1908.

No. 2.

CONTENTS.

EDITORIAL NOTES	97
Canadian Capital—Australian Immigration—West Indian Affairs— East African Land—Franco-British Exhibition, &c.	
THE FINANCIAL PROBLEM OF AUSTRALIA	116
CANADIAN NATIONALISM	125
THE OUTLOOK IN SOUTH AFRICA	129
SOME RECENT RAILWAY REPORTS	134
MARINE INSURANCE	141
PROSPECTS OF RUBBER CULTIVATION	146
THE FINANCES OF THE LEEWARD ISLANDS	149
BUSINESS NOTES	152
Telephones—Motor-cars—Cotton-gin—Mahogany—Windmills, &c.	
COLONIAL STAMPS	162
REVIEWS AND NOTICES	167
Sir F. Treves on the West Indies—Canadian Annual Review, &c.	
THE FUTURE OF THE WEST INDIES—LETTER	176
RECENT APPOINTMENTS	178
COLONIAL OFFICIALS ON LEAVE OF ABSENCE	181

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Spacious Dining, Drawing, Writing, Reading,
Billiard, and Smoking Rooms, Lounges.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-.**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKCRAFT, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON." |

Esmond Hotel,
"AESOPUS, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Spacious Dining, Drawing, Writing, Reading,
Billiard, and Smoking Rooms, Lounges,
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) *from 3/6 to 6/-.*

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from 8/6 to 10/6 per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESS—

Kingsley Hotel,
"HARTSTREET, LONDON."

Thackeray Hotel,
"GREAT RUSSELL, LONDON."

Esmond Hotel,
"MONTAGUE, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

GOODLASS, WALL & CO. LTD., **LIVERPOOL.**



—♦—
PAINT, COLOUR, and
VARNISH
MANUFACTURERS.
—♦—

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.
The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c., &c.

MERRYWEATHERS' LONDON-MADE "DUB-SUB" CANVAS HOSE

WOVEN AT

Merryweather & Sons' Works, Greenwich Road, London, S.E.



In order to meet the demand for a

SPECIALLY STRONG CANVAS HOSE,

necessitated by the more general use of Steam Fire Engines and High-pressure Hydrants, Messrs. Merryweather & Sons have introduced their "Dub-Sub" (Double Substance) Canvas Hose.

This Hose is made of specially selected long flax of the very highest quality, and woven on greatly improved looms, which enable a hose of great strength to be manufactured, and with 15 strands instead of the 9 or 10 usually employed, and each individual thread is extra stout and strong. It is

CAPABLE OF STANDING GREAT PRESSURE,

and is therefore suitable for the most powerful Steam Fire Engines and Pumps. It represents the very

LATEST & BEST PRACTICE IN WEAVING CANVAS FIRE HOSE.

The special stoutness of this Hose ensures for it a very much longer life than that of ordinary Canvas Hose, as it is much better adapted to withstand the effects of the chafing and rubbing unavoidable in course of ordinary work.

The "Dub-Sub" (Double Substance) Hose, when first used, allows the water to pass through the pores somewhat freely, but after it has been in use a short time it becomes as tight as more finely woven hose.

MERRYWEATHERS' INDIA-RUBBER-LINED "DUB-SUB" HOSE Is a Watertight Hose of the Very Highest Class.

CAUTION—See that the name "**MERRYWEATHERS**," as well as the brand, appears on every length.
Indent for **MERRYWEATHER HOSE**.

MERRYWEATHER & SONS,
GREENWICH ROAD, S.E., and 63, LONG ACRE, W.C., LONDON.

Telegrams: "Merryweather, London."



elure

There is no paint on earth
SO ELASTIC as Velure,
 nor, **BECAUSE OF THIS**,
 so perfect in surface, so
 free from flaws, cracks and
 blisters, so easily kept clean
 or so durable for indoor or
 outdoor painting, especially
 if exposed to sun & weather
 which quickly destroy ordinary
 paint but leave Velure unaffec-
 ted for years. No varnish required
ITS SECRET IS ELASTICITY.

PROVED BY LETTERS FROM HUNDREDS OF USERS.

Send for Handbook with full particulars to **C. Chancellor & Co.,** 13, Clerkenwell Rd.,
LONDON, E.C.
Name this publication.


**VERY HOT
 AND
 VERY COLD
 CLIMATES**

WHERE EXPOSURE
 TO SUN AND
 EXTREMES OF
 TEMPERATURE MAKE
 ORDINARY PAINTS
 AND VARNISHES
 CRACK, CHIP, CRAZE
 AND PEEL OFF,
 SCARCELY AFFECT
 THE LASTING
 PROPERTIES OF

Velure.

EMPIRE TYPEWRITER.

STANDARD VISIBLE MACHINE.
 UNIVERSAL KEYBOARD.
 EASILY LEARNED AS IT IS SIMPLE IN CONSTRUCTION.
 NO TROUBLE TO KEEP IN ORDER.
 QUITE PORTABLE.



Fitted with Tin, Canvas, or Leather Travelling Case.

Price £13 2s. 6d.

The **EMPIRE TYPEWRITER Co., Ltd.**, 77, Queen Victoria St., London, E.C.

CROWN PRESERVED COAL CO., LTD.,
Admiralty Contractors.

Awards :

LONDON	1862
PARIS	1876
LIVERPOOL	1886
JAMAICA.....	1891



Awards :

ROYAL NAVAL 1891 & 1906
CHICAGO..... 1893
BORDEAUX 1896

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—CARDIFF AND PORT TALBOT.

Telegraphic Address :—"Crown, Cardiff."

Telephone :—Nat. No. 241.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

BENSON'S



"EVERLASTING"
"EMPIRE" PLATE
FOR
HOME AND COLONIAL WEAR.

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER & TEA SETS, &C.

"EMPIRE" PLATE
Excels all
others
for General Wear.

"The Times" Approved
**MONTHLY
PAYMENTS**
IS AVAILABLE

"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of A1 Quality "Empire"
Plate and Real Ivory Cutlery.

A service for 12 persons ... **Price £19**
(Others £3 12s. to £100).

BENSON'S do not charge extra for buying.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

ADVERTISEMENTS.

EDUCATIONAL ANNOUNCEMENTS.

<p style="text-align: center;">HOME SCHOOL FOR GIRLS.</p> <p>L EIGH COURT, near CLIFTON, BRISTOL. Principal, Miss MEDINA S. GRIFFITHS, assisted by an efficient staff of Teachers. Extensive and beautiful grounds afford special advantages for open-air life and games. Preparation for University Examinations undertaken. Inclusive terms. Prospectus on application.</p>	<p style="text-align: center;">CHRIST COLLEGE, BRECON.</p> <p>PUBLIC SCHOOL OF 100 BOYS, preparing for Universities, Colonial Office, business and professional careers. Fees: Fifty Guineas. Admirable buildings, 30 acres playing fields, mountain air and scenery, fishing, golf. Three first classes gained at Oxford in 1908, viz., Classics, Mathematics, Science; numerous other distinctions in work and play. Resident Master for every 16 boys; close individual attention. Complete charge of pupils from abroad. Apply HEAD MASTER.</p>
<p style="text-align: center;">SOUTHPORT MODERN SCHOOL.</p> <p>HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.C.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. Carr. J. C. UNDERWOOD, A.C.P., F.R.G.S., Head Master. (Registered teacher.)</p>	<p style="text-align: center;">SCHOOLS FOR BOYS AND GIRLS.</p> <p>PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—UNIVERSITY SCHOLASTIC AGENCY, 122, Regent Street, W. (Est. 1868.)</p>
<p style="text-align: center;">BROMSGROVE SCHOOL, WORCESTERSHIRE.</p> <p>AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £20. There are also a certain number of reserved places at reduced terms, primarily for sons of Clergymen. Apply, the Head Master, F. J. R. HENDY, M.A.</p>	<p style="text-align: center;">EASTBOURNE COLLEGE.</p> <p>PRESIDENT—THE DUKE OF DEVONSHIRE. Head Master—Rev. F. S. WILLIAMS, M.A., late Assistant Master at Rugby School. Special Army and Engineering Classes. Physical Drill compulsory for the whole School. Cadet Corps. New buildings, racquets and five courts, swimming-bath, &c. Exhibitions for Sons of Officers and Clergy.</p>
<p style="text-align: center;">BERKHAMSTED SCHOOL.</p> <p>PREP. FOR UNIVERSITY, ARMY, Navy, Scientific, and Medical Life. Junior School, quite separate houses, teaching, and life; successful prep. for Senior School and for Navy. Apply HEAD-MASTER, School House.</p>	<p style="text-align: center;">OAKHILL SCHOOL for Daughters of Gentlemen, 9 Ridgway Place, Wimbledon Common.—Principals: The Misses HEAD and STEPHENS. Resident and Day Pupils received. Thoroughly sound, modern education without undue pressure. Individual attention. Sole charge of children whose parents are residing abroad. Resident and visiting Specialists.</p>

CROSSLEY & CO. (Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

ADVERTISEMENTS.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Viaduct Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :—**Monolithic Construction.** | **Light, Durable,**
Economical, Fireproof. | **Vibrationless, Sanitary.**

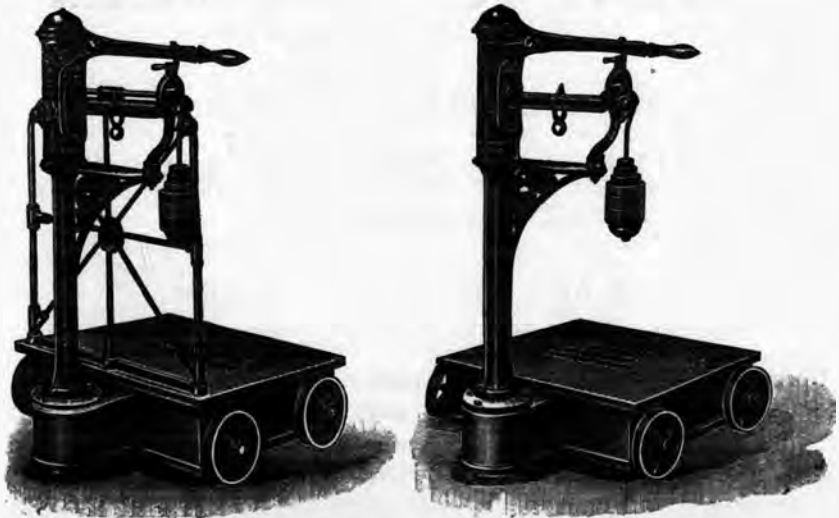
More than 16,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories, Grain Silos, Coal Hoppers, Reservoirs, Wharves, Jetties, Retaining Walls, Piers, Bridges up to 200 ft. clear span, Water Tower, Swimming Baths, Water and Sewer Pipes, &c., &c., are now in use.

A LARGE NUMBER OF WELL-MATURED FERRO-CONCRETE PILES OF DIFFERENT LENGTHS AND SECTIONS KEPT IN STOCK AT OUR HULL DEPÔT READY FOR IMMEDIATE SHIPMENT.

HENRY POOLEY & SON, LIMITED.



Manufacturers of every Description of Weighing Machinery.

Head Office:—**TEMPLE STREET, BIRMINGHAM.**

Telegrams :—*Pooley, Birmingham.*



6-hour & 12-hour sizes fitted
with auxiliary Light.

PORTABLE Acetylene Lamps.

FLARE LIGHTS Each 500 to 5,000 c.p.

**PATENT ADJUSTABLE AND SELF-
CLEANING BURNER.**

Flame can be regulated without disturbing Light.

☞ No attention required after lighting. ☞

HAND FLARES.

HAND LAMPS.

HOUSE GENERATORS.

Full Particulars from the Patentees—

C. C. WAKEFIELD & CO.,

27, CANNON STREET, LONDON, E.C.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph
Office, or at the Offices of any of the Atlantic Cable
Companies, which register addresses free. No charge
for the words "Via Pacific."

**Queen Anne's Chambers,
Westminster.**

THE "BERKEFELD" FILTER.

GERM PROOF.

THREE

GERM PROOF.

FAMOUS PATTERNS.



N
Travellers'
Pump Filter.

In use
all over the
World.



H
House Filter for attaching to
Service Pipe over Sink.

Simple in
Construction.
Most easily
Cleaned.



Drip Filter,
made in 4 sizes.

The BERKEFELD FILTER CO., LTD.,
121, Oxford Street, LONDON, W.

BLAGDEN, WAUGH & CO.,

50 & 51, LIME STREET, LONDON, E.C.

Contractors to Admiralty, War Office and India Office, also to
Colonial and Foreign Governments.

Tar, Ammonia, and other Chemical Products.

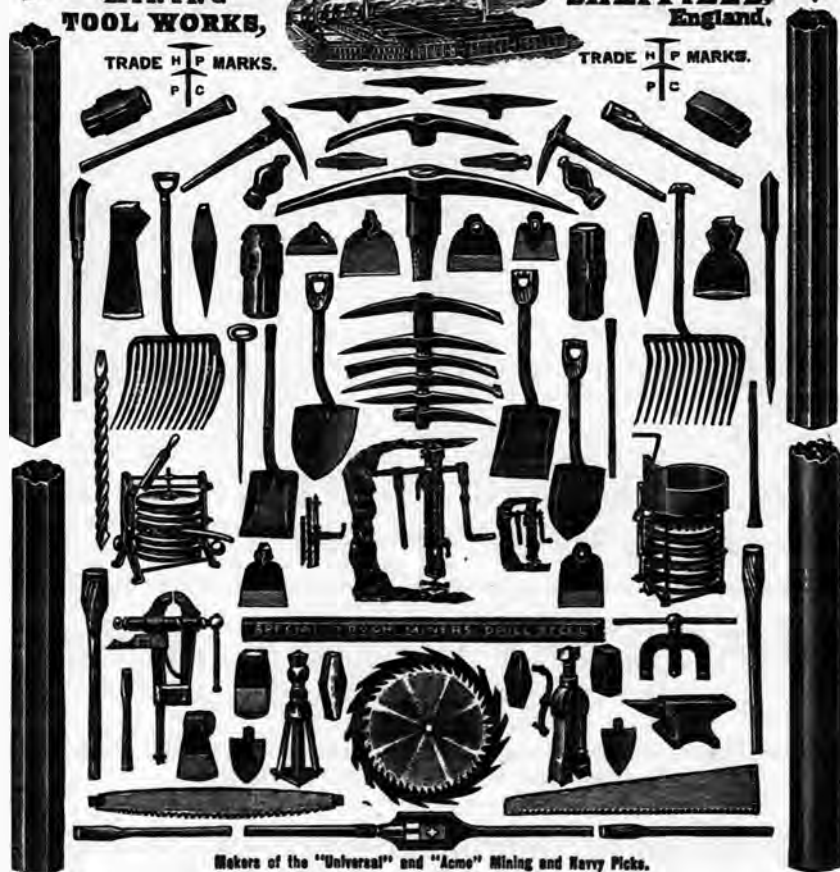
To-day's prices, ex
works, England.

Coal Tar Pitch	...	19s. 6d.	per ton, in bulk.
Creosote	...	3d.	" gall.
Naphthaline	...	£8	" ton, in bags.
Carbolic Acid, B.P. Xtals	...	4½d.	" lb.
Ditto Liquid, 95/99 %	...	10d.	" gall.
Disinfecting Fluid, soluble in water	...	7½d.	" "
Sheep Dip	...	10d.	" "
Refined Tar	...	12s.	" barrel.
Sulphate of Ammonia, 24½ %	...	£11 10s.	" ton.
Carbonate of Ammonia	...	3½d.	" lb.
Liquid Ammonia	...	8d.	" "
Potassium Cyanide, 98/100 %	...	7½d.	" "
Sodium Cyanide	...	7d.	" "
Prussiate of Potash, Yellow	...	4½d.	" "
Arsenic, 99 % White, Powdered	...	£16	" ton.
Black Varnish	...	6d.	" gall.

SPECIAL ATTENTION GIVEN TO COLONIAL ORDERS.

Enquiries solicited for Chemicals.

THE HARDY PATENT PICK CO. Ltd., MINING TOOL WORKS, SHEFFIELD, England.



Makers of the "Universal" and "Acme" Mining and Navy Picks.

HAND & POWER BORING MACHINES for ROCK & COAL.

PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS,
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Rasps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

**Simplest and most durable machines extant
for Mines and Quarries.**

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1908.

Issued Quarterly.

London :

WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

London Office :



9, VICTORIA ST., S.W.

CAMMELL LAIRD & CO. LTD.

Head Office: **CYCLOPS WORKS, SHEFFIELD.**

Works :

Grimeathorpe Ordnance, Steel, Tyre and Spring Works,
Sheffield.
Yorkshire Steel and Iron Works, Penistone.
Derwent Iron and Steel Works, Workington.
Lowther Iron Works, Workington.
Solway Iron Works, Maryport.
New Oake Collieries, near Barnsley.
Clyne Valley Colliery, Swansea.
Shipyard and Engineering Works, Birkenhead.

Manufacturers of

STEEL RAILS AND FISHPLATES,

Tyres, Straight and Crank Axles, Springs, Buffers,
Wheel Centres and Castings for Locomotives, Carriages and Wagons,
Spring Steel Billets Blooms Bars

MARINE CASTINGS AND FORGINGS FOR TURBINES,

And all other purposes.

Any Size or Weight. In the Rough or Machined.

Sole Licensees & Makers in the United Kingdom of the "ABT" System of Rack Railway
for Steep Grade Lines.

ARMOUR PLATES, GUN SHIELDS, PROJECTILES,

CYCLONE

HIGH SPEED STEELS.

"H.R.D."

"0172."

ALL CLASSES OF TOOL AND MINING STEEL,

SHOES AND DIES. FILES AND RASPS

Special Manganese Steel for Mining Machinery Parts.

Makers of

BATTLESHIPS, CRUISERS, DESTROYERS, PASSENGER AND
CARGO STEAMERS, MARINE ENGINES & BOILERS.

Contractors to Admiralty, War Office, Crown
Agents and Foreign Governments.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Billiter Buildings, Billiter Street,
LONDON, E.C.**

West End Branch: DEWAR HOUSE, HAYMARKET, S.W.

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

WAY & CO. act as buying Agents for Firms on lowest possible Commission.

All kinds of Insurance effected:

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

“The African” Liqueur Whisky,

**SPECIALLY BLENDED FOR THE TROPICS,
OVER 9 YEARS OLD.**

WAY & CO. Ltd.,

“THE AFRICAN” COOK’S BASKET.

“THE AFRICAN” LUNCHEON BASKET.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed.
It can be set up or taken down in one minute without bolt or screw.
It is neat in appearance and light in weight, being only 28 lbs.
It is a giant in strength.
It is rigid.

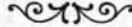
Very suitable for Ambulance purposes: can be used as a STRETCHER.

It does not squeak or become shaky. It is very comfortable to sleep on. It can be changed
into a hammock in twenty seconds.

HANDY-COSY BED CO.,

49, LEADENHALL STREET, LONDON, E.C.

CLAYTON MACHINES.



FUMIGATION AND DISINFECTION.

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

CONTRACTORS TO

INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.



Silver Medal,
Sydney, 1879.



Registered
Trade Mark.



Awarded First-Class Medal for
Prismatic Compass & Stand, 1893.

Cable Address :
"Alfazimuth,
London."



Second Award,
Melbourne, 1880.

HIGHEST AWARDS FOR COMPASSES, BAROMETERS, AND SUN-DIALS.

Instrument Makers
TO
THE ADMIRALTY,
WAR OFFICE,
INDIA OFFICE,
&c.

Makers of

Abney's Levels,
Abney's Levels and
Prismatic Compass
Combined, Barker's
Patent.
Aneroid Barometers, for
Pocket, Surveying and
Mining, with Barker's
Registered Altitude
Scales.
Box Sextant & Prismatic
Compass Combined,
Barker's Patent.
Box Sextants.
Clinometer Rules.
Clinometer and Sight
Compass Combined,
Barker's Improved.

ESTABLISHED 1848.

BARKER'S PATENT ALTITUDE INSTRUMENT AND PRISMATIC COMPASS COMBINED.

(PATENT 1,926)



As Altitude Instrument
and Clinometer.

Made in 3 and 4 inch sizes, with Card Dial or
Aluminium Ring.

With this Instrument Horizontal Angles,
Compass Bearings, and Rise and Fall of
any surface in degrees or inches per
yard, can be obtained with accuracy and
despatch.

Prices and further particulars sent upon application.

Full directions for use sent with each Instrument.

Barker's new Patent Surveying & Mining
Aneroid in Aluminium, with Vernier
reading to 1 foot; full particulars upon
application.



As Prismatic
Compass.

Instrument Makers
TO
LONDON COUNTY
COUNCIL,
GOVERNMENT
LABORATORY,
&c.

Makers of

Ediographs.
Levels, all kinds.
Levelling Staves.
Pentagraphs.
Prismatic Compasses (a
speciality).
Protractors, all kinds.
Range Finders.
Rules, Parallel and
Rolling.
Sun-Dials.
Thermometers of every
description.
Theodolites, &c., &c.

A.B.C. CODE USED.
5th Edition.

F. BARKER & SON,

SUN-DIAL HOUSE, 12, CLERKENWELL ROAD, LONDON, E.C.,
Makers of Drawing, Surveying, and Scientific Instruments of every description.

ILLUSTRATED BOOKLET AND PRICE LISTS SENT POST FREE UPON APPLICATION.

COLONIAL POSTAGE STAMPS.

WANTED TO PURCHASE

Stamps from all British Colonies in large or small quantities, used or unused.

PROVISIONALS and HIGH VALUES particularly desired.

Accumulations from Firms' Correspondence, Government Remainders, &c., purchased. No quantity too large for me to handle.

All offers are promptly attended to and the best prices paid. Goods sent instead of cash if preferred.

Old issues especially wanted, used or unused. Extra high prices paid for Stamps in complete sheets or large blocks.

Residents in all parts of the world should send me any Stamps they may wish to dispose of. Satisfaction Guaranteed.

Newly issued Provisionals purchased at a good percentage over face value if sent to me within a few weeks of issue, while they are still novelties.

Highest references, Banker's or otherwise, given if desired.

ALL KINDS OF STAMPS BOUGHT, SOLD AND EXCHANGED.

Publisher of "The West-End Philatelist." Price 1/6 per annum, post free. The best paper for stamp collectors.

D. FIELD,

4 & 5, The Royal Arcade, Old Bond Street,
LONDON, W., England.

ESTABLISHED 1864.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

ADVERTISEMENTS.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

ADVERTISEMENTS.

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896
SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. II.

JANUARY, 1909.

No. 3.

CONTENTS.

EDITORIAL NOTES	193
Political Position in Canada and Australia—Cheap Telegrams— New Coins—Miscellaneous Items.	
AFTER THE BOER WAR	211
EARLY COLONIAL HISTORY	215
RACE CHARACTERISTICS OF MAURITIUS	220
THE ONE FATHOM BANK FERRO - CONCRETE LIGHTHOUSE, STRAITS SETTLEMENTS	223
By Col. the Hon. A. Murray, V.D., M.I.C.E., F.R.C.I.	
BUSINESS NOTES	228
RAILWAY NOTES	240
Uganda—Nigeria—Gold Coast—British Honduras, &c.	
MEDICAL NOTES	249
REVIEWS AND NOTICES	256
COLONIAL STAMPS	267
THE FUTURE OF THE WEST INDIES—LETTER	269
RECENT APPOINTMENTS	272
COLONIAL OFFICIALS ON LEAVE OF ABSENCE	274

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-.**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKCRAFT, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON." |

Esmond Hotel,
"AGROUP, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones. Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-.**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8 6 to 10 6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESS.—

Kingsley Hotel,
"BOACRAFF, LONDON."

Thackeray Hotel,
"THACKERAY, LONDON."

Esmond Hotel,
"AESOUR, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

BLAGDEN, WAUGH & CO.,

50 & 51, LIME STREET, LONDON, E.C.

Contractors to Admiralty, War Office and India Office, also to Colonial and Foreign Governments.

Tar, Ammonia, and other Chemical Products.

		To-day's prices, ex works, England.	
Coal Tar Pitch	...	19s.	per ton, in bulk.
Creosote	...	2½d.	" gall.
Naphthalene	...	26	" ton, in bags.
Carbolic Acid, B.P. Xtals	...	4d.	" lb.
Ditto Liquid, 96/99 %	...	11d.	" gall.
Disinfecting Fluid, soluble in water	...	7½d.	" "
Sheep Dip	...	10d.	" "
Refined Tar	...	12s.	" barrel.
Sulphate of Ammonia, 24½ %	...	£11	" ton.
Carbonate of Ammonia	...	3½d.	" lb.
Liquid Ammonia	...	3d.	" "
Potassium Cyanide, 98/100 %	...	7½d.	" "
Sodium Cyanide	...	7d.	" "
Prussiate of Potash, Yellow	...	4½d.	" "
Arsenic, 99 % White, Powdered...	...	£15	" ton.
Black Varnish	...	6d.	" gall.

SPECIAL ATTENTION GIVEN TO COLONIAL ORDERS.

Enquiries solicited for Chemicals.

CLAYTON MACHINES.



FUMIGATION AND DISINFECTION.

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

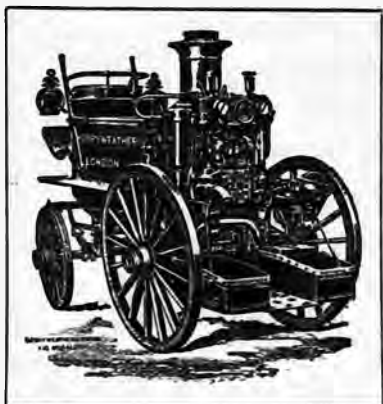
Tgms. : "Unconsumed, London."

CONTRACTORS TO

INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

MERRYWEATHERS' PATENT "Greenwich Gem" Steam Fire Engine.

THE LIGHTEST AND BEST STEAM FIRE ENGINE ON THE MARKET.



ADVANTAGES.

Fire Door and Machinery at rear.

Accessibility of Valves.

Simplicity of Machinery.

No Steam Pipes to cause trouble.

A FIRE BRIGADE CHIEF writes:—

"The 'Gem' is so compact and handy that it can easily be stoked and worked by one man—a fact that does not apply to other Fire Engines."

Adopted by London and other Fire Brigades all over the World.

MAKERS OF EVERY DESCRIPTION OF MOTOR FIRE APPARATUS.

MERRYWEATHERS' "London Made" DUB-SUB CANYAS HOSE, woven on Improved Looms at Greenwich Road Works. It is capable of standing great pressure, and is therefore suitable for the most powerful Steam Fire Engines and Pumps.

WRITE FOR CATALOGUES AND LISTS.

MERRYWEATHER & SONS ^{Ld.}
63, LONG ACRE, W.C. ; & WORKS, GREENWICH, S.E.,
LONDON.

ESTABLISHED OVER 200 YEARS.

ADVERTISEMENTS.

EMPIRE TYPEWRITER.



Price £13 2s. 6d.

STANDARD VISIBLE MACHINE.

UNIVERSAL KEYBOARD.

EASILY LEARNED AS IT IS SIMPLE IN CONSTRUCTION.

NO TROUBLE TO KEEP IN ORDER.

QUITE PORTABLE.

Fitted with Tin, Canvas, or Leather Travelling Case.

The EMPIRE TYPEWRITER Co., Ltd., 77, Queen Victoria St., London, E.C.

CROWN PRESERVED COAL CO., LTD., Admiralty Contractors.

Awards :

LONDON	1862
PARIS	1876
LIVERPOOL	1886
JAMAICA	1891



Awards :

ROYAL NAVAL 1891 & 1906
CHICAGO..... 1893
BORDEAUX..... 1895
MEXICAN.....1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—CARDIFF AND PORT TALBOT.

Telegraphic Address :—"Crown, Cardiff."

Telephone :—Nat. No. 211.

TORBAY PAINT.

THE MOST RELIABLE

PAINT FOR

TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,

**26, 27 & 28, BILLITER STREET,
LONDON, E.C.**

BENSON'S

"EVERLASTING"

"EMPIRE" PLATE
FOR
HOME AND COLONIAL WEAR.

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER & TEA SETS, &c.

"EMPIRE" PLATE

Excels all others and is
the best wearing substitute
for solid silver.



"The Times"
**MONTHLY
PAYMENTS**
IS AVAILABLE.

"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plate and
Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 12s. to £100.)

BENSON'S do not charge extra for buying.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph
Office, or at the Offices of any of the Atlantic Cable
Companies, which register addresses free. No charge
for the words "Via Pacific."

Queen Anne's Chambers,
Westminster.

THE MOSS BAY

HEMATITE IRON AND STEEL COMPANY, LIMITED.

WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

**STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.**

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

**29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.**

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—


**"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.**

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

HUGO GRIEBERT & CO.,

Dealers in Rare Postage Stamps.



IMPORTERS OF UNUSED AND
USED COLONIAL STAMPS. 

*Buyers of Important collections of Postage Stamps,
Mixed Lots of Used and Unused Stamps purchased.*

A Specialty made of importing large quantities of surcharged stamps that are provisionally issued from time to time in the Colonies and other Countries. A good commission paid for prompt and immediate supplies.

Stocks or Government Remainders of obsolete Unused Stamps

PURCHASED AT HIGHEST POSSIBLE PRICES.

 We have bought by far the largest quantity of such Government Remainders that have been for sale in the various Countries within the last Twenty years. 

Full particulars of quantities, &c., should be communicated to us immediately.

WE ONLY BUY FOR CASH through our Bankers, THE LONDON CITY AND MIDLAND BANK, who settle on our behalf—through their Agents in any part of the world.

*A Specimen Number of "Griebert's Philatelic Notes and Offers"
sent gratis to all applicants.*

HUGO GRIEBERT & CO.

Five Gold, &c., Medals at various Philatelic Exhibitions.
Member of the Jury, Rotterdam, 1907

170, STRAND, LONDON, W.C.

Telegrams and Cables: "GRIEBERT, LONDON."

A. B. C. Code, 5th Edition.

EDUCATIONAL ANNOUNCEMENTS.

BROMSGROVE SCHOOL, WORCESTERSHIRE.

AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £20. There are also a certain number of reserved places at reduced terms, primarily for sons of Ulgymen. Apply, the Head Master, F. J. R. HENDY, M.A.

SCHOOLS FOR BOYS AND GIRLS. PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—**UNIVERSITY EDUCATIONAL AGENCY,** 122, Regent Street, W. (Est. 1888.)

OLDEN LODGE SCHOOL, PURLEY, SURREY.

REFINED HOME SCHOOL FOR GIRLS, situated among the Surrey Hills. Every educational advantage. London Professors for all branches of Music and Art. Every home comfort. Terms moderate. Principal, Miss GOVEY.

NEWTON COLLEGE, NEWTON ABBOT, SOUTH DEVON.
SMAALL PUBLIC SCHOOL in mild but bracing climate. Prepares boys from 8 years of age for Army, Navy, Universities and Professions. Fine buildings in 20 acres of ground. Preparatory house separate. Write for Prospectus to Rev. HEAD MASTER.

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.C.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. Capt. J. C. UNDERWOOD, A.C.P., F.R.G.S., Head Master. (Registered teacher.)

KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON, S.W.
(Conducted by the Council of King's College, London.)

TERMS in 1909, beginning January 20th, April 28th, September 22nd. For Prospectus (Boards and Day Boys), apply to the HEAD-MASTER.

BEDFORD.

THE MODERN SCHOOL.

ONE OF HARPUR TRUST SCHOOLS with very low fees. New buildings recently opened. Splendid science rooms, art rooms, gymnasium, etc. Public school life and sound education for professions, business or engineering. Bedford a specially attractive residential town. Centre for Indian and Colonial children. For illustrated Prospectus apply to the Head Master, C. W. KAYE, M.A., Oxon.

GIRLS.

BOURNEMOUTH.

FONTAINEBLEAU SCHOOL, MANOR ROAD offers to Daughters of Gentlemen liberal Education, with def. Ch. teaching. Preparation for all exams. Bright home life. Res. graduates 4; language mistresses 3; gold medalist for Swedish and medical gymnastics, games, riding, cycling, fencing. Entire charge at inclusive fees taken of pupils between the ages of 7-18 whose parents are abroad. Principal: Miss C. A. ROWLAND.

HOME SCHOOL FOR GIRLS.

LEIGH COURT, near CLIFTON, BRISTOL. Principal, Miss MEDINA S. GRIFFITHS, assisted by an efficient staff of Teachers. Extensive and beautiful grounds afford special advantages for open-air life and games. Preparation for University Examinations undertaken. Inclusive terms. Prospectus on application.

CHRIST COLLEGE, BRECON.

PUBLIC SCHOOL OF 100 BOYS, preparing for Universities, Colonial Office, business and professional careers. Fees: Fifty Guineas. Admirable buildings, 30 acres playing fields, mountain air and scenery, fishing, golf. Three first classes gained at Oxford in 1908, viz., Classics, Mathematics, Science; numerous other distinctions in work and play. Resident Master for every 15 boys; close individual attention. Complete change of pupils from abroad. Apply HEAD MASTER.

All LOVERS of GOOD LINEN

SHOULD WRITE TO

ROBINSON & CLEAVER, LTD., BELFAST,

who not only manufacture

IRISH HOUSEHOLD LINENS, TABLE DAMASKS, IRISH CAMBRIC HANDKERCHIEFS, SHIRTS, COLLARS, &c.,

But supply the Choicest Goods direct to the public and save consumers ALL INTERMEDIATE PROFITS.
Samples and Price Lists post-free to any part of the World.

ROBINSON & CLEAVER, LTD. (Manufacturers to the King), Belfast, Ireland.

To prevent delay all enquiries should be sent to 44 P. Donegall Place, Belfast.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.

ROYAL DOULTON POTTERIES, LONDON, S.E.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Viaduct Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO=CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :—Monolithic Construction, | Light, Durable.
Economical, Fireproof, | Vibrationless, Sanitary.

More than 16,000 Examples of HENNEBIQUE FERRO=CONCRETE



Warehouses, Mills, Factories,
Grain Silos, Coal Hoppers,
Reservoirs, Wharves, Jetties,
Retaining Walls, Piers, Bridges
up to 200 ft. clear span, Water
Tower, Swimming Baths, Water
and Sewer Pipes, &c., &c., are
now in use.

A LARGE NUMBER OF
WELL-MATURED FERRO-
CONCRETE PILES OF
DIFFERENT LENGTHS AND
SECTIONS KEPT IN STOCK
AT OUR HULL DEPÔT READY
FOR IMMEDIATE SHIPMENT.

SOUTH METROPOLITAN GAS COMPANY,

709, OLD KENT ROAD, LONDON, S.E.

Manufacturers of

COAL TAR PRODUCTS.

**Anthracene.
Benzole.
Carbolic Acid.
Creosote Oils.
Dark Cresylic Acid.
Disinfectants.
Grease Oils.
Naphthalene, Granu-
lated (Crude).**

**Naphthalene, Sublimed.
Pitch.
Refined Tar.
Solvent Naphtha.
Sulphate of Ammonia
up to 20·75 per cent.
of Nitrogen.
Toluole.**

C.I.F. QUOTATIONS GIVEN ON APPLICATION.

Telegraphic Address: "Metrogas London."

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

**Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.**

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. | Impervious to sun-
Non-Combustible. | heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos-Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath,
plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by ½ in. thick and upwards. Manufactured
under the British Patent Rights.

Sole Concessionaires and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

R. H. STEVENS & Co.,

Type Founders and Manufacturers of Printing Materials,

89, SOUTHWARK STREET,

LONDON, S.E.

Successors to **V. & J. FIGGINS,**

RAY STREET, LONDON, E.C.



**We have the whole of the Plant, including
Punches and Matrices, of the late V. & J.
FIGGINS, and we are adding many up-to-date
faces. We are casting Type on Point Body &
Line as well as on the old Standard Bodies.**

Some New Faces shown here.

THE

BRITISH URALITE CO. (1908), LTD.

Contractors to the Crown Agents and other Government Departments.

FIREPROOF BUILDING SPECIALITIES

(Satisfactorily tested by the British Fire Prevention Committee).

ROOFING. CEILINGS. PARTITIONS. DOORS.

CHEAP. LIGHT. DURABLE. EASILY FIXED.

FUME, ACID AND VERMIN PROOF.

FIVE-ROOMED BUNGALOWS FOR ABOUT £180.

Constructed of Uralite Asbestos.

WARM IN WINTER. COOL IN SUMMER.

ADMIRABLE FOR TROPICAL CLIMATES.

Write for our Colonial Catalogue to

THE BRITISH URALITE CO. (1908), LTD.,

16, ST. HELENS PLACE, LONDON, E.C.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

CROSSLEY & CO. (Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

" Whilst the ' Colonial Office List ' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring accurate and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

" The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

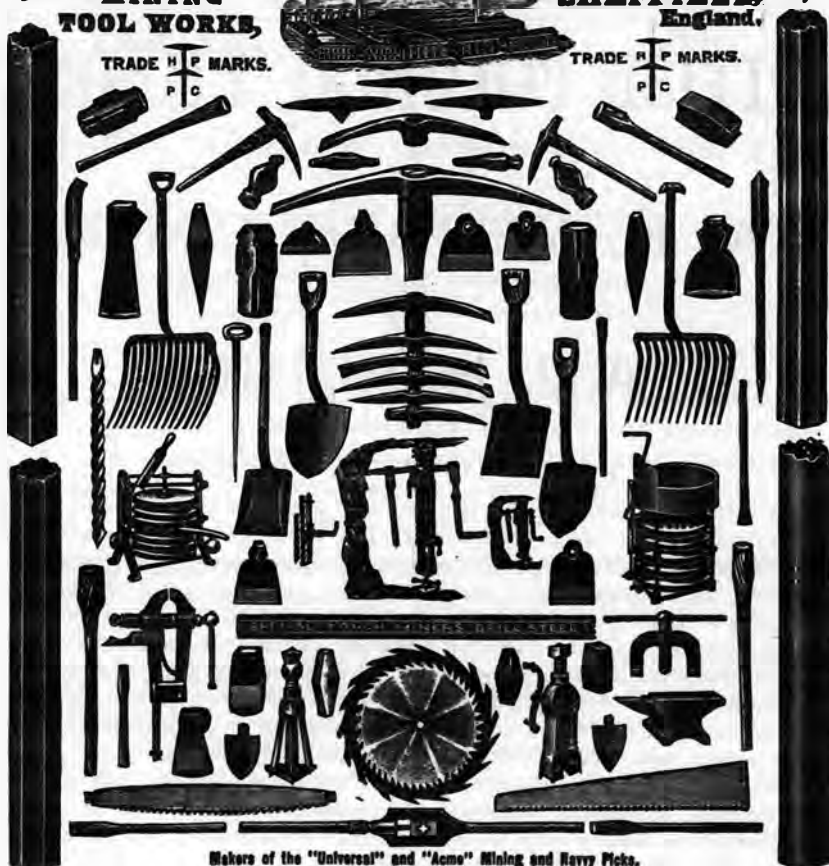
Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

THE
HARDY PATENT PICK Co. Ltd.,
MINING TOOL WORKS, SHEFFIELD, England.



Makers of the "Universal" and "Acme" Mining and Heavy Picks.

HARD & POWER BORING MACHINES for ROCK & COAL,
PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS,
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Rasps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

**Simplest and most durable machines extant
for Mines and Quarries.**

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1909.

Issued Quarterly.

London :

WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

London Office :



9, VICTORIA ST., S.W.

CAMMELL LAIRD & CO. LTD.

Head Office : **CYCLOPS WORKS, SHEFFIELD.**

Works :

Grimesthorpe Ordnance, Steel, Tyre and Spring Works,
Sheffield.
Yorkshire Steel and Iron Works, Penistone.
Derwent Iron and Steel Works, Workington.
Lowther Iron Works, Workington.
Solway Iron Works, Maryport.
New Oaks Collieries, near Barnsley.
Clyne Valley Colliery, Swansea.
Shipyard and Engineering Works, Birkenhead.

Manufacturers of

STEEL RAILS AND FISHPLATES,

Tyres, Straight and Crank Axles, Springs, Buffers,
Wheel Centres and Castings for Locomotives, Carriages and Wagons,

Spring Steel

Billets

Blooms

Bars

MARINE CASTINGS AND FORGINGS FOR TURBINES,

And all other purposes.

Any Size or Weight. In the Rough or Machined.

Sole Licensees & Makers in the United Kingdom of the "ABT" System of Rack Railway
for Steep Grade Lines.

ARMOUR PLATES, GUN SHIELDS, PROJECTILES,

CYCLONE

HIGH SPEED STEELS.

"H.R.D."

"0172."

ALL CLASSES OF TOOL AND MINING STEEL.

SHOES AND DIES. FILES AND RASPS.

Special Manganese Steel for Mining Machinery Parts.

Makers of

**BATTLESHIPS, CRUISERS, DESTROYERS, PASSENGER AND
CARGO STEAMERS, MARINE ENGINES & BOILERS.**

**Contractors to Admiralty, War Office, Crown
Agents and Foreign Governments.**

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Dewar House,
11/12 Haymarket,
LONDON, S.W.**

**Billiter Buildings,
Billiter Street,
— E.C. —**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

WAY & CO. act as buying Agents for Firms on lowest possible Commission.

All kinds of Insurance effected:

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

**"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

The "Handy-Cosy" Bed.

A Light Steel-frame Portable Folding Bed.

- It is a folding Portable Bed.
- It can be set up or taken down in one minute without bolt or screw.
- It is neat in appearance and light in weight, being only 28 lbs.
- It is a giant in strength.
- It is rigid.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER.***

It does not squeak or become shaky. It is very comfortable to sleep on. It can be changed
into a hammock in twenty seconds.

HANDY-COSY BED CO.,

149, LEADENHALL STREET, LONDON, E.C.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.
The War Office.
The Crown Agents for the Colonies.
The India Office and Principal Indian Railways.
&c., &c.



8-hour & 12-hour sizes fitted
with auxiliary Light.

PORTABLE Acetylene Lamps.

FLARE LIGHTS Each 500 to 5,000 c.p.

**PATENT ADJUSTABLE AND SELF-
CLEANING BURNER.**

Flame can be regulated without disturbing Light.

 No attention required after lighting. 

**HAND FLARES.
HAND LAMPS.
HOUSE GENERATORS.**

Full Particulars from the Patentees—

C. C. WAKEFIELD & CO.,
27, CANNON STREET, LONDON, E.C.

CHAS. BAKER & Co.'s



STORES LTD.

High-Class Tailoring and Outfitting

AT STRICTLY MODERATE PRICES.



Special Suits for

Tropical Climates.

Made from the Newest Designs
in Fine Cashmeres and Flannels.

49/6, 57/6, 62/6, 69/6.

Patterns, Fashion Book, and
Measurement Forms post free.

*Only the most Experienced Cutters and
Tailors are employed.*

ALSO . .

**SHIRTS, PYJAMAS, HOSIERY, HATS,
SUN HELMETS, BOOTS AND SHOES,
BAGS AND TRUNKS, &c., &c.**

HEAD DEPÔT AND EXPORT DEPARTMENT :

**271, 272, 273, 274, HIGH HOLBORN,
LONDON.**

NESTLÉ'S CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.
BLACK SHEETS.
WIRE NETTING.
CONSTRUCTIONAL WORK.

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1886.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896

SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. II.

APRIL, 1909.

No. 4.

CONTENTS.

EDITORIAL NOTES

283

Sir C. Lucas's Visit to Australia—The International Waterways Convention—Canadian Immigration—South African National Union—Rhodesian Prospects—South African Agriculture—Northern Nigerian Progress—West Indian Affairs.

THE CESSION OF MALTA

302

TROPICAL HOUSES

305

THE MODERN HARBOUR

308

REVIEWS AND NOTICES

312

Cambridge Modern History—Fiji—Cyprus—United States.

BUSINESS NOTES

323

RAILWAY NOTES

330

MEDICAL NOTES

336

COLONIAL STAMPS

341

THE FUTURE OF THE WEST INDIES—LETTER

350

ULTIMA THULE

352

RECENT APPOINTMENTS

353

COLONIAL OFFICIALS ON LEAVE OF ABSENCE

355

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-.**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKERAT, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON." |

Esmond Hotel,
"AGROUF, LONDON."

LONDON WALL.

LONDON.

190

Dear Sir,

Colonial Office Journal.

Your subscription to above having expired,
we shall be pleased to receive a renewal thereof
for such period as you may desire, accompanied
by remittance.

The terms are 7 - per annum, post free.

Yours faithfully,

WATERLOW & SONS LIMITED.

*The Right Honorable
The Earl of Crawford & T.
formerly Stanley Gibbons Esq
London*

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms,
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-.**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from 8/6 to 10/6 per day.

ALSO UNDER THE SAME MANAGEMENT.

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

The TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES—

Kingsley Hotel,
“BLOOMSBURY, LONDON.”

Thackeray Hotel,
“THACKERAY, LONDON.”

Esmond Hotel,
“ESMOND, LONDON.”

LONDON WALL.

LONDON,

190

Dear Sir,

Colonial Office Journal.

Your subscription to above having expired,
we shall be pleased to receive a renewal thereof
for such period as you may desire, accompanied
by remittance.

The terms are 7/- per annum, post free.

Yours faithfully,

WATERLOW & SONS LIMITED.

*The Right Honorable
The Earl of Crawford K.T.
Gommeson Stanley Gibbons
Strand*



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

BENSON'S

"EVERLASTING"

"EMPIRE" PLATE

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER AND TEA SETS,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE

Excels all others and is
the best wearing substitute
for solid silver.

As far back as the 1862 Exhibition "EMPIRE"
PLATE was awarded Prize Medals for excellence
of manufacture, and it still retains that pre-
eminence for which it was noted 50 years ago.



"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plates and
Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 12s. to £100.)



PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph
Office, or at the Offices of any of the Atlantic Cable
Companies, which register addresses free. No charge
for the words "Via Pacific."

Queen Anne's Chambers,
Westminster.

MERRYWEATHERS' PATENT "Greenwich Gem" Steam Fire Engine.

THE LIGHTEST AND BEST STEAM FIRE ENGINE ON THE MARKET.



ADVANTAGES.

Fire Door and Machinery at rear.

—+—
Accessibility of Valves.

—+—
Simplicity of Machinery.

—+—
No Steam Pipes to cause trouble.

A FIRE BRIGADE CHIEF writes:—

"The 'Gem' is so compact and handy that it can easily be stoked and worked by one man—a fact that does not apply to other Fire Engines."

—+—
Adopted by London and other Fire Brigades all over the World.

—+—
MAKERS OF EVERY DESCRIPTION OF MOTOR FIRE APPARATUS.

—+—
MERRYWEATHERS' "London Made" DUB-SUB CANVAS HOSE,
woven on Improved Looms at Greenwich Road Works. It is
capable of standing great pressure, and is therefore suitable for
the most powerful Steam Fire Engines and Pumps.

—+—
WRITE FOR CATALOGUES AND LISTS.

—+—
MERRYWEATHER & SONS Ltd.
63, LONG ACRE, W.C. ; & WORKS, GREENWICH, S.E.,
LONDON.

ESTABLISHED OVER 200 YEARS.

ADVERTISEMENTS.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Viaduct Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :—Monolithic Construction, Economical, Fireproof, | Light, Durable, Vibrationless, Sanitary.

More than 16,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories, Grain Silos, Coal Hoppers, Reservoirs, Wharves, Jetties, Retaining Walls, Piers, Bridges up to 200 ft. clear span, Water Tower, Swimming Baths, Water and Sewer Pipes, &c., &c., are now in use.

A LARGE NUMBER OF WELL-MATURED FERRO-CONCRETE PILES OF DIFFERENT LENGTHS AND SECTIONS KEPT IN STOCK AT OUR HULL DEPÔT READY FOR IMMEDIATE SHIPMENT

THE MOSS BAY HEMATITE IRON AND STEEL COMPANY, LIMITED.

WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.



6-hour & 12-hour sizes fitted
with auxiliary Light.

PORTABLE Acetylene Lamps.

FLARE LIGHTS Each 500 to 3,000 c.p.

**PATENT ADJUSTABLE AND SELF-
CLEANING BURNER.**

Flame can be regulated without disturbing Light.

No attention required after lighting.

HAND FLARES.

HAND LAMPS.

HOUSE GENERATORS.

Full Particulars from the Patentees—

C. C. WAKEFIELD & CO.,

27, CANNON STREET, LONDON, E.C.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



**PAINT, COLOUR, and
VARNISH
MANUFACTURERS.**

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.

&c. &c.

THE
BRITISH URALITE CO. (1908), LTD.

Contractors to the Crown Agents and other Government Departments.

FIREPROOF BUILDING SPECIALITIES

(Satisfactorily tested by the British Fire Prevention Committee).

ROOFING. CEILINGS. PARTITIONS. DOORS.

CHEAP. LIGHT. DURABLE. EASILY FIXED.

FUME, ACID AND VERMIN PROOF.

Two Recent Orders :

200,000 sq. ft. for an ARGENTINE RAILWAY.

20,000 sq. ft. for an INDIAN GOVERNMENT RAILWAY.

Write for our Colonial Catalogue to

THE BRITISH URALITE CO. (1908), LTD.,
16, ST. HELENS PLACE, LONDON, E.C.

DOULTON'S
GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,

26, 27 & 28, BILLITER STREET,
LONDON, E.C.

BLAGDEN, WAUGH & CO.,

50 & 51, LIME STREET, LONDON, E.C.

Contractors to Admiralty, War Office and India Office, also to
Colonial and Foreign Governments.

Tar, Ammonia, and other Chemical Products.

	To-day's prices, ex works, England.
Coal Tar Pitch	19s. 6d. per ton, in bulk.
Creosote	2½d. " gall.
Naphthalene	2s. " ton, in bags.
Carbolic Acid, B.P. Xals	4d. " lb.
Ditto Liquid, 95/99 %	11d. " gall.
Disinfecting Fluid, soluble in water	7½d. " "
Sheep Dip	10d. " "
Refined Tar	12s. " barrel.
Sulphate of Ammonia, 24½ %	21l 10s. " ton.
Carbonate of Ammonia	8½d. " lb.
Liquid Ammonia	8d. " "
Potassium Cyanide, 98/100 %	7½d. " "
Sodium Cyanide	7d. " "
Prussiate of Potash, Yellow	4½d. " "
Arsenic, 99 % White, Powdered	2½s. " ton.
Black Varnish	6d. " gall.

SPECIAL ATTENTION GIVEN TO COLONIAL ORDERS.

Enquiries solicited for Chemicals.

FUMIGATION AND DISINFECTION

IN USE ALL OVER THE WORLD.

Clayton Fire Extinguishing and Ventilating Company, Limited,

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

R. H. STEVENS & Co.,

Type Founders and Manufacturers of Printing Materials,

**89, SOUTHWARK STREET,
LONDON, S.E.**

Successors to V. & J. FIGGINS.

RAY STREET, LONDON, E.C.

We have the whole of the Plant, including Punches and Matrices, of the late V. & J. FIGGINS, and we are adding many up-to-date faces. We are casting Type on Point Body & Line as well as on the old Standard Bodies.

Some New Faces shown here.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

EDUCATIONAL ANNOUNCEMENTS.

SCHOOL FOR YOUNG GENTLEWOMEN
of good social position from all parts of the
Empire and from foreign Countries.

GARRATTS HALL, BANSTEAD. SURREY HILLS.

Garratts Hall, a fine mansion, in beautiful
grounds of forty-five acres, is situated on the
crest of a hill 670 feet above sea level, among
the pines of Surrey.

The aim of the School is to fit girls for the
best style of home life.

There are all forms of games, including Golf,
Hunting, Riding, Driving and Cycling. Large
stabling for pupils' own horses.

The education is cultured and on modern
lines. There is a large staff of resident
Specialists and regular visiting Masters.
Sanatorium and Studio.

Music, Art, Languages and Literature are
made a speciality.

Pupils are received in sole charge, and can
travel in the vacations if desired.

Address—THE LADY PRINCIPAL.

CHRIST COLLEGE, BRECON.

PUBLIC SCHOOL OF 100 BOYS,
preparing for Universities, Colonial Office,
business and professional careers. Fees: Fifty
Guineas. Admirable buildings, 80 acres playing
fields, mountain air and scenery, fishing, golf.
Three first classes gained at Oxford in 1908, viz.,
Classics, Mathematics, Science; numerous other
distinctions in work and play. Resident Master
for every 15 boys; close individual attention.
Complete charge of pupils from abroad.

Apply HEAD MASTER.

BEDFORD.

THE MODERN SCHOOL.

ONE OF HARPUR TRUST
SCHOOLS with very low fees. New
buildings recently opened. Splendid science
rooms, art rooms, gymnasium, etc. Public
school life and sound education for professions,
business or engineering. Bedford a specially
attractive residential town. Centre for
Indian and Colonial children. For illustrated
Prospectus apply to the Head Master,
C. W. KAYE, M.A., Oxon.

SCHOOLS FOR BOYS AND GIRLS.

PROSPECTUSES OF THE LEADING
English and Continental Schools, with
every information and advice, supplied to
Parents and Guardians **FREE OF CHARGE**.
Please state pupils' ages, locality preferred,
and approximate school fees to be paid.—
UNIVERSITY EDUCATIONAL AGENCY,
122, Regent Street, W. (Est. 1858.)

PARSONS MEAD, ASHTEAD, SURREY.

GOOD HOME-SCHOOL for the
Daughters of Gentlemen. Beautiful
Grounds of six acres. Excellent Teachers
for all subjects. Training for Home Life with
special attention to Literature, Music and Art.
References kindly permitted to the Countess
of Pembroke, the Lady Robert Cecil,
Mrs. Utterson and others.

HILL BROW, HEMEL HEMPSTEAD, HERTS.

SCHOOL FOR GIRLS.

Principal—Miss WHITE.

A SMALL HOME SCHOOL,
particularly adapted for girls whose
parents are abroad. Small numbers. Highly
efficient Mistresses and Visiting Masters.
Special attention to Health and Physical
Training. Reference kindly permitted to
Percy Christopherson, Esq., M.A., Lockers Park,
Hemel Hempstead; Mrs. H. M. Draper,
63, Chepstow Place, Kensington, W.

HOME SCHOOL FOR GIRLS.

**LEIGH COURT, near CLIFTON,
BRISTOL.** Principal, Miss MEDINA
S. GRIFFITHS, assisted by an efficient staff of
Teachers. Extensive and beautiful grounds
afford special advantages for open-air life and
games. Preparation for University Examinations
undertaken. Inclusive terms. Prospectus
on application.

**KING'S COLLEGE SCHOOL,
WIMBLEDON COMMON, LONDON, S.W.**
(Conducted by the Council of King's
College, London.)

TERMS in 1909, beginning January
20th, April 28th, September 2nd. For
Prospectus (Boarders and Day Boys), apply to
the HEAD-MASTER.

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent
Staff, including B.A., M.Sc., F.C.V.,
A.R.C.O., etc. Preparation for all examina-
tions. Foreign boys received. Gymnasium
and Swimming Clubs, Cadet Company, Games,
etc. Capt. J. C. UNDERWOOD, A.C.P.,
F.R.G.S., Head Master. (Registered teacher.)

NEWTON COLLEGE, NEWTON ABBOT, SOUTH DEVON.

SMALL PUBLIC SCHOOL in mild
but bracing climate. Prepares boys from
8 years of age for Army, Navy, Universities
and Professions. Fine buildings in 20 acres
of ground. Preparatory house separate.
Write for Prospectus to Rev. HEAD MASTER.

BROMSGROVE SCHOOL, WORCESTERSHIRE.

AT LEAST SIX SCHOLARSHIPS
AND EXHIBITIONS are offered
annually in July. Value from £80 to £20.
There are also a certain number of reserved
places at reduced terms, primarily for sons of
Clergymen. Apply, the Head Master,
F. J. B. HENDY, M.A.

UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.

(A constituent College of the University
of Wales.)

President: Lord RENDEL

Principal: T. F. ROBERTS, M.A., LL.D.

PREPARES FOR DEGREES IN
Arts, Science, Law, Music, and
Agriculture. Hostel accommodation for over
300 Women Students. Scholarships and
Exhibitions given. Apply to the Registrar,
University College, Aberystwyth.

RECOGNISED HIGH-CLASS SCHOOL FOR GIRLS.

MISS PENN receives a limited
number of pupils. Large staff of
resident Mistresses and visiting Masters.
Individual Christian influence. Home com-
forts. Large house and garden. Tennis Courts
and field for hockey and cricket. Riding,
cycling, bathing. St. John's South View,
Belwyth Road, Eastbourne. Terms on
application.

EDUCATIONAL ANNOUNCEMENTS.—continued.

<p>OLDEN LODGE SCHOOL, PURLEY, SURREY. REFINED HOME SCHOOL FOR GIRLS, situated among the Surrey Hills. Every educational advantage. London Pro- fessors for all branches of Music and Art. Every home comfort. Terms moderate. Principal, Miss GOVEY.</p>	<p>GIRLS. BOURNEMOUTH. FONTAINEBLEAU SCHOOL, MANOR ROAD offers to Daughters of Gentlemen liberal Education, with def. Ch. teaching. Preparation for all exams. Bright home life. Hon. graduates 4; language mis- tresses 3; gold medalist for Swedish and medial gymnastic, games, riding, cycling, fencing. Entire charge at inclusive fees taken of pupils between the ages of 7-18 whose parents are abroad. Principal: Miss C. A. ROWLAND.</p>
--	---

CROWN PRESERVED COAL CO., L^{TD.},

Admiralty

Contractors.

Awards:

LONDON	1862
PARIS	1876
LIVERPOOL	1886
JAMAICA.....	1891

TRADE



MARK.

Awards:

ROYAL NAVAL 1891 & 1906
CHICAGO..... 1893
BORDEAUX..... 1895
MEXICAN .....1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address:—"Crown, Cardiff."
Telephone:—Nat. No. 211.

ALL LOVERS of GOOD LINEN

SHOULD WRITE TO

ROBINSON & CLEAVER, LTD., BELFAST,

who not only manufacture

**IRISH HOUSEHOLD LINENS, TABLE DAMASKS, IRISH
CAMBRIC HANDKERCHIEFS, SHIRTS, COLLARS, &c.,**

But supply the Choicest Goods direct to the public and save consumers ALL INTERMEDIATE PROFITS.
Samples and Price Lists post-free to any part of the World.

ROBINSON & CLEAVER, LTD. (Manufacturers to the King), Belfast, Ireland.

To prevent delay all enquiries should be sent to 44 P. Donegall Place, Belfast.

CANADIAN PACIFIC

OCEAN AND RAIL SERVICES TO AND THROUGH CANADA.

TRANSATLANTIC—Fast Line to Canada from Liverpool. Only four days open sea by
"Empress" Steamers. Unsurpassed Service at Moderate Fares.

TRASCANADA—Luxurious Train Service from Atlantic to Pacific.

TRANSPACIFIC—"Empress" Steamers to Japan and China. Canadian-Australian Mail
Service via Vancouver to Australia and New Zealand.

APPLY FOR PARTICULARS TO

CANADIAN PACIFIC RAILWAY, 62-65, Charing Cross, London, S.W.

OR LOCAL AGENTS EVERYWHERE.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorized Capital	- £1,000,000.	Paid-Up Capital	- £100,000.
Subscribed Capital	- £250,000.	Reserve Fund	- £50,000.

Head Office : 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address :—"BULLION," LIVERPOOL.

London Office : 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address :—"ARREGLO," LONDON.

Hamburg Office : GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address :—"BULLION," HAMBURG.

Branches :

GAMBIA—Bathurst. **SIERRA LEONE**—Freetown.

GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches :—"BANKING."

Agencies :

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LAHOU, OBUASSI, SALTPOND, WINNEBAH, BONNY, ECWANCA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

T. STANLEY ROGERSON, Esq., J.P.

SIR JOHN KIRK, G.C.M.G., K.C.B.

CLIFFORD B. EDGAR, Esq., J.P.

ALEXANDER MILLER, Esq.

GEORGE MILLER, Esq.

Manager and Secretary—LICHFIELD H. MOSELEY, Esq.

Head Office : MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu, Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Dagama, Egwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bara-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Advances made against Shipping Documents. Banking business of every description transacted.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To Bermuda outwards there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf, Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO.,

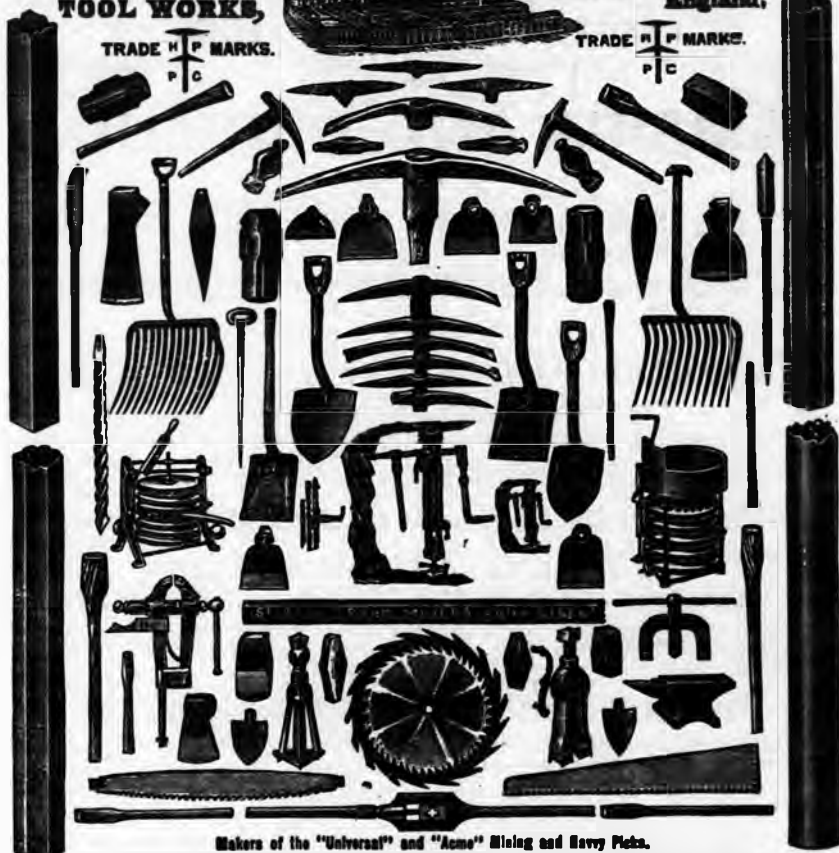
COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

THE
HARDY PATENT PICK Co. Ltd.,
MINING TOOL WORKS, SHEFFIELD, England,



Makers of the "Universal" and "Acme" Mining and Heavy Picks.

HAND & POWER BORING MACHINES for ROCK & COAL.

PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS,
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Raps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

**Simplest and most durable machines extant
 for Mines and Quarries.**

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

APRIL, 1909.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

London Office :



9, Victoria St., S.W.

Cammell Laird & Co.

LIMITED.

Head Office : CYCLOPS WORKS, SHEFFIELD.



GROUP OF SPRINGS.

STEEL RAILS AND FISHPLATES.

Tyres, Straight and Crank Axles, Springs, Buffers, Wheel Centres and Castings for Locomotives, Carriages and Wagons.

Cammell's "VICTORIA" Brand Tyres.

Sole Licences and Makers in Great Britain of the "A.B.T." System of Rack Railway.

HIGH SPEED STEELS.

CYCLONE SPECIAL

For High Speeds and Heavy Cuts, may be hardened in Air, Oil, or Water.

"H.R.D."

Self hardening Steel, for Turning Brake Planished Tyres, &c.

Shoes and Dies. Files and Rasps.

ARMOUR PLATES, GUN FORGINGS, PROJECTILES.

Makers of . . .

BATTLESHIPS, CRUISERS, DESTROYERS, PASSENGER AND CARGO STEAMERS, MARINE ENGINES AND BOILERS.

Contractors to Admiralty, War Office, Crown Agents and Foreign Governments.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Dewar House,
11/12 Haymarket,
LONDON, S.W.**

**Billiter Buildings,
Billiter Street,
— E.C. —**

**AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of Baggage for shipment.**

**Complete Equipments purchased and deferred payments
arranged on special terms.**

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.

All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting.

COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER**.*

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. | Impervious to sun-
Non-Combustible. | heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos- Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath,
plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by ½ in. thick and upwards. Manufactured
under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

SOUTH METROPOLITAN GAS COMPANY,

709, OLD KENT ROAD, LONDON, S.E.

Manufacturers of

COAL TAR PRODUCTS.

**Anthracene.
Benzole.
Carbolic Acid.
Creosote Oils.
Dark Cresylic Acid.
Disinfectants.
Grease Oils.
Naphthalene, Granu-
lated (Crude).**

**Naphthalene, Sublimed.
Pitch.
Refined Tar.
Solvent Naphtha.
Sulphate of Ammonia
up to 20·75 per cent.
of Nitrogen.
Toluole.**

C.I.F. QUOTATIONS GIVEN ON APPLICATION.

Telegraphic Address: "Metrogas London."

CHAS. BAKER & Co.'s



STORES LTD.

High-Class Tailoring and Outfitting

AT STRICTLY MODERATE PRICES.



Special Suits for Tropical Climates.

Made from the Newest Designs
in Fine Cashmeres and Flannels.

49/6, 57/6, 62/6, 69/6.

Patterns, Fashion Book, and
Measurement Forms post free.

*Only the most Experienced Cutters and
Tailors are employed.*

ALSO . . .

SHIRTS, PYJAMAS, HOSIERY, HATS,
SUN HELMETS, BOOTS AND SHOES,
BAGS AND TRUNKS, &c., &c.

HEAD DEPÔT AND EXPORT DEPARTMENT :

**271, 272, 273, 274, HIGH HOLBORN,
LONDON.**

NESTLÉ'S

CONDENSED MILK



The
Richest
in
Cream.

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

NESTLÉ'S

CONDENSED MILK



—
The
Richest
in
Cream.
—

FREE FROM GERMS AND
CHEMICAL PRESERVATIVES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From **BRISTOL (Avonmouth Dock)** to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

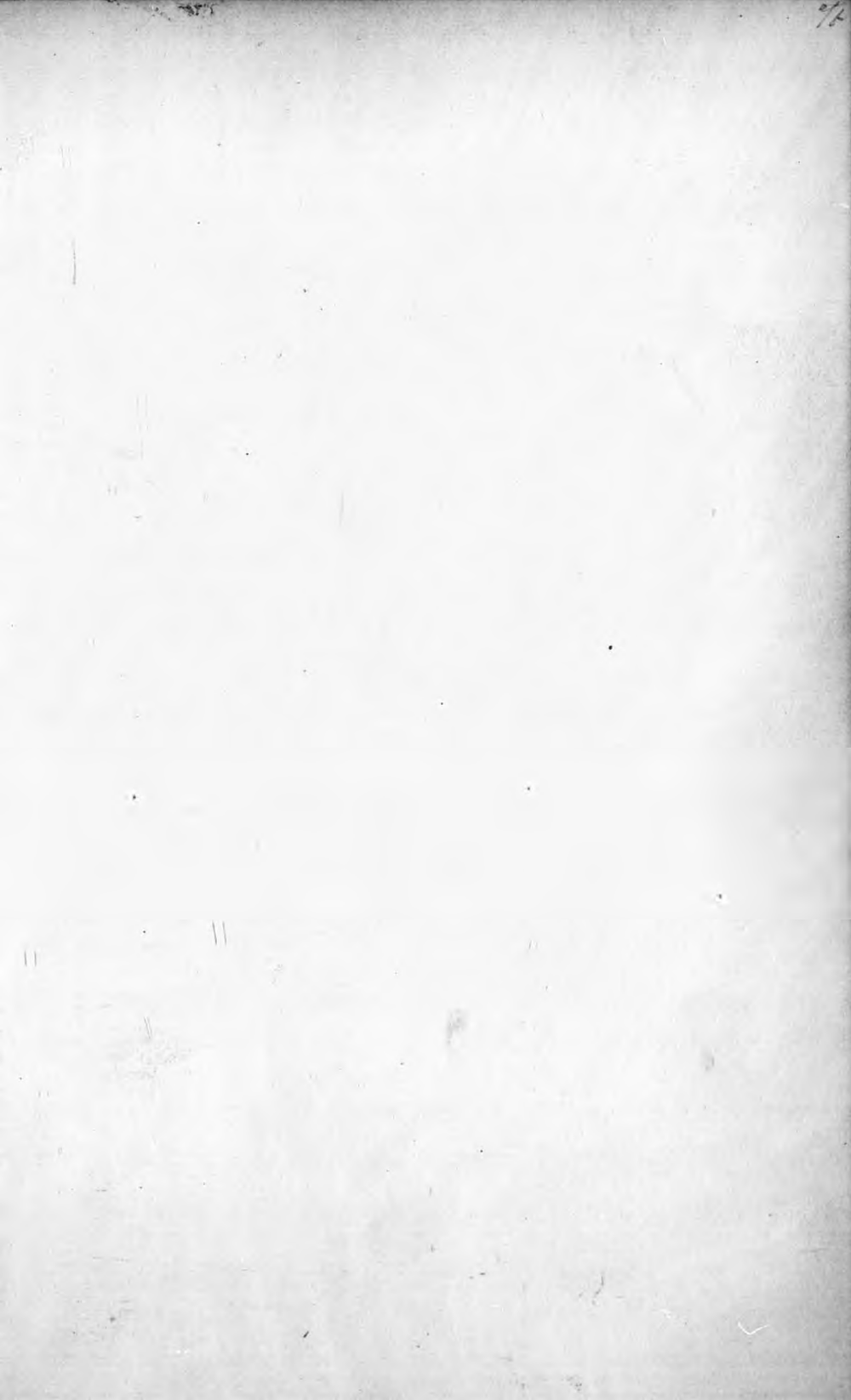
HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

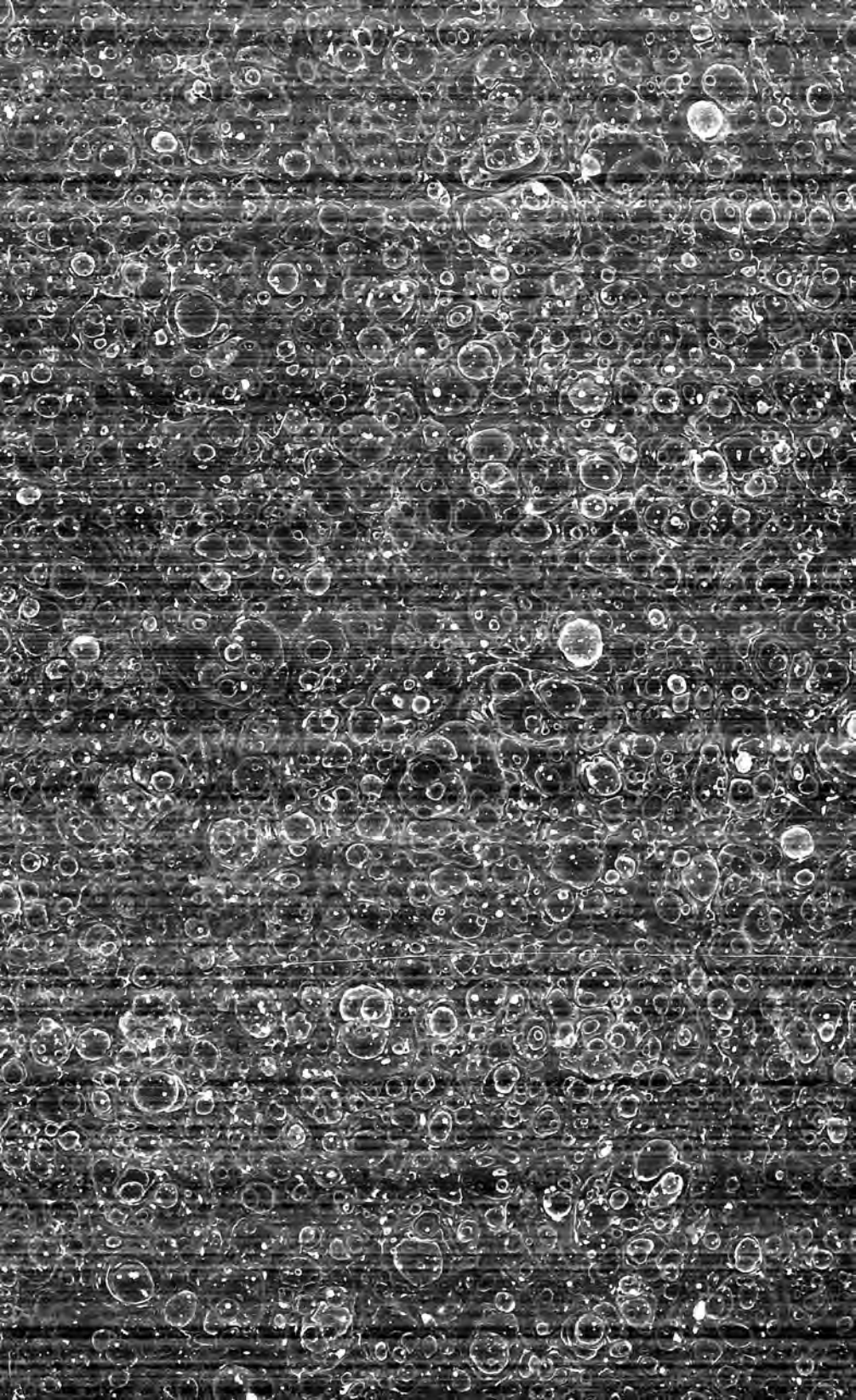
WORKS: Chippenham, Wilts.

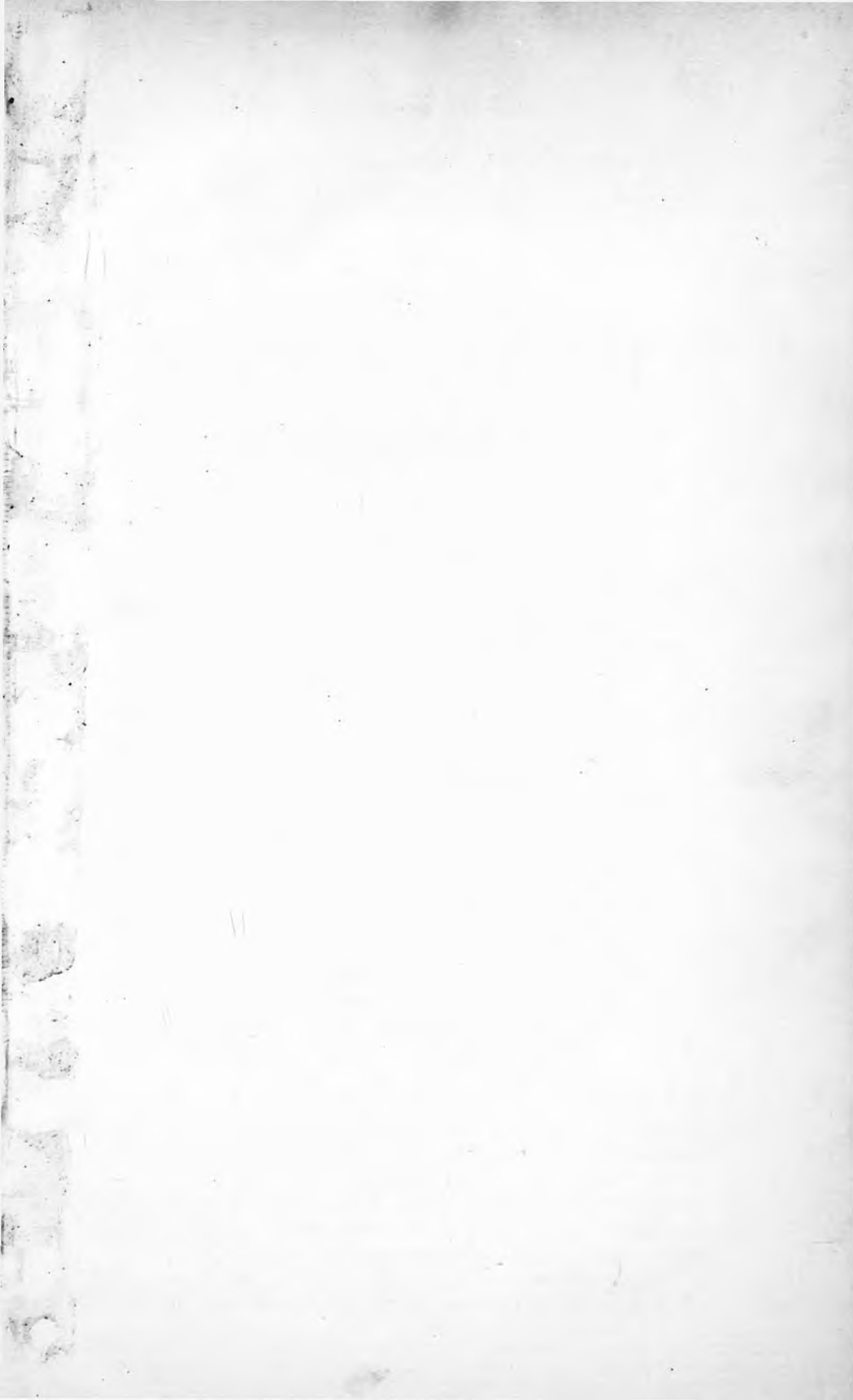
Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.











Brawford 1984

THE COLONIAL OFFICE JOURNAL.

VOL. III.

JULY, 1909.

No. I.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]


EDITORIAL NOTES.

THE Imperial Naval Conference, which is to be held in London in the month of July, is the outcome of a resolution passed by the Imperial Conference of 1907 that subsidiary conferences should be held from time to time to consider special subjects when occasion arose between the dates fixed for the periodic meetings of the general conference. On this occasion special interest attaches to it in connection with the discussion as to the strength of the fleet which followed upon the introduction of the Navy Estimates, and the remarkable movement in favour of effective naval co-operation which has arisen in the self-governing dominions. New Zealand's prompt and munificent offer of a "Dreadnought" to the Imperial Government, coupled with a further promise of a second vessel, if required, and the similar action since taken by the Commonwealth Government, have furnished a striking appeal to the imagination, and have served as an indication of the almost indefinite elasticity of the resources which the British Empire has in ultimate reserve for defence purposes. But it is evident that a general and coherent scheme of co-operation should be adopted if there is to be a proper economy of effort, and the

decision of the Government to invite discussion of such a scheme at a moment when the general readiness to co-operate is manifest has been well received.

The presence in England of the delegates to the Naval Conference, and also of the delegation which is expected from South Africa in connection with the passing through Parliament of the scheme of Closer Union, will result in an assembly of Statesmen hardly less representative of the Empire than the last Imperial Conference itself. Meanwhile, the Imperial Press Conference has supplied a precedent for a highly interesting Imperial gathering of an unofficial character, and the notable speech of welcome delivered to the delegates by Lord Rosebery may almost be said already to have become historic. A noticeable feature of the proceedings has been the concentration of interest on the subject of Imperial defence, and the almost complete unanimity of sentiment among the delegates on this subject. Lord Rosebery's speech in fact set the tone which ran through the whole of the subsequent discussions.

The progress of the movement towards South African Union has been somewhat more eventful, and less uniformly smooth, during the past few months. The scheme formed by the Convention was subjected to searching criticism in the Parliaments of the Cape and Natal, and at one time there was a fear that the amendment introduced by those two bodies might result in a deadlock when the Convention re-assembled for its final meeting at Bloemfontein. The scheme was in its very essence a compromise between conflicting interests and too great insistence by any section upon its own favourite policy would inevitably have led to disaster. But the delegates at Bloemfontein once more showed a remarkable practical statesmanship, and it was found possible to effect a compromise acceptable to all parties. Various minor concessions were made to Natal, while the Cape secured the abandonment of the principle of proportional representation in the elections for the Assembly. This last alteration will be regretted by many students of political institutions. But it must be remembered that, while the English observer may find it convenient that our distant dominions should serve as "laboratories for political experiments," the dominions themselves may reasonably hesitate before adopting a system which, however interesting and theoretically admirable it may be, has been little tested in practice. From the party point of view, it would seem probable that one party will gain in the town and the other in the country, by the change which has been made. There can be no doubt that South Africa is in some ways a peculiarly suitable field for a system of proportional representation, because without such a



system there will remain in many districts a permanent minority which can never hope to be represented in Parliament.

The Convention as redrafted in Bloemfontein was approved unanimously by the Parliaments of the Transvaal and Orange River Colony, and with the minimum of criticism by that of the Cape. But in accordance with pledges given some time since, it became necessary to submit it in Natal to the more perilous ordeal of a popular referendum. The results of such an appeal to the whole population are notoriously uncertain all the world over, and in the case of Natal the opposition which had been aroused by the agreement between the Transvaal and Mozambique (in spite of the fact that the Natal Ministry had been kept fully informed of the course of the negotiations), and the comparative isolation of the Colony from the inter-Colonial connections which are so strong in the case of its three neighbours, led many friends of Union to fear a defeat. Both sides pursued an active campaign, and popular excitement ran very high. But as the date of the referendum approached, it became increasingly clear that the larger issues would outweigh all smaller considerations, and that no local or sectional interests would be allowed to wreck the scheme on which so much labour had been expended. Even if Natal had hung back, it was generally recognized that a union of the other Colonies would be effected, and that the accession of Natal to such a union would only have been postponed. Her position would probably have been much like that of Western Australia at the time when the Commonwealth Bill came before the Imperial Parliament. But the actual result of the referendum showed a majority of 7,420 in favour of Union, and the completion of the whole scheme, so far as the self-governing Colonies of South Africa are concerned, is now certain. The progress of the Bill through the Imperial Parliament will be watched with interest, but it is obvious that it stands in no danger of rejection, or even of substantial alteration.

Mr. Fisher's Cabinet in the Commonwealth has met with the same fate which overtook the previous Labour Ministry over which Mr. Watson presided, and its lease of power has been too short for it to have left any marked impress either on legislation or administration. It is far from easy to forecast the political future in the Commonwealth. The new Cabinet is composed of such diverse elements that its legislative programme must be a matter of the utmost uncertainty, and to many observers there have seemed to be far more points of agreement between Mr. Deakin and Mr. Fisher than between Mr. Deakin and his new associates. With the existing position of parties in Australia, it is hardly possible for any Government to rely solely upon a single homogeneous party for

support, and instability is the inevitable result of the ever-present possibility of a change in party combinations. It is possible that the election of next year may provide an absolute majority for one party, and unless this occurs it is difficult to see how frequent Cabinet changes are to be avoided. The situation is unfortunate ; for the Commonwealth Government has much difficult work ahead of it. Both Mr. Deakin and Mr. Fisher have given expression to their sense of a need for constitutional amendments to enlarge the powers of the Commonwealth, and the marked tendency shown by the High Court to put a narrow interpretation on those powers—a tendency to which Mr. Wise refers in a volume which we review elsewhere—is bound to give a fresh impulse to the policy so outlined. The death of Mr. Price, the late Premier of South Australia, has removed one of the most notable figures from the sphere of State politics, and his successor would seem to have before him a task hardly less difficult than Mr. Deakin's.

It was found impossible to remove the political deadlock in Newfoundland without recourse to a second general election, but the result of this has been to give a substantial majority to Sir Edward Morris, and one of the most curious political situations which has ever existed in any British Colony is thus brought to a close.

The Canadian Labour Gazette for April contains a favourable account of the immigration prospects for the current year. "Indications are that the number of immigrants coming into Canada this year will be considerably larger than in 1908. Some increase in arrivals by ocean ports has already been shown over last year. The influx of settlers into Western Canada from the United States has been on a very heavy scale for several weeks past, most of the settlers having purchased land, and bringing in their stock and other effects. The opening of the pre-emption areas, making it possible for a settler to acquire 320 acres, instead of 160 as formerly, has also stimulated the movement." In spite of this, the Board of Trade figures of emigration from the United Kingdom give the impression that the decline in emigration to Canada is continuing. During the first three months of the year 12,916 persons of British origin left the United Kingdom for British North America, as compared with 15,774 in the same period of 1908. On the other hand there was a substantial increase—from 5,432 to 8,483—in the number of departures for Australia and New Zealand. This change in the direction of the stream of emigration is to be attributed partly to economic causes, but also partly to a change in the policy of the governments of the dominions concerned. Canada is becoming more inclined to be critical, and to pick and choose among would-be emigrants. Australia is becoming increasingly alive to the need of

new settlers if the potentialities of the country are to be fully developed.

The New Zealand Government have made for their own purposes an examination of a number of the ports of the United Kingdom, and the results have been published in a parliamentary paper. Bristol, Cardiff, Liverpool, Manchester, Glasgow and London were visited, and details are given at length of the port accommodation and facilities, and the convenience of situation for distribution of goods. Manchester and Bristol are singled out for special praise as having made "most ample and satisfactory provision for the handling and storage of frozen meat and other perishable produce," and neither Liverpool nor London come near them in this respect. The chief difficulty at present in the New Zealand trade is the irregularity of the steamship sailings and uncertainty of the charges. The buyer at this end wants a system of regular supplies, especially in the case of perishable produce, and if the sailings from the Colony are irregular, the supply is too abundant for his purposes at one time and deficient at another. Uncertain freights naturally discourage business, and it is interesting to note that it is the uncertainty that causes the trouble, rather than the charges, because "as New Zealand products have to compete in the open market with those of other countries, it is apparent that the costs of transit and handling must fall upon producers." The case supports the views of those merchants who think that it is worth while to pay an extra price to the steamships to secure fixed rates and sailings. The Report advocates a Government subsidy, which amounts to the same thing. Possibly the object might be achieved by combination between the producer and buyer directed to secure regular supplies at fixed freights.

The importance of securing provision for cold storage is strongly brought out by the information given by Mr. J. A. Ruddick, the Canadian Dairying and Cold Storage Commissioner to the Select Standing Committee on Agriculture and Colonisation. The Canadian authorities have dealt with the matter with singular thoroughness. In every way production on first class lines is stimulated: prizes are given for milk yields; bonuses for cold storage creameries; grants for iced car services; and arrangements have been made with various steamship lines for the carriage of fruit in cooled chambers. All this entails a constant watch on the quality of produce, and it is only natural that good results should come from this machinery of inspection, advice, and co-operation. The change really has been marvellous, and forms a striking testimony to the power of government organisation. It should not

be overlooked that Great Britain itself is largely interested in these improvements. They mean a bigger and better supply of the things produced for its population.

The National Memorial Tower which is being erected at Quebec will commemorate the epoch-making battle and the beginning of constitutional government a century and a half ago. The first parliamentary assembly in Canada met at Halifax in 1758: in 1759 the struggle on the Plains of Abraham took place. The Tower will be a historic landmark typifying the union of two races and the spirit of British institutions. Halifax has a similar undertaking, and Canada has good reason to be proud of these and many other municipal expressions of a patriotic interest in her past.

The long delayed report of the Royal Commission on Shipping Rings has at last been issued as a Blue Book. It is a voluminous document on a somewhat intricate subject, and space will not permit of a lengthy review in the present number. We shall hope to deal more fully with the subject in our next issue. Briefly, it may be stated that in their conclusions and recommendations the Commissioners are not unanimous. The majority propose as a remedy for the abuses of the Conference System:—

“The recognition and encouragement of associations of merchants and shippers in given trades, who by combination would be able to present a united front to the Conference when any controversy arose. That such associations should be registered by the Board of Trade, and that in cases of dispute the Board of Trade should be empowered to appoint an Arbitrator or endeavour to obtain a settlement by conciliation.”

The minority submit that the Conference System has established a monopoly of the chief ocean routes; has raised and kept up rates; has been injurious to “tramps” or outside steamers; and has caused, in the case of South Africa, diversion of British trade. They recommend Board of Trade supervision, but suggest wider powers for the Board, and an annual return to Parliament of all Shipping Conferences, Conference agreements, extensions, or changes, if any, in the areas of Conferences, their amalgamation, &c., so that Parliament may be made acquainted and kept in touch with the working and development of the Conference System.

One of the first subjects which will call for the attention of the South African Parliament will be the Customs tariff, and here topographical differences will make themselves felt to an unusual extent. The protective duties which are at present levied at the coast operate to the benefit of industries at or near the coast, and here living is

cheaper, wages lower, and skilled labour more abundant than in the interior. There is little chance therefore that in the interior industries can be established to any great extent able to compete with those on the coast, and the interests of the inhabitants therefore favour lower duties so far as these are protective. The annual report of the Johannesburg Chamber of Commerce lays stress on the handicap imposed on the Transvaal by the taxes on food and other articles of general consumption, and no doubt efforts will be made to get them reduced. The agricultural interests of South Africa are quite capable of responding to increased competition, and we expect that future developments will be on the lines of cheaper living, due both to lower duties and improved local production, and consequently greater commercial enterprise.

A large part of the difficulty in South Africa is owing to the fact that the coast colonies have been tempted by the industrial activity in the Transvaal to make money out of the goods that have passed through their territory for that destination, instead of relying on their own resources. The Transvaal has dominated the commercial situation, and a large expenditure has been incurred on railways to enable the people on the coast to reap a harvest as forwarding agents and toll-gatherers. Unfortunately for these lines the route from Delagoa Bay is shorter and cheaper, and though out of loyalty to the sister colonies the Transvaal has kept up the rate on this route to the same amount as that on the others, it is obvious that an arrangement under which the Transvaal deliberately sacrificed an important advantage was of a highly artificial character and by no means sure to prove permanent. To have thrown over Cape Colony and Natal in this matter would have been to inflict a terrible blow, and the only way in which the Transvaal could save them and at the same time relieve herself from burdensome rates was to unite South Africa.

At the annual meeting of the Witwatersrand Native Labour Association the Chairman, Mr. F. Perry, stated that there were 47,766 more native labourers employed by members of the Association at the end than at the beginning of last year, and that allowing for the repatriated Chinese there was a net gain of 24,373, to which may be added 11,515 for the first quarter of the present year. A large part of this increase on the Rand is no doubt directly or indirectly attributable to the limitation of De Beers operations, but it is clear that a much larger number of natives from Cape Colony now come to the mines; five years ago it was 14,000, last year it was 40,000, and this result shows what can be done by effort and organisation.

We desire to offer our congratulations and best wishes to a new contemporary, *The Northern Rhodesian Journal*, Vol. I., No. 1, of which has made its appearance at Fort Jameson under the editorship of the Rev. W. J. Bell. The standpoint of the paper is happily expressed in the following extract from the "Editorial":—

"As to politics, we are Conservative-Home-Rule-Radicals.

"CONSERVATIVE, because we voice a Farming Community.

"HOME-RULE, because we are British citizens, and will therefore insist in deciding how we are to be ruled.

"RADICAL, because we are colonists and do not wish to make our colony just a replica of the Home land with all its conventionalities."

The fourth annual report of the British Cotton Growing Association states that although the results of 1908 are not as satisfactory as could be wished, the Council are not in any way discouraged, especially as recent reports from West Africa and Uganda are most promising. Depression in trade and the Lancashire cotton dispute caused low prices, and this condition of things is of course unfavourable to the enterprise of the association, which was brought into being by high prices. The demand, however, is sure to revive, and to give increased encouragement to colonial-grown cotton. The total production of cotton under the auspices of the association amounted to 23,000 bales, of a value of £360,000, and a heavy correspondence is conducted on matters connected with the industry. There was a deficit of £31,647 on the year's working, due mostly to the partial failure from drought of the West African crop. Much better results are expected from 1908-9.

The last report on Papua is, like its predecessors, specially interesting as embodying the results of Australian administration of a people of very primitive type. The inhabitants are generally, as absolutely uncivilized races usually are, exceedingly nervous and suspicious, and this is not to be wondered at when it is considered that sudden raids and treacherous murders were regular occurrences. Evidently the habit of fighting is still strong. As an instance of this, the Administrator tells a curious story of how he tried two men for throwing spears at the police; they pleaded guilty, and he explained to them through interpreters that they must never do it again. Thereupon they asked that they might be hanged, and when asked their reason said that their only pleasure in life was throwing spears at the police, and if this was denied them they did not wish to live. The Administrator truly remarks that it is difficult to put oneself in the position of such a person mentally, and more difficult still to imagine what he will be like when he is civilized. Probably it was a case of child-like petulance, and there are signs that when

greater security to life is guaranteed these natives will settle down to agricultural pursuits.

The official report states that the language of the Papuans cannot be better described than as resembling the snarling of dogs interspersed with hiccoughs. This reminds us that to the ancient Greeks the speech of foreigners seemed like the twittering of birds, and we should be glad to know what the Papuans themselves think of the English tongue. After this unappreciative description of their language, we are not surprised at being told that many of them are a murderous lot, and repulsive in appearance. Yet "experience has shown that this type of native may be brought to a state of comparative civilization without any very great difficulty by the exercise of tact and patience. As, for instance, was the case with the Red Creek natives in the Northern Division, mentioned in the last annual report, who from apparently tameless savages have now developed into a race of market gardeners and carriers."

The revenue of the Leeward Islands in 1907-8 was the largest ever collected, and the financial results of the first nine months of 1908-9 showed a further increase of revenue. The marked improvement is due in the case of Antigua to the encouragement given to sugar production by the two central factories and to the cultivation of cotton. Gunthorpe's factory returns 12 to 15 per cent. on capital, and this success should lead to the establishment of factories in other places; the benefit to growers is of course considerable, and the case is a good instance of the improvement which can be effected in such an industry by Government action, aiming at combination and co-operation. On the other hand, some planters have lost money on cotton growing, and the export in 1909 is not likely to equal that in 1908: the moral is that the industry is only remunerative on land which gives a good yield.

Mr. Carnegie has generously given £2,000 to Seychelles for the erection of a public library, on condition that a free site should be provided without creating a burden on the revenue of the colony, and that £100 a year revenue should be guaranteed by the Government. These conditions have been complied with. Mr. Carnegie had previously shown similar generosity to British Guiana and to Barbados.

The Bill introduced by the President of the Board of Trade to abolish sweating and establish a minimum wage in scheduled trades follows the example set by Victoria in 1896. The first trades selected in Victoria were, as here, those in which sweating is most marked, and were similar in character to those now scheduled in the Bill.

The first Act of the colony was passed for four years and against strong opposition ; but when it was about to expire, some of those who had most energetically opposed it voted for its renewal, largely because they benefited themselves by the suppression of the unconscientious employer. The Act is now permanent and is generally regarded as very beneficial. No doubt the task of levelling up wages in these poor industries is more difficult in the United Kingdom than in a colony which has a protective tariff, as any increase in cost may drive the trade abroad, but it seems well worth while to run some risk of this rather than to tolerate a condition of things which makes decent life impossible.

Even apart from this consideration, we think that the attack upon sweating will be justified economically. Sweated industries mean shoddy goods, and are bad in the long run both to the consumer and to the better-class manufacturer. Competition which is allowed to go on with no restrictions inevitably results in frantic efforts to cheapen production, and the result is seen in supplies in which the manufacturer reduces the quality in a more or less underhand manner. The deficiency can only be discovered by severe tests, which take time and cost money, and the maker, in not a few cases, relies upon the expectation that his goods will be accepted if they seem all right, and on the knowledge that their rejection will probably cause a serious loss of time. The competition of these people naturally tends to lower the standard of more honest manufacturers. The chief essential for good work is good workmanship, and this, more than coal or iron, or anything else, is the great asset of this country. Good workmanship, however, can only be secured by fair wages, and a decent minimum is in the interests of everybody, not excluding the sweater himself.

Thanks to the generosity of a Parsee resident, Mr. H. N. Mody, there is every prospect that Hong Kong will soon be in possession of a University. Mr. Mody's original offer was to provide a sum of \$150,000 for building and a further sum of \$30,000 for endowment. He has since increased his offer to the sum of \$300,000, provided that the sum of \$110,000 required for endowment is raised by the end of the current year. Sir Frederic Lugard has interested himself actively in the scheme and has obtained the Secretary of State's approval of the provision of a suitable site by the Colonial Government. The scope of the University will include a Faculty of Medicine, a Faculty of Applied Science (Engineering, &c.), and later a Degree of Arts, as well as Chinese Literature and Classics. The China Association has issued an appeal in support of the scheme, from which we extract the following passage :—

“The University would enhance the standing of the colony, and would prove of inestimable advantage to Chinese, whether

resident in the Empire itself, in Hong Kong, in the Straits Settlements, or in Indo-China, by providing facilities for the acquisition of Western learning practically at their doors, while it is hoped that the training would dispose students to remember sympathetically in after-life the associations and teachers connected with their education gained in a British Colony."

We understand that considerable financial support has already been obtained in this country.

The despatch of an American mission to Liberia is a striking mark of the traditional interest taken by the Republic in the fortunes of this community. It cannot be said that Liberia has done much to keep pace with the energetic progress of its neighbours; and there are inevitably occasions when the absence of proper administrative arrangements, according to our ideas, creates awkward situations. It would be unfortunate if any serious crisis arose out of these embarrassments, and it would be a clear advantage to us if the American mission succeed in securing effective arrangements for good government. The difficulty is that the Liberians who possess American associations have not succeeded in making their authority over the aboriginal tribes effective.

The United States Government have now realised that all is not plain sailing when liberal constitutions have been given to native communities. The Assembly of Puerto Rico has (as was bound to happen) refused to vote supplies, and President Taft has observed that "we have gone somewhat too fast in the extension of political power to them for their own good," and has recommended Congress to amend the constitution act. The same result has come to pass in the Philippines and Hawaii.

COLONIAL LOAN ISSUES.

IN the piping days when money is cheap in the City, the colonies, great and small, descend upon the fold with the firm intention of getting their share of the good things going. When money in this quarter is dear, a situation indicated sufficiently by the Bank rate, then applications are put off for a better day. The future course of money is always a problem which defies calculation, and, though there are experts who discourse on prospective movements, it may be noticed that their prophecies are very short-dated; the City in fact is little interested in any anticipations, however apparently intelligent, which go beyond the next settling day. Still there is a sort of rough average about the price of money which is enough to settle the question whether money is plentiful enough to tempt borrowers to come on the market, or so scarce as to deter them. Of course when the supply of money is referred to in this way, it is only for certain purposes. The world's capital at large does not go up and down in marked fluctuations, but the amount available for borrowers does. The point of view is strictly that of the Stock Exchange and the financial newspaper. If industries are remunerative here and elsewhere—and for the purposes of the money market it is obviously necessary to take a world-wide view—money is made and saved, and becomes for the time being surplus, and it is therefore available for investment. The time when such money is most abundant is not the moment of the greatest production and exchange, but shortly after it. At a time of active business more money is put into established industries, but there comes a period when the local requirements are satisfied, and then the chance arrives for investments further afield. On the other hand if the borrower delays to seize the psychological moment, a further diminution of industry brings about reduced profits and a shaking of the feeling of confidence, and therefrom the hoarding of money, or, what practically comes to the same thing, the lending of it on short notice. Then it is necessary to

make an effort to attract more capital; up goes the Bank rate, and the opportunity of the borrower or exploiter is gone. The movement is of a cyclic character; business operations cannot be so adjusted that supply and demand are always equally matched. The supplier as a rule goes on producing in ignorance of the fact that his customers have had nearly enough, and the latter give no notice of their position. They are in fact at arm's length, and go on till they are advised by some calamity that the old expectations require revision. Some day, when the millennium is nearly due, there may be a machinery for regulating these things, but in the meantime it is clear that there will be recurrent ups and downs in the financial world.

If a borrowing State has the misfortune to require money when the rate is high, the most economical course is to borrow for the time being against the unissued scrip and to postpone the flotation of the loan itself for a better opportunity. It has then to pay the high rate of interest, but only on such amounts as are absolutely required from month to month to keep the works going; whereas if the loan were issued, interest would be payable on the whole sum, though that would not be required for perhaps two or three years, and the high rate of interest would be payable for the whole currency of the loan, which is usually about fifty years. There is of course always an element of speculation in the matter; the Bank rate may go still higher and persist in this objectionable attitude till the loan must perforce be issued. Having regard, however, to the general periodicity of financial movements, the balance of advantage is in favour of waiting for a reasonable opportunity, and meeting the requirements meanwhile by temporary accommodation.

There is another reason for putting off the issue of a loan till a substantial part of the money has been spent. A colony always pays more interest on a loan than it does on advances. The reason is that money lent at call or on short notice carries interest at a rate considerably lower than money which is locked up. Therefore, putting aside all speculation, it is advantageous to borrow temporarily, and it is often possible to continue to do so until the works for which the loan is required are nearly complete.

It is the practice now-a-days on the issue of colonial loans and others of a like kind to get them underwritten. The underwriters, in consideration of a commission, which is usually 1 per cent., undertake to take so much of the loan as is not subscribed for by the public. Governments would, of course, not sacrifice 1 per cent. if they could get the money without employing underwriters, but experience has shown that on the whole they gain by doing so. Only a very small part of a loan is applied for by the real public at the time of issue. The ordinary investor buys stocks and shares at a moment when he has money available, which is not often; it is the

professional who examines the morning newspaper and makes use of the few hours, which are often all that is allowed, to come to a decision and send in his application. If the issue is readily taken up so that the price is likely to go to a premium, the list must be closed early, as otherwise on the news getting about a vast number of applications would be sent in with the object of getting advantage of the premium, and this would be unfair to the genuine applicants. The result is that the success depends practically on the view which the market takes of the deal, and this is largely a matter of the influence of the financial houses interested. The underwriters hope to bring the price to a premium, and can then unload more or less promptly at a profit well worth having ; in some cases they have to hold for a long period, perhaps a year or two, before they get rid of their holdings. In the latter case there are no pickings for the Stock Exchange, and the issue is denounced by some of the financial papers as a failure. This means that the colony has got the money cheaper than the Stock Exchange thinks right, but it is obviously undesirable, in view of future issues, that a colony should get a bad name or imperil the prospects of the others, and the best result on a general view is that the issue should go off well and rise for the time being to a fractional premium. If, however, the premium becomes a substantial one, the presumption is that the borrower has let the loan go too cheap. Not much should be made of the fact that a loan is subscribed several times over. The City is eager enough to take up a safe thing, and if it is bruited about that a loan is going off like hot cakes the "stags" rush in and apply for enormous amounts which they could not take up, well knowing that their allotments, if they get any, will be a very inconsiderable proportion of what they apply for. The L.C.C. loan recently issued was subscribed for 60 or 70 times over.

The real bargain is thus made with the underwriters. The agents for the borrowing colony have to ascertain the prospects and, so to speak, feel the pulse of the City, and after many inquiries and consultations the terms of issue are agreed upon. The colony, so far as the particular issue is concerned, is not interested by anything that happens afterwards ; it has got the money at an agreed price, and the only object of the public flotation is to pass the stock on to the private investor and to make a market in it. The professional character of the transaction is the reason why loans are frequently offered in the shape of bonds convertible after a few years into inscribed stock. Bonds are much more convenient than inscribed stock to financial houses. They are payable to bearer and pass readily from hand to hand as first-class securities for advances. They cannot depreciate in value to any material extent, because they must be redeemed at par at maturity, which is commonly after four years' currency. Thus they are attractive to the City, and

borrowers make use of the fact to facilitate the floating of the loan on good terms. The private investor, on the other hand, finds it more convenient to inscribe, for then his title is secure and does not depend on a piece of paper which can be lost or stolen ; furthermore, trustees cannot hold these bonds and must inscribe. The process of conversion therefore sets in as the loan passes into the possession of the public.

It is essential to successful borrowing that there should be no alarm from foreign politics. This is the principal danger in the eyes of the City ; not domestic politics, nor even budgets, greatly disturb Stock Exchange movements, but the breath of a suspicion of foreign complications instantly sends prices down and rates up. The average investor is not much affected by sudden panics ; he does not dump his stock down, but holds on grimly ; what he has to fear is a gradual undermining of values. But financial houses, living in a sense from hand to mouth and dependent on the varying price of money, are extremely sensitive to such influences. That Government deserves best of the city which keeps clear of foreign complications.

Everyone is remarking the great number and size of colonial and municipal loans which are being issued, and the phenomenon has a very important significance apart from its financial aspect. It means that public bodies are invading more and more the fields of private enterprise. All political parties are from time to time being involved in undertakings which can truthfully be described as collectivist and anti-individualistic, so much so that the old *laissez-faire* doctrine is out of sight, the theories of Spencer and Mill obsolete, and the whole Empire, according to timid observers, plunged into a maelstrom of socialistic schemes. This general movement is due not so much to academic reasoning, as to the multiplication of tempting opportunities, and one main reason why they are tempting is that public bodies can get money more cheaply than any one else. Moreover, the money offered for such purposes seems to be steadily on the increase, and it may be of interest to point out why this is and must be the case. It is due to the operation in practice of the Trustee Act of 1893. It is not to any considerable extent the money of the living man which goes into Government stocks. The ordinary investor puts money into his own or his neighbour's business, or failing these opportunities into something which he expects will pay something more than $3\frac{1}{2}$ per cent. To this end he studies some favourite financial organ which purports to give tips on every form of enterprise, and, though candour would often compel him to admit that he would be better off if he had never seen this kind of literature, the fact remains that he seldom patronises Government stocks till he has learnt by experience that there

is nothing like leather, and not often then. But the Act drives all trust moneys, with some very limited exceptions of certain railway bonds and the like, into public stocks, partly out of consideration for the welfare of the proverbial widow and orphan, and partly for the benefit of the State. A large part of the wealth of the country comes at some time or other into the hands of trustees and may remain there for a long period. It is, of course, open to testators and settlors to exclude the Act by giving trustees special powers of investment and restricting them to these, but a reference to the Act is simple, is on the safe side, and tends to become a common form. Even on the expiration of the trust much of the money remains undisturbed. The market is fairly active in dealings with the big stocks, but much of this is speculative and on the surface. Experience of the lesser known stocks shows that there is singularly little selling, and this indicates that beneficiaries are to a large extent content to leave things alone. The inevitable result is that a constantly increasing amount of wealth is being poured into such stocks, and this diversion from private to public undertakings has wide-reaching effects. The inclusion of Colonial Government stocks amongst those authorised for trustees was the result of an application put forward at the Colonial Conference of 1887, and founded on and justified by their security, but it is safe to say that the economic results were not foreseen.

There is much to be said for the Crown Colonies issues as a field for investment. The constitutional position is not generally understood, and it may be desirable to make some remarks in explanation of it. The Imperial Government gives no guarantee of these issues and is therefore not responsible for repayment or the meeting of the interest charges. Sometimes this has been explained officially, though in somewhat varying terms. But it is not by any means the whole of the matter. It is true that the Secretary of State for the Colonies undertakes no liability for the British tax-payer, but as regards the colony he controls the situation. It is only with his consent that the loan can be issued at all, and this consent is never given without minute examination of the intended purposes and the expectations built upon them. It is not too much to say that of all the loans raised on earth the Crown Colony loans are the most scrupulously devoted to public works of a directly industrial and reproductive character. We might add that they are the most economically and providently administered. From first to last the spending of the money is critically watched both in the colony and in Downing Street, and the result is that in the end there is a solid asset to show. The intervention of the Secretary of State in these matters is commonly enough followed by hostile criticism from some quarter, often both in the colony and at home.

It is unpleasant and invidious to put difficulties in the way of schemes which may be strongly demanded locally, but the duty is done and nothing is sanctioned until a reasonable case is clearly made out. Furthermore the Secretary of State is fully able to secure that the colony will make every effort to meet its liabilities. He could by a few strokes of the pen increase the estimated revenue or decrease the expenditure, and if there is any difficulty about carrying out his directions he can revoke the constitution and establish another one of a more compliant character. In return for these autocratic powers he gives the colonies the safeguards of sound finance, and whenever colonial publics are inclined to resent the slowness and caution with which the Colonial Office examine projects favoured by them, they should take into consideration the fact that, as the result of this control, the Crown Colonies enjoy a credit which is as good as and in some cases better than that of Australia.

Without such control it is quite certain that numerous costly enterprises would be undertaken which would eventually be mill-stones round the necks of the Colonies affected. There is a vast difference in such places between schemes which have to be paid for on the nail and those which can be provided for out of borrowed money. The white population in the hot countries is not there for life; it wants to make its pile as quickly as possible and get back home again, and it cannot therefore be as interested in the future welfare of the place as a population which is making it a permanent home. There is, therefore, a temptation to favour big schemes which will bring about a good deal of local work and spending of money, while the repayment is a long way off and will affect other people. On the other hand, any scheme of public improvement which it is proposed should be met from current revenue is often strongly criticised and opposed. The result is that it is generally easier to get a railway project through than a sanitary improvement.

High as the credit of the Crown Colonies is, considering their position and resources, it would be better except for the fact that the ordinary investor knows very little about them and mixes them up in his mind chiefly as homes of malaria and sleeping sickness. It cannot be expected that he will ever know much about the individual merits. The difficulty would be met by consolidating the debts of all the Crown Colonies, and this we are inclined to believe would not be so difficult as appears at first sight. It may, for instance, be urged that the rich colony should not be made liable for the poor colony, but as all expenditure is controlled by the Secretary of State the liabilities which the latter colony would be allowed to incur would not be out of proportion to its means. The question is worth consideration and will, we believe, become more important as

time goes on. The Crown Colonies are developing fast and entering the money market more and more ; a loan expenditure of several millions may be said to be in sight at this date. The consolidation into one stock would not only better the credit, but would create an active market at close prices. All Crown Colonies are already domiciled under one roof, and the consolidation, from a working point of view, could easily be carried out.

In any case the steady development and increasing importance of the Crown Colonies will tend to improve their credit, and the probability is that in comparison with other securities those of the Crown Colonies will appreciate in value.

THE SETTLEMENT OF TRADE DISPUTES IN CANADA.

THE Canadian "Industrial Disputes Investigation Act" (generally known, after the name of its introducer, as the "Lemieux Act") has now been in operation for more than two years, and it is possible to form some opinion as to the degree of success which has attended it, and as to its general effect upon the relation of capital and labour in the Dominion. Such an enquiry is of especial interest at the present time, when machinery not unlike that established by the Lemieux Act has been set up at home in the case of the railways and in that of the shipbuilding trade. It is quite in accordance with British industrial traditions that this machinery should have been set up by purely voluntary action (assisted in one case, it is true, by the mediation of a Government department), and not by legislation. It is no less characteristic of Canadian, as distinct from Australasian methods, that the Lemieux Act should limit the functions of its Conciliation Boards to enquiry and report, and not confer upon them powers of final and authoritative decision. The Act, it will be remembered, provides for the appointment of a Board of Conciliation and Investigation, on the application of either party, when an industrial dispute is apprehended in services connected with "public utilities" or in mines; it forbids strikes or lock-outs pending an enquiry by such a board; and it provides for the publication by the board of a reasoned report and recommendations, which are not, however, in any way made binding upon the parties to the dispute. The hope of its framers was that the pressure of public opinion would suffice to bring about their acceptance.

The Canadian *Labour Gazette* for January contains an analysis of the operations conducted under the Act during 1908. Twenty-five disputes were reported upon by boards set up under the

Act, and in only one case—that of a dispute between the Canadian Pacific Railway Company and its mechanics—did a strike or lock-out occur. In this instance there was a majority report signed by two members of the board, and a minority report, signed by the remaining member. The findings of the majority were accepted by the Company, but not by the men. A strike followed and lasted for two months, when the men returned to work on the basis of the findings of the majority report. It is unfortunate that, in the number of men affected—8,000—this dispute should have been the most important dealt with under the Act. In the majority of the other cases, the disputes were settled in accordance with the recommendations of the Board of Conciliation. In a few cases, where there was a minority report, "it is believed that the circumstances brought to light during the investigation and the publicity given to such investigation were responsible for bringing about an improved situation, as a consequence of which the strike or lock-out originally threatened was averted." At the close of the year four disputes were still under the consideration of boards, and it is interesting to notice that one of them was a dispute in the boot trade, referred for adjustment under the Act by joint consent of the parties, though the manufacture of boots does not fall within the definition of a public utility. In estimating the value of the results achieved under the Act, it must, of course, be remembered that the disputes settled were not comparable in importance to the great disputes which have occurred at home. The total number of men affected by twenty-four of the disputes—in the remaining case the number is not given—was 25,225.

The official report summarized above is nothing more than a bare record of facts and figures. But two more detailed studies of the actual working of the Act are also available. Dr. Victor S. Clark, who is a well-known authority on legislation affecting labour and industry, and the author of a valuable review of Australasian experiments in this field, was sent to Canada by the American Government to investigate the working of the Act, and his report (covering the period up to January 15th, 1908), was published in the issue for May, 1908, of the Bi-monthly Bulletin of the United States Bureau of Labour. Dr. Clark emphasises, at the outset, a fact of much importance. "The Canadian Act was put in force just before an industrial depression, on the verge of a period of unemployment and falling wages. Therefore in its natal year it was put to a severer test than have been the Australasian laws in the twelve years of their operation." Allowing for this adverse circumstance, his verdict on the results of the Act is distinctly favourable. But he regards the reduction of the element of compulsion to a minimum as a necessary condition of its success. "Most boards have recognised that the spirit and intent of the law is conciliation, and that this can

The Settlement of Trade Disputes in Canada. 21

best be secured by informal procedure, leaving penalty features of the law in the background, and depending on mutual understanding and goodwill even more than upon public opinion for a settlement. . . . Some of the least successful chairmen have been judges, though judges and lawyers are in other cases the first to grasp the distinction between conciliatory and judicial proceedings. A judge who organises a Board after the fashion of a court, sets it up on a dais, takes testimony according to legal rules of evidence, enforces legal technicalities, and checks up his witnesses by stenographic proceedings—so far as Canadian experience goes—leaves the parties at the end of their negotiations farther apart than at the beginning, and crystallizes tentative issues into insolvable difficulties. The most successful chairmen have been those who conducted their proceedings in the most informal manner, the members of the board, and the representatives presenting the two sides, sitting around a table, interviewing witnesses rather than examining them, and talking each other into an agreement." Upon this aspect of the functions of a Board of Investigation some interesting remarks were made to Dr. Clark by an eminent lawyer, a former judge of the Supreme Court of the Dominion: "The great difficulty," he said, "you would have in operating such a law in the United States is the tendency of your legislators, courts and lawyers, to sacrifice everything to formality. I fear this spirit would affect even non-legal tribunals like our Conciliation Boards. You would allow objections to evidence and such technical frivolities to defeat substantial justice. Your big labour leaders understand the matter much better, and I can see the force of their objection to statutory arbitration in the States. Formalities, differences as to admitting evidence, &c.—often in matters of detail and on minor points involving no general principle—breed a lot of ill-feeling and prevent conciliation." Dr. Clark's general conclusions are that the Act "has accomplished the main purpose for which it was intended, the prevention of strikes and lock-outs in public service industries"; that it is more applicable to American conditions than compulsory arbitration; that it has not affected adversely the industries to which it has been applied, or the workers in those industries; that employers and the general public, with very few exceptions, view it with favour; and that while working-class opinion is more divided, and it is impossible to say definitely whether, if a referendum were taken, the workers of Canada would accept or reject it, it is generally supported in the eastern provinces, and has been endorsed by the Trades and Labour Congress, the most influential labour body in Canada.

Even more valuable, as giving an inside view of the actual working of the Act, is an address delivered in December last at the

annual convention of the American Association for Labour Legislation at Atlantic City, New Jersey, by Professor Adam Shortt of Ottawa, who acted as chairman of no less than eleven boards under the Lemieux Act, and whose impartiality and good judgment have recently led the Dominion Government to select him as one of their first Civil Service Commissioners. Professor Shortt declares strongly against legislation for the compulsory settlement of trade differences, and he finds that even the compulsory submission of such differences to a board is difficult, if not impossible, to enforce. "Experience indicates that it is impossible, in a democratic community, to compel any considerable number of men to work under given terms of employment; nor, in spite of the hostages to the courts which the property of an employer furnishes, is it possible to compel him to employ any given number of men on certain prescribed terms. Freedom to accept or reject proffered terms of employment, and freedom to manage one's own business, are essential to sound economic relations in a free community. Experience has proved also that the compulsory feature in the Canadian Act is almost impossible of enforcement where either of the parties considers it advisable to refuse to submit its case to a board. When such refusal has taken place, however, it has usually been on the supposition that the acceptance of the award of the board was essentially compulsory. Thus, it is only the voluntary nature of the ultimate settlement which renders the compulsory submission of a case to a board at all workable." Professor Shortt also makes it clear that the proceedings of a board are as different as possible from those of a court of law. Minor points of difference are disposed of in conference, partial concessions won now from one side, now from the other, until the differences which cannot be reconciled by mutual agreement are reduced to a minimum. At this stage the board generally submits its own proposals for a settlement to the parties. But, should these be rejected, it does not regard its functions as at an end. It proceeds to negotiate—often through the agency of the chairman—with the two parties separately, without bringing them again into conference. "The object of these final negotiations was to find, on either side, the lines of least, and also of most resistance; to overcome prejudice; to plead what seemed to the board or the chairman as the just cause of each side with the other, and gradually to break down or dissolve away the barriers between the parties until so little remained that it was not worth while to risk a great and uncertain struggle for so small an ultimate advantage, even if successful." "It is not so much a question of expounding economic principles as of the diplomatic handling of human personalities, the elimination of misconceptions, the removing at once of sensitive

The Settlement of Trade Disputes in Canada. 23

suspicion, the memory of old struggles, and the unwillingness to exhibit the apparent weakness of receding from a stand once taken." Professor Shortt favours the exclusion of the press from the proceedings. It is not desirable that the extreme claims of each party "advanced with confidence and backed with vigour," and the inevitable declarations that no reduction of these claims is possible, should be made public and widely advertised, for subsequent concession and withdrawal will be made much more difficult by such publication. The presence of the press also encourages the tendency to "talk to the gallery," while the legitimate interest of the public in a dispute is sufficiently satisfied by the ultimate publication of the board's report. The Canadian system obviously does not lend itself to the establishment of a code or even the creation of a body of "case law" on points of difference likely to recur in industrial disputes. But Professor Shortt mentions certain general principles on which the boards have insisted. Of these the first is the "recognition of unions, in the sense that there shall be no discrimination against their officers or members." The second is "the principle of the open shop," which lays it down that membership of a union shall not be a necessary condition of obtaining employment, and that all agreements made shall be applicable to unionists and non-unionists alike. (It will be remembered that in New Zealand the Court of Arbitration has frequently laid down in its awards that preference shall be given to unionists, subject to certain safeguards and limitations.) Thirdly, undue interference with the liberty of the employer to "manage his own business," in so far as the making of rules and regulations and the promotion of employees is concerned, has been consistently discouraged. Professor Shortt made no extravagant claims for the Lemieux Act. He concluded his address in the following terms:—

"The policy and method of the Canadian Act by no means affords a certain remedy for industrial disputes. No practical man dreams that industrial disputes can be prevented from occurring, because there will always be cases where justice unavoidably pertains to both sides. There are, however, many disputes which are chiefly due to historic prejudice, mutual ignorance and misunderstanding, and it ought to be possible to dispose of most of these, and to effect a working settlement in the case of many of the others. All that one may claim for the essential features of the Canadian Act is that, if tactfully handled, they provide a reasonable method of securing the maximum of concession with the minimum of compulsion."

The example of Canada is in some ways of more practical value to Great Britain than that of Australia or New Zealand. For in

considering legislative possibilities, the general attitude of the people towards governmental intervention must be carefully weighed, and Canada is probably not less but more individualistic in her traditions than Great Britain. The success of the Lemieux Act augurs well for the policy which has been consistently followed by the Board of Trade under Mr. Lloyd-George and Mr. Churchill, which has already been applied to the railways and to the shipbuilding industry, and which, it is to be hoped, is at the present moment in course of application to the cotton trade.

THE EROSION OF LAND.

A REPORT of the Oceana Company has recorded the fact that the steamers on the Shiré River had been laid up, owing to "the gradual and persistent lowering of the level of Lake Nyassa, and the consequent shallow state of the waters of the Shiré, which is now navigable for a few weeks only in the year, a state of things which could not possibly have been foreseen some years ago." The process which is going on here is unfortunately widespread. The earth is in many places gradually losing its water and soil. The elements of fertility are dispersed in the lakes or the unfruitful and inhuman oceans. In such countries as Palestine, once prosperous and happy, now arid and desert, the process has in no great time completely changed the character of the land. Many parts of Africa, America, and Australia are threatened with the same fate, and no land problem concerns the British Empire more. The wearing away of the carpet of the Veldt in South Africa is perhaps the most serious aspect of the economic trouble in that country. The primitive plain, the recent creation of cosmic forces, is undenuded, but the flow of water over it gradually roughens the surface by cutting out channels, and valleys are formed which have steep sides and narrow bottoms. These ravines in course of time are cut deeper and carried further back until they approach base level, when flats are developed and a state of erosion is reached. Erosion is now, speaking generally, increasing. It means for practical purposes the multiplication of water courses and the increased removal to the sea of fertile soil. The unfortunate fact is that not only natural causes but the progress of civilization tends to this. Man interferes with the provision of nature by felling trees, over-grazing, and other disturbances. In India, hundreds of square miles along the foot-hills of the Himalayas have been in danger of being converted into a desert by being gradually covered with

detritus washed from the denuded hill-sides. This denudation is attributed to over-grazing. But the chief cause is the destruction of forests.

Nature herself is a soil producer, and if left to herself makes the necessary adjustments. She protects the soil by a vegetation which supports and replenishes it, thus increasing the fertility, and which also acts as a store-house for water and a barrier against erosion. But this process of soil formation is slow; it has been calculated roughly at one foot in 10,000 years. It does not require much surface wastage to destroy the constructive work of enormous periods. Water is the great transporting and dissolving force of the world, and if wrongly treated becomes an immense power for mischief.

Trees and other roots bind the soil together and prevent its being wasted. Where all trees have been destroyed, the result is seen in a dry and unfertile plain or slope, intersected by water-courses. A natural forest fire may bring this about as well as the demands of humanity, and probably vast wastes have been caused in this way. Fire also destroys grasses and reeds, which form storage for water. Roads and railways obviously help the running away of water. They are generally laid along low ground and become drainage lines. Large herds of cattle will make deep and dusty paths, which largely contribute to waste of water and soil. They naturally follow the slope in their passage to water, and the track makes an easy water-course.

It is easy to suggest that the cause of the bare plains is the diminution of the rainfall; but any such theory assumes a good deal. The process which has changed a garden into a wilderness must, on this footing, have resulted from a transformation from abundant rain to hardly any rain at all. For such a phenomenon there is no scientific evidence. Allowing that in remote ages the deposit of moisture was greater, there is nothing to show that since the earth settled down more or less comfortably into its present condition the rainfall has decreased. It is asserted frequently in particular localities that it has, but a succession of droughty seasons—a common instance of periodicity—is enough to set up this belief. The probability is that the rainfall, depending as it does on atmospheric causes which remain practically constant, varies little from age to age unless the surface of the land is changed. The South African Inter-Colonial Irrigation Commission remarks that a period of drought distresses men's minds and recalls similar periods to their memory, thus causing an exaggerated judgment. The considerable alterations in the land, which we actually see going on, are at any rate largely due to other causes which can be easily traced.

It is often considered that the dryness of some countries is largely due to the scarcity of vegetation, and that more rain would

fall if there were more trees. No doubt great masses of forests would tend to increase the rainfall, but there is no evidence to show that natural conditions are greatly affected by trees. Rain falls because under certain atmospheric circumstances it must; it is dependent on air currents which are not largely affected by the surface of the land. On the other hand, trees cannot cause a fall of moisture which is not there. Their principal function in the matter is to conserve water when they get it, and with this water the soil. They are one of the means of preventing the rainfall from running rapidly away, and in the course of doing this denuding the soil and silting up the lakes. The forest humus acts as a sponge, letting the rain-water trickle gently and evenly down. Without trees the fertile valley will in some climates become as dry and fruitless as the hill-top land bared by the rains of thousands of years.

Trees in masses may produce rain in two ways: (1) by cooling a warm current of air, so that the vapour in it loses by condensation its gaseous form and turns into minute specks of water; (2) by increasing the amount of vapour in the atmosphere. It is very doubtful how far the first process goes. In some climates, especially in summer, the air in large forests is cooler than that outside, and this air on rising expands and may be cooled below the dew point. Experiments at Nancy have shown that more rain falls in the forest than just outside (100 being taken to represent the fall at the centre, that outside is 76·7). But these experiments, while showing the facts, do not establish the cause; and it seems probable that the cooling effect of forests must be slight. At night trees are generally warmer than the surrounding air, and in the day-time the difference is small, but no doubt enough to cause moisture to be deposited in calm weather. More important is the adiabatic cooling caused by the air rising over mountains. The principal factor in the case is probably the generation of aqueous vapour by the transpiration of plants. "The amount of water-vapour transpired by plants is stated by numerous authors to be enormous. Each tree appears to act as a capillary tube pumping up water from the sub-soil to evaporate it when the work for which it was required is accomplished, through the millions of pores and stomata of its foliage. The surface exposed is very large and the amount of water-vapour given off to the surrounding atmosphere must be considerable. Sachs states* that 'in the course of a single period of vegetation, the quantity of water which has been withdrawn by evaporation may exceed many times the weight and volume of the plant itself. It is easy to understand that this is possible only when the loss is compensated by the absorption of corresponding quantities of water through the roots, and that the water withdrawn from the leaves is replaced in this way.' The source from which this water is drawn is itself the

* *Text Book of Botany*, p. 598.

result of forest growth : surface drainage is checked and a large quantity of water is conveyed by percolation to the sub-soil, from whence a part drains off as 'sub-soil drainage' to feed the springs and rivers, and a part is pumped up by the trees as stated above."

—*Mauritian report on déboisement.*

The chief cause of these changes is not temperature but light. It has been found that the amount of water given off is hardly affected by any changes of temperature; but in bright sunshine leaves have been found to give off more than their own weight of water, while in total darkness the output was hardly perceptible. This process under which water is separated from the other constituents of plants is a source of electricity, and to this the afternoon thunderstorm is often attributable.

Thus on the whole there is at least a strong probability that forests increase the fall of rain. But the fall is mostly local, and if this were all it would not have much importance. The essential point is that forests keep much of the moisture. It has been found in experiments made in France and Germany, that evaporation from a forest is only 40 per cent. of what it is in the open. The absorption of the rain in the ground, as contrasted with a surface run-off, is helped by the covering of roots, dead leaves, and loose soil; the mulch of litter keeps the mineral soil below in the best condition for rapid absorption. Of this moisture perhaps half is lost by evaporation and transpiration, but of this some comes back eventually; the other half is discharged gently and steadily into the streams. It is clear that this process of percolation contributes vastly to the permanence and regularity of flow, and that when it is removed desiccation and floods set in with destructive results to the soil.

Thus the most important function of forests in this respect is the prevention of erosion and the modification of surface drainage. It has been found that, when a forest has been destroyed, a heavy rainfall, with nothing to check its course, has drained off in a few hours a watercourse which had been previously fed by subsoil drainage throughout the year and preserved a uniform flow, and in doing so had carried away a large part of a mountain. In France "the usual results have followed the cutting of the forests, in the frequency and destructiveness of floods, which have washed away the soil from the hill sides and valleys of many districts, especially in the South, and the frequent inundations of the last fifty years are no doubt caused by the deforesting of the sources of the Rhone and Saone. Laws were passed in 1860 and 1864 providing for the 'reboisement' of the slopes of mountains, and these laws take effect on private as well as state property. Beneficial results have already ensued. Thousands of acres are annually planted in the departments of Hautes and Basses Alpes; and during the summer of 1875, when much injury was done by floods in the south of France, the

Durance, formerly the most dangerous in this respect of French rivers, gave little cause for anxiety, and it is round the head waters of this river that the chief plantations have been formed.”—*Encyclopædia Britannica*.

In South Africa the process is shown by the following description in the *Cape Agricultural Journal* :—

“The steep mountain slopes of Zwartberg on the North and the Lange Bergen, Outeniquas and Zitzikama Mountains on the South, are drained mainly by a great number of short torrents, the floods of which have increased in violence and capacity as the steep rugged mountains have become deprived of their original dense covering of vegetation. Instead of these streams providing an abundant supply of perennial water which might be utilised for irrigating the rich Karroo alluvium of the main valleys, they now come down in sudden and violent floods which are too strong and of too short duration to be utilised for irrigation excepting to a small degree, most of the flood water flowing away to the sea. The raging volume of water, heavily laden in its upper reaches with coarse and unprofitable sand from the Table Mountain sandstones, on reaching the comparatively level valley deposits its useless burden on the land it inundates, and at the same time tears away vast quantities of the much finer rich alluvium of the Karroo, Uitenhage series, and Bokkeveld, and carries it off to the sea and helps to swell the dimensions of the great Agulhas Bank.

“During the past summer the Oudtshoorn irrigation furrows have been dry, and the Lucerne fields have been parched for want of water, and farmers have been buying mealies with which to feed their ostriches. When rain finally fell in the autumn, and dirty torrents came down from the mountains, none came from the Karroo; one wonders what percentage of the flood was saved from the sea, how much useless silt was deposited on the lands, and how much good alluvium was carried away. Nowadays, whenever really heavy rain falls in the mountain area, we hear of great damage to property, bridges swept away, lands either washed away or great sluits formed through them; or they are rendered useless by being covered with sand and boulders. Let anyone roam about these rich valleys, and he will see everywhere the signs of recent devastation by floods. Big sluits, boulder and sand-strewn flats of once rich arable land, the remains of a great road bridge, &c., and, if he wanders along the banks of the now dry and stony river, he will see its banks everywhere caving in and exposing a great depth of rich alluvial soil. The river is ever increasing in width, and in place of the rich alluvium there is a vast deposit of boulders and sand. As these boulders are deposited further and further down the river, its bed gradually rises, and floods thus

slowly rise above the level of the country, denuding it and opening up fresh channels."

In the same publication Mr. Van Rooy writes as follows:—
"It is not yet fifty years ago that our fathers left us these regions in a very useful condition, and if we had continued building upon their good work and improved the veld step by step, our farms to-day would certainly be able to carry stock and produce so much more as to carry a more dense population and that no Afrikaner need trek to the Argentine or elsewhere. At present we have to import annually into this large country for its small population millions' worth of provisions. Is that not strong testimony against us? Man certainly has also a responsibility to posterity, and it is nothing less than our sacred duty to see that the ground, as far as it lies in our power, is left to our children in better condition than we received it. Only then there can be progress. And in that respect we stand condemned, for anyone can see that these parts have deteriorated instead of having been improved. Thirty or forty years ago this stook-country was still sound, with magnificent 'vleis' waterpools, and fountains. The veld was closely and densely overgrown with grass and other growth, shrubs, reeds, and 'matjesgoed,' provided with 'blauwbos' and 'taaibos' and an abundance of useful wild tress. We scarcely knew of 'sluits' and noxious weeds, and notwithstanding drought, which at that time occurred also, this was a country of which the majority of years one almost might say: It was as flowing with milk and honey. And what is it now like? Bushes and trees have disappeared almost without leaving a trace, grass and bush largely replaced by noxious weeds and bare, half-dead ground. It is 'sluit' after 'sluit.' The earth is washed to pieces. In one word: It is regrettably deteriorated and lived out, that it is half dead. But I have not yet mentioned the worst, which is the loss, the irreparable loss, of our richest and most fertile soil. The ground, which might be of the most use in maintaining our veld and in storing the indispensable rain and spring-water. Where there used to be the glory of our soil, one now finds sluits of various sizes and bare, hard, dead sub-soil, and where is that treasure? Gone to sea. The cream and fatness of our country is in the sea. And the sea never returns it. Of course, it has taken centuries to form such a deep, fertile top-layer of mould, and how much of it has disappeared for ever during the last 25 years, and how much is still being lost annually while we scarcely take the slightest notice of it? That rapid impoverishment of the choicest of our soils and water is nothing but a national calamity. This gnaws at the root of our individual and national existence. That is the blood and marrow of our country, and if nothing can be done against the fatal

exhaustion of those two indispensable elements of life, then, indeed, one need not be a prophet to see what must be the end of it all."

In cold climates frost acts as a useful conservator of the soil. The agricultural wealth of Canada is in no small measure due to the fact that the valuable nitrates of the earth are held secure by frost, at a time when but for this they would be washed out. But in dry, hot and dusty climates there is no such preservative. Furthermore, the surface soil becomes more loose and friable, and every devastation leaves the ground smoother and more favourable to the easy escape of moisture. Thus when the process of drying up once sets in it is likely to go on at a rapid rate and to end in complete devastation, leaving a land of more or less bare rock and great rivers. This development is going on day by day, and accounts for the increasing wastes which in former days supported flourishing communities. The exhaustion of coal and other mineral resources is a small matter in comparison with the loss of soil. The one is a loss of wealth; the other is extinction.

The most effective method of dealing with the mischief is to reproduce the original conditions by irrigation works. In former times a flood spread in a broad sheet over the land and moved off slowly, depositing soil as it did so. The problem is to do this artificially, but it is no easy matter, as unless great care is taken the diversion of flood water may do more harm than good. Storage reservoirs, or weirs with channels on each side can be used on a flat country. On hilly or undulating ground the most practicable remedy is to obstruct the channels. Stones and bush are useful materials, strengthened, if possible, by wire netting. As soon as sufficient soil has been deposited some suitable shrub should be planted; without this the improvement is not likely to be permanent. Lines of shrubs laid at right angles to the general fall of the land, and so athwart the course of water, check the flow and catch the sediment. *The Cape Agricultural Journal* recommends the American aloe for this purpose. A bank is quickly formed by the silt, and both surface and underground water is held up. The land above is enriched, and the land below is protected. The fleshy leaves of the aloe are said to serve as a palatable food in times of drought.

Roads are often bad offenders, lying as they frequently do, in low places, where they naturally lend themselves to the escape of water. The remedy is to lay them on local ridges, or to raise them slightly above the level of the ground.

Railways should provide as many openings through the line as possible, but the water after passing through a culvert should be distributed in a thin sheet, and not in a stream. In India it is a common practice to dispense with culverts and to form a bank of stones, which are loosely packed, so that the drainage finds its way through without developing anywhere into a stream. This plan is,

of course, only suitable on level ground where the water has no great force.

The heroic remedies must be left to Government action; but in general the mischief is one that can be largely dealt with by individual action. It is not always great measures that are wanted, but careful attention at every point. The remedial measures are simple and cheap, but to use them efficiently the ground must be carefully studied, and the best man for this purpose is the farmer himself. If water is stopped in one district it will try to find another course. The object is to prevent this and establish an even spreading over the land. Every plantation helps this, providing—an essential qualification—that it is laid athwart the course of drainage, and all work of this character contributes to stop the deterioration of the land.

It follows from the above that schemes of re-afforestation should be devoted to the river systems. No harm is done by déboisement on the tops of hills, except around any headwaters of springs and streams: in such places and on the slopes every tree should be retained to prevent flooding and erosion and to retain soil and sub-soil moisture. New trees should be placed in lines at right angles to catch moist winds and induce the precipitation of the moisture.

THE COLONIAL OFFICE AND THE CROWN COLONIES.

AN interesting paper on British Colonization in the Tropics was read at the School of Commerce at Brussels last February, by Mr. W. L. Grant, Beit Lecturer in Colonial History at Oxford, and has been printed in the March number of the *Revue Economique Internationale*. So much adverse criticism of Belgian colonial methods has proceeded from English sources, that Mr. Grant may have felt his position to be a somewhat delicate one. At any rate, he devoted himself to criticism rather than to laudation of British achievements in this sphere, and we are not sure that the general tendency of his paper is not to give a somewhat unduly pessimistic view of the methods of administration in the Crown Colonies and Protectorates. "Great Britain," he says, "has achieved many triumphs in the domain of colonization, but examination reveals that these triumphs have always been won outside tropical regions." We are not prepared to subscribe to this general statement. It is not easy to deny the title of "triumph," for example, to the results achieved by British rule in the Federated Malay States, and we are disposed to think that the same word might be applied without exaggeration to the work now in progress in Northern Nigeria and the Soudan. When, too, Mr. Grant says that "the West Indies are the Cinderella of our Empire, and I see no fairy godmother on the horizon," he appears to us to go somewhat beyond the truth. To complain of depressed circumstances and of the apathy of the powers that be has long been recognized as the prescriptive right of the West Indian, and it is still conceded to him as readily as it is to the British farmer. But its free and lawful exercise ought not to blind the observer to the existence of a considerable degree of material prosperity in our West Indian Colonies; and we have recently had occasion to point out that there has been a substantial increase in this prosperity of late years. But Mr. Grant's account of

the English Crown Colony system, his explanation of its justification,—the impossibility of placing full powers of government in the hands of a local white minority,—and many of his criticisms of its imperfections, are valuable and instructive, and a foreign audience must have found them of considerable educational value. He compares the methods of selection and training of administrative officers for service in the Colonies unfavourably with the methods applied for the same purpose in the case of India, and in this criticism it is impossible to disagree with him. But it must be remembered that the colonial service has only recently grown to anything like its present dimensions, that lack of funds precludes the immediate adoption of so costly a machinery as that of the Indian Civil Service, and that considerable advances in the direction of more systematic selection and training have quite recently been made. It is fair, too, to point out that there are advantages in maintaining one branch of the public service the conditions of admission to which are sufficiently elastic to admit men of varying experience and training who would scarcely have succeeded in passing through the meshes of a competitive examination. We are not quite sure that we fully understand Mr. Grant's attitude on the subject of the proper relations of administration to commercial interests. He condemns administration by commercial companies as tending to sacrifice sound government to the security of dividends; and he holds that the commercial man requires to be kept under "a strict though enlightened supervision." But he would like to see officials recruited more largely from the commercial classes, commerce more largely represented in the local councils, and "a committee or committees of expert business men, such as are the Associated Chambers of Commerce of the United Kingdom, appointed to take part in the selection of the governor." Upon this subject we find ourselves in disagreement with Mr. Grant. We agree that the promotion of commercial progress is one of the proper functions of government, especially in our Crown Colonies, where "state socialism" in all its branches is already highly developed, and due regard for, and comprehension of commercial interests is certainly essential to the success of administration. But, on the other hand, the interests of the commercial community and those of the native population come not infrequently into conflict, and when this occurs, the government is invested with the duty of arbitration, a duty which it cannot possibly perform impartially and successfully if it is closely associated with, or even dependent for its existence upon, one of the two interests which have come into conflict. The Government of India is not generally charged with a disregard of commercial interests. Yet no government has a *personnel* so wholly aloof from commercial connections. The ideal system would seem in fact to be that the

administration should be accessible to all interests but identified with none.

There is one other point on which we feel disposed to quarrel with Mr. Grant, and that is his description of the staff of the Colonial Office. We quote, but forbear to translate.

"J'y connais des hommes de grande valeur qui connaissent à fond la littérature grecque et latine ; qui n'ont jamais mis les pieds hors de l'Angleterre, si ce n'est pour aller prendre les bains de mer ou les eaux en France ; qui voient dans toutes les colonies actuelles une source d'ennuis, parce qu'elles leur prennent un temps précieux qu'ils aimeraient consacrer à étudier leur histoire aux XVII^e et XVIII^e siècles ; est-il donc extraordinaire que ce ministère ne satisfasse pas les colonies ? De fait, au temps passé on encourageait les employés à ne rien savoir sur les colonies : leurs jugement auraient pu être prévenus ; bien qu'une telle disposition d'esprit n'existe plus, ils sont encore trop peu nombreux les employés des ministères des colonies, qui ont des renseignements de première main sur les colonies."

Mr. Grant, we think, underestimates the amount of first-hand knowledge of the Colonies possessed by members of the Colonial Office, but apart from that point we suspect that his criticism is based to some extent on a failure to appreciate the exact functions of the office in its relations with tropical dependencies. The criticism which we have quoted largely ignores the administrative staffs in the Colonies. The Colonial Office criticises, controls, and assists administration, but it is not its function to administer. For these purposes it must be closely in touch with colonial officials, and this it certainly is, but it is not an absolute necessity that its members should have a local knowledge of the Colonies. The visits which they are occasionally able to make to the Colonies are valuable mostly as encouraging sympathetic appreciation of the work done and to be done, and supplying a skeleton of concrete experience upon which "paper knowledge" can crystallize more easily, but the knowledge acquired soon gets out of date, and it would obviously be unsafe to rely much on it. Nor is there any occasion to do so, for not only is the stream of information supplied by mail on the whole extremely full, but a great number of officers, averaging about 600, are at home on leave, and most of them are frequently in communication with the office. Any attempt by the civil servants at home to judge colonial questions upon facts which they have themselves collected is sure to be dangerous, and the suggestion that it should be done shows a confusion of two totally distinct provinces of work. The essential question is not how much the handful of men in the Colonial Office have seen of the Colonies, but how the local work is done by the men who are sent out to do it. We shall hardly be suspected of underrating the importance of

the examination and control kept up by the Colonial Office, but the occupation is entirely different, and with it the qualifications. In any case we are sure that Mr. Grant is entirely wrong in suggesting that the staff is distracted from its current work by either its reminiscences of Greek and Latin literature or researches into the history of the XVIIth and XVIIIth century. We suspect that Mr. Grant himself would plead guilty to some proclivities of this kind, without admitting that they necessarily impair his efficiency for practical work. In the Colonial Office it is very certain, whether fortunately or unfortunately, that they are not general.

ANURADHAPURA.

[This buried city of Ceylon—the Anuro-Grammum of Ptolemy—was founded about 500 B.C. and became the capital soon after. Its importance increased when Ceylon embraced Buddhism about 300 B.C. A branch of the sacred Bo-tree, under which Buddha attained wisdom, was brought here from India; it is now the oldest historical tree in the world, and attracts great crowds of pilgrims—20,000 or 30,000—on the full moons of May, June and July. The ruins of the city were neglected for many centuries, but some thirty years ago the government began a work of restoration. The following has been written by one of the engineers who were engaged on it. The clearing is still going on; during 1904 and 1905 the monastery was excavated.]

WHAT memories are called up by this ancient jungle-covered city, preserved from the weather for more than a thousand years! A few years ago the word “Anarajahpoora,” as we called it, meant the most unhealthy district of Ceylon, and now we hear of it as a show place, and as healthy as any part of the island. A few years ago only we were making roads there, and clearing the jungle away from the ancient ruins. And yet how perfect was much that we found! The moonstones, as we called them, at the bottom of the flights of steps into the houses, were half circular in form, and often beautifully carved in high relief. The handrails were as perfectly wrought as if they had just left the mason’s hand. There must have been wonderful woodworkers in Anuradhapura, at least if we may judge from the stonework left, for evidently the stonework was an imitation of the woodwork, which no doubt was chiefly used for the upper part of the buildings. Perhaps there is no finer stonework in the world than here, but the stone is wrought as if it were wood.

Stone is used everywhere as a veneer to brickwork, and the high state of finish to which it was brought can only be compared with woodwork of the highest excellence. We may take it for granted then that the woodwork of the place must have been magnificent, for surely, if stonework has been wrought so perfectly in imitation of woodwork, it is only fair to imagine the woodwork at least as perfect.

The temple of the thousand pillars seems most likely to have been a wooden structure on a stone foundation. Now this stone foundation is merely rows of squared stone logs, as it were, set up on end, and used as we would use wooden uprights for a foundation now. This must have been a vast building, but there is no trace whatever of its superstructure, or of its architectural form. The private dwelling houses in some places were set at more or less equal distances apart on each side of a great thoroughfare, and as the stonework alone is left we have to conjecture what their appearance must have been. The stonework, as we have said before, is only an imitation of woodwork, so we find the uprights with tenons to fit into the horizontal stones which lay across them, to support, no doubt, the wooden superstructure. This woodworking style is carried out in the capitals of columns, for they have a mortice cut in them, and on the column will be found the square tenon which fits the mortice. When we come to the examination of the Tuparama Dagoba we find the woodwork style still adopted in the columns which are, as a rule, squared logs of stone set on end. In this ruin some of the columns are many sided, but though the general plan of the place is round, the columns have in no case been set radially from the centre. This is a most curious fact, and in making plans of these Dagobas, symmetry, as we understand the word, is not to be expected. This Dagoba, and Ruanwelle, perhaps the largest building of the kind in the world, would require many pages to explain how they were built and for what purpose, but they stand before us as monuments of a great religion to this day, and at certain seasons the Ruanwelle Dagoba is visited by hundreds of men, women, and children, who camp round it and seem to have a picnic, which is brought to a close by the great concourse mounting the platforms which surround its base, and swathing the walls of these platforms with cloths and fabrics tied together. The continuous shouts of "Sadu" have an impressive effect when heard from a distance. Evidently these celebrations come down from great antiquity, and though the Buddhist priest here reads his "Novum Testamentum," and highly approves of its teaching, he has before him a religious system which to him is satisfactory and absolutely free from strife. The Buddhist is an amazing instance of hereditary religious thought, and in Anuradhapura his gentle listlessness seemed worse than useless as a force in the world. It is here that the sacred "Bo-tree" with its masonry protection can be seen, but it does not, apparently, attract either the priests or the people, so the wild monkeys can enjoy it by themselves. Our jungle clearings before the present finishing touches of civilisation had reached this part gave the appearance of an English park to the place, and though tropical creatures of all kinds were met with, the sparrow was there and the swallow, to make the Englishman feel at home.

There were two immense public baths, as we thought them then, in a remote part of the jungle, with stately stone staircases, with finely wrought handrails ending on the landings in artistic curves. These ruins were in such good repair that it was hard to believe that they were built more than a thousand years ago. There was one curious circular well near the Dagobas with accurately sloped sides. This well was built of brick and lined with wrought stone covering, set in steps from the top to the bottom. Ten feet across at the top and about two at the bottom, the depth about twenty feet. But what was it for? In Anuradhapura the question "What was it for?" constantly presented itself without getting a satisfactory answer from oneself or anyone else. But one of the greatest puzzles of all was a large flat stone with a slot cut in it: this stone used to be under water at a depth of say thirty feet when the great tank or lake was full of water. It was at the end of the culvert through which the water was carried under the great embankment for irrigation, and lay flat. Possibly it was the valve through which the water was admitted by the removal of some sort of plug or door. In the middle of the great embankment was a brickwork shaft at the bottom of which the opening into the culvert could be seen. The culvert, in fact, was divided at this point, so the water must have risen in the shaft and thereby insured a continuous and regular flow to the irrigation channels outside the bank or embankment. We had not tried this system of delivery when I examined this interesting piece of ancient water engineering, but were cutting the embankments across, and making use of wing walls and an iron service pipe for delivery. These wing walls were a cause of anxiety because in the dry weather the bank receded slightly from them, and when the rains came water trickled through and weakened the bank where it abutted on the wing walls.

Much can still be learnt from the study of these ancient water works, but it is very difficult to find out when examining Eastern work whether a comprehensive scheme had been carried out, or whether tanks were built wherever a community chose, without reference to other communities which might be affected injuriously by the work.

Anuradhapura, the city of the thousand kings, has secrets which will take years and years to find out, and a visit to it will certainly repay the visitor in letting him see actually how work was done in those remote times, and how patience helped those old stoneworkers in the difficult task of cutting out a great drinking trough for elephants from a solid rock, of which, most fortunately, one specimen was to be seen. As to how the stone beams were quarried square out of the living rock—as we could see they were, for specimens unused were lying in the quarry—who shall say?

REVIEWS AND NOTICES.

A History of Canada, 1763-1812. (By SIR C. P. LUCAS, K.C.M.G.,
C.B. *Clarendon Press, Oxford.*)

THIS clear and readable history is distinguished from the ordinary style of narrative by the numerous comments suggested, not only by the facts related, but also by the writer's practical experience of recent developments. The method leads to general observations applying both to old and to new situations. Thus, in commenting on the American revolution, Sir Charles Lucas sketches the differences which at any point of time tend to arise between a Mother-country and its Colonies. "A Colonial Empire consists of an old community linked to young ones. The conditions, the standards, the points of view, in politics, in morals, in social and industrial matters, are not identical in old and young constitutions. Young people, like young men, do not count the cost, and do not feel responsibility to the same extent as their elders. They are more restive, more ready to move forward, more prompt in action. Their horizon is limited, and therefore they see immediate objects clearly, and they do not appreciate compromise. The problems which face them are simple, as compared with the complicated questions which face older communities, and they are impatient of the caution and hesitation which comes with inherited experience in a world-wide field of action. The future is theirs rather than the past; they have not yet accumulated much capital and draw little on the coming time. Most of all, being on promotion, they are sensitive as to their standing, keenly alive to their interests, and resent any semblance of being slighted." It may be doubted whether the distinction is not less a question of age and youth, than one of restricted and abundant opportunities. The individual Englishman is probably as open to new ideas as the individual colonist, but in practical life he has less room for them, and is accustomed from childhood to comparatively fixed conditions.

But however the cause may be expressed, there can be no doubt that politically young communities are more plastic than the old, and, to repeat Sir Charles Lucas's words, "more ready to move forward, more prompt in action." The frequent anticipation in Australia of administrative improvements in this country, and the swift decisions come to on occasions appealing to the national spirit, illustrate this rapidity of movement. From the point of view of the administrator, the habit has occasional disadvantages, but it is well to have both qualities, enterprise on the one hand and caution on the other, represented in the working of the Empire.

The book is largely concerned with the American war, the results of which are viewed in the light of present circumstances. The victory of the States seemed at the time to be disastrous to British colonisation. Franklin offered to furnish Gibbon with "materials for writing the history of the Decline of the British Empire." As it turned out, the wide and stable expansion of the Empire was the direct outcome of the loss of the American States. Within four years after the treaty the occupation of Australia began, and the building up of Empire went on apace. The separation of the States, inevitable in the long run, came early enough not to interfere with this movement; had it come later the States would have absorbed much of the strength which went to the making of it. Moreover, in the new creation the moral lesson was of enormous value. As regards Canada the consequences are vigorously summed up: "The result of the war was to give prominence and individuality to Canada as a component part of the British Empire; to bring in a strong body of British colonists not strengthening but supplementing the French Canadians and antagonistic to the United States from which they were refugees; to revive the instinct of self-preservation which in old days had kept Canada alive, by again confronting her with a foreign Power, and at the same time to give her the advantage of protection by and political connection with what was still to be the greatest sea-going and colonizing nation of the world. The result of the War of American Independence was to make the United States a great nation; but it was a result which, whether with England or without, they must in any case have achieved. The war had also the effect, and no other cause could have had a like effect, of making possible a national existence for Canada, which possibility was to be converted into a living and a patent fact by the second American war, the war of 1812."

Whatever may be said on the merits of the case of independence, it is clear that no similar situation will ever arise again. The early English colonists went out to America largely in the spirit of protest against the conditions at home: they were more or less ripe for revolution and separation on an opportunity, and the opportunity soon occurred. The whole spirit is different now;

there is neither resentment on the one side, nor arrogance on the other. The only trial which would put the connection of Canada with the Empire to serious test would be a great war, and it is easy to appreciate the feeling which has been expressed by Mr. Bourassa that many Canadians, the French element in particular, have some dread of being involved in a struggle over some question in which they are little concerned. If such an unfortunate occasion ever arises, the sympathy and support of Canada would no doubt largely depend on the view taken in the Dominion of the merits of the case; if that view were clearly on England's side, there can be no moral doubt that Canada would stand by the Colony.

We cordially commend Sir Charles Lucas's book to all readers who wish for a straightforward history of the period, not overloaded with detail, but full of suggestive criticism.

The British Empire: its Past, its Present, and its Future.

(By A. F. POLLARD. *League of the Empire, Carlton Hall, Westminster.*)

It is stated in the preface that the object of this volume and its successors is, like those of the League of the Empire itself, primarily educational, and that the expenses of the series having been already provided for, all the proceeds will be devoted to the furtherance of education. It is very satisfactory to find that a work written with these objects is eminently readable. It brings into prominence the material fact and abounds in interesting comment. The concluding chapter will be the most attractive to the general reader. It deals with the question of the future organisation of the Empire, and puts strongly the case for administrative combination between the Mother-country and the Colonies. A machinery has been provided in the Imperial Conference, and we agree with the author that it will be whatever the Dominions determine to make it. If their Governments insist on finding business for it (and of appropriate business there is no lack), the business will have to be done, and in proportion to the work the needful instruments must be developed. A list is given of the topics of general importance which have been marked for consideration—uniformity of naturalization laws, revision of commercial treaties, uniformity as to trade marks, patents, trade statistics and company law, and the "all red" route to Australia. It can hardly be claimed, however, that the list is an inspiring one. With the exception of the last subject, it is limited to technical matters, and experience has shown that these must be in effect settled by experts, and that political leaders have little time or desire to meddle with them. The most important of

such questions—uniformity of shipping law—is not included, and the correspondence which has taken place on this subject shows the difficulty of establishing uniform rules. Uniformity, in fact, in such matters is more than can be expected: the aims and policy are different in different places and dictate varying requirements. The ordinary machinery is sufficient to carry on the discussion of such subjects, and a vast amount of work is continually being carried on in this way, but without coming prominently before the public. The value of the Imperial Conference, however, is not to be measured by actual results in these, or indeed, any other matters. The fact of the periodical meeting of the political chiefs of the Empire is by itself of enormous importance in consolidating the connection, the strength of which lies in the hearts of the men who influence thought and action. There will always be opportunity and occasion at these meetings for the expression of friendly feeling and harmonious desire, and an impulse will be given to the forces which make for combination and mutual support.

The Commonwealth of Australia. (By B. R. WISE. *Sir Isaac Pitman & Sons.* 7s. 6d. nett.)

This volume, the first of an "All Red Series," is quite distressingly "all red" in external appearance. The redness of the edges vies with that of the cover, and the redness of the cover easily communicates itself to the hands of the reader. But the inside is much better than the outside. Mr. Bernhard Wise has an intimate knowledge of Australian affairs, and a not less intimate knowledge of the ordinary attitude towards them of the British public. He therefore knows what misconceptions have arisen or are likely to arise, and he is well qualified to remove them. But he admits,—and in justice to English critics of Australia the point deserves emphasis—that most of the stories circulated to discredit Australia "originated in some Australian newspaper or some speech by an Australian politician." "In Australia, Parliament and the Press cry every error of Australians through a megaphone." One reflects that it is not for nothing that Australia possesses a population of almost purely British origin. Mr. Wise understands that in Canada you can be fined for publishing a libel on Canada. "Such a law," he reflects "would have augmented the Australian revenue." The Englishman who reads Mr. Wise's book carefully will have no further excuse for misunderstanding. He will find the charge of general political corruption most energetically repudiated. He will find the picturesque legend of the six hatters traced to its origin and reduced to its true dimensions. If they had happened to pursue some other calling it is not likely that their fame would have encircled the globe. But there is something about a hatter which

arrests the imagination ; and during the happy days of leisure when they paced the streets of Sydney and returned each evening to their ship, their employer enjoyed a splendid gratuitous advertisement. We do not wish it to be understood that Mr. Wise invariably identifies himself with the Australian point of view. He is not less severe than other writers have been in his strictures on the national devotion to betting, and he can find little to say in justification of Australian cookery. He is ready too to admit the defects of Australian Parliaments—the extreme prolixity of debates, the time wasted on aimless motions, the irresponsibility of the private member masquerading as freedom from party ties, and in the case of one State, the unrestrained license of language. But he leaves one with the impression that he regards himself as primarily a citizen of Australia, and that he is proud to be able to claim the title. The most valuable section of the book is Part II., which describes how the machinery of Government actually works. He tells the history of the establishment of the Commonwealth, in which he was himself an actor, and explains the peculiarities of its constitution by reference to their origin. In speaking of the old Federal Council, he quotes the following criticism written by himself in 1885. “It originated in no Colonial Parliament and was suggested by no popular movement. It is inferior in all the attributes of a governing body. It makes no provision for an executive ; it has no power of taxation ; it cannot appropriate a penny of the Federal revenue ; it contains no provision for an appellate judiciary to decide conflicts between federal and local authority. It is thus a Cabinet without responsibility ; a Government without authority ; an Executive without a revenue . . . It must give rise to numberless occasions for dispute.” We reproduce this passage because its significance is not confined to Australia. It enumerates, tersely and cogently, the difficulties which still stand in the way of any scheme for the establishment of an Imperial Council. Mr. Wise is a convinced Federalist, and he holds that when the growing sense of Nationality in Australia demands fuller expression, the constitution will have to be remodelled on Canadian lines. He points to the decision of the High Court in the famous “Harvester” case, which proved a fatal obstacle to Mr. Deakin’s scheme which goes by the name of the “New Protection,” as a typical example of the way in which the framing of a National policy is frustrated by the existing limitations on the powers of the Commonwealth. In this connection, it is interesting to notice that the safeguard conceded to the State by the grant of equal representation in the Senate, a device copied from the American constitution, and recently reproduced, in a modified form, in the draft South African constitution, has, in Mr. Wise’s opinion, proved to be unnecessary. “It is evident now,” he writes, “after eight years trial of Union, that these demands

undervalued the National sentiment and were based on the delusion that parties would divide upon the issue of Commonwealth *versus* States. In fact, party divisions have never been upon State lines, and are not likely to become so, while nothing indicates that the States will ever group themselves, as a body, in opposition to the Commonwealth." The truth appears to be that, while the battle between the Commonwealth and the States continues, the battleground is not the Commonwealth Parliament. Party divisions in the Assembly and the Senate run upon similar lines, and Sir Richard Baker's dilemma, "There cannot be a responsible Government which is responsible to two Houses," has proved to be an unreal one.

The third section of Mr. Wise's book deals with various legislative measures of the Commonwealth and States. There is a useful account of the Wages Board system in Victoria and of the Industrial Arbitration Law of New South Wales. Mr. Wise was himself responsible for the introduction of the latter, and he naturally regards it as preferable to the Victorian system. The recent attempt to combine the two systems in New South Wales he views with distrust, and considers that it has already broken down. An interesting point which Mr. Wise makes is that whereas the policy of Industrial Arbitration promotes the development of trade unionism, the Wages Board system has an opposite result. This certainly appears to be borne out by the statistics which he quotes as to the membership of trades unions in Victoria, as compared with New South Wales and Western Australia. Mr. Ramsay MacDonald has frequently argued that both systems are only possible as part of a policy of high protection, and are therefore inapplicable to present conditions in England. The question is of peculiar interest in view of the recent introduction of the Trade Boards Bill by Mr. Churchill; but Mr. Wise, as a protectionist describing a protectionist community, can hardly be expected to deal with this particular argument. We note that he is not in favour of the ultra-democratic proposals which have found some support in Australia—in particular the general use of the referendum, and the direct election of ministers by Parliament. Mr. Wise is an enthusiastic supporter of the policy of Imperial preference, and of Mr. Deakin's plan for universal military service. We commend his volume to English readers who wish to obtain a more intimate understanding of Australian politics. In the next volume of the series Sir Arthur Douglas is to describe the Dominion of New Zealand. A little more care might be taken with the printing, typographical errors being somewhat frequent in the volume which we have noticed.

The Colonies and Imperial Defence. (By P. A. SILBURN, D.S.O.,
M.L.A., late Major, Natal Permanent Forces. *Longmans, Green
and Co., 6s.*)

This book makes its appearance at a time when the question of Imperial Defence is very much to the fore, and the writer, a Colonial who has served in the field with Colonials, brings to his task a considerable knowledge of the data of the subject, and of the feelings with which it is regarded in the Colonies. The dominion of the seas, which every one agrees would in the event of a great war be essential to the maintenance of the Empire, is viewed in the Colonies and in the Mother-country from different standpoints. "The theory held by the Admiralty authorities, 'that the safety of Colonial ports can be best secured by the operations of a fleet somewhere away out on the high seas,' has yet to be confirmed in actual war; the past is full of historical examples, but the matter-of-fact Colonial mind looks for something fresher than the musty pages of history. To him it appears a matter of rash speculation to risk the safety of Australia in the hands of the Admiralty alone. The Colonial sees many elements of danger in placing his whole trust for personal safety in the hands of a defence force provided by the inhabitants of the United Kingdom; to them the loss of a Colonial possession would but mean the loss of a prestige, or at the worst the partial and perhaps temporary disruption of the Empire." Whatever may be said of the principle of strategic control and concentration, this feeling exists and has to be reckoned with. Mr. Silburn recognizes and strongly deprecates the futility of a policy which, if generally followed, would fritter away the resources of the Empire instead of securing a strong homogeneous Navy, but he also recognises that, on the whole, defence is a question of minor importance in the Parliaments of the younger self-governing Colonies. "In those Legislatures it only receives attention when the Budget is well on the credit side, and when other subjects considered locally of burning import are quiescent. It is first shelved when the Budget is on the wrong side, or a branch railway, redistribution or immigration restriction Bill is brought forward. The heat and turmoil of debate, discipline of party, and the importunities of Colonial constituents preclude most Colonial politicians from examining closely any questions from a point of view other than that of expediency." The attempt to settle the matter by the system of monetary contributions by the self-governing Colonies to the Navy, which results in a bare £400,000, or about 1 per cent. of the naval vote, is unsatisfactory to both sides. At home we find that we pay 16s. per head for naval defence, while the Colonist pays 4d. On the other hand: "The

grievances that most Colonies have against the direct contribution are :—

1st. That when asked for, no proper basis for 'contribution was suggested ; it was left for the Colonies to grant what they thought fit, thus placing them in a very ambiguous position with regard to the Mother-country, the other self-governing Colonies, and the Empire generally.

2nd. That when granted, there is no control by the Colonies on the expenditure.

3rd. That it gives in return no guarantee of naval protection.

4th. It is felt in some Colonial quarters that these naval grants would be more effectually used in the interests of Imperial defence by being expended on local defences."

Mr. Silburn's solution is that Great Britain should provide the Navy and the Colonies assist in the Army. He contends that the population of the great colonies are essentially inland people, little interested in or fit for sea work. On the other hand, they are eminently fit for army work. "Canada, Australia, South Africa and New Zealand are in a position to relieve the Mother-country of a great deal of her military burden. A very large proportion of the Imperial Army should be supplied by these large pastoral Colonies. Then, again, each of these Colonies should be responsible for the adequate land defences of their coasts, the absolute security of the coaling ports and harbours of refuge. In undertaking this at their own expense, and with their own Colonial manhood, they are giving a far more practical contribution to the Navy than can be represented in cash, and more effective defence to themselves and the Empire, than by the selfish and ineffective policy of local and independent Navies."

The merits of the idea are a matter for experts, but, at any rate, it is based on an attempt to follow natural lines. The present defensive resources of every Colony are summed up in a convenient form.

"Pioneering." (By F. SHELFORD, M.I.C.E. *E. and F. N. Spon*, 3s. net.)

Sir George Goldie observes in a preface to this book that the traveller has "in this small volume a very complete compendium, which will spare him diffuse and wearisome enquiries at a time when he probably needs to concentrate his attention on what he is leaving behind him at home, or on the work which is taking him abroad. What experienced explorer, if he could be brought to free confession, would not admit his early tortures of indecision as to what he should select and what he should reject in his equipment,

and his subsequent self-reproaches for his sins of commission and omission in this respect?"

Mr. Shelford's personal experiences and his official acquaintance with camp requirements enable him to set out fully and clearly the best provision for a tour or expedition in tropical countries. Every necessary article is discussed, and in particular mention may be made here of the canteen devised by Sir Walter Egerton, said to be probably the most excellent in existence, and sold at the Army and Navy Co-operative Stores, and of the Doulton pump filters (price about 36s.), described as the most carefully thought-out filter at present offered to travellers. It is well to have in mind that all luggage and cases should be of tin, if possible. Mosquito boots, which are necessary to check the insect's special partiality for biting one's ankles during dinner, are now procurable at the Army and Navy Stores. Handy notes are given on mapping and surveying. The "tenderfoot" is warned to be considerate to his carriers, and told that a smile of encouragement or a well-timed joke will put the whole party into good humour and add half-a-dozen miles to a day's march. Unfortunately, no illustrations of this form of procedure are given, but probably most officials have picked up a few examples at the Sports Club or other favourite resorts. We cordially recommend the little volume to all who have occasion to travel in the tropics.

The Frontiers of Beluchistan. (By G. P. TATE. *Messrs. Witherby.* 12s. 6d. net.)

Those who are interested in the difficulties of survey work will find an example in this book. In two and a-half years the Seistan Arbitration Mission lost 4,900 camels and horses, and endured the horrors of thirst, the visits of road wolves and jackals, and a dry wind of peculiar penetrating power which blows in these favoured regions for 120 days in the year. To preserve them from the sting of the Seistan fly the horses are clad in pyjamas as well as coats. The country seems remarkable chiefly for ruined towns and mouldering monuments. Altogether the colonial surveys with which we are acquainted, though in some cases attended with enough hardship to satisfy anyone, cannot compete with this. The narrative may therefore be read with enjoyment, as showing that things are worse somewhere else. There has been some disappointment among reviewers of this work on the ground that it does not bring out the romance of the country. Possibly this criticism is largely due to the fact that Mr. Tate has lived there and the reviewers have not.

Wellcome Research Laboratories.—GORDON MEMORIAL COLLEGE, KHARTOUM: Third Report and Supplement (*Baillière, Tindall and Cox*, £1 1s. and 10s. 6d.)

These reports are full of valuable matter of interest to all tropical countries, though why technical works of this description should be got up in a sumptuous and expensive manner is a mystery. Similar productions abroad are issued with cheap paper and binding, and are therefore procurable by the ordinary student.

Medical, bacteriological and chemical observations are set out with fullness and abundant illustrations. Forty-eight coloured plates show the forms of the germs which infest the blood in tropical diseases and the insects which carry them about: the mosquito, the chigger, tsetse and tumbu flies, locusts, buttis, ticks, fleas, and others *ejusdem generis* are depicted with a fullness which shows the wonderful advance of medical enquiry into these mysterious disorders. In the old days Khartoum was a perfect hot-bed of mosquito life, but the plague has been so vigorously attacked that the insect is now distinctly rare there. Rules are given for the construction of irrigation channels in such a way as to prevent malaria: the important point is that they should be on a higher level than the surrounding land, so that when the flow of water in them ceases they may drain dry. Some notes are given on tropical houses, one point of which is that they should be as well darkened as is convenient. The black man is sufficiently protected from the injurious light rays by the pigmentation of his skin, and has therefore only to shield himself from the heat rays; the white man has to shield himself from both, but generally his houses are not so much darkened and therefore not so healthy as the native huts. An account is given of the medical practice and superstition of the natives. Magical beliefs of course play an important part in their sphere, and a scientific examination of the drugs used shows an astonishing absence of any empirical knowledge. In one case the doctor allowed a Hakim to cure a patient suffering from advanced syphilis by a medicine consisting chiefly of iron smelter's refuse, but the patient collapsed (the transaction however interesting scientifically, was perhaps open to some academical objection from this point of view) and the Hakim fled in a fright and was not seen again. The most curious feature of this subject is that "wonderful cures are of course reported on all sides, and the non-professional English official is quite convinced in many cases that the native Hakim possesses mysterious knowledge and drugs far superior to the mercury and iodide of the English Physician." A tribute however is paid to native massage, a universal custom among the Arabs in health and disease. A strongly scented paste is made from ground dura, fat, oil, &c., rubbed over the entire body, and gradually worked off with

a strong kneading action: with this all dead epithelium is removed, and a refreshing tone given to the skin and muscles. In wasting diseases, fever, rheumatism, strains and sprains, no better treatment, it is observed, could be employed. The Arab is careful of his head, and it is pointed out that the thick paste of flour and oil, which is rubbed into the hair and allowed to dry into a perfect plaster cast about an inch thick, is an excellent safeguard against the sun; but the writer is content with the suggestion and does not go the length of recommending the practice as a substitute for straw hats.

The supplement contains a review of some of the more recent advances in tropical medicine. Under the head of "Water" there is a useful account of methods by which water may be purified for domestic purposes. Several machines are on the market for boiling water in such a way as to retain the air in solution, for if this is not done the boiled water has an insipid taste. It should be remembered that the water used for washing up plates, and knives and forks, may, if not purified, infect these articles. The new army cart is fitted with sponges to stop sediment, and with candles to stop microbes. When the soldier is some distance from transport, Vaillard's tablets are recommended; these contain an iodide which kills certain organisms with certainty. Storage by itself is a method of purifying water, one theory being that the micro-organisms of water-borne diseases gradually die in the struggle for existence against ordinary water bacteria. If water is stored for a long time, it becomes incapable of giving rise to epidemic disease, and it is a good thing therefore to have reservoirs of water. Lake water is well known to be at least comparatively pure. Probably storage for four weeks is sufficient, and even a few days have a good effect. In a recent Cyprus report the question is discussed whether reservoirs are dangerous as breeding grounds of mosquitoes, and the conclusion arrived at is that they may be, but that a distance of one mile gives protection from infection.

A Nyasaland Handbook.

We have received a copy of the first issue of "The Handbook of Nyasaland," which is published by the Government Printer at Zomba, and may also be obtained (price 3s. 6d. nett) from Messrs. Wyman & Sons, of Fetter Lane. In addition to full lists of the establishments of Government Departments, statistics of revenue and expenditure, information as to postal regulations, lists of court fees, &c., &c, the volume contains an excellent descriptive section, and much information as to the history, population, fauna and flora of the Protectorate. A valuable section is devoted to agriculture, and there are some useful and practical medical notes.

Altogether, the intending settler or visitor will find in this book just what he requires in the way both of fact and of advice, and we offer our congratulations to all who have been concerned in its production. There are some excellent illustrations.

We have received a copy of the Handbook of the Cayman Islands for 1909 (price 1s. 6d.) which is now in its second year of issue. It contains much interesting information about this remote and little-known Dependency.

West Indian Bulletin.

No. 4, vol. ix., contains articles on the timber of Jamaica and Dominica, the Aleyrodidæ of Bardados, fungous diseases of Cocoa-nuts, and millions and mosquitoes

BUSINESS NOTES.

Lighting of Coaches.

The following memorandum has been received dealing with this question. The three methods of lighting carriages, are :—

- (a) By means of oil lamps.
- (b) Compressed Gas.
- (c) Electric Lighting.

(a) This system involves little capital outlay beyond the acquisition of the lamps and globes, but has been considered for many years quite unsatisfactory from a railway standpoint. The light given by the lamps is indifferent ; oil and water find their way into the globes which in turn become more or less opaque ; the leakage of oil, wicks burning irregularly causing smoky chimneys, and the general results from oil lighting have proved very unsatisfactory. In America, especially in the Pullman Cars, light is provided by clusters of oil lamps burning paraffin. These in charge of a careful conductor seem to give very satisfactory results, but the disadvantages are not entirely abolished even under such conditions. In the same way, of recent years, oil lamps in which the flame under pressure and mixed with air impinges on a mantle, thus giving an incandescent light, have been introduced, but broken mantles and other defects have resulted in failure of lights and continual trouble.

Acetylene has also been used but it is not viewed favourably in the Railway world, and is not considered satisfactory.

(b) Lighting by gas has proved much more satisfactory and is in common use in England, America, and on the Continent. It consists of a gas which is manufactured from either crude petroleum or shale oil, the oil being run into a red hot iron retort where the oil is vapourised, and finally converted into gas. After washing and cleaning from tarry deposits the gas is passed into a holder from which it is in turn compressed by a suitable engine into a series of large storage tanks capable of easily withstanding the pressure to

which the gas is compressed (ten atmospheres). From these reservoirs high pressure pipes are laid to the neighbourhood where the coaches are cleaned, stored and sorted, and the gas is led from these mains to small storage cylinders under the coaches by means of flexible hose pipes. Each coach is fitted with a contrivance for reducing the pressure from the cylinders to a constant pressure at the burners, and the result is that a very rich gas is provided in the lamp, the consumption of which is comparatively small. The lighting from this system is good and clean, but it has the disadvantage of requiring a special and somewhat expensive plant to be installed at some point or points on the railway. If the demand for gas is not sufficient to justify a gas plant at each station where the charging of the coach cylinders is necessary, arrangements are made to use a certain number of travelling high-pressure reservoirs, which are charged from the original station and sent to the sub-stations, where small gas mains are again laid to enable the coaches to be properly charged. This system has the advantage of being self-contained in the sense of the word that every coach is entirely equipped and is absolutely independent of the movement of any other coach, so that shunting operations, or transferring the carriage from the main line to a branch, has no effect upon the lighting of the vehicles. A system of lighting by coal gas was in vogue on the North London Railway some years ago whereby ordinary coal gas was stored in large india-rubber bags at one end of the guard's brake-van, led by pipes and rubber connections through the whole of the train; but this somewhat obsolete and unsatisfactory method has been done away with for some years.

(c) Electric lighting has been tried in several forms, principally one or other or a combination of the systems of—

- (i.) Generating electricity on the train and conveying it to the compartments.
- (ii.) Storage battery.
- (iii.) Combination of (i.) and (ii.).

The most successful system, and that generally adopted now, is by "Stone's Patent Electric Lighting." In this system a small dynamo is connected with the axle of the coach and each vehicle thus generates its own supply of electricity. The mechanism is so arranged that a constant supply of current to the lamps is maintained if required when running at anything beyond the minimum speed. When the lamps are not in use, or should the speed be greater than that necessary to supply the power to the lamp, the electricity so generated passes into a small storage battery or set of accumulators, and is there in readiness for future consumption when the train is at a standstill, or proceeding at such a low speed as not to generate sufficient electricity to light the lamps.

To lay down a plant for compressed oil gas suitable for the requirements of a railway might necessitate an expenditure of roughly from £4,500 to £5,000, exclusive of buildings. In England, with oil costing about 3½d. per gallon, the gas works out at about 10s. 9d. per thousand cubic feet. The consumption of oil gas is about three-fourths of a cubic foot per burner per hour, and to thoroughly light a coach duplex burners in each lamp are recommended. In the case of electricity there is no continual recurrent charge for material for the manufacture of electricity, but only the first cost, which is heavy, of equipping the coaches with dynamos, &c. One of the serious disadvantages of either oil or gas consists in the danger of fire in the case of a collision or serious disaster on the railway. Several of the recent accidents to passenger trains on railways in other countries have been greatly intensified with regard to the results, and to the damage done, in consequence of fire resulting after the occurrence. This is greatly minimised by the use of electricity.

The cost of lighting by oil lamps may be put at ½d. per hour per lamp. Assuming a lamp to give about eight candle power, this would give a cost of '0615d. per candle power per hour. A compressed oil gas burner of eight candle power consuming '75 cubic feet of gas per hour would cost about '097 per lamp per hour, or '012 per candle power per hour. From particulars obtainable the cost of Stone's Electric Lighting is about 0'007 per candle power per hour; this includes interest on capital outlay.

The cost of equipping each coach with all plant and fittings necessary for electric lighting may be estimated at £195 per large bogie carriage. The cost of maintenance including renewal of lamps, plants, accumulators, belts, bearings, and other wearing parts for a coach burning for six hours per day is said to be about £11 per annum.

The first cost of electricity is greater, but it seems to be more free from possible dangers than either of the other systems. It has now advanced far beyond the point of experiment, and in Stone's system we have an arrangement for lighting coaches which can be absolutely depended upon.

In addition to the lighting of the vehicles, Stone's system can be made applicable to the cooling of coaches by the circulation of a current of cool air which very considerably reduces the temperature of the compartment.

Acetylene and Oil Gas Lighting.

This system, while very convenient for small installations, is unsuitable for large ones, because the gas must be burnt practically as quickly as it is made. It is produced by the action of water on calcium carbide, but is soluble in water and cannot be stored long in

a holder. It is difficult, therefore, to provide a reserve for occasions when an exceptional number of lights are required. Another objection is the difficulty and cost of shipment of calcium carbide to the Colonies: the regular lines nearly always refuse to accept it at all.

Oil gas can be made from any oil, mineral, animal, or vegetable, and can be stored for any period. It is suitable for cooking, heating and driving gas engines, and the cost is low. At certain railway stations the cost of oil, fuel, and renewals comes to about 7d. per light for one hour. An apparatus providing for 30 lights consuming 1 cubic foot each for five hours burning (gasholder, 5 ft. 9 in. diameter, 6ft. depth), can be obtained for £72.

National Air Gas System of Lighting.

This system has been installed at the new buildings of the War Office, but we understand that the department is not yet in a position to report on the result. The apparatus consists mainly of a hot-air engine, an air-blower, a vertical cylinder containing the supply of petrol, and a carburettor connecting by a service of pipes and valves to a small gas holder, the whole being self-contained and working automatically. It is claimed that the mixture of air and petrol is kept uniform, and that the variations of temperature are provided for. The flame produced, which is intensely hot, has of itself no illuminating power and is only combustible with special burners. In an office in Victoria Street, a 60-light apparatus is placed in a wooden shed outside the building, occupying a floor space of about 4 ft. by 2 ft. 6 ins. The main gas pipe from the engine is carried underground to the inside of the building direct to the burners in the lamps. To start this engine it is necessary to operate it by hand by turning the fly-wheel until a sufficient quantity of gas is made to light the burners under the cylinder which heats the air for working the cylinder, and it has to work for about 45 minutes before sufficient gas is made for lighting the building. The engine uses a gallon of petrol a day for the 60-lights. The plant gives no trouble and requires little attention. A very heavy low-grade petroleum spirit is found good enough, at a price of 5½d. per gallon in London: it is usually shipped from America. The system will probably be found convenient and cheap in many colonies. The price of the plant is from £45 upwards.

The West India Committee Circular contains a very hopeful account of the development of oil-boring in Trinidad, from which we extract the following:—

“Mr. A. Beeby Thompson, the well-known petroleum mining expert, who has just returned from a visit to Trinidad, speaks with

enthusiasm of the prospects of the petroleum industry in that colony. It has now passed the experimental stage, and active developments on a large scale may be anticipated in the near future. The Trinidad Petroleum Company, whose operations are centred at Guapo, have struck oil in all their recent wells in considerable quantities, and great quantities of gas accompany the oil. Some of the wells have flowed periodically, the oil gushing to a height of over 100 ft. One feature of great importance is the absence of water in the oil-bearing strata, which thus removes one of the worst difficulties so often to be met with in oil-field development. The petroleum of the Guapo district is of excellent quality, yielding on distillation a large percentage of illuminating and intermediate oils, as well as petrol and lubricating oils. The early difficulties of drilling, which much delayed the prospecting operations, have been entirely overcome by a combination form of rig designed to suit the local conditions, and wells can now be drilled at a much quicker rate than formerly. In the vicinity of the Pitch Lake at La Brea, six miles from the Guapo oil fields of the Trinidad Petroleum Company, several highly productive wells have been completed by the New Trinidad Lake Asphalt Company, and preparations are in progress for an increased scale of development. One well in April and May flowed continuously for about three weeks at an estimated rate of from 20 to 30 tons daily. The oil is of a heavy asphaltic description, specially suitable for fuel oil. Both the Trinidad Petroleum Company and the New Trinidad Lake Asphalt Company are using oil fuel in their boilers, and already arrangements are under consideration for supplying the electric power station in Port of Spain and other works with liquid fuel. The operated properties adjoin the coast and occur in the Gulf of Paria, where shipping is always protected, so that exceptional facilities exist for the cheap shipment of oil for export. There is no important oil field in the world so favourably located for the cheap disposal of the produced products to the markets of the world."

Aluminium Wire.

The manufacture of aluminium has been growing steadily in the last few years. The cost has decreased, and in consequence it is being used to a considerable extent in America and on the Continent for overhead power transmission lines, and we believe that it has been erected in France for telegraph purposes.

In any comparison between the values of different metals for telegraphic line wire purposes, emphasis must be laid primarily on the fact that the wire which has the higher breaking strain is likely to give most satisfaction unless other characteristics are distinctly detrimental.

A copper wire with a diameter of $\cdot 116''$ weighs 200 lbs. per mile; has a resistance of 4.39 ohms per mile; a breaking strain of 650 lbs, and costs at present market prices approximately £75 per ton. An aluminium wire with a diameter of $\cdot 160''$ weighs 124 lbs. per mile; has a resistance of 3.5 ohms per mile; costs approximately £88 per ton, but has a breaking strain of only 620 lbs. On the other hand a three-ply stranded aluminium conductor, each wire having a diameter of $\cdot 092''$, weighs 126 lbs. per mile; has a resistance of 3.54 ohms; costs approximately £98 per ton, and has a breaking strain of 660 lbs.

Taking for comparison a line 100 miles long, with the above wires and present market prices, the copper wire would weigh 9 tons and cost £675; the aluminium wire—if solid—would weigh 5.6 tons and cost £493; if stranded, would weigh 5.7 tons and cost £550, so that with the solid aluminium conductor there would be, as compared with copper wire, a saving of £182 in cost, a reduction of 3.4 tons in weight, a reduction of 89 ohms in resistance, but also a reduction of 30 lbs. in tensile strength.

With the stranded conductor there would be, as compared with the copper wire, a saving in cost of £125, in weight a reduction of 3.3 tons, in resistance a reduction 85 ohms, and a slight increase in tensile strength.

Similarly a copper wire, weighing 150 lbs. per mile, could be replaced by a stranded aluminium wire, weighing 96 lbs. per mile (each strand having a diameter of $\cdot 080''$), of identical breaking strain; and with the 100 mile line, the resistance would be reduced 110 ohms. There would be a saving of 2.4 tons in weight, and a saving of £83 in cost.

The chief difficulty arising with the use of aluminium wire has been the making of a satisfactory joint. So far, soldered joints are not found reliable, owing to the impossibility of getting a good flux for this metal, and welded joints show decided reduction in the tensile strength at the joints. But it is now generally found that a joint made with the "Macintyre" sleeve gives complete satisfaction. This joint is made by means of a sleeve or tube into which the two ends of the wires to be connected are placed, a special tool is then used to twist the sleeve and the contained ends round. The result is a good electrical contact throughout between the wires and the sleeves, full tensile strength is maintained, and experience shows that no corrosion sets up and no extra resistance is added to the line.

For inland positions there is no doubt as to the utility of aluminium wire, but it is not certain whether it will stand the moist saline atmosphere on the sea coast.

Internal Combustion Machines.

The use of internal combustion engines for marine purposes is being much discussed, and there are some clear advantages in it which are very important in the Colonies. A gas engine uses less than one-half the coal required by a steam plant, and the cost of stoking is not only so much lighter but is also easier, as the men are not exposed to the glare of the heat during the cleaning of the fires. The stokehold is cooler and cleaner. It is claimed that the pipes would be safer than those under high pressure of steam, and no doubt they would usually be much less troublesome, but there are dangers in a gas-pipe system. In small vessels, where there is little space, the internal combustion engine is the most suitable on these grounds. The drawbacks are the difficulty of varying the speed and of reversing, and in these respects it is very desirable that improvements in the machinery may be effected.

Wireless Telegraphy.

The utility of wireless telegraphy on ships was dramatically illustrated in the rescue of the passengers and crew of the White Star liner "Republic" and again more recently in the case of the wreck of the "Slavonia." Some 180 steamers have been fitted with the Marconi equipment, about 150 being on the North Atlantic, and the system is being rapidly extended to the Mediterranean, South African, and South American routes. Messrs. Rennie, Son & Co. have set the example on the South African journey, and the Orient Co. propose to equip the five 12,000-ton steamers which they are building for the purposes of the Australian mail contract. Most of the vessels are fitted with an apparatus which only commands a distance of about 200 miles, but a long distance apparatus is coming into use, and, having regard to improvements and cheapening which are being effected, it is certain that the large ships of the near future will as a class be in touch with the world throughout their voyages.

Rubber Growing.

Mr. John Ferguson, in his admirable paper read before the Royal Society of Arts, prophesied that the rubber crops in Ceylon would in five years hence yield £3,000,000 yearly. Some remarkable results are being achieved, and not the least satisfactory feature is that a small area and moderate capital can give excellent returns. One company with an issued capital of £6,000, possessing only 20 acres in bearing and 26 of young rubber, has in its second year paid a dividend of 21 per cent. An individual planter in the Perak district, holding 100 acres, netted an income in 1907 of £3,500. Single trees have given in a few months twelve to twenty pounds of rubber, worth over 5s. per pound, and small areas have given returns equal to more than £60 per acre profit in one year. The

average figures are of course less, but there can be little doubt that such land as that in Malaya, yielding mature rubber, gives the highest financial results of any agricultural land in the world.

Steel Rails.

Some perturbation of mind has been caused by the fact that a large order has been placed in Russia for steel rails by the Cape Government. There is no getting over the fact that Russian rails are several shillings per ton cheaper than those procurable in this country, and we fear that purchases of them on colonial account would be more frequent than they are if shipments could be effected as conveniently from the Black Sea as from the United Kingdom. Prices in this country indicate the existence of a ring, and the export trade suffers accordingly.

Spray Disinfector, Mark II.

A number of spray disinfectors are in use, but they have not given general satisfaction, and they have been superseded in the War Office service by the above, which is considered more efficient and is about one-third the usual price. It was devised by Dr. L. Mackenzie, Inspector of the Local Government Board, Scotland, and consists of a bucket, pump, suction tube, spray, crosspiece with two nozzles, additional rods for reaching ceiling, and rubber (or for hot climates) flexible metallic tubing. It is said that an ordinary room can be disinfected in ten minutes. The price, packed for shipment, is £2. 5s. 6d.

Dust Preventive Compounds.

Dust is a terrible nuisance in many tropical places, especially where, as often happens, the roads are metalled with limestone. But unfortunately the preventive compounds are probably affected by the heat in a manner to which they are not subjected in more temperate climates, and they are also subjected to more violent rain storms. Tar is the best preventive known, but it is affected by great heat, even if properly refined by distillation. There are about twenty preparations on the market, but we have no information as yet as to their suitability for hot climates. A trial might be made of "Calcium chloride;" "Clare's patent tar compo," "Lahnite," "Akonia," and "Tarvia," may also be picked out as likely preparations. The cost in this country varies from $\frac{1}{2}$ d. to 1d. per square yard.

Sewage Schemes.

The Shone system has been tried and found very satisfactory at Rangoon. The annual cost of the complete scheme for a population of 75,243 was put at Rs. 1,79,158 (including interest on capital

cost and sinking fund). Experience with those parts of the town at present unsewered goes to show that collecting night-soil by pails is as costly as the sewerage system, and of course much less efficient, especially as the sulliage waters are not collected at all and seriously pollute the soil.

Condensed Milk.

At the request of the Government of British Guiana a report has been obtained from Mr. F. J. Lloyd, F.I.C., as to the best brand of condensed milk for hospital use. Mr. Lloyd recommends the milks supplied by Messrs. Nestlé and the Anglo-Swiss Condensed Milk Co. He advises that it should be a condition for the milk to be homogenised as well as sterilised, and that the word "preserved" should not be used in ordering as it is most undesirable that the milk should contain any preservative.

Motor Cars.

In hot climates large radiators are indispensable, as without them the engine is very likely to overheat and possibly seize. If the car is required for country without roads, such as the South African Veldt, quite a foot clearance from the ground is necessary, or there will be a great risk of collision with a high patch of ground. On ordinary roads this is not necessary, but as bumpy bits are frequently encountered the springs and axles should be specially strong.

A considerable number of cars for travelling and commercial purposes have been supplied for the Crown Colonies by the Lacre Motor Car Co.

Gold Coast Harbour Works.

During the construction of the breakwater, a deposit of sand has taken place within the sheltered area of the harbour, and under such circumstances, when the sand is of a light character, freely carried in suspension in disturbed water, but deposited in sheltered water, the best course is to use a centrifugal sand-pump, with engine, boiler, and the necessary suction and delivery piping. A suitable timber platform should be erected in anticipation of the arrival of the machinery.

It is now proposed that the breakwater, which as originally projected was to be 800 feet long, shall be extended to a further distance of 250 feet, and that the jetty under its lee should be extended from 270 feet by a further 150 feet. These works would, it is expected, be accomplished by the end of 1910. These plans would cause the postponement of the block-setting in the projected breakwater at Sekondi till September, 1910, as the plant at Accra will be required for this work.

RAILWAY NOTES.

South African Railways.

A clear and instructive report on these railways has been written by Mr. F. Bedford Glasier, General Manager of the Lagos Railway, as the result of a tour of inspection. The lines have the enormous advantage of cheap coal. The average price paid by the Central South African Railways is under 6s. a ton of 2,000 lbs; this averages 2½d. per engine mile. But this is far from being sufficient to make lines pay which have been built from political or rather local policy and which could not be expected to be remunerative. If a Government deliberately constructs a railway to develop a particular district or industry, the policy may be perfectly legitimate, but the financial results should be clearly shown. There is a great temptation not to do this, but to grant special rates for a particular branch, and to cover up the result by including the accounts in those of the whole system. The general rates have therefore to suffer. If it is decided to encourage a particular district, the cost of doing so should be shown and met openly by a definite grant in aid. The necessity of meeting the situation in this way would no doubt militate strongly against the adoption of inconsiderate schemes. That the mischief is a very real one is shown by the fact that in Australia some lines have been actually closed for traffic, and that there is now talk of closing the main line north of the Victoria Falls. In Australia the abuse was stopped by vesting the control in commissioners who are free from political influences. India is an example of the proper application of business principles.

Natal.

In 1908 the revenue came to £1,832,862, a decrease of £4,842, and the working expenditure to £1,240,319, a decrease of £27,824. The heavy loss in commercial seaborne traffic to the Transvaal and Orange River Colony has continued. Coal traffic has kept up the

marked development which commenced in the middle of 1907, the tonnage being 1,571,919. There has also been a very decided increase in the local sugar production, the tonnage landed being 35.6 per cent. in excess of 1907. Apart from sugar the agricultural development of the country has been retarded by the continued spread of East Coast Cattle fever, and it is much to be hoped that the union of South Africa will cause these plagues to be dealt with more effectually. The maize export, however, was larger and the prices good: in the present year a record crop is probable unless the unforeseen happens. Five Hendric D. Goods type engines were ordered in this country, and 50 thirty-five tons capacity wagons were obtained from the Leeds Forge Company, but a trial is to be made of the construction of wagons locally. In recent years the cast iron chairs have been replaced by steel chairs and buttresses, and they have proved such a success that enquiries have been received from other places, including the United States, where in some cases the wear on the rails and wheel flanges is abnormal. Experiments are being made with a small number of reinforced concrete sleepers, which are being used largely in America and Italy, but their weight and cost make difficulties. The expenditure of the Maintenance Department was £195 per open mile.

Ceylon.

Mr. John Ferguson read an excellent paper on 6th April to the Royal Society of Arts, in the course of which he commented on certain railway extensions which have been strongly urged, but not yet agreed to. Mr. Ferguson's arguments were fairly and moderately put, and he did not resort to the common device of accusing the Colonial Office of apathy or lethargy, because it has to undertake the invidious role of closely scrutinising all proposals for large expenditure. The accepted proposals in 1908 included, besides railway works, such heavy items as the drainage of Colombo, survey, Colombo Lake development, irrigation, water supply, and so forth. These special works were estimated to come to Rs. 50,414,000 chargeable to loan, and Rs. 16,905,634 chargeable to surplus balances. The programme of public works is a long and miscellaneous one, and involves an expenditure largely in excess of any sum suggested in the preceding correspondence. The island is, however, so thriving that great expectations may be formed of its development, and the full discussion of these questions cannot but be helpful.

Nigeria.

The correspondence which has been published relating to railway construction in Nigeria (Cd. 4523) is of unusual interest. It discloses the arguments which were employed for two separate and

to some extent competing schemes, and incidentally lifts the curtain which usually screens the combats of Government offices from the public eye by setting out the correspondence with the Treasury. Ultimately it was arranged that the loan required for the Baro-Kano railway should be raised by Southern Nigeria, but that that colony should be relieved of interest charges as they accrue from year to year, by remitting equivalent sums from her annual contribution to Northern Nigeria. Thus the two provinces are treated as practically one for this purpose, and no doubt, eventually, they will be amalgamated.

The adoption of both of the Nigerian schemes, the Lagos extension and the Baro-Kano, does not close the discussion of their comparative merits and of the future administration. The latter line can only be made effective, independently of Lagos, by improving the navigation of the Niger, but objection is taken to the expenditure of large sums for this purpose. This argument is put vigorously by Sir Walter Egerton as follows:—

“Can it be doubted that, given a direct line to the important centres of Zaria and Kano, the history of the Mississippi will be repeated on the Niger? The railway will give a daily service to and from all the chief producing centres, and, as traffic increases, at much lower rates for long distances, with the added advantage that Lagos by the time the railway reaches Kano, if the harbour works are persevered with, will be a commodious harbour, safe for the largest West African steamers and well equipped with wharves and all the facilities for quickly loading and discharging ocean steamers. Those familiar with shipping and commercial matters know what an advantage such a port must have over a port like Forcados, and ocean freights must drop where the traffic increases in volume and approved facilities for dealing with it are furnished.

“I would urge upon your Lordship that, although there may be justification for building the Baro line to meet local requirements, there is no justification for in any way sacrificing the interest of the more important Lagos-hinterland line in order to give slightly better communication between Baro and Kano.

“The above is written purely from a consideration of commercial advantage; but from an administrative or strategical standpoint the arguments are almost equally strong in favour of the Lagos line, for, comparing Nigeria with India, Lagos is the Calcutta and Zaria can never be more than the chief administrative station in the interior, or its Simla.

“The Niger River will always be an important commercial trade route, but, like the Mississippi, only for the local trade to places on or adjacent to the river system, provided Government does not interfere to prevent trade taking its natural route.

"It may be admitted that in the United States one of the chief reasons for the Government spending large sums in improving the navigation of the magnificent Mississippi waterway is to prevent the powerful railway trusts unduly raising freights on railway-borne goods so that it may not be possible for any combination of railway magnates to raise freights on the railways, because, if they do, the traffic can be diverted to the river. In Nigeria no such reason for expenditure, 'which would not be justified from purely commercial considerations alone,' exists, because the railway belongs to the Government and the Government controls its rates.

"I do not know what expenditure in dredging on the Niger is contemplated, but the annual expenditure can hardly be reduced below £5,000 a year. The present traffic on the river passing Idah was in 1907 only about 20,000 tons, inclusive of railway materials. If an expenditure of £60,000 a year on the Mississippi with the traffic of 2,306,362 tons in 1901 when dredging was commenced (or of 1,719,893 tons in 1906) is not justified commercially, is an expenditure of £5,000 justified on the Niger with a traffic of 20,000 tons. ?

"I do not wish to appear as an opponent to the dredging of the Niger, but what I do wish to urge is that the Baro-Kano line should be considered as a branch line and that the Lagos-Kano line should be constructed as the main line on the route which is best from Lagos to Kano and not on the route that may give a better line from Baro to Kano. Taking the Lagos line from Zungeru to the alignment proposed for the Baro-Kano line means, probably, an addition of over 30 miles to its length, for by this route on leaving Zungeru it does not begin to advance towards Zaria until after joining the Baro alignment."

Dredging, however, may be thoroughly justified if it leads to a considerable traffic, and in the case of heavy and bulky goods, there is a reasonable expectation that the river will secure a good share of the through freight. It is true that there is not, and probably never will be, a harbour at the mouth of the Niger, but this is immaterial so long as goods can be easily transhipped there.

Messrs. Elder, Dempster & Co., have signed an agreement for carrying up the railway material this year, and the new boat "Uromi," carrying at least 1,000 tons, will be in time for the July working.

Jebba Train Ferry.

A steamship of unique type has been built by Messrs. Rennie & Co., Greenwich, to act as a train ferry at Jebba on the Niger. It is of double-ended type, and has a balance rudder at each end. It will carry six wagons or passenger carriages of 24 tons

each : there are two lines of rails running over the whole length of the deck, and at each end there is a hinged prow, raised and lowered by counter-balance weights. The hull is of Siemens-Martin steel, galvanized throughout, and woodwork is of teak. A large water ballast tank is provided to regulate the height, and this is divided into seven compartments, so that any trim can be given to the vessel. A noticeable feature is the arrangement by which the capstans can be sunk out of the way to the level of the deck. The ferry is a paddle boat, 160 ft. long by 33 ft. 6 ins. beam ; the displacement, fully loaded, 560 tons ; draught, 5 ft. 6 ins. ; speed, $7\frac{1}{2}$ knots : contract price, £13,588. The ferry boat will eventually be displaced by a bridge over the southern branch of the Niger. The bridge over the northern branch (between 400 and 500 feet in length) is under construction.

Sierra Leone.

For nearly the whole of 1907 the price of palm kernels and palm oil was abnormally high, but towards the end of the year it fell, and a really better state of business was not evident till September, 1908. The railway is greatly affected by these variations, and during the first half of 1908 a drop in the receipts occurred. Since December, 1908, however, the traffic has greatly improved.

Trinidad.

Extensions are contemplated of the railway system to Rio Clara and Siparia, at an estimated cost of £8,247 and £8,791 a mile. The total cost of the scheme is put at £371,979, and in due course a loan will be issued to meet it.

Hong Kong.

A very complete review of railway undertakings in China was given by Mr. A. J. Barry, M.I.C.E., before the Royal Society of Arts, on 19th May. He referred to the Canton-Kowloon Railway as follows :—

“The Canton-Kowloon Railway is a very important line, 100 miles in length. It starts at Canton, the great commercial centre of South China, and terminates at the frontier of the British leased territory of Kowloon by a junction with a very expensive and heavy section of railway 20 miles long that the Hong Kong colony are constructing to complete the connection between Hong Kong and Canton. In the future, if all goes well, by means of this railway Hong Kong and Canton will be put in direct railway communication with Hankow, the future Clapham Junction of the great trunk lines of China, and thence with Peking itself, so that before many

years it should be possible to take a railway ticket at Victoria Station to Hong Kong *via* Berlin, Moscow, Siberia, Peking, and Hankow.

"The amount of the loan is £1,500,000, and, although rather serious delays in getting possession of the necessary land have involved unnecessary expenditure, the railway is likely to be completed for the amount of the loan, or at any rate very nearly so."

The history of these undertakings is one of steadily increasing control by the Chinese Government. This movement had advanced considerably at the time of the Canton-Kowloon agreement; provision was made for a Chinese managing director, and the chief engineer nominated by the bondholders is subject to the approval of the Chinese. In subsequent schemes the Chinese have claimed the right of appointing the chief engineer, and their demands may act as a check to further enterprise; but in the Kowloon-Canton case the Chinese director and his British assistants have been on excellent terms with one another.

Johannesburg to Buluwayo.

Mr. Smuts, Mr. Hull, and Sir T. Price have paid a visit to Trichardt to consider on the spot the project of extending the railway from Pietersburg to Rhodesia. It is understood that the project is favourably regarded. Such a line would greatly improve Rhodesia's communications, and there should be an exchange of commodities which would be highly valuable to both communities.

Accra—Akwapim.

The first sod for this line was cut by Sir John Rodger on 7th January, and the funds will be provided out of the loan recently issued. The line authorised is for 40 miles, but it is hoped that it will be at no distant date extended to Coomassi. It is for agricultural purposes, and promises not merely to cheapen transport but to give a great impetus to the process under which the natives are becoming agriculturists. The phenomenal expansion of the cocoa industry bears witness to the capacity of the natives for husbandry, and not the least gain from the undertaking will be the complete conversion of the till lately ferocious Ashantis into industrious tillers of the soil.

Bridges.

Many bridges in the East are built of teak, but it is found that the life of a piece of teak does not exceed 15 years and is sometimes not more than ten. A cubic foot of teak, including all the processes, costs from six to seven rupees to repair. One bridge, 533 feet long, costs in annual repairs 4,000 rupees. In such cases it

is desirable to replace the timber with reinforced concrete, and the cost is comparatively small, being often less than that of the annual repairs. A very satisfactory mixture for concrete has been made of broken basalt stone from $1\frac{1}{2}$ to $\frac{1}{2}$ inch nine parts, screened coral sand six parts, Portland cement (which should be good) three parts. After the concrete has been laid, it should be kept moist and protected from the heat, to permit an even setting. One advantage of reinforced concrete over steel is that the cost of painting is saved.

Sleepers.

It has been found on the Rhodesian railways that no wood sleeper is absolutely secure from white ants; even a creosoted Baltic will eventually succumb, as long before it would otherwise succumb it loses its objectionable taste to them. An order which was given for native hard wood, to encourage local industry, turned out unfortunately; the wood was very heavy, split easily, and warped very badly. Both Karri and Jarrah have failed. Steel sleepers used since 1892, on the other hand, are apparently little the worse for wear.

MEDICAL NOTES.

Sanitation in the Colonies.

SIR RUBERT BOYCE, who has visited the West Indies on behalf of the Colonial Office, has found evidences of sanitary progress all along the line. It is reported that Barbados is issuing summonses on an extensive scale against those persons who harbour mosquito larvæ on their premises—an extension of the laws against harbouring which certainly shows a determination to deal drastically with the mischief. All along the islands, Sir Rubert states, the authorities are flocking to the standard of hygienic reform. In particular he mentions the very genuine endeavour made to improve the health conditions of the indentured labour on the sugar cane estates.

A very different note was sounded by Major Ronald Ross before the Royal Institution. He summed up the work done in the words "very little." Speaking of the colonial reports published in the Report of the Advisory Committee of the Tropical Diseases Research Fund for 1907, he stated that "Only those furnished by seven colonies, namely, Southern Rhodesia, Papua, Mauritius, British Central Africa, Gambia, Ceylon, and Southern Nigeria, showed evidence of any real interest in the matter. Those from Bahamas, Barbados, Jamaica, and St. Kitts-Nevis showed, to my mind, nothing but neglect of public duty, while those from Northern Nigeria, St. Lucia, British Honduras, Grenada, Somaliland, Straits Settlements, and Sierra Leone gave no decisive evidence of the result."

Major Ross puts the blame mostly on the shoulders of the heads of the medical departments. "Worse heads of departments cannot be found. They scoff at the knowledge and efforts of others in order to cover their own ignorance and apathy. To them all new discoveries are frauds, and all new proposals are charlatanism. They repress every kind of honest endeavour among their juniors; they fill the best appointments with their own friends; and they truckle to their official superiors in the hope of obtaining further preferment. At last, decorated and pensioned, they leave the field to others of their own stamp—men without an idea or an ideal, except such as refer to their own advancement. These are the

persons who are really responsible for the state of things which I have described."

This is strong language, and with all deference to Major Ross we think it is undeserved. He appears to ignore the great practical difficulties in the way of sanitary reform in the Crown Colonies. The great obstacle to rapid progress is the ignorance and indifference of the public, which is nearly all coloured. Education is wanted, and this is a work of no little time. The practical administration cannot be expected to ride rough-shod over the popular feelings, however prejudiced or stupid they may be, and the chief medical officers have common sense enough to realise that the Government cannot instantly do a thing because it is scientifically right. Progress is undoubtedly being made, and the information given by Sir Rubert Boyce about the West Indies shows that that acted upon by Major Ross is more or less out of date. Still it is useful to have some pressure applied, and the zeal shown for the cause by Major Ross will not be wasted.

Further bulletins have been issued by the Sleeping Sickness Bureau. The principal articles in No. 5 are entitled "The Development of Trypanosomes in Tsetse-flies," "Mode of Transmission of Trypanosomes by Tsetse-flies," and "Report on Human Trypanosomiasis from Léopoldville." The sixth number contains an account of the important discovery by Professor Kleine, since confirmed by Sir David Bruce, that more than one species of tsetse-fly can transmit trypanosomiasis to animals, a fact which suggests the possibility of an analogous state of affairs in the case of human trypanosomiasis. In future issues of the bulletin it is proposed to pay greater attention to trypanosomiasis in animals. In this connection it may be noted that the Sleeping Sickness Commission of the Royal Society in Uganda, of which Sir David Bruce is in charge, has issued a report on an outbreak of disease among cattle on an estate belonging to the Uganda Company, in which a special appeal is made for information and assistance from all who are interested in stock-raising in the colony.

We reproduce below a letter which Sir Rubert Boyce has addressed to the Governor of Barbados on the subject of the recent occurrence of cases of Yellow Fever in the island.

" BARBADOS,

" *March 26th, 1909.*

" YOUR EXCELLENCY,

" In a letter, No. £058/1909, the Right Honourable the Earl of Crewe, Secretary of State for the Colonies, informed me that this

Colony desired the services of an expert to advise on the steps which should be taken to cope with the present outbreak of Yellow Fever and to guard against its recurrence. I gladly offered my services and arrived in this Colony on March 1st, and I beg to report briefly to your Excellency as follows, leaving to a subsequent date my full report, when, having ascertained additional facts I will be able to report more fully :—

“NATURE OF DISEASE: WHETHER YELLOW FEVER OR NOT.

“In company with Dr. Hutson and other Medical Officers I visited several supposed cases of Yellow Fever on my arrival, and had no difficulty in coming to the conclusion that they were cases of genuine Yellow Fever. I had also the advantage of making two post-mortem examinations which put all doubt at once at rest, and for the guidance of others I beg to repeat, as I did in my Honduranian report, that a post-mortem examination is the final proof of Yellow Fever, and that therefore a post-mortem examination should be held at the very first opportunity. The findings obtained from it are absolutely conclusive.

“SIZE OF EPIDEMIC.

“I satisfied myself that the epidemic was one of small dimensions, but that it was very scattered all over the Island and not concentrated in one particular focus. I am of opinion, however, that the epidemic would have been much larger had it not been for the scrupulous conscientiousness and vigilance of Dr. Hutson and many of his colleagues in various parishes, and for the energy displayed by the sanitary staff. I consider, however, that a very great deal of injury has been done and unnecessary weakening caused to the sanitary reputation of the Colony, as well as a great deal of suffering produced by an undoubted hostile feeling voiced in the press and elsewhere against early notification. All authorities upon Yellow Fever have emphasized the absolute necessity of early notification. It has been pointed out time and time again that prompt notification is the only way to avert commercial disaster, and that a community is exceedingly short-sighted if it does not exert itself to bring about early notification. Absolute honesty in this respect is the only basis upon which international and intercolonial quarantine measures can be carried out.

“ANTI-YELLOW FEVER MEASURES IN FORCE.

“I found on my arrival that the Health Authority was fully alive to the importance of vigorous action, and had framed and promulgated exceedingly wise anti-mosquito measures. I made it my

business to at once see how far these measures had been carried out, in other words to ascertain the strength of the defence of the Colony against Yellow Fever.

" VISIT TO PARISHES.

" For this purpose I visited all the parishes and had long interviews with the Parochial Medical Officers. I found, to my great satisfaction, evidence on all sides of the conscientious and vigorous action of the Parochial Sanitary Authorities. In many of the Parishes simple but exceedingly effective Yellow Fever hospitals had been erected, and I beg here to testify that in my opinion it has been this prompt action on the part of the Parochial Sanitary Authorities and their Medical Officers that has confined the epidemic to its small size in the straggling parishes of the island.

" HOUSE TO HOUSE VISITS IN BRIDGETOWN AND STEGOMYIA.

SURVEY.

" I instituted an early house to house inspection throughout Bridgetown and I have visited 525 houses and yards, and thoroughly inspected them from a sanitary and water supply point of view. The houses visited may be divided into three classes: (1) Those of the rich and well-to-do, (2) Those of the poor, and (3) Those of the very poor. With regard to the first category the fact that each house has a water supply laid on to it has done away with the necessity of water receptacles of any kind, and in consequence no breeding places of *stegomyia* larvæ were found. With regard to the second category, whilst a few of the houses had a water supply laid on, the majority employed numerous receptacles, chiefly barrels, and a large proportion of these were infected with *stegomyia* larvæ. On the other hand, the very poor had fewer receptacles and therefore a smaller percentage of *stegomyia* was found. At each house visited, I pointed out the danger of harbouring *stegomyia*, and I wish here to record my satisfaction of the way in which all classes of society have backed up my efforts, and the intelligent interest which even the very poorest have taken in getting rid of the pest. The total number of water receptacles examined was 993. RESULT: The *Stegomyia callopus* is the common house mosquito of Barbados and is still abundant, i.e., in 11 per cent. of the houses, and must be got rid of before the island can be considered secure.

" REMOVAL OF ODD RECEPTACLES.

" During these house to house visits, in which I was accompanied by the Chairman of the Sanitary Commissioners, and the Sanitary Inspectors, and the dust contractors, an enormous number of odd

receptacles of all kinds were got rid of. This will mean that when the rainy and dangerous season commences there will be infinitely fewer breeding places for mosquitoes. I wish to record my thanks and appreciation of the loyal co-operation which I have received from the Medical Profession and the Sanitary Authorities of the Island, and above all for the courtesy and kindness which I have received at your Excellency's hands. It is you who have enabled me to rapidly instal an office and commence operations immediately upon my arrival, and you have enabled me further to meet all classes of the community. In conclusion, although it is useless to cry over spilt milk, I would be lacking in appreciation of the efforts of others did I not point out the warnings which have been raised from time to time in connection with Yellow Fever in this and other West Indian Islands. The Colonial Office, Dr. Low, Drs. Hutson, Bridger, and others, have shown the weak spot in the anti-Yellow Fever armour of the Island, namely, the fact that the Colony was harbouring and breeding the *stegomyia* mosquito. Since 1905 it has been emphasized throughout the civilised world that there is no necessity for the existence of yellow fever; that as it is a disease unlike small pox, scarlet fever, typhoid, and such like, it can readily be controlled and banished, because of the fact that there is only one agency at work in its propagation, and that is an agent which can with energy and little expenditure of money be completely got rid of. I therefore beg to recommend in this preliminary review of the situation that energetic Anti-Yellow Fever measures be continued not only in Bridgetown but in every part of the island, and for this reason: It is evident that owing to the very diffuse way in which yellow fever has spread over the island, there must still be remaining in the island, in the houses, a considerable number of adult affected infected *Stegomyia*, for it will be understood that this must be so, as there has not been a complete house to house fumigation in the island. Therefore these adult *Stega* will, when an opportunity arrives, lay their eggs and perpetuate the species, and therefore I counsel no diminution at present in the sanitary staff, for we have still many hot months and the rainy season to encounter.

"STANDPIPES.

"A factor which has very greatly simplified the work of the authorities is the magnificent water supply in the Island. A few localities still remain where the stand-pipes are few and far between. I strongly recommend the increasing of these standpipes at the earliest possible opportunity. Such an action would do away with more and more the necessity for water receptacles.

"In conclusion I have much pleasure in expressing the opinion, from my own personal observation of the people and the sanitary

measures already adopted, with the meteorology and geological conditions of the island, that the problem of fighting Yellow Fever is a comparatively simple one, and I can assure you that with the conscientious carrying out of the well-recognised anti-mosquito measures, Yellow Fever will become a thing of the past and that never again need the commerce of the port be crippled and the poor made to suffer.

"It is not my purpose here to enter into the question of improvements in Sanitary Administration which I would like to see carried out for the better security of the Island. At the present time there exists undoubted evidence of lack of sanitary and medical organisation and co-ordination, but I foresee no difficulty in adjusting this without in any way interfering with the general sanitary policy of the Island.

"In conclusion I wish to thank the Colonial Secretary, Mr. Yearwood, Dr. Chandler and Dr. Hutson and the Chief Sanitary Inspectors for much assistance and advice.

"I also wish to tender my thanks to my Clerk and namesake, Mr. Boyce, who has very materially facilitated my work, and who has been most energetic, and painstaking, and tactful.

"I have the honour to be,

"Sir,

"Your most obedient Servant,

"RUBERT BOYCE."

Vaccine Lymph.

Complaints are frequently made that lymph sent to hot countries is found to be inert. Dr. Alan Green, of the Lister Institute, has advised that calf lymph preparations containing glycerine or other germicides inevitably suffer in the potency of the lymph micro-organism when the preparation is exposed to a high temperature, and recommends a trial of dried powdered vaccine. It is thought that the specific organism when dried is probably in a resting stage, and is consequently less susceptible to the adverse influence of heat; one report on this lymph from West Africa supports this view.

We have received Vol. II., No. 5, of "*Annals of Tropical Medicine and Parasitology*," issued by the Liverpool School of Tropical Medicine. The place of honour is given to an article on "The Nomenclature of the Mammalian Trypanosomes observed in North-Western Rhodesia," by Doctors Montgomery and Kinghorn, and several other articles deal with different aspects of Trypanosomiasis. Doctor Marsden discusses native drugs in use in the Congo.

receptacles of all kinds were got rid of. This will mean that when the rainy and dangerous season commences there will be infinitely fewer breeding places for mosquitoes. I wish to record my thanks and appreciation of the loyal co-operation which I have received from the Medical Profession and the Sanitary Authorities of the Island, and above all for the courtesy and kindness which I have received at your Excellency's hands. It is you who have enabled me to rapidly instal an office and commence operations immediately upon my arrival, and you have enabled me further to meet all classes of the community. In conclusion, although it is useless to cry over spilt milk, I would be lacking in appreciation of the efforts of others did I not point out the warnings which have been raised from time to time in connection with Yellow Fever in this and other West Indian Islands. The Colonial Office, Dr. Low, Drs. Hutson, Bridger, and others, have shown the weak spot in the anti-Yellow Fever armour of the Island, namely, the fact that the Colony was harbouring and breeding the *stegomyia* mosquito. Since 1905 it has been emphasized throughout the civilised world that there is no necessity for the existence of yellow fever; that as it is a disease unlike small pox, scarlet fever, typhoid, and such like, it can readily be controlled and banished, because of the fact that there is only one agency at work in its propagation, and that is an agent which can with energy and little expenditure of money be completely got rid of. I therefore beg to recommend in this preliminary review of the situation that energetic Anti-Yellow Fever measures be continued not only in Bridgetown but in every part of the island, and for this reason: It is evident that owing to the very diffuse way in which yellow fever has spread over the island, there must still be remaining in the island, in the houses, a considerable number of adult affected infected *Stegomyia*, for it will be understood that this must be so, as there has not been a complete house to house fumigation in the island. Therefore these adult *Stegs* will, when an opportunity arrives, lay their eggs and perpetuate the species, and therefore I counsel no diminution at present in the sanitary staff, for we have still many hot months and the rainy season to encounter.

"STANDPIPES.

"A factor which has very greatly simplified the work of the authorities is the magnificent water supply in the Island. A few localities still remain where the stand-pipes are few and far between. I strongly recommend the increasing of these standpipes at the earliest possible opportunity. Such an action would do away with more and more the necessity for water receptacles.

"In conclusion I have much pleasure in expressing the opinion, from my own personal observation of the people and the sanitary

measures already adopted, with the meteorology and geological conditions of the island, that the problem of fighting Yellow Fever is a comparatively simple one, and I can assure you that with the conscientious carrying out of the well-recognised anti-mosquito measures, Yellow Fever will become a thing of the past and that never again need the commerce of the port be crippled and the poor made to suffer.

"It is not my purpose here to enter into the question of improvements in Sanitary Administration which I would like to see carried out for the better security of the Island. At the present time there exists undoubted evidence of lack of sanitary and medical organisation and co-ordination, but I foresee no difficulty in adjusting this without in any way interfering with the general sanitary policy of the Island.

"In conclusion I wish to thank the Colonial Secretary, Mr. Yearwood, Dr. Chandler and Dr. Hutson and the Chief Sanitary Inspectors for much assistance and advice.

"I also wish to tender my thanks to my Clerk and namesake, Mr. Boyce, who has very materially facilitated my work, and who has been most energetic, and painstaking, and tactful.

"I have the honour to be,

"Sir,

"Your most obedient Servant,

"RUBERT BOYCE."

Vaccine Lymph.

Complaints are frequently made that lymph sent to hot countries is found to be inert. Dr. Alan Green, of the Lister Institute, has advised that calf lymph preparations containing glycerine or other germicides inevitably suffer in the potency of the lymph micro-organism when the preparation is exposed to a high temperature, and recommends a trial of dried powdered vaccine. It is thought that the specific organism when dried is probably in a resting stage, and is consequently less susceptible to the adverse influence of heat; one report on this lymph from West Africa supports this view.

We have received Vol. II., No. 5, of "*Annals of Tropical Medicine and Parasitology*," issued by the Liverpool School of Tropical Medicine. The place of honour is given to an article on "The Nomenclature of the Mammalian Trypanosomes observed in North-Western Rhodesia," by Doctors Montgomery and Kinghorn, and several other articles deal with different aspects of Trypanosomiasis. Doctor Marsden discusses native drugs in use in the Congo.

Ratin.

In our last number we referred to the failure of a trial of this preparation by the Cape Department of Public Health. We have received the following letter on the subject :

"SIR,

"I notice in your last issue a short paragraph dealing with the results obtained from the use of Ratin at Cape Town, and with your permission I should be glad to be allowed to give my view on this matter.

"The Cape Town Harbour Board sent an order through their London Agents for a supply of Ratin, and I told them that it was necessary, to obtain proper results from our preparation, that a fair quantity should be used, and that in order to deal with the rat plague at the Docks not less than 30 tins should be applied. These calculations were based upon the amount of Ratin we had used in dealing with the rat plague at Tilbury Docks, where the results had proved entirely satisfactory. I further stated that it would be necessary to continue the treatment, because rats are always likely to return, and it is quite as important to prevent them from returning as it is to exterminate them, so that once a campaign has been started it should be followed up.

"In spite of this advice, the Agents in London only ordered two tins, which were sent out to the Cape, and part of one tin was used on caged rats, the other lot, as far as I know, was applied in the Docks without apparent results.

"This in my opinion is not fair to us, because too small a quantity was used altogether to form any idea of our preparation. Where you are dealing with matter containing living organism every fair minded man will agree that to take one tin and judge the rest from this is entirely wrong and, further, as regards the other tin, which was used in the Docks, I feel certain that the people did not follow the treatment thoroughly, and they thought because they saw no dead rats that the results were negative.

"Now I have the authority of the following officials who state that Ratindoes kill rats and sets up a disease amongst them, and I may say that most of these officials have used it on a very extensive scale :—

The Minister of Agriculture, Quebec.

The Minister of Public Works, Cairo.

The Governor, Falkland Islands.

The Colonial Secretary, Grenada.

The Surgeon-General, Georgetown, Demerara.

The Medical Officer of Health, Khargpur, who twice tested Ratin on a very extensive scale on behalf of the Bengal-Nagpur Railway.

"In view of this I feel sure that we have in Ratin a preparation which deserves to be widely known, and more particularly now when our Dr. Bahr has been able to put up the Tropical Ratin, and which we are now having such a considerable demand for from the tropics. This preparation is the result of very extensive researches made for the last two years by Dr. Bahr, and he feels that he has now found the very thing that will deal with the rat trouble in hot climates, and no one who understands the danger of rats in the tropics will undervalue the great importance of such a discovery.

"I am, Sir,

"Your obedient Servant,

"The Ratin Laboratory,"

"C. A. BURN, Manager."

COLONIAL STAMPS.

WE have received a copy of *Gibbons' Stamp Weekly* of 24th April, containing an article on the Cayman Islands case, referred to in our last number. The writer has evidently gone carefully into the matter, and it would require more knowledge of the circumstances than we possess to discuss the points with him. As regards the connection of Messrs. Whitfield, King & Co. with the affair, it is clear that there is no imputation against them, and the moral of the case is that there are strong objections to all "provisionals."

WE have received some complaints from dealers in this country that comparatively large orders for new Colonial issues have in certain cases not been complied with, though small orders have. Presumably the local postmaster has been afraid of having his stock depleted by these large orders and prefers to satisfy the small demands. Possibly also he has a feeling against sending supplies for purposes which are obviously philatelic and not postal. Governments, however, are by no means averse to taking the profit derived from collectors, and it may be as well to point out that if the large dealers are discouraged in this way from getting supplies the business will probably be seriously diminished. The demand for a new issue from this quarter can be roughly estimated and allowance made for it in fixing the quantity to be printed.

ANTIGUA.—1d. stamps entirely red are about to be despatched.

BARBADOS has adopted the new colour scheme, and $\frac{1}{2}$ d., 1d. and 6d. stamps have been supplied, all on unsurfaced paper.

BERMUDA.—A supply of $2\frac{1}{2}$ d. stamps, entirely in blue, is about to be sent out.

DOMINICA.—In applying the new colour scheme, it has been thought advisable to reverse the colours in which the centre and border are printed, in order that the larger portion of the stamp may be in the doubly fugitive colour. New 2d., 3d. and 6d. stamps have been supplied, but the reversal of the colours is not very perceptible in the case of these values, as the appearance presented is practically that of a single colour stamp.

EAST AFRICA.—Rs. 2 stamps, printed on multiple watermarked paper, are about to be shipped.

GAMBIA has decided to adopt the new colour scheme, but not to apply it to the 5d., 7½d., 10d., 1s. 6d. and 3s. values which will be in the following colours:—

5d.	same as the existing	2d. stamp.
7½d.	"	"
10d.	"	"
1s. 6d.	"	"
3s.	bright yellow with bright green overprint.	

Stamps of all values are on order.

LEEWARD ISLANDS.—A supply of new ½d. stamps of the existing design are on the point of being despatched.

NATAL.—3d., 4d. and 5d. Postage and Revenue stamps will in future follow the new colour scheme and be printed partly in doubly fugitive ink, and therefore on surfaced paper.

The only Natal stamps concerning the colour of which no change has been announced are the 1½d. and 2d. values.

SOUTHERN NIGERIA.—A supply of 2d., 3d., 4d., 6d., 1s., 2s. 6d., 5s. and 10s. stamps in the new colours has been sent out.

ST. LUCIA.—A supply of 3d. and 1s. stamps in the new colours have been despatched.

ST. VINCENT.—The 2d. stamp will, when next required, be printed in accordance with the new colour scheme, entirely in grey.

The stop under the "d" representing "pence," which has been omitted in the case of the revised 1d. and 6d. stamps, will be inserted in all future printings.

SIERRA LEONE.—2d., 3d., 4d., 5d. and 1s. stamps of the new colours have been supplied. Also 6d. stamps for the first time on surfaced paper.

TRANSVAAL.—The next issue of 6d. Postage and Revenue stamps will be in singly fugitive ink on unsurfaced paper, and that of £1 postage stamps in doubly fugitive ink on surfaced paper. Stamps of both sorts are in course of manufacture and the colours will not be materially changed. 2d. stamps are also on order, printed entirely in grey.

TURKS ISLANDS are preparing to issue a set of stamps of a type similar to those of the Falkland Islands. The colours will follow the new colour scheme, except in the case of the following:—

- 4d. red on yellow paper.
- 2s. red on green paper.
- 3s. black on red paper.

The stamps will thus each be printed in one colour by the copper-plate process. The paper will therefore be unsurfaced.

TRINIDAD.—In order to comply with the Postal Union requirements, new plates have been ordered for the $\frac{1}{2}$ d., 1d., and 2 $\frac{1}{2}$ d. values, showing the duties in Arabic numerals. A supply of stamps from the new plates has been requisitioned, and also of 4d., 6d., and 1s. stamps in the new colours. The last named have been despatched.

Since our last issue three more of Mr. Melville's little monographs have reached us, the subjects being "United States 1847-1869," "Gambia," and "Nevis." They certainly seem to merit no less praise than the previous volumes.

Stanley Gibbons' "Annual Priced Catalogue for 1909," in two volumes, published at 391, Strand, W.C., has made its appearance:—

"Priced Catalogue of Stamps of the British Empire, 1909."
2s. 6d. net.

"Priced Catalogue of Stamps of Foreign Countries, 1909."
2s. 6d. net.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. E. BLACKWOOD WRIGHT (Chief Justice of Seychelles), Stipendiary Magistrate, Port of Spain, Trinidad.
- Mr. A. K. YOUNG (Stipendiary Magistrate, Port of Spain, Trinidad), Chief Justice of Seychelles.
- Mr. R. S. JOHNSTONE (Stipendiary Magistrate, Bahamas), Chief Justice of Grenada.
- Mr. W. L. MCKINSTRY (Officer of Customs, Barbados), Treasurer and Collector of Customs, British Honduras.
- Mr. J. B. CARRUTHERS (Director of Agriculture and Government Botanist, Federated Malay States), Government Botanist and Assistant Director of Agriculture, Trinidad.
- Mr. N. C. McLEOD (Deputy Conservator of Forests, Southern Nigeria), Conservator of Forests, Gold Coast.
- Dr. R. S. EARL (Commissioner and Medical Officer, Virgin Islands), Colonial Surgeon, Falkland Islands.
- Dr. A. E. IRELAND (Government Medical Officer, GrandTurks), Medical Officer of Health, Fiji.
- Dr. T. R. ROBERTSON (District Commissioner and Medical Officer, Caicos Islands), Government Medical Officer, Grand Turks.
- Mr. E. A. HANCOCK (formerly Head Master of St. Kitts Grammar School), Assistant Master, Queen's Royal College, Trinidad.
- Mr. T. E. KEWLEY (Traffic Officer, Sierra Leone Railway), Deputy Assistant Traffic Manager, Baro Kano Railway, Northern Nigeria.
- Mr. J. D. BATHGATE (retrenched from Transvaal Civil Service), Engineer, Public Works Department, Southern Nigeria.

- Mr. H. C. HUGGINS (Draughtsman and Estimator, Public Works Department, Trinidad), Engineer, Public Works Department, Southern Nigeria.
- Mr. J. M. LUMLEY (retrenched from South African Constabulary), District Superintendent of Police, East African Protectorate.
- Mr. G. B. ANDERSON (retrenched from Transvaal Civil Service), Clerk in Public Works Department, Nyasaland.
- Mr. W. S. AKERS (late Clerk, Central South African Railways), Relief Clerk, Land Office, East African Protectorate.
- Captain W. E. BEAMISH (late Lieutenant, Southern Nigeria Regiment, West African Frontier Force), Assistant District Commissioner, Southern Nigeria.
- Mr. F. W. GARVEY (retrenched from Transvaal Town Police), Assistant Commissioner of Police, Southern Nigeria.
- Mr. F. S. GRANT (late of South African Constabulary), Inspector, Federated Malay States Police.
- Mr. J. M. SKIRVING (Inspector of Police, St. Helena), Inspector of Police, Antigua.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ANDREWS, M. S. ...	13 Aug., '09	EMERY, J. C. ...	16 July, '09
ANDERSON, F. ...	16 July, '09	ELIOT, E. C. ...	12 Sept., '09
BONNYMAN, Capt. F. J. C.	10 Aug., '09	FLETCHER, H. ...	28 Aug., '09
c/o Messrs. Cox & Co.,		FERGUSON, B. ...	22 Aug., '09
16, Charing Cross, S.W.		FINLAY, A. A. C. ...	12 Aug., '09
BRANCH, H. C. ...	21 Sept., '09	FITZGERALD, B. ...	7 Aug., '09
BURTON, W. ...	7 July, '09	GREIG, F. W. ...	21 July, '09
BARKER, Dr. G. L. ...	25 Aug., '09	GRIFFITH, G. R. ...	22 Aug., '09
c/o Sheffield and		GORDON, Capt. W. F. L.	31 July, '09
Hallamshire Bank,		c/o Messrs. Holt & Co.,	
Ltd., Sheffield.		3, Whitehall Place,	
BERINGER, Dr. F. J. A.	20 Aug., '09	S.W.	
BECK, G. ...	8 July, '09	HOOD, T. ...	16 Sept., '09
COPE, Dr. R. ...	6 Aug., '09	HOBBS, H. J. ...	20 Oct., '09
CRAIG, R. ...	22 Aug., '09	HOLMES, H. G. ...	29 Aug., '09
CHAPIN, S. H., D.S.O. ...	16 July, '09	HOOD, S. J. ...	29 Aug., '09
COULDERY, A. C. ...	28 July, '09	HALL, T. L. ...	1 Sept., '09
COCHRAN, Capt. H. P. G.	26 Sept., '09	HALE, E. ...	12 Aug., '09
CLARKE, Major H. C. S.	16 July, '09	HASTINGS KELK, Rev. W.	20 Sept., '09
Junior Naval and		HILL, A. J. ...	29 June, '09
Military Club, 98,		c/o Parr's Bank, Ltd.,	
Piccadilly, W.		Notting Hill Gate, W.	
DALE-GLOSSOP, Capt.	22 Aug., '09	HAMER, A. G. ...	7 Aug., '09
H. W. ...		HUTT, W. ...	8 Aug., '09

GOLD COAST—continued.

IRVINE, Maj. R.A. ...	12 Sept., '09	RUTHERFORD, Dr. G. J. ...	16 Sept., '09
Junior Naval and Military Club, 96, Piccadilly, W.		Sports Club, St. James' Square, S. W. ...	
JENSEN, O. ...	28 Sept., '09	ROBERTSON, J. P. ...	16 Sept., '09
JARDINE J. ...	18 Oct., '09	ROBERTSON, W. C. F. ...	22 Aug., '09
JOBSON, F. J. ...	22 Aug., '09	RODGER, Sir J., K.C.M.G.	12 Aug., '09
LEES, Capt. E. F. W. ...	30 July, '09	ROGERS, F. W. ...	21 July, '09
LAST, W. ...	16 July, '09	REECE, E. B. ...	31 Aug., '09
LLOYD, A. G. ...	11 Sept., '09	RATTRAY, R. S. ...	25 Aug., '09
LORENA, Dr. A. C. ...	8 Sept., '09	SODEN, Major G. W. C.	29 Aug., '09
LOCK, T. H. ...	17 Sept., '09	SALE-HILL, Capt. A. K. S.	
LUMSDEN, A. F. ...	30 Sept., '09	STOKES, R. H. ...	
MADDOCK, J. H. ...	4 Aug., '09	SMITH, W. E. ...	4 Sept., '09
MACARTNEY-FELGATE, D. L. N. ...	15 Aug., '09	c/o Royal Colonial Institute, Northum- berland Avenue, W.C.	
MONTGOMERY, Dr. ...	5 Sept., '09	SCOVELL, Capt. A. M. ...	12 Aug., '09
H. B. S. ...		SEATON-WADE, H. J. ...	31 July, '09
MEE, G. H. ...	21 Aug., '09	TIERNEN, B. ...	16 July, '09
MUSS, L. J. ...	8 July, '09	TOBIT, Dr. P. M. ...	5 Aug., '09
MCDONALL, Dr. J. C. S.	16 Aug., '09	VAN EEDEN, W. C. ...	14 Sept., '09
NEWMAN, G. H. ...	18 Aug., '09	WYPER, J. ...	8 July, '09
OMMANNEY, Capt. G. P.	15 Aug., '09	WADE, Dr. W. M. ...	28 Aug., '09
PACKWOOD, G. H. ...	7 July, '09	WHITE, A. ...	29 Aug., '09
ROEBUCK, J. M. ...	29 Aug., '09	WHYTE, G. W. ...	27 Aug., '09
		WILLIS, M. H. S. ...	26 July, '09

GAMBIA.

BRANDFORD-GRIFFITH, H. M., C.M.G. ...	23 July, '09	JOSEPH, Miss M. ...	14 Nov., '09
Constitutional Club, Northumberland Avenue, W.C.		MACAFFEN, M. ...	28 Sept., '09
FRANKLIN, Dr. J. C. ...	5 Aug., '09	PICKERING, W. ...	15 Sept., '09
		SPROSTON, H. F. ...	28 Sept., '09
		WEBB, P. L. ...	5 Sept., '09

SIERRA LEONE.

BARKER, E. G. ...	7 July, '09	DUFF, J. H. ...	Due back 5 Aug., '09
BEATTY, K. J. ...	20 July, '09	FARRAR, A. ...	21 Sept., '09
c/o The Standard Bank of South Africa, Ltd., 10, Clement's Lane, E.C.		HINSON, D. B. ...	16 Sept., '09
BURROWS, Dr. D. ...	11 Sept., '09	HADDON-SMITH, G.B., C.M.G. ...	Steamer leaving 17 July, '09
COLQUHOUN, Capt. F. R.	16 July, '09	Junior Athenæum Club, 116, Piccadilly, W.	
c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.		HATTON, T. ...	16 Sept., '09
CHAMLEY, J. W. ...	4 Sept., '09	JOHNSON, E. O. ...	28 July, '09
		KERSHAW, H. V. ...	23 Sept., '09

SIERRA LEONE—continued.

MICKLETHWAITE, Miss		SUPPLE, Capt. W. H. ...	8 Sept., '09
G. G. ...	24 Aug., '09	c/o Sir C. R. McGregor,	
MEGETT, A. ...	7 Aug., '09	Bart., & Co., 25, Charles	
MAXWELL, Dr. J. C. ...	7 Aug., '09	Street, S.W.	
MILES, F. ...		TENGEBY, P. L. ...	21 Aug., '09
OSWELL, W. St. J. ...	16 Sept., '09	WILBRAHAM, D. F. ...	10 Sept., '09
PEARSON, Dr. J. S. ...	16 Sept., '09	Wellington Club,	
SIDNEY, J. B. ...	28 Aug., '09	Grosvenor Place, S.W.	

SOUTHERN NIGERIA.

ANSON, J. A. ...	27 Aug., '09	DUNCOMBE, H. F. ...	12 Oct., '09
ADAMS, J. W. ...	8 July, '09	Constitutional Club,	
ASHTON, Dr. D. A. ...	12 Aug., '09	Northumberland	
ADAMS, F. B. ...	27 July, '09	Avenue, W.C. ...	
BEDFORD-GLASIER, F. ...	24 Sept., '09	DAWSON, F. J. ...	16 Sept., '09
BAILEY, Dr. J. C. M. ...	18 Aug., '09	c/o Bank of British	
BAIRNSFATHER, G. ...		West Africa, 17,	
BARKER, F. D. ...	27 Aug., '09	Leadenhall Street,	
BROWNE, C. W. ...	11 Sept., '09	E.C.	
BEATTIE, L. H. ...	4 Sept., '09	DUNCOMBE, W. K. ...	18 Aug., '09
BOORE, C. H. ...	23 Sept., '09	c/o Royal Colonial	
BOWKER-BOOKER, H. T. ...	16 Sept., '09	Institute, Northum-	
BONELL, T. H. M. ...	22 Aug., '09	berland Avenue, W.C.	
BROWN, A. W. ...	18 Aug., '09	DYER, H. ...	16 Sept., '09
BUTTERWORTH, C. ...	12 Aug., '09	DALEY, J. H. ...	24 Oct., '09
BICKEL, W. H. ...	28 July, '09	EVANS, W. ...	4 Sept., '09
BOOTH, J. ...	8 July, '09	EVANS, L. W. ...	23 Sept., '09
BUTLER, H. B. ...	16 Sept., '09	EVETT, W. ...	16 Sept., '09
County Club, Carlisle,		FOTHERINGHAM, A. ...	5 Aug., '09
N.B.		FRANCIS, A. C. ...	28 July, '09
COUTTS, A. R. ...	7 Aug., '09	FORD, A. M. P. ...	15 Aug., '09
CUMMINGS, E. O. ...	14 July, '09	c/o Capital and	
CARLEY, W. J. ...	31 July, '09	Counties Bank, Ltd.,	
CARRERAS, B. H. ...	27 July, '09	22, Fenchurch Street,	
COCHRANE, F. S. ...	27 Aug., '09	E.C.	
CHILD, Lt. H. A., R.N. ...	18 July, '09	FLEMING, G. H. ...	18 Aug., '09
CROSS, Dr. J. ...	8 July, '09	FINCHAM, R. ...	12 Aug., '09
COGHILL, Dr. H. S. ...	16 Aug., '09	FRANCEY, W. M. ...	12 Aug., '09
COTTON, J. C. ...	28 July, '09	FOSTER, E. W. ...	
CRAWFORD, W. E. B. C.		FINCH, F. C. ...	26 July, '09
CHEICHESTER, C. R. ...	4 Sept., '09	FROST, A. ...	18 Aug., '09
CHAPPLE, A. J. ...	18 Aug., '09	GRAHAM, Dr. E. W. ...	23 Sept., '09
CRICKMAN, G. R. ...	21 July, '09	GILCHRIST, A. M. ...	
COOK, W. ...	16 July, '09	Sports Club, St. James'	
CROFT, H. ...	27 July, '09	Square, S.W.	
CULLEN, C. S. ...	16 Sept., '09	GRAY, Capt. W. B. ...	7 Sept., '09
DENTON, W. H. ...	18 Aug., '09	GREEN, C. H. ...	28 July, '09
DERRIMAN, F. H. ...	11 Oct., '09	GARDNER, R. D. ...	14 Sept., '09
DAWSON, E. B. ...	31 July, '09	Caledonian Club	
DENE, H. ...	12 Aug., '09	Charles Street, S.W.	
DOUGLAS, A. C. ...	15 Aug., '09	GORDON, W. ...	4 Sept., '09

SOUTHERN NIGERIA—continued.

GIBB, A....	...	27 July, '09	MANN, N. S. ...	...	15 Aug., '09
GRAHAM, J. W. ...	...	11 Aug., '09	NICOLL, D. ...	...	27 Aug., '09
GOODENOUGH, C. ...	...	16 Sept., '09	NEAL, Capt. H. V., D.S.O.	...	8 Sept., '09
GOODWIN, A. J. ...	...	26 Sept., '09	NICHOLSON, F. ...	...
HOLMES, R. B. W. ...	...	29 Aug., '09	NORTON, A. E. ...	...	12 Sept., '09
HAYTON, R. ...	...	18 Aug., '09	Junior Naval and		
HARRIS, H. ...	...	28 Aug., '09	Military Club, 96,		
HEWITT, W. S. ...	...	27 Aug., '09	Piccadilly, W.		
HOPKINSON, G. St. L. ...	...	8 July, '09	OSBORNE, C. ...	...	5 Aug., '09
HUMFREY, Capt. L. E. H.	...	23 Sept., '09	OGILVIE, C. S. ...	...	2 Oct., '09
HACKETT, W. W. ...	...	20 July, '09	ORPEN, R. T. ...	...	5 Aug., '09
HODGSON, G. F. ...	...	12 Aug., '09	O'SHAUGHNESSY, Maj.,		
c/o National Bank of			J. J. F. ...	...	28 July, '09
South Africa, Ltd.,			Blenheim Club, St.		
Circus Place, E.C.			James' Square, S.W.		
HAWKINS, I. T....	...	14 Sept., '09	PACKARD, E. T. ...	...	20 Sept., '09
Royal Societies Club,			PYKE, C. C. ...	...	5 Aug., '09
St. James' Street, S.W.			PONSTY, W. C. ...	...	21 July, '09
HERON, R. M. ...	...	24 Sept., '09	c/o Royal Colonial		
United Empire Club,			Institute, Northum-		
117, Piccadilly, W.			berland Avenue, W.C.		
HARRISON, W. ...	...	4 Sept., '09	PICKELS, Dr. J. A. ...	...	28 Aug., '09
HOLLINGWORTH, J. ...	...	2 Aug., '09	PARCH, T. A. ...	...	16 July, '09
HICKES, L. D. ...	...	2 Oct., '09	POE, J. H. L. ...	...	27 July, '09
c/o Messrs. Cox & Co.,			PARRY, T. F. R. ...	...	21 July, '09
16, Charing Cross, S.W.			PALMER, E. C. ...	...	2 Oct., '09
HOWARTH, W. ...	...		c/o Sir C. R. McGrigor,		
JONES, H. E. ...	...	16 Sept., '09	Bart., & Co., 25, Charles		
KELLEHER, Dr. E. J. ...	...		Street, S.W.		
KING, W. ...	...	4 Sept., '09	RAE, A. C. ...	...	2 July, '09
KNIGHTON, W. E. ...	...	21 July, '09	ROSEDALE, F. H. ...	...	27 July, '09
LOMAX, J. F. ...	...	12 Oct., '09	SPITZEN, J. R. ...	...	5 Aug., '09
LATTON, R. C. ...	...	18 Aug., '09	SCHARENGUIVEL, A. J. R.	...	21 Sept., '09
LARBALESTIER, Dr W. R.	...	9 July, '09	STEVENSON, W. G. ...	...	12 Aug., '09
c/o Capital & Counties			STATHAM, W. D. ...	...	16 July, '09
Bank, Ltd., 38a, Vic-			SIMPSON, E. D. ...	...	28 July, '09
toria Street, S.W.			SPROSTON, S. W. ...	...	21 Sept., '09
LYONS, Capt. J. G. ...	...	28 July, '09	SHERSTON, S. A. ...	...	2 Sept., '09
c/o Messrs. Cox & Co.,			SHEFFIELD, Capt. G. N.	...	18 Sept., '09
16, Charing Cross, S.W.			SNELL, Dr. W. S. ...	...	31 July, '09
MOREHEAD, Dr. H. R....	...	2 Oct., '09	SAYER, M. B. ...	...	16 July, '09
MCCORD, Miss E. ...	...	7 Sept., '09	SHERIFF, A. ...	...	9 July, '09
MUNRO, H. ...	...	11 July, '09	SKURRAY, J. S....	...	16 July, '09
MCWHIRTER, R. C. ...	...	21 July, '09	SKULL, Miss M. ...	...	4 July, '09
MCCOLL, H. ...	...	21 July, '09	TRESING, E. ...	...	17 Sept., '09
MURPHY, W. ...	...	18 Aug., '09	TAYLOR, V. B. ...	...	13 Oct., '09
MANSON, F. P. ...	...	5 Aug., '09	TROUSDELL, W. H. C. ...	...	8 July, '09
c/o Messrs. Grindlay			TYNAN, Dr. E. J. ...	...	15 Aug., '09
& Co., 54, Parliament			THOMPSON, C. E. ...	...	12 Aug., '09
Street, S.W.			TABOR, F. L. ...	...	6 Aug., '09
MARSLAND, C. ...	...	27 Aug., '09	WILLIAMS, J. L. ...	...	26 July, '09
MAYHEW, E. F. W. ...	...	16 Sept., '09	WEBB, S. G. ...	...	12 Aug., '09

SOUTHERN NIGERIA—continued.

WRIGHT, P. A. T. ...	27 Aug., '09	WOOD, J. A. ...	11 Sept., '09
WELD, O. J. W. ...	28 July, '09	WYATT, F. ...	4 Sept., '09
WHIFFLE, H. C. ...	31 July, '09	WOOLLEY, A. ...	
WILLIAMS, W. ...	16 Sept., '09		

NORTHERN NIGERIA.

BRACKENBURY, Capt. ...	31 July, '09	HOPKINS, F. F. ...	4 Sept., '09
E. A. c/o Messrs. Way & Co., 11, Haymarket, S.W.		c/o Messrs. Way and Co., 11, Haymarket, S.W.	
BYFIELD, R. D....	7 Oct., '09	HARE, C. E. ...	25 Aug., '09
BURNARD, Capt. C. F. ...	19 Aug., '09	HOLDING, A. W. ...	15 Sept., '09
BEST, E. R. ...	26 July, '09	HALL, H. C. ...	24 Sept., '09
BUDGEN, T. A. G. ...	4 Sept., '09	HENDERSON, W., Junr. ...	16 July, '09
CLUTTERBUCK, E. ...	17 Sept., '09	HANSON, B. E. ...	21 July, '09
CHAPMAN, H. J. ...	28 July, '09	HOBBS, A. C. ...	26 Sept., '09
CHURCHER, A. E. ...	2 Sept., '09	HIGGINS, A. ...	22 Sept., '09
CHAMBERS, W. G. F. ...	22 Sept., '09	HOWELL, Capt. H. G. ...	15 Aug., '09
CANTRELL, B. O. W. ...	17 Sept., '09	HAMILTON-BROWNE, Capt. W., D.S.O.	17 Sept., '09
CAHILL, J. F. ...	10 Oct., '09	HARDIE, G. H. ...	6 Aug., '09
CHARTRES, J. ...	16 July, '09	INGHAM, B. H. ...	26 Sept., '09
COCKBURN, Maj. J. B. ...	1 Aug., '09	JOHNSON, W. ...	31 July, '09
CHAYTOR, C. A. ...	3 Aug., '09	JONES, A. W. ...	12 Aug., '09
Junior Naval and Military Club, 96, Piccadilly, W.		JARVIS, A. M. ...	12 Sept., '09
CULLEY, A. H. ...	5 Aug., '09	JAMES, C. P. ...	16 July, '09
EVANS, W. S. ...	16 July, '09	JORDAN, H. E. ...	10 Oct., '09
ELLIS, Dr. M. F. ...	10 Aug., '09	KITCHEN, W. ...	16 July, '09
Royal Societies' Club, St. James' Street, S.W.		LONSDALE, Capt. P. ...	16 July, '09
EAGLESOME, J., C.M.G. ...	17 July, '09	LARTMORE, Maj. H. D., C.M.G.	7 Sept., '09
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		LANGWORTHY, H. W. ...	14 July, '09
FOY, Dr. H. A. ...	14 July, '09	LLLOYD, R. A. ...	21 July, '09
c/o Messrs. Cook and Sons, Ludgate Circus, E.C.		LAKE, W. S. ...	31 July, '09
FRASER, W. K. ...	11 Nov., '09	LAING, E. H. B. ...	30 Sept., '09
FITZ-HENRY, W. C. ...	22 Oct., '09	MATTHEWS, H. de C. ...	5 Aug., '09
GWYN, C. ...	15 Aug., '09	MILLIGAN, J. ...	28 Aug., '09
GOLDSMITH, H. S. ...	25 Aug., '09	MOISER, Dr. B. ...	5 Aug., '09
GOULDEN, Capt. F. C. ...	31 July, '09	MACKENZIE, Maj. E. L., D.S.O.	5 Aug., '09
GLENTWORTH, J. ...	9 Nov., '09	MCGAHEY, Wm. K. ...	12 July, '09
GOODWIN, A. E. ...	17 July, '09	McKINNEY, Dr. H. G., Thatched House Club, St. James' Street, S.W.	10 Oct., '09
GRIFFIN, F. ...	16 July, '09	MILLER, W. ...	18 Aug., '09
GORDON, Capt. C. F. ...	4 Sept., '09	NOOTT, P. G. ...	21 July, '09
Junior Naval and Mili- tary Club, 96, Picca- dilly, W.		NUGENT, Capt. G. O. ...	12 Aug., '09
GASKIN, D. ...	12 Sept., '09	O'BRIEN, P. ...	22 Aug., '09
HOPKINSON, Capt. J. H. ...	1 Aug., '09	c/o Bank of Nigeria, Ltd., Mowbray House, Norfolk Street, W.C.	

NORTHERN NIGERIA—continued.

PEEBLES, Capt. H. W....	9 Aug., '09	STUDHOLME, W. ...	18 Aug., '09
PYE, Capt. F. J. ...	18 Aug., '09	SCIORTIUS, J. C. P. ...	3 Oct., '09
c/o Lloyd's Bank, Ltd., Sandgate.		SWAIN, J. W. ...	21 July, '09
PIRIE, Dr. G. F. ...	5 Aug., '09	SPEED, E. A. ...	8 Sept., '09
PRICE, Capt. J. F. N. ...	20 Aug., '09	THOMSON, W. B. ...	1 Sept., '09
PARODI, E. U. ...	21 July, '09		<i>Due back</i>
Royal Societies Club, St. James' St., S.W.		THESIGER, G. E. P. ...	6 Sept., '09
PRICE, G. F. ...	21 Sept., '09	TOMLINSON, G. J. F. ...	5 July, '09
PATTEN, W. ...	16 July, '09	TAYLOR, Capt. S. C. ...	15 Sept., '09
RUXTON, Capt. U. F. ...	29 Aug., '09	Junior Naval and Military Club, 96, Piccadilly, W.	
Royal Societies Club, St. James' St., S.W.		TOMSETT, A. P. ...	11 July, '09
ROBINSON, T. H. ...	20 Aug., '09	UNIACKE, Capt. A. G. D.S.O. ...	26 July, '09
RYAN, H. B. ...	26 July, '09	VICARS, W. ...	14 Sept., '09
RIDSDALE, A. C. ...	30 Sept., '09	VERTUE, G. N. ...	2 Nov., '09
STONE, A. M. ...	30 Sept., '09	VAUDREY, W. ...	10 Oct., '09
SLANEY, E. R. ...	16 July, '09	WHITE, E. E. ...	15 Aug., '09
SHORT, Capt. P. H., D.S.O.	5 Aug., '09	WRENFORD, A. L. ...	17 July, '09
SHARPE, Maj. W. S., C.M.G. ...	27 Sept., '09	WATSON, Dr. C. E. S. ...	27 Aug., '09
Junior Naval and Military Club, 96, Piccadilly, W.		WILL, J. T. ...	16 July, '09
		WHELAN, C. ...	31 July, '09
		WATSON, F. W....	7 Sept., '09

NYASALAND.

BIGGLESTON, R. A. ...	23 Sept. '09	NORRIS, Dr. S. K. ...	29 Oct., '09
BEAUMONT, G. N. ...		PICKFORD, W. ...	20 Aug., '09
United Sports Club, 4, Whitehall Court, S.W.		SALMON, R. H....	30 Sept., '09
COE, F. A. ...	9 Oct., '09	TUCKETT, G. H. ...	19 Sept., '09
		WILLIAMS, A. J. ...	25 Oct., '09

EAST AFRICA.

BRAMWELL, W. J. ...	27 Aug., '09	FAWCETT, F. ...	27 Oct., '09
BERRY, L. D. ...	31 Aug., '09	FOAKER, F. G. ...	12 Sept., '09
BLAIN, W. ...	1 Sept., '09	Sports Club, St. James' Square, S.W.	
BAKER, H. H. ...	5 Aug., '09	GOSLING, J. T. ...	27 Sept., '09
CRAIGIE-HALEKETT, Capt. H. M. ...	21 Aug., '09	HUTCHINGS, D. E. ...	
Caledonian Club, 30, Charles Street, St. James', S.W.		HUMPHRY, R. W. ...	27 Oct., '09
CREWE-READ, E. C. ...	27 July, '09	HAYES-SADLER, Sir J., K.C.M.G., C.B. ...	12 Aug., '09
CHEVALLIER, Dr. C. L....	29 Sept., '09	ISAAC, F. W. ...	27 Oct., '09
CURRIE, H. A. F., C.M.G.	27 Oct., '09	JOHNSON, Dr. J. T. C. ...	23 Oct., '09
DOHERTY, A. G. ...	27 Oct., '09	Royal Societies Club, St. James' Street, S.W.	

EAST AFRICA—continued.

LONG, R. H.	31 July, '09	TOWNSEND, W. H. M....	27 July, '09
LLEWELLYN, Lieut.-Col. E. H.	5 Oct., '09	TRAILL, F. S. F. ...	7 Aug., '09
MILTON, J. H.		Sports Club, St. James' Square, S.W. ...	
MORTON, E.	11 Sept., '09	VANDER VELDE, M.A.M.	27 Aug., '09
MACDONALD, Hon. A. E.	12 Sept., '09	WEBBER, C. W. ...	
c/o Royal Colonial Institute, Northum- berland Avenue, W.C.		WALKER, H.	
MANSENGH, J. C. O. ...	12 Sept., '09	WOODRUFF, G.	27 Aug., '09
MORRISON, A.	27 Aug., '09	WOOD, G.	1 Sept., '09
PANTING, C.		WALKER, A. H.	13 Sept., '09
TOWAN, J.	27 Oct., '09	WILSON, E. G.	27 Sept., '09
TURNER, Mrs. A. M. ...	12 Oct., '09	WALLER, D. D.	12 Aug., '09
		YOUNG, H. A.	27 Oct., '09

UGANDA.

BELL, Sir H. H., K.C.M.G.	3 Nov., '09	NICOLSON, Capt. W. H.	27 Oct., '09
BURTON, E. F.		c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W. ...	
BOWRING, W. A.	16 Nov., '09	REYNOLDS, F.	22 Sept., '09
CUBITT, L. H.	27 Oct., '09	SPEKE A. E.	10 Aug., '09
COLLYNS, Dr. J. M. ...	27 Oct., '09	STRATHAIRN, Dr. G. C. ...	57 Oct., '09
FLINT, Capt. F. A.	22 July, '09	WILSON, G., C.B.	5 Feb., '10
GRAY, Capt. A. C. H. ...	24 Oct., '09	Royal Societies Club, St. James' St., S.W.	
LANE, Dr. G.	28 July, '09		
LAWRENCE, Capt. E. H. T.	22 July, '09		

SOMALILAND.

BELL, F. W., V.C.	3 Sept., '09	TAYLOR, R. W.	14 July, '09
DRAKE BROCKMAN, Dr. R.E.	11 Aug., '09	TABLETON, F. R.	3 Aug., '09
		WHITTY, J. L.	27 Sept., '09

BECHUANALAND.

JONES, M.	31 Oct., '09
------------------	-----	-----	--------------

BASUTOLAND.

MONTRAY, W. P.	31 Aug., '09
-----------------------	-----	-----	--------------

JAMAICA.

BARTLETT, Dr. T. M. ...	8 Aug., '09	DIGNUM, C. B.	6 Sept., '09
BRADBURY, P. J. O. L. ...	6 Aug., '09	HARGREAVES, Dr. G. ...	7 Nov., '09
COUSINS, H. H.	5 Oct., '09	MAUNSELL, G. E.	4 Nov., '09
CLARK, W. P.	20 Sept., '09	MORRIS, P. H.	31 Aug., '09
CLARK, Sir F.	2 Sept., '09	THOMPSON, T. C. D. ...	5 Nov., '09
Oriental Club, Han- over Square, S.W.		THOMSON, Dr. C. A. H.	7 Oct., '09
D'AETH, J.	5 Nov., '09	London Hospital, S.E.	

TRINIDAD.

ACTON, Capt. F. W. H. M.	29 Sept., '09	Low, R. A.	... 15 Sept., '09
COCHRANE, C. S.	... 31 July, '09	MACFARLANE, Dr. J. A.	2 Oct., '09
DUMORET, R.	... 2 Nov., '09	THOMPSON, T. A.	... 19 July, '09

CALCUTTA EMIGRATION AGENCY.

MARSDEN, A.	... 25 Oct., '09
-------------	------------------

BRITISH GUIANA.

BERKELEY, M. J.	... 30 Sept., '09	GREENE, G. B.	... 2 Oct., '09
ENGLISH, E. W. F.	... 13 Sept., '09	Sports Club, St. James'	
FRANKS, G. F.	... 12 Sept., '09	Square, S.W.	
West Indian Club, Norfolk St., Strand, W.C.		HODGSON, Sir F. M., <i>Steamer leaving</i> K.C.M.G.	29 Sept., '09
FAIRBAIRN, T.	... 14 Oct., '09	MASON, G. F.	14 Jan., '10
GILCHRIST, W. J.	... 4 Sept., '09	SPENCE, R. O. H.	... 5 Sept., '09
c/o Royal Colonial Institute, Northum- berland Avenue, W.C.		TENGELY, G. A.	... 31 Dec., '09

ST. LUCIA.

MOORE, J. C.	... 16 Nov., '09
--------------	------------------

ANTIGUA.

ELDRIDGE, A. E.	... 30 Sept., '09	NUGENT, O.	... 14 Nov., '09
-----------------	-------------------	------------	------------------

VIRGIN ISLANDS.

BAYNES, E. W.	... 7 Aug., '09
c/o of Royal Colonial Institute, Northumberland Avenue, W.C.	

TURKS ISLANDS.

WATKINS, F. H.	... 17 Sept., '09
----------------	-------------------

BAHAMAS.

DUNCOMBE, F. A. C.	... 22 Aug., '09
--------------------	------------------

ST. KITTS.

ROXBURGH, T. L.	24 Oct., '09
-----------------	-----	-----	-----	-----	-----	-----	-----	--------------

BARBADOS.

BLACKWOOD, Lord B.	...	10 Sept., '09	SMITH, F. S.	...	...	5 Nov., '09
LINGWOOD, G.	...	22 July, '09				

ST. HELENA.

SKIRVING, J. M.	...	13 July, '09	SKIRVING, Mrs. L. M.	...	13 July, '09
-----------------	-----	--------------	----------------------	-----	--------------

CYPRUS.

CLEVELAND, Dr. R. A.	...	29 Sept., '09	McDONALD, E.	...	1 Oct., '09
----------------------	-----	---------------	--------------	-----	-------------

FALKLAND ISLANDS.

HURST, G.	5 Apr., '10
-----------	-----	-----	-----	-----	-----	-------------

BRITISH HONDURAS.

COLLET, W.	...	11 Aug., '09	CUTBERT, M.	...	24 Oct., '09
CLEMENTS, W. H.	...	28 Oct., '09	SMYTH, J. L.	...	28 Oct., '09
Royal Societies Club, St. James' St., S.W.					

FIJI.

BARNETT, E. A....	...	12 Aug., '09	FRANCIS, Col. C. A.	...	
BOOTH, R. M.	...	2 Oct., '09	FARRINGTON, Dr. J.	...	26 Nov., '09
CAMPBELL, W. T.	...	5 Sept., '09	HEATON, H. H.	...	Steamer leaving
DOWSE, Dr. T. A.	...	7 Aug., '09			2 July, '09
EHREHARDT, A.	...	31 July, '09	IM THURN, Sir E.	...	30 July, '09

MAURITIUS.

ARMSTRONG, A....	...	5 Mar., '10	LINCOLN, G.	...	24 Dec., '09
CANTIN, A.	...	31 Oct., '09	MILLER, T. W.	...	1 Aug., '09
GANACHAUD, A.	...	24 Dec., '09	NEMORIN, B.	...	12 Oct., '09
LESUEUR-GREENE, J.	...	24 Oct., '09	O'LOUGHLIN, Canon E.	...	13 July, '09
LESUEUR, Rev. L.	...	25 Nov., '09			

STRAITS SETTLEMENTS.

BRERETON, H.	...	5 May, '10	CRUMMEY, H. G.	...	7 Oct., '09
BOOMGARDT, Miss E.	...	21 July, '09	CUXADEN, W. A.	...	19 Jan., '10
BAILEY, A. W.	...	1 Mar., '10	CHEVALLIER, H.	...	14 Sept., '09
BUCHANAN, W.	...	10 Sept., '10	DENNY, S. E.	...	30 Apr., '10

STRAITS SETTLEMENTS—*continued.*

DEWAR, Capt. A. R. J....	30 Oct., '09	KELLAR, J. D. B. ...	25 Aug., '09
DICK, J. N. ...	11 July, '09	LUCAS, T. J. ...	4 Aug., '09
EBDEN, L. P. ...	4 Oct., '09	LIVINGSTONE, A. D. ...	17 Nov., '09
GOTTLIEB, F. H. V. ...	12 Jan., '10	MICHELL, W. C. ...	2 Feb., '10
FISHER, W. W. ...	15 Feb., '10	MURPHY, P. ...	16 Nov., '09
Reform Club, Pall Mall, W.		MARRIOTT, H. ...	31 Mar. '10
HAINES, Rev. F. W. ...	18 Nov., '09	NORRIS, H. H. ...	16 Oct., '09
FISH, E. W. ...	30 Aug., '09	PRIOR, E. ...	21 Apr., '10
FIRMSTONE, H. W. ...	23 Sept., '09	PRINGLE, A. E. ...	1 Dec., '09
HART, H. ...	1 Mar., '10	RODRIGUEZ, F. ...	31 July, '09
HUMPHREYS, J. L. ...	3 Dec., '09	ROBINSON, F. ...	24 Dec., '09
HELLIER, M. ...	8 Oct., '09	SETH, G. G. ...	1 Mar., '10
HEATH, A. ...	2 Aug., '09	STUART, A. ...	13 July, '10
KELLEHER, J. M. ...	16 April, '10	TARBAT, Miss J. O. ...	3 Jan., '10
KILLOURBY, D. ...	31 Mar., '09	WAIT, O. H. ...	8 Dec., '09

TANJONG PAGAR DOCK.

BLACK, R. ...	31 July, '09	HOWDEN, J. G....	9 Feb., '10
DAVIES, J. O. ...	25 Oct., '09	ROBSON, G. F. ...	5 Mar., '10
GRAHAM, J. ...	25 Jan., '10		

WEI HAI WEI.

HICKIN, Dr. H. J. ...	14 Oct., '09	WHITTAKER, A. ...	24 Sept., '09
-----------------------	--------------	-------------------	---------------

HONG KONG.

ATKINSON, Dr. J. M. ...	3 Nov., '09	JORDAN, Dr. G. P. ...	9 Mar., '10
CARVALLA, F. ...	Steamer due 15 Oct., '09	KENT, W. ...	19 Nov., '09
CARTER, A. ...	31 Aug., '09	LEE, Miss M. A. ...	6 Oct., '09
CROOK, A. H. ...	1 Mar., '10	LYON, J. A. ...	3 Nov., '09
CAMERON, W. ...	2 Jan., '10	LYONS, Capt. F. W. ...	5 Nov., '09
COOKE, W. E. ...	29 Mar., '10	LEE-JONES, J. W. ...	11 Dec., '09
DOYLE, D. ...	6 Apr., '10	LONGSTAFF, J. T. ...	5 Feb., '10
DARBY, A. J. ...	1 Mar., '10	MACFARLANE, Dr. H. ...	16 Mar. '10
DUNCAN, R. ...	16 Feb., '10	MCHARDY, D. ...	8 Oct., '09
DOBERCK, Miss A. ...	11 Aug., '09	NICHOLAS, C. E. ...	19 Apr., '10
GARROD, H. ...	5 Dec., '09	PARR, H. V. ...	8 Oct., '09
HAGGARD, H. E. G. ...	7 Aug., '09	REES-DAVIES, W. ...	9 Sept., '09
HIGBY, W. ...	Steamer leaving 11 Sept., '09	Reform Club, Pall Mall, S.W.	
HALLIFAX, E. R. ...	23 Dec., '09	SOLLY, W. J. ...	5 Dec., '09
HUTCHINGS, J. ...	8 Apr., '10	STOLLARD, Miss K. E. ...	7 Oct., '09
INGHAM, J. ...	31 Jan., '10	TERRETT, A. ...	19 Dec., '09
JONES, E. ...	5 Nov., '09	WILLS, R. H. ...	11 Sept., '09
JACKMAN, H. T....	Steamer due 5 Aug., '09	WATSON, A. ...	25 Oct., '09
		WILLIAMS, W. H. ...	30 Apr., '10
		WILLIS, G. ...	31 Jan., '10

PERAK.

ACTON, W. W. ...	3 Aug., '09	HATCH, E. C. ...	30 July, '10
COOPER, H. J. ...	<i>Stmr. leaving</i>	KEILICH, D. ...	31 Dec., '09
	17 July, '09	MILNE, W. S. ...	27 Apr., '10
ELLES, B. W. ...	11 Nov., '09	MACKEY, W. H. ...	24 Sept., '09
FAITHFULL, F. F. ...	27 Jan., '10	MELDRUM, W. P. ...	26 Oct., '09
GREIG, G. E. ...	18 Dec., '09	SATOW, P. A. ...	4 Jan., '10

NEGRI SEMBILAN.

DEW, E. C. ...	28 Aug., '09	SUMNER, H. L. ...	3 Apr., '10
JUST, A. W. ...	13 Nov., '09	WOLFF, E. C. H. ...	11 Feb., '10

PAHANG.

BADDELEY, T. M. ...	18 Feb., '10	DELMEGE, Dr. J. R. ...	<i>Steamer due</i>
BENNETT, E. L. ...	25 July, '10		29 July, '09
		SIMPSON, H. ...	30 June, '10

SELANGOR.

BURNSIDE, E. ...	24 Dec., '09	IRVING, C. J. ...	21 Nov., '09
c/o Messrs. H. S. King		JACKSON, R. D. ...	3 Sept., '09
& Co., 9, Pall Mall, S.W.		LUCAS, G. D. ...	3 Aug., '10
GIBSON, W. S. ...	<i>Steamer due</i>	MARKES, H. J. ...	5 Aug., '09
	26 July, '09	MADDOCKS, W. E. ...	31 May, '10
GREY, R. C. ...	13 Feb., '10	WILKINSON, W. A. ...	21 Aug., '09
GOUGH, A. E. ...	8 Sept., '09		

FEDERATED MALAY STATES.

ALSTON, A. H. ...	3 Oct., '09	LEGGE, R. H. ...	11 Sept., '09
BAKER, E. M. ...	<i>Steamer due</i>	LAIDLAW, G. M. ...	2 Sept., '09
	24 Oct., '09	MILLER, W. ...	11 Apl., '10
BENNETT, T. ...	31 Oct., '09	MARSHALL, H. ...	26 Oct., '09
BROWNE, E. G. ...	27 July, '09	MOODY, R. J. ...	31 Oct., '09
CARRUTHERS, J. B. ...	18 Aug., '09	PHILLIPS, D. ...	27 July, '09
CADMAN, C. G. ...	31 Oct., '09	RUSSELL, J. ...	31 Oct., '09
CAULDWELL, E. ...	8 Aug., '09	SHELLEY, M. B. ...	18 May, '10
CARDEW, C. D. ...	8 Aug., '09	STURROCK, A. J. ...	14 Feb., '10
GRAHAM, Capt. A. McD.	28 Mar., '10	STEELE, J. ...	20 Sept., '09
GEYER, E. W. ...	21 May, '10	WYATT, C. H. ...	10 Mar., '10
GLOVER, J. S. ...	<i>Steamer due</i>	WOOD, W. T. ...	31 May, '10
	29 July, '09	WELLS, A. E. ...	11 Apr., '10
HUBBARD, A. B. ...	14 Mar., '10	WHITE, W. A. ...	7 Dec., '09
KINSEY, W. E. ...	24 Oct., '09		

CEYLON.

ANDREWS, A. ...	25 Aug., '09	LAINE, H. ...	29 Sept., '09
ALEXANDER, E. B. ...	10 May, '10	LEGGE, J. A. ...	20 Mar., '10
APPLETON, H. ...	5 Feb., '10	MISSE, W. J. ...	31 Dec., '09
BRODHURST, H. W. ...	5 May, '10	MADDOCK, A. E. ...	31 July, '09
BAXTER, H. ...	24 Aug., '09	MAARTENSZ, L. M. ...	19 Dec., '09
BARTLETT, F. ...	28 Feb., '10	MACLEOD, K. W. B. ...	10 May, '10
BARTON, F. ...	9 Feb., '10	OHLUMS, J. W. ...	17 Oct., '09
CARSON, A. de C. ...	31 Oct., '09	RANKINE, G. N. ...	15 July, '09
CONSTANTINE, B. ...	10 July, '09	RAWLINGS, C. ...	6 Oct., '09
CARTE, R. G. ...	5 Feb., '10	ROTHWELL, A. ...	11 Dec., '09
COXON, T. ...	9 Dec., '09	SCHRAEDER, L. W. C. ...	28 Aug., '09
CAMPBELL, T. C. ...	31 July, '09	SLATER, A. R. ...	4 Nov., '09
COTTLE, H. C. ...	12 Nov., '09	SHIPTON, L. ...	4 Feb., '10
DENNISS, A. W. ...	24 Sept., '09	SCOTT, J. ...	14 Feb., '10
DANIEL, J. H. ...	1 Oct., '09	STRANG, A. ...	10 Sept., '09
DE SILVA, H. ...	3 Apr., '10	STONE, G. ...	10 Oct., '09
DIAS, F. R. ...	3 Dec., '09	SKELTON, R. ...	3 Oct., '09
DRIEBERG, J. G. ...	19 Mar., '09	SHANKS, A. ...	13 Oct., '09
DAVIES, E. C. ...	10 Sept., '09	TICKELL, R. E. ...	29 Aug., '09
FERNANDO, C. M. ...	11 Sept., '09	VAN TWEST, J. T. ...	30 Nov., '09
FRASER, Miss R. A. ...	13 Mar., '10	WEERAPERUMMAL, Dr.	
GREEN, C. ...	28 Sept., '09	A. A. M. ...	26 Nov., '09
HYLAND, W. ...	25 Aug., '09	WYLIE, T. A. ...	24 Aug., '09
JAMISON, A. D. ...	5 Oct., '09	WHITE, H. ...	22 Dec., '09
JOSEPH, H. P. ...	30 Mar., '10	Grosvenor Club, Piccadilly, W.	
LOVEGOVE, C. A. ...	9 Apr., '10	WOODFORD, F. O. ...	24 Sept., '09
LUND, C. W. ...	23 Aug., '09		

THE COLONIAL OFFICE JOURNAL.

VOL. III.

OCTOBER, 1909.

No. 2.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE passage of the South Africa Bill through both Houses of Parliament marks the completion of a political achievement as notable as any which history has to show. The concluding stages were far from being merely formal. As a result of a number of conferences with the Secretary of State, the delegates agreed to certain alterations in the text of the Bill, which were regarded as not inconsistent with its principles, with the consequence that it was finally presented to Parliament as a measure jointly agreed upon by His Majesty's Government and by the fully accredited representatives of four self-governing Colonies. The fact that the delegation from South Africa was hardly less representative of the parties in opposition than of those in power necessarily lent further weight to their influence and strengthened their title to speak in the name of United South Africa. In these circumstances any amendment of the Bill by the Imperial Parliament became practically out of the question. But the debates on the measure were nevertheless of quite exceptional interest. In the House of Commons, in particular, a forcible attack was made upon the provisions of the Bill which disqualify persons of non-European descent from membership of the Union Parliament, and leave the natives, except those in the Cape, without direct repre-

sentation. An amendment which would have abolished the "colour bar" was rejected on a division by a majority of one hundred, but not a single speaker defended the restriction on its merits. It was explained on behalf of the Government as an essential part of an intricate compromise, without which agreement among the parties to Union would have been impossible. It was supported on the same grounds from the front Opposition bench. But Mr. Balfour and Mr. Lyttelton were not less emphatic than the Prime Minister and Colonel Seely in their disapproval of the extent to which differentiation between black and white is carried by the measure, and their views were endorsed with absolute unanimity by speakers in every quarter of the House. The Prime Minister expressed an earnest hope that this consensus of opinion at home would carry weight in South Africa and lead sooner or later to a voluntary abrogation of the colour bar. If the change is ever made it is certain that it must spring from a development of opinion in South Africa itself, and not from any attempt at dictation from England. But it was right that expression should be given in a dignified form to the view which may be regarded as universal in this country.

Apart from the criticism passed upon these particular provisions, the attitude with which the Bill was received was one of enthusiastic approval, and the third reading was voted unanimously. It is understood that the new constitution will be proclaimed on May 31st, 1910, the eight anniversary of the conclusion of the Treaty of Vereeniging, and no more appropriate date could possibly have been selected. That a war so protracted and so hard-fought should have been followed after so short an interval by a reconciliation so complete was more than the most optimistic could have ventured to hope, and is a remarkable tribute to the freedom and elasticity which British institutions render possible. The Union of South Africa will be in every way worthy to rank beside the two other great unions of self-governing Colonies in the British Empire, and its establishment brings the more systematic organization of the whole Empire appreciably nearer. In the whole course of our history there is no event which may more legitimately be regarded with pride and satisfaction. It is understood that the Prince and Princess of Wales will visit South Africa to open the first Union Parliament, and will make an all-round tour. They will be accompanied by Sir Francis Hopwood.

All precedents show that any attempt to control the native question by removing it from the ordinary sphere of local government is doomed to failure. Such an attempt was made when

Western Australia was granted responsible government, but the whole of the machinery devised was soon afterwards given up, and no ill effects have resulted from this. South Africa must, and will, shape its own policy.

It is interesting to notice, in connection with the Union of South Africa, that a strong movement is proceeding in Australia in favour of unification. A petition presented to the Commonwealth Parliament urges:—

“1. That at the time when the Commonwealth Constitution was adopted, it was confidently hoped by a large majority of the electors of Australia that large reductions would be made in the expense of maintaining the State Governments.

“2. That practically no reductions have been made, and the establishments of the State Governments are still maintained on an altogether unnecessary scale.

“3. That the experience of six years of Federation has made it clear that no satisfactory legislation in the direction of reducing the expense of the State Governments, or of increasing their efficiency and usefulness, can be hoped for from the Legislatures of the States.

“4. That the continued existence of the State Governments with their existing powers prevents the development of any true Federal spirit in Australia, and tends to perpetuate the State jealousy and provincialism which it is the purpose of Federation to destroy.

“5. That the continued existence of the State Governments, as at present constituted, hampers the efficiency of the Commonwealth Government, and prevents it from exercising its power in the fullest measure for the benefit of Australia.

“6. That the only satisfactory remedy for the conditions described is to be found in the Unification of Australia; the State Governments being retained in existence only for the purpose of dealing, under Commonwealth control, with matters of purely local interest.”

The difficulty of the Imperial defence question is that public interest and sympathy cannot well be kept active except by measures of decentralization, and decentralization from a military point of view means waste and weakness. The history of the negotiations over the period since 1887 shows the continual conflict of the two considerations. It may be the best strategy to concentrate your forces, and the best place for defending a colony from attack may be some thousands of miles from it; but such dispositions are not reassuring to the places which are apparently left exposed, and do not help in the least to create that enthusiasm

and public spirit, without which it cannot be expected that money and support will be forthcoming. The payment to which the Australian representatives agreed at the Conference of 1887 was made on an understanding which was not very definite, and which was afterwards put in varying shades of colour to suit different feelings. But on the whole Australian opinion clearly demanded that the vessels for which they paid should be regarded as intended for their coast defence. The general aim should be both to provide for strategic action and to satisfy the requirements of local feeling. Due weight has to be given to the fact that trained men are indispensable as well as ships, and that any scheme which provides such training locally is very valuable even if it involves the detachment of vessels. Nothing but good can come of close discussion of the subject, and the visit of the representatives of the Dominion to this country to confer with the Government has been marked by a distinct practical advance.

The visit of the Colonial press representatives to England had much to do with the reduction of press rates to and from Australia to 9d., effected simultaneously on the Eastern and Pacific routes from 1st August. The reduction affects the former much more than the latter route, as the Australian Press Association have practically confined their favours to the Eastern companies. A reduction of the rate on ordinary messages would be a much more vital matter. The Pacific cable is at present, not reckoning the payments for sinking fund and renewal reserve, earning about $2\frac{3}{4}$ per cent. interest per annum; but including those disbursements the deficit is about £60,000, and any general reduction is sure to increase it. Only about 21 per cent. of the Australian cable business passes over the "all-red" route, and if a reduction is to be justified some better support may reasonably be asked for. It was mainly the Australian mercantile community that agitated for and ultimately got the Pacific cable, but as soon as this scheme had the effect of bringing down the price they as a body ceased to concern themselves with it.

The Report for 1908 of the General Manager of the Central South African Railways contains an interesting account of the working of the "white labour experiment." At the present time upwards of 2,000 white men are employed on the railways on unskilled manual labour, and the General Manager finds that "the experiment has been, in the main, quite as successful as any optimist acquainted with the circumstances could have expected." It is true that the performance of the work by white men has led to an increase in cost, even where it has rendered possible a reduction in the number of hands employed; and it is

also true that the white men so employed "find it difficult to make ends meet on their present pay and privileges." But against these drawbacks the General Manager sets three great advantages which have resulted from the success of the experiment.

"1. It has found subsistence and employment for a large number of white men whom it would otherwise have been difficult and costly to provide for.

2. It has established another bond of common interest and mutual trust between the members of the two white races over a wide area in the Transvaal and Orange River Colonies. . . .

3. It has already served to break down in a remarkable degree what seemed to be an insuperable barrier of prejudice on the part of white men to perform for wages manual labour which they regarded as degrading and only fit for natives to perform. It is true that this barrier is as yet only partly broken, but the gaps are now so wide and numerous, in so far as we are concerned, as to be beyond repair. The men have found that labourers' work well done has brought them, instead of degradation, the respect and goodwill of their fellows, and opportunities of improving their positions. Not only are the means of earning a livelihood enlarged to men of their class, but the prospect of employment for white men on a large scale in South Africa is correspondingly increased."

The disinclination of the white man to undertake unskilled labour constitutes, perhaps, the most difficult problem which South Africa has to face in the future, and if the experiment on the Central South African Railways should result in the gradual removal of that disinclination, it will have been of incalculable service to the country.

The Royal Commission appointed to consider the trade relations of Canada and the West Indies has arranged to begin its work in Canada, and the British members sailed for the Dominion on September 11th. The Commission will subsequently, probably after Christmas, visit the West Indies. The enquiry is a long and complicated task, and by no means easy to arrange. Any question of differential treatment raises delicate points, but the Commissioners may be able to make a selection of articles which could be admitted from Canada into the islands at a reduced rate, and which are not to any substantial extent exported from this country. That it is highly desirable to improve steamship and telegraph communication between the two places everyone is agreed, and it is probable that these matters will figure in the recommendations.

There is a natural inclination on the part of local producers in any place to agitate for the exclusion of competing imports if it can be contended that any danger attends them. Not a little objection has been urged in South Africa to the importation of oversea fruit and vegetables on the ground that pests are introduced in this way. The objection is rather weakened by the fact that the country has already an extensive supply of these pests in its own productions, and the danger in further introductions from fruit is trifling compared with what it is from trees and plants. The recent report of the Cape Department of Agriculture points out that insistence upon absolute freedom from anything in the nature of a pest would necessitate the exclusion of almost all consignments of fruit that arrive. A reasonable margin must be allowed, and there is not much practical difficulty in fixing it.

In British East Africa the year 1908-9 was one of the most bounteous within the experience of settlers in the highlands. There were good harvests of all crops. The spread of cattle disease, however, caused much trouble, and considerable effort will be necessary to deal with the mischief. A hostel has been built on the Kabete farm to accommodate young settlers from home, who will be able here to acquire experience before taking up farming on their own. The Colony has a great advantage in the fact that two harvests of wheat can be obtained in the year, and farmers were receiving from 5s. 8d. to 6s. per bushel at the mill. The cotton harvest in the coast belt has been a very meagre one: cotton requires a long time from sowing to harvesting, and apparently the rains are not sufficiently extended for it. The labour difficulty still awaits solution, and the most favoured idea appears to be a system of indentured Indian labour, with engagements for three to five years, and at a cost of 15 rupees per month, passages included. With four millions of natives in the country it seems curious that the labour difficulty should be acute, but the employer does not find this teeming population where he wants hands. The settlement of small areas contiguous to native reserves has been encouraged, but the plan is neither so safe nor so agreeable to the settlers, who naturally prefer to be side by side.

The great trouble in East Africa is, of course, the insects—termites, ticks, and tsetse-flies. Ticks are blood-suckers and transmit blood diseases: their vitality and reproductiveness are remarkable, and account for their myriads. The tick-borne diseases known at present are East Coast fever, red water, biliary fever of the horse, and heart-water of sheep and goats.

More complete records of the distribution of these pests and tsetse-flies are required, and will be eventually accomplished.

"At the present stage of the country's career," it is observed in the report of the Department of Agriculture for 1908--9, "State aid and initiative are urgent. Scientific and technical assistance should be given in the conduct of investigations in agricultural problems: such as the control of diseases and insect pests, the collection of trustworthy data, and the fostering of the various branches of industry during infancy. . . . Stock of all descriptions appear to thrive well, most crops belonging to the temperate, the sub-tropical and the tropical zones, can be grown within one part or other of its boundaries, and climatic conditions are, generally speaking, favourable for white occupation." Much useful work in this direction is being done by the Department, and if the land laws are aggressively criticised in some quarters it should be remembered that the main objects are the creation of a large class of small proprietors and the participation of the State in future years in the increased value of the land.

The development of German East Africa in recent years has been remarkable, and the position of their steamship service on the coast commands respect, even if it leads to complaints that the British flag is not represented as it should be. But in making comparisons it should be remembered that the outlets for German capital in their own colonies are very limited compared with ours. A great amount of money, represented by some forty or fifty companies, to say nothing of private enterprise, has been sent from Germany to the Colony. A length of railway of 212 miles is now open, and in six years there will be 680. The exports have trebled in the last eight years. The number of white settlers, however, is still small—about 480. A rapidly growing "overland" trade is due to the Uganda Railway, which thus renders a valuable service to the German possessions, and benefits itself; in fact, the produce of that part of German East Africa which borders on the Victoria Nyanza accounts for more than 40 per cent. of the whole traffic receipts of the railway. The community of interests and the similarity of conditions make the official extracts which we give in this number well worth study.

The earthquake of 1907 in Jamaica was followed by prompt and vigorous efforts to repair losses, and the good results were seen in the best revenue in the following financial year that the Colony has enjoyed for several years. In districts suitable for paying products there has been an undoubted increase of prosperity, and a considerable investment of capital for sugar pro-

duction has taken place. Bananas remain the easiest and most lucrative investment, but there is some drawback in the fact that the commercial position depends largely on this risky crop. The planting of more permanent crops, such as cocoa, is, however, increasing more rapidly than ever.

The administrative work which is quietly going on in Ashanti and the Northern Territories of the Gold Coast is a good example of the settlement of troublesome countries. The only intercourse between the tribes of such places used to be by fighting, and an entirely new spirit is created when it is shown to them that they can travel about in security. An agricultural show was arranged at Coomassie, and 88 chiefs with over 1,000 followers from the Northern Territories accomplished the long journey of several weeks; but the fear of the Ashanti, which has been such a dominant feature in the life of the people of the Protectorate for so many years, made it extremely difficult to persuade the chiefs to make the journey down, and the boisterous welcome given them on their return showed with what fear their people looked on the visit.

It is reported with satisfaction that it becomes rarer every year now to see men and women without some clothes on, and no doubt this sartorial advance is very significant.

In the Annual Report on St. Helena for 1908 Colonel Gallwey takes occasion to correct the somewhat misleading accounts which have been published of the attractions of the Island as a holiday resort.

"With the very best of intentions," he writes, "certain of St. Helena's well-wishers in England have allowed their enthusiasm in the Colony's cause to overrun their better judgment by prompting them to claim for the Island advantages as a holiday resort which it certainly does not possess. The most alluring inducements are being held out by these people through the columns of the English newspapers as to St. Helena's advantages as a holiday resort. Among the advantages claimed are a splendid climate, cheap hotels and boarding-houses, comfortable houses at a low rent, &c., &c. They even go so far as to state that St. Helena possesses 'some of the finest golf links in the world!' The kind thought which prompts St. Helena's well-wishers in England to promote the Colony's interests is fully appreciated, but it is generally recognised that more harm than good must result from misrepresentation, for such misrepresentation can only lead to disappointment among any persons who might decide to visit the Colony on the strength of the inducements held out to them in the newspapers. It would serve the Island's interests better if

only facts were stated. What are those facts? The climate is very healthy, and, although in the tropics, that of the highlands is very temperate and never too hot. There is not a single hotel in the Island, and the so-called boarding-houses in Jamestown might at a pinch accommodate half-a-dozen people. There are no boarding-houses in the country where visitors would require accommodation. There are about six untenanted houses which could be leased at reasonable rents, half of which are either unfurnished or only partly furnished. 'Some of the finest golf links in the world' must be taken as referring to the one golf course of nine holes, there being no suitable site for a second course in the Island. I should be very pleased to see St. Helena become a health and holiday resort. If visitors were forthcoming boarding-houses would soon spring up. It is not to be expected, however, that such establishments will be started on chance. As things stand at present, accommodation for more than a very few visitors does not exist, and any persons proposing to visit the Colony would be wise to ensure beforehand that the accommodation they require is both suitable and available. Visitors, too, must be prepared to find the Island somewhat dull. There are few diversions by day and practically none by night. In any case, the hilly nature of the country and uncertain weather conditions do not conduce to the comfort of night travelling in St. Helena. Taking it all round, the Island's advantages, as far as holiday and health seekers are concerned, lie almost entirely in its healthy climate."

From the same Report, it is satisfactory to learn that the economic situation in 1908 showed a marked improvement, and that so far as the country districts were concerned the year was a good one. In Jamestown conditions were less satisfactory, but much was hoped from the efforts of Mr. A. Mosely, C.M.G., to establish new industries in the Island.

The Earl of Crewe has appointed a committee, under the chairmanship of the Earl of Cromer, to organise entomological research in the British Colonies and Protectorates of tropical Africa. An Imperial contribution of £1,000 a year for five years has been granted, and £1,000 a year for the same period will be contributed by the West African Colonies. Mr. G. K. Marshall is Scientific Secretary to the Committee. The importance of the part played by insects in the transmission of disease among both human beings and animals has been immensely emphasized by recent medical research, and the establishment of this new organization is a welcome extension of the already considerable activity of the Colonial Office in the field of tropical medicine.

THE CANADIAN CIVIL SERVICE.

THE Canadian Parliamentary Session of 1908 was distinguished by the stormy proceedings which took place in connection with the charges of the misdeeds of public officers. The Civil Service Commission appointed in 1907 issued an elaborate report, in which many severe reflections were made on the modes of making appointments. It was alleged that in the working of the Civil Service there was "a constant attempt to evade the examinations"; patronage seemed "to run more or less through every Department"; promotions were few and transference from one district to another in the outer Service was rare; ambition to rise was being largely checked and individual work was deteriorating; the higher posts were being filled by political patronage. Uniform classification was said to have failed and to be practically disregarded; salaries upon the whole were too low and increases based upon individual merit were recommended; promotions were seldom made from considerations of merit, and it was urged that the whole system of political favouritism and patronage should be abolished. Many officials and appointees of this kind were said to be not amenable to discipline. Regret was expressed at the repeal of the Superannuation Act which, it was declared, should be re-enacted with provisions for the support of the widows and orphans of deceased civil servants. An Act on these lines was drafted and appended to the Report.

The question of efficiency was dealt with at length. In the outside Service the Commissioners found that, as a rule, "politics enter into every appointment and politicians on the spot interest themselves not only in the appointments but in the subsequent promotions of officers." It was declared that the officials of this branch of the public service were "without hope and the majority of them in dire need."

But the most sensational part of the report was a statement included in it, but made in particular by two members of the

Commission who had enquired specially into the working of the Marine and Fisheries Department. By way of example of a tremendous indictment may be quoted the remark that "zeal for economy and good management, or pride in the work, is not visible. Perfunctory and mechanical discharge of duties is the rule, with apparently no perception of any need for uniformity." There was also a charge of "lack of conscience," and a not obscure suggestion of dishonest practices. The judgment of the Commission was as follows:—

"Your Commissioners have to confess that the general conclusions which they have formed regarding the administration of the Department are most unfavourable. It seems to have few redeeming features; although there are some, one of which is the presence in the Department of some good men, chiefly, but not wholly in the lower ranks. With a better organization and a better method these might form the nucleus of a good staff. The trouble is not of recent origin, but has been long continued, and is the result of evil methods and practices persisted in for many years. Organization, discipline, zeal for the public service, and regard for economy are all conspicuous by their absence. Money is wasted in small things as in great, because no one seems to have any motive to do otherwise. While there is no real punishment for the most outrageous blundering or the most incompetent service, there is at the same time absolutely no means for the discovery of merit and the promotion of talent. It seems to have been the same under all Administrations, and Government departments, like private corporations and private individuals, having once acquired a distinctive character, find it impossible to change it by any impulse from within."

The publication of the report caused wide-spread sensation. The Government at once took the line that the accusations of the Commissioners, while general and indefinite, reflected on the integrity of the officials generally, and that both in fairness to them and for the protection of the public interest it was necessary to sift them. Mr. Justice Cassels was accordingly appointed to investigate the allegations. Various causes delayed this enquiry. But in Parliament the discussions on the general subject went on. In the Commons, on May 26th, the Hon. G. E. Foster moved a resolution declaring that: "The Civil Service system of Canada should be based on merit and character alone, and all the appointments thereto should be made from candidates whose competency has been established through open competitive examinations conducted under a non-partisan Civil Service Commission." His speech dealt at length with the non-partisan Civil Service of Great Britain and its rich results, its history and general character, its many lessons for Canada; reviewed the

United States system, its struggles, corruptions, and reforms; described Canada as making little or no progress in the condition of its Service; approved the chief conclusions and criticisms of the recent Commission; denounced the patronage system and political influence in appointments; proclaimed the necessity and enormous value of a trained, independent, self-respecting Civil Service based on merit, freedom, and individual manliness.—(*Canadian Annual Review*).

The motion was considered objectionable by the Government in appearance, and was defeated by 72 votes to 30; but on June 17th a Government measure was introduced by the Minister of Agriculture with the following explanation:—"Probably the most important reform provided in this Bill is the establishment of an independent Civil Service Commission. The Commission shall control the examinations for entrance into the Service, also give such certificates as may be required with regard to promotions, increases of salary, and the improvement of the status of the employees. The Commission will control the examinations, and make all necessary arrangements for the carrying out of the work—all, of course, subject to the approval of the Governor-General-in-Council. The Commission is to be composed of two members with the status, salary and tenure of a Deputy Minister. The Commission will recommend the necessary staff required for the carrying out of the work. The second important reform is that entrance to the Civil Service shall be open to competitive examination. At present entrance to the Civil Service is open to those who have passed the qualifying examination. That examination, however, does not entitle any one to entrance. It simply gives the opportunity of entering and the choice is left entirely to the judgment of the nominating power. But under this Bill the entrance will be by open competitive examination, and the nominations to the Service will be in order of merit under the control of the Commission." The Bill was passed, with an important amendment, which made the status of the Commission permanent and the Commissioners irremovable by ordinary Government action. Thus, whatever the truth about the alleged corrupt influences, the agitation brought about a change of enormous importance and significance, the creation of a Civil Service on the lines of that of Great Britain. Whether the charge of general political corruption, against Ministers of the Crown as well as departmental officials, was well founded was a question which divided Canada at the last election, but there can be no denying that it was made by a great number of responsible persons and papers. It was, in fact, freely alleged that corruption permeated every department, and a very large part of the time of Parliament and of the energies of the Government was taken up

in dealing with the subject. This state of things is practically inevitable in a country which has large concessions and contracts to dispose of, unless the Civil Service is kept up to a high level of efficiency and trustworthiness.

Mr. Justice Cassels' report has been issued this year in a sessional paper (No. 38). His instructions were in effect to ascertain the guilt or innocence of any official charged with lack of conscience or of directly receiving bribes or other perquisites. It quickly appeared that the country lost considerably from a vicious system for which the officials were not responsible. The departments were compelled to buy from "patronage lists" of selected firms, and these lists were made out to a greater or less extent in consideration of party influences. The Judge, as might be expected, severely condemned this system, as not only wasteful of money but also demoralising to the officials. "The system," he states, "seems to have been handed down from one Administration to another since Confederation. To my mind the adoption and continuance of the system is absolutely wrong. It apparently is based on the old maxim, 'to the victors belong the spoils,' utterly ignoring the fact that the money to be disbursed is money contributed by the people generally, and not the money of the political followers of the party at the time being in power." We doubt whether the practice was based on the above or any other maxim; it was simply a case of taking an advantage for party purposes, and probably few, if any, Canadians would openly defend it on any ground. It was abolished by the Minister of Marine and Fisheries, so far as his department was concerned, before the Judge reported. An extraordinary feature is that it seems to have been open to private Members of Parliament to direct the placing of orders. Thus: "Q.: So it was not your own independent judgment that was exercised from time to time as to where the work should be done or by whom, or by whom materials should be furnished: that was done upon recommendation? A.: By the Member of Parliament having the patronage." And "Q.: Have the Members intervened so as to govern the patronage list? A.: Yes; they could take any name off the list they wished, and they could add names to the list. From time to time we get special instructions that special work is to be given to special people. Q.: From whom do you get those instructions? A.: From the Members. Q.: Do you obey the instructions? A.: Certainly, sir." In one case it was shown that a wholesale firm in Halifax sold goods to a department at 10 per cent. over retail prices, and the firm explained that "we get the orders for the most part from the fact of our being on the patronage list. . . . Any particular order we would ask the Member at times to use his influence to see we got it."

The examination of the personal cases clearly showed that certain officials took money improperly. Thus one made advances to contractors, charging five per cent., the colourable pretext being that they got their money quicker in this way than if they waited for the official settlement: "denuded of verbiage," the report puts it, "the fact is that he has been exacting a toll of five per cent. on the amounts due by the department to contractors and others who had the privilege of dealing with the department." It is hardly necessary to remark that the firms which made this arrangement do not appear to have been exposed to competition, and "it may almost be assumed that those paying this commission did not pay it out of their pocket, but so arranged that the prices paid to them amply recouped them for such outlay, and the toll was paid by the country."

In other cases direct bribery was proved, and the Judge observes that "the conduct of some of these officials who have been guilty deserves nothing but condemnation. . . . They seem to have been ignorant of the injunction in the Mosaic law against receiving gifts, 'for gifts blind the eyes of the wise and change the words of the just.'" If the Mosaic law is ignored, it may be suggested that a good substitute is a local statute making the giving or acceptance of bribes in such cases a penal offence.

Some recommendations are made at the end of the report, but they do not go so far as to make these transactions punishable criminally. The chief remedy, the Judge says, "lies in the awakening of the public conscience. If the public generally could be brought to view with abhorrence graft and abuse of trust on the part of those administering the public moneys and property, the end of such abuses as have occurred in the past would be in sight." It may be questioned whether any quickening of the "public conscience" would cure the mischief. Judging from the interest shown in the controversy the conscience of Canada in such matters is sound, but there, as elsewhere, crime has to be put down by the strong hand, and it is one of the tasks of modern administration to detect crime in whatever specious disguise it may be concealed.

THE ROYAL COMMISSION ON SHIPPING RINGS.

THE President of the Board of Trade submitted a tough problem to the body which he appointed to report on shipping rings. We are surrounded nowadays by combinations the object of which is to fix prices and shut out all competition which might interfere with the arrangements made. When the public discovers that a price has gone up and that no one is to be found who will supply what is wanted at a lower figure, it very naturally exclaims that there is a monopoly, and there is a general feeling that any monopoly is mischievous and should be put down. This feeling is largely due to the historical associations of the word. Monopoly has usually implied an exclusive concession by the State, and the power which gave could take away, and was generally sooner or later induced to do so. The modern monopoly is not of this creation, and cannot be dealt with in the same way. It arises out of voluntary combination, and has no legal privilege. In the old case the establishment of a monopoly was an interference with the liberty of the subject. In the new case it is the suppression of the monopoly that would be such an interference. Nothing is gained, therefore, by the use of the word as a weapon of attack, and the consideration of the subject must turn upon the advantages and the disadvantages of the system in practice.

The particular characteristic of a shipping ring is the deferred rebate. The object is to induce shippers not to resort to any other service, and to effect this a percentage, usually ten, of their freights during a certain period, usually four or six months, is eventually paid to them provided they have confined their shipments to the ring's steamers during the whole of the time. Thus, though the shipper enters into no contract to ship exclusively by the ring's steamers, he is rewarded if he does so. In practice the inducement to be "loyal" in this sense is very strong. The reason for this is simple. The rings provide the best

and the only regular services, and the occasions are numerous when a regular shipper has no alternative but to send by them. He might on some other occasion when time is of no great consequence get cheaper freight from a tramp steamer, but in that case he forfeits his rebate on his other shipments, and, generally speaking, he finds that it is not worth while to do it. This would not be the case if the disparity between the inside and the outside rates were much greater than it is, and clearly the charges of a ring are limited by the competition which would be at once called into being if they became generally excessive. The tramp steamer is in the majority, is tied to no route or customers, and is ready at any time to take advantage of a favourable opening. It can therefore only be kept out by a service which, on the whole, is calculated to secure the adhesion of shippers.

A case of a unique character is that of the Straits Homeward Conference. There the principal local freight agents, said to represent about 60 per cent. of the trade, agreed with the Conference to use its steamers exclusively, and the Conference agreed, on certain conditions, to distribute five per cent. of the total freight among them. This arrangement is set out in the Report (pars. 49—51), but in a rather misleading way, as it is not supplemented by the fact that in addition to this special five per cent. there is a further and general rebate of ten per cent. allowed to all shippers who support the Conference. The case, therefore, contains the usual elements, with a special agreement with a limited number of firms added.

A salient feature of the matter is that these shipping conferences have rapidly extended to almost every quarter of the seas. They do not exist in the North Atlantic and Coasting trade. But these exceptions are explained by circumstances peculiar to these quarters. In the Atlantic the importance of the passenger trade is so predominant that this business by itself suffices to support a regular and well-organized service. In the coasting trade recourse to rebates is unnecessary because it is easier to secure guaranteed custom in other ways. Some homeward trades are also outside the system; these are cases where a larger amount of tonnage is shipped than goes outward, and the liners therefore cannot and need not insist on having it all. In all other cases the conference system has established itself, and this generality points to a clear and broad reason. What this is is obvious enough: it is the demand for a regular and organized freight service. If there is no such demand, there is not and cannot be a conference; if there is, a conference is inevitably established. The public, in fact, gets from the system something which otherwise it would not get, and naturally it has to pay some price for this. The benefits gained are undoubtedly very

The Royal Commission on Shipping Rings. 109

substantial. Some of them are involved in the provision of an organized service, and others are matters of custom. "Advantages coming under the first heading are fundamental in their character, affecting the nature or cost of service, and are due to the organization implied in the conference. Among them must be included the provision of regular and fixed sailings, covering as a rule many foreign ports, and taking place throughout the year, the arrangement of such dates so as to avoid clashing, the determination of rates and classification on a stable basis, and the many other features which distinguish a service from the varying, irregular, and disconnected, even if frequent, opportunities for shipment offered where there is no organization." The advantages offered by vessels of high class and speed are very substantial. The insurance premium on cargo is less, and the cargo is delivered in better order and more expeditiously. The liners are specially adapted to the trade for which they are used. The regularity of freight charges is a feature, the importance of which the Report hardly brings out; buyers want regular supplies at, as far as possible, regular charges, and are willing to pay something for this convenience, as pointed out in our last number (p. 57). The advantages under the second head are different. "They exist in the usages which the Lines in Conference observe in their dealings with the shippers. Thus there is a tacit understanding that Conference Lines will charge equal rates to all, give protection to their shippers in cases where trade competitors by going outside have obtained lower rates, and abstain from carrying goods on their own account. These and other understandings, whether avowed or not, have crystallized into usages, to which most of our witnesses attached great importance. They are usages due to the existence of Conferences, and observed by them towards shippers who give them an undivided support." The system has, in short, with all its features been built up organically in accordance with the requirements met with.

The price which is paid for these advantages is, of course, found in the freight charges, and obviously it would be futile to specify a rate which at any time might be higher than that offered by a tramp steamer, unless in some way continuity of custom is secured. Fixity of arrangements on the liners' side implies some amount of fixity on the shippers'. "Lines which maintain a regular service covering small as well as large foreign ports, and sailing at regular and fixed dates, are involved in greater expense than competitors who choose their sailings, and offer only irregular opportunities for shipments. Moreover, owing to the movable nature of ships, such competitors, if driven off by the Conference from any one route, can resort to other tracks

without suffering any loss commensurate with that incurred by unsuccessful competitors in the general industrial world. Finally, the adoption of some of the improvements whereby transport is cheapened, *e.g.*, the building of ships of larger carrying capacity or specially adapted for particular trades, increases the risk and difficulties of regular lines unless they possess some guarantee of a continuity of custom." It follows from this that a "tie" of some sort is necessary. The most common form of tie is that of contract, and in some cases this was resorted to, but the results were not satisfactory, and it was largely owing to the desire to avoid the inconvenience involved that the system of deferred rebates was introduced.

The trouble is that when once the conferences have secured their position they are able to put up the rates, or some of them, higher than they should be. The Royal Commission, while explaining that it is possible that the position may be abused in this way, state that the evidence in support of the contention that excessive or unfair rates have been charged appears to them inconclusive. This point is dismissed briefly (*par.* 299), and the somewhat indefinite way in which it is treated will seem to the many people who regard it as the most important question a rather weak feature of the report. But in other ways the report is clear that the system has abuses. "We consider that this is a grave defect in the system which has in the past led to diversion of orders from this country to the United States of America, and thereby discounted the benefits obtained from the system. We consider it advisable, therefore, that some means of checking abuse of the system in this direction should be found." The Commissioners note that in the case of the Straits Homeward Conference an agreement was made by the Conference with certain of the more powerful merchant firms granting them a considerable preference in the form of an extra rebate, and they observe that the circumstances of this case are very exceptional, and may, if the course adopted be persisted in, call for legislation. The South African and West African Conferences were, they consider, shown to have acted in an arbitrary manner, and in the case of the former grievances of a substantial character have been experienced.

At this point in the argument the Commission breaks into two parties. It is exceedingly difficult for any body of men to arrive at the same appraisement of advantages and disadvantages in such circumstances, and it is not surprising to find a minority report which sets out that the advantages of the system are overrated and the disadvantages underrated in the majority report. The majority report is decidedly against the statutory abolition of the

rebate system. The signatories consider that on the whole it is generally advantageous, and decline to recommend any control over it by legislation. Their main recommendation is that the shippers and merchants in a given trade should form themselves into an Association, so that they might be able to present a united front to the Conference when any controversy arose. They further recommend that in case of failure to reach an agreement the Board of Trade should have power to appoint a person to endeavour to promote a settlement by conciliation, or on the application of both parties (an unlikely event) an arbitrator to decide the point at issue; and that in cases where it appears to the Board of Trade that there are good grounds for believing that important national or Imperial interests are affected, and where it has not been found possible to settle the dispute by conciliation, the Board of Trade shall have power to appoint a person or persons to inquire into the matter and report to them, it being left to the discretion of the Board of Trade whether their report should subsequently be presented to Parliament. They also suggest the publication of rates and classification of goods.

The Minority Report makes light of the advantages which it is claimed are given by the system of shipping rings. None of these advantages, it urges, are given under any contract which can be enforced at law. It may be replied that they are not the less real on this account; it is the actual system, and not any matter of legal rights, that is on trial. As regards the employment of better steamers, sailing on fixed dates, it argues that "this has been merely an incidental or subsidiary result of the change. It was not the object with which the system was introduced. That object was to put down and prevent competition." All this may be admitted. No one supposes that the Conferences have been established for benevolent purposes, but the question is not one of motives but of results. It is contended at some length that there is a waste, owing to the fact that the steamers of the rings, though not at the time required on the line, are not allowed to "move freely from one part of the world to another, or to pass from one track to another, as the circumstances of the day may require." The answer to this is that it is not true, but in any case "waste" is inevitable when there is depression. Some hardships are referred to, and here the minority report is on firmer ground. Thus the exclusion of British tramp steamers from Singapore has no doubt given an impetus to foreign tonnage, and this result of the system is perhaps its most assailable point. There have been notorious cases of shipments from the United States to South Africa at lower rates than from this country, and it requires a highly philosophical temperament to

watch with equanimity the diversion of trade in this way. But when it comes to actual proposals, the minority shrink from recommending that the deferred rebate system should be made illegal. They prefer that "a real attempt should be made to give effect to a system of conciliation and limited supervision by the Board of Trade." The proposal as set out in detail does not differ in principle and not greatly in procedure from that indicated in the majority report. Sir D. M. Barbour, one of the signatories, adds a trenchant "reservation," in which he gives his opinion that "the proposed associations would be of very little value, and that the nominal power of check given to the Board of Trade would be quite ineffective in practice." But this pessimistic criticism is not accompanied by any clear recommendation of any more drastic policy.

The general conclusion from the evidence seems to be, in the first place, that there is nothing intrinsically wrong in the system, unless all forms of combination for the purpose of keeping down competition are to be regarded as immoral. All classes of suppliers are rapidly finding out that it is better for them to agree with one another than to try to cut one another's throats. The combination is effected in various ways; in a primitive form it is a mere nucleus, lightly held together by a general understanding; under pressure of competition it crystallizes into a solid ring. The result is seen in higher prices and the increased cost of living, but few people seriously suggest, at any rate for present purposes, that such combinations or their arrangements should be made illegal. In the case of the shipping rings, certain practical benefits to the public result in the shape of better services, though it is difficult in many cases to say whether an admitted improvement is due to this or to some other cause. On the other hand, there are some abuses, of which the most serious is that occasionally foreign trade benefits by the elimination of the British tramp. The proposal of the Royal Commission (which has been put forward in this Journal) that the shippers should band themselves together to meet the shipowners in the gate, with the Board of Trade playing the part of guardian angel to both sides, is mild in appearance, and there is no doubt something unsatisfactory to the logical mind in these arrangements of a purely permissive character to which no force of law is given. But in practice the bringing together of representative bodies of two sides, under an organised system of conciliation, is found time after time the most effectual way of obtaining concessions and of bringing about a settlement of disputes. Merchants are really more interested in getting steady and uniform rates than in cutting them down. What they have to fear mostly is having their stocks

The Royal Commission on Shipping Rings. 113

depreciated by importations by cheap tramps. It is therefore by no means so difficult as it may seem to establish rates which can be accepted as satisfactory by both sides. The efforts of the mercantile associations would be directed towards securing equal treatment for all, reasonable notice and justification of changes, and co-operation against foreign trade which is being given an advantage. If a fair measure of harmony can be attained in these matters, very little more will be heard of the rebate system.

The best way of considering the expediency of making the rebate system illegal is perhaps to work out what would then happen. Clearly the shipowners would distinguish between regular and casual customers, and this could hardly be considered unfair on business principles; but it would introduce the practice of preferential treatment, and make the question of rate continually unsettled. There would be no guarantee of regular dates for sailing. The minority Commissioners think that there is "a natural process of adjustment in such matters," and rely upon evidence representing that "the growth of regular sailings is the consequence, not of the Conference system, but of the development of trade." Of course supply adjusts itself more or less to the demand, and if there is freight there will in the ordinary course be shipping for it; but anyone who has had practical experience knows well enough that tramp steamers regard the advertised date of sailing as a mere expectation of a possibility, and that passengers and cargo will be kept waiting if there is a chance of getting more. The disturbance of regular sailings would probably tend to the employment of slower and inferior vessels. The want of fixity of freights would cause a reversion to the old state of things when the big people chartered tonnage themselves and the small people could only get space by paying them their profit: in other words, it would operate against the small merchant, and would tend to throw business into a few powerful hands. At Singapore, where the system has perhaps been more bitterly attacked than anywhere else, the number of small traders has increased greatly since the Conference came into force. Forward contracts, which are freely made under the Conference system, would be impracticable if freight and tonnage were irregular.

The special enquiry into the South African grievances resulted in no definite conclusion. The merchants there as a body are quite aware that the fixed rates and regular sailings are substantial advantages. The commercial position is now improving, and this fact is, as usual, the best cure for grumbling. If the goods trains to the coast can be filled up instead of running half

loaded the steamers are able to, and probably will, concede better terms. This is really what is now beginning to happen. The export of heavy goods, mealies, oats, &c., is assuming large proportions, and the Conference Lines, it is understood, are agreeing to allow exporters to ship by outside steamers to ports of the United Kingdom, provided no Conference steamer is running to such ports and the rate of freight is not less than to the regular ports of call.

It may be added from our point of view that a Colonial Government importing supplies is not in the position of a merchant in this matter, but in that of the general public. Its interest is to get the lowest possible rates, and it is not so much concerned with their regularity. It might therefore conceivably be to the advantage of a Colonial Government to go outside the ring and support a competing service in cases where this would not be to the advantage of the merchant. But this would mean generally that the Colony would have to charter vessels itself or guarantee business sufficient to support a service, and it is rarely the case that the Government requirements would be large enough for this. The point was seriously considered by the South African Colonies a few years ago, but it was seen on examination that the Government freight was so small in comparison with the whole that it was quite insufficient for such an object. Occasionally there seems to be a tempting opportunity for supporting an outside service which is offering lower rates, but this is a rather dangerous game, for it is pretty certain that if the outsider gets strong support it will be taken into the ring. That, of course, is its object. The result is worse than before, for the ring is so much the stronger. This happened when the Messrs. Houston service challenged the South African Conference. A great amount of pressure was put on the Government departments to ship by these steamers, and though these efforts were not successful, considerable support was given to them by the British South Africa Company. The Messrs. Houston line having established its position, was admitted into the ring. The consequence is what the Minority Report calls an "inflation of tonnage," meaning a greater amount than there is real necessity for, and while this is the case there is little chance for any competitor. It seems, therefore, useless for a Government to attempt to fight a ring unless it sees its way to providing enough cargo to support an independent service. In that case it would ship by the Conference steamers only light goods which are urgently wanted, and give up the rebate. It would have to enter the business of freight agent actively to obtain a homeward cargo, and provide itself with landing boats and all the other appliances

which the place might require. But, on the whole, the Conference lines have given the Government favourable treatment, so much so that merchants have frequently complained of such departures from the rule of uniform rates. The whole public, however, benefits by these concessions, and it would be obviously quixotic to insist on the companies levelling up their charges. The Majority Report defends the practice on the ground that "contracts made with Governments stand in a category by themselves, inasmuch as the preferences they accord are not given to one merchant at the expense of another, and the advantage of them is ultimately distributed over the whole community."

loaded the steamers are able to, and probably will, concede better terms. This is really what is now beginning to happen. The export of heavy goods, mealies, oats, &c., is assuming large proportions, and the Conference Lines, it is understood, are agreeing to allow exporters to ship by outside steamers to ports of the United Kingdom, provided no Conference steamer is running to such ports and the rate of freight is not less than to the regular ports of call.

It may be added from our point of view that a Colonial Government importing supplies is not in the position of a merchant in this matter, but in that of the general public. Its interest is to get the lowest possible rates, and it is not so much concerned with their regularity. It might therefore conceivably be to the advantage of a Colonial Government to go outside the ring and support a competing service in cases where this would not be to the advantage of the merchant. But this would mean generally that the Colony would have to charter vessels itself or guarantee business sufficient to support a service, and it is rarely the case that the Government requirements would be large enough for this. The point was seriously considered by the South African Colonies a few years ago, but it was seen on examination that the Government freight was so small in comparison with the whole that it was quite insufficient for such an object. Occasionally there seems to be a tempting opportunity for supporting an outside service which is offering lower rates, but this is a rather dangerous game, for it is pretty certain that if the outsider gets strong support it will be taken into the ring. That, of course, is its object. The result is worse than before, for the ring is so much the stronger. This happened when the Messrs. Houston service challenged the South African Conference. A great amount of pressure was put on the Government departments to ship by these steamers, and though these efforts were not successful, considerable support was given to them by the British South Africa Company. The Messrs. Houston line having established its position, was admitted into the ring. The consequence is what the Minority Report calls an "inflation of tonnage," meaning a greater amount than there is real necessity for, and while this is the case there is little chance for any competitor. It seems, therefore, useless for a Government to attempt to fight a ring unless it sees its way to providing enough cargo to support an independent service. In that case it would ship by the Conference steamers only light goods which are urgently wanted, and give up the rebate. It would have to enter the business of freight agent actively to obtain a homeward cargo, and provide itself with landing boats and all the other appliances

The Royal Commission on Shipping Rings. 115

which the place might require. But, on the whole, the Conference lines have given the Government favourable treatment, so much so that merchants have frequently complained of such departures from the rule of uniform rates. The whole public, however, benefits by these concessions, and it would be obviously quixotic to insist on the companies levelling up their charges. The Majority Report defends the practice on the ground that "contracts made with Governments stand in a category by themselves, inasmuch as the preferences they accord are not given to one merchant at the expense of another, and the advantage of them is ultimately distributed over the whole community."

GERMAN EAST AFRICA IN 1908.

THE Foreign Office Report on German East Africa for the year 1907-8 contains, as might be expected, a good deal of matter which is of interest to the neighbouring British territories of the East Africa Protectorate and Uganda. The trade of German East Africa is divided in this report into the "seaport" trade, by way of the coast ports, and the "overland" trade, by way of the inland frontier and the ports on Lake Victoria Nyanza. Of the latter an interesting account is given in the report:—

"The western or interior sphere of activity is brought into touch with the world's markets by two great channels of communication; in the south by the River Shire and railway *via* Chinde, and in the north by the Uganda Railway *via* Mombasa. The trade *via* Chinde is of comparatively small importance.

"The Uganda Railway, on the other hand, in conjunction with the British steamship service on Lake Victoria, is solely responsible for the unexpectedly rapid growth of the 'overland' foreign trade, notably of the three lake ports Muanza, Bukoba and Schirati, and the surrounding lake districts. In particular, the Uganda Railway has provided an outlet for natural products, the export of which, owing to the heavy cost of portorage, had previously proved unremunerative. The value of such exports, which form the bulk of the 'overland' exports, rose from £37,915 in the calendar year 1904 to £185,288 in 1907, representing an increase of nearly 400 per cent. in three years. Their value in 1907 is equivalent to over 42 per cent. of the total value of the exports from Mombasa during that year originating from the Congo State, Uganda, British East Africa and German East Africa combined.

"This fact would appear to be of no small importance to the neighbouring Protectorate of British East Africa, for it is not

unreasonable to suppose that at least a portion of this 'overland' trade will cease to follow the same route if the projected German railway from Dar-es-Salaam to Lake Tanganyika *viâ* Tabora is connected from the latter place, as has been suggested, with Muanza on Lake Victoria. This project, however, even if it receives the sanction of the Imperial Reichstag, cannot become an accomplished fact in much under eight years' time.

"Meanwhile the German Government appear to be quite content that the Uganda Railway should render a valuable service to German East Africa at a considerable profit to itself, and the suggested extension of the Usambara Railway *viâ* Moschi to Lake Victoria has for the present, at any rate, been dropped, in the not unreasonable belief that the existence of a competitive line would render both lines unprofitable.

"That the Uganda Railway does reap a considerable harvest from German East Africa can be proved by a comparison of the declared values of a given commodity of export at the coast ports and at the interior. For example, in the year 1907 some 117 tons of groundnuts were exported to Germany *viâ* the Uganda Railway of a declared local value of £734, *i.e.*, about £6 5s. per ton. From the coast 107 tons of groundnuts were exported to Germany of a declared local value of £1,473, *i.e.*, roughly £13 15s. per ton. The difference, namely, £739, or £7 10s. per ton, represents the cost of freight, which chiefly went into the coffers of the Uganda Railway. It may be mentioned here that 1,165 tons of groundnuts, of a declared local value of £10,394, were exported to British East Africa in addition to the above in transit to other countries.

"The chief items in these 'overland' exports in 1907 were:—

	£
Ox-hides	48,068
Goat-skins	41,708
Wax	40,937
Rubber	21,445
Groundnuts	15,847
Coffee	4,794
Ghee	4,634

"Of less importance were sheep-skins, gold, fibre, ivory, cotton, simsim and horns.

"The value of the goods imported into German East Africa *viâ* Mombasa in 1907 was only £37,881, or about one-fifth of that of the exports. This is equivalent to a little over 19 per cent. of the total goods imported into Mombasa during that year."

A good deal of attention is devoted to the handicap to British trade resulting from the absence of any direct British service to East African ports, a subject which has figured pretty regularly in Parliamentary discussions of late years, since the Committee

on Shipping Subsidies, over which Mr. Evelyn Cecil presided, reported that there were special reasons for favourably considering proposals for a subsidized service to East African ports.

“Direct trade with United Kingdom.—It is satisfactory to note a slight improvement in the position of the United Kingdom in the direct foreign trade with German East Africa. It cannot be expected, however, that this position will become at all representative so long as the direct carrying trade between European and German East African ports remains a monopoly in the hands of a subsidised German line of steamers. The Deutsche Ost-Afrika Linie maintains a three-weekly passenger and cargo service round Africa in both directions, and in addition a six-weekly cargo service between Europe and East Africa by the Suez Canal. Only the main line steamers call at Southampton, and for passenger traffic alone. It is true that the outward steamers by the west coast route take in cargo there for the Cape, but all cargo consigned to and from London by the east coast route has to undergo transshipment at Hamburg, involving considerable damage and delay. Moreover, these vessels are often heavily laden at the beginning of their journey, and if any freight has to be refused it is naturally the British and not the German shipper who is the first to suffer.

“Preferential freights.—But this disadvantage is of small account as compared with that imposed upon British merchants by the rebate which is granted by the Deutsche Ost-Afrika Linie to German firms importing German goods. The company is naturally reticent as to the amount of this rebate, but it is generally stated in British Indian commercial circles to be not less than 10 per cent., and in some cases to amount to as much as 20 or 25 per cent.

“Absence of a direct British line.—It is certainly possible to ship goods from London to German East African ports in a British bottom, namely, by the four-weekly service of the British India Steam Navigation Company to Zanzibar, and thence by native dhow. This course, however, involves transshipment at Aden and again at Zanzibar, and the damage and delay entailed thereby, and even more by transport in open dhow during the heavy tropical rains, make this route impracticable for goods of a nature in any degree fragile.

“It might be urged that the existing German line carries British goods to East Africa more cheaply than a British line could afford to do so. This contention, however, does not appear to be supported by facts. Reference has already been made to the rebate on freights and the preferential treatment in general which is enjoyed by German shippers by the German line. This is in itself a severe handicap to British trade on the coast, suffering, as

it already does, under the disadvantage of dependence upon a foreign line, which is naturally none too eager to encourage it.

“High freights.”—But there is another point for consideration. The Deutsche Ost-Afrika Linie being in the enjoyment of a practical monopoly, does not fail to charge monopoly prices; freights have increased accordingly, and are now maintained at a very high level. In the year 1907, when a direct British line of steamers was running between Zanzibar-Mombasa and London, the freight charges of the Deutsche Ost-Afrika Linie between those ports averaged £1 16s. per ton. The British East Africa Line, on the other hand, carried goods between East Africa and London at a rate which sank from £1 15s. to 7s. per ton. It is only fair to add, however, that the latter excessively low rate was the result of an unfortunate and exceedingly ill-timed freight war with the British Indian Steam Navigation Company, which speedily resulted in the service of the former company being discontinued. Little emphasis can therefore be laid on this point as an argument, but the fact that the Deutsche Ost-Afrika Linie, having recovered its monopoly, straightway raised its freights to £2 5s. per ton in 1908—the rate of freight homewards from East Africa to London now averaging as much as £2 15s. to £3 per ton—would appear to provide a not unreasonable proof that British goods are carried to and from East Africa at the present time at a cost considerably above the margin of reasonable profit.

“Passenger fares.”—The single 1st class passenger fare between Southampton and East African ports (Mombasa, Tanga, Zanzibar and Dar-es-Salaam) by the east coast route was until recently £42 10s. This was increased by 10 per cent. at the end of 1907, the increase taking effect to all ports by the east coast (Suez Canal) route. Return tickets cost double the single fare, less 10 per cent.

“Bombay Line.”—In 1907, when a British line was running between East Africa and Bombay a deck passage to the latter port cost about £2 5s. In 1908, after the collapse of the British line, this fare was raised by the German line to £3.”

A fuller account of the situation is given in a later section of the report, and the information which it gives as to the relation between the Deutsche Ost-Afrika Linie and the German Government is sufficiently interesting to deserve quotation in full:—

“Shipping and navigation. Monopoly of Deutsche Ost-Afrika Linie.”—Communication between German East Africa and Europe is maintained by the Deutsche Ost-Afrika Linie (German East Africa Line), which in fact holds an absolute monopoly of the direct passenger and cargo traffic between those countries, and occupies a very predominant position on the East African coast in general.

" This line, which sent its first steamer to the east coast of Africa in 1889, now possesses a fine fleet of 20 steamers, ranging from 6,300 to 2,100 tons, which maintain a three-weekly passenger and cargo service from Hamburg round Africa by both east and west coasts, a six-weekly cargo and mail service between Hamburg and Durban, and a regular service between Bombay and Durban *viâ* East Africa, branching from the main line at Mombasa. The service from East Africa to Bombay is three-weekly, but in the other direction at intervals of 10 days, every third steamer returning to Bombay direct from Durban.

" *Main line.*—In addition to the larger of these vessels, two of the finest steamers of the Woermann Line (6,500 and 6,300 tons respectively), and one of the Hamburg-America Line (6,400 tons) now take part in the main line service. This arrangement is the outcome of an agreement concluded in the latter part of 1907 between the interested companies and the Imperial Government whereby the Deutsche Ost-Afrika Linie took over the mail and passenger service of German South West Africa from the other two lines, which in return for this relief transferred the three vessels in question to the Deutsche Ost-Afrika Linie service.

" The points of call by the east coast route are:—Hamburg, Rotterdam or Flushing, Southampton, Lisbon, Tangier, Marseilles, Naples, Port Said, Suez, Aden, Mombasa, Tanga, Zanzibar, Dar-es-Salaam, Mozambique, Chinde, Beira, Delagoa Bay, Durban, East London, Port Elizabeth, Cape Town, Lüderitzbucht, Swakopmund, Las Palmas, Southampton, Antwerp, Bremerhaven, Hamburg, and conversely by the west coast route.

" The contract speed of these vessels is 12 knots an hour between Naples, where the mails are transferred, and Dar-es-Salaam; for the rest of the voyage it is only 10½ knots. The company has undertaken, however, to increase these speeds if required to cope with any foreign competing lines.

" *State subsidy.*—The Deutsche Ost-Afrika Linie in return receives from the German Government a considerable subsidy, which was raised in 1900 to its present amount of £67,500. The chief object of the Government in increasing this subsidy appears to have been the promotion of German trade on the African continent; the result achieved in this respect, as far as German East Africa is concerned, is referred to in other parts of this report. There undoubtedly existed other motives, however, in the desire to encourage German ship-building, to secure German agencies for German commerce, to ensure the independent carriage of mails, and to avoid the inevitable damage and delay involved by transhipment.

" *Need of a British line.*—It would, of course, be impossible for a British line without State aid to compete with a line as

firmly established as the Deutsche Ost-Afrika Linie and backed by a heavy subsidy, but there would appear to be equally little doubt that a subsidised British line of steamers, apart from all other considerations, would prove an immense boon to British interests and promote the sale of British goods in German East Africa as in the rest of East Africa generally. Moreover, the passenger traffic between Europe and East Africa, which is especially heavy—not infrequently congested—during the first and last quarters of the year, is by no means a negligible quantity, for a large majority of the passengers carried are British, and it is not unreasonable to suppose that these would prefer to travel under the British flag, especially if the accommodation compared at all favourably with that offered by the existing German line.

*“Communication with the United Kingdom; cargo traffic.—*Reference has already been made to the fact that all cargo passing between London and East Africa is exposed to the damage and delay of transshipment at Hamburg. The main line steamers call at Southampton* in both directions, but are only allowed by the terms of the contract to stay long enough to deal with passenger traffic. The intermediate line, which carries only cargo and mails, does not touch the United Kingdom at all. Hence all cargo from London must be sent first to Hamburg and there transhipped.

*“Bombay Line.—*The Bombay Line is now served by nine vessels of 3,400 to 2,100 tons, the agreement with the Woermann and Hamburg-America Lines having enabled the company to transfer to this line three of their smaller vessels which until recently took part in the main line service, thereby securing a greatly improved service with India. These steamers—which carry passengers, mails and cargo—call at all the ports between Durban and Mombasa served by the main line steamers, and in addition at the smaller ports of German East Africa, and at Inhambane and Lamu. They also visit Madagascar (Majunga and Nossi-Bé), Seychelles, Goa and Porebunder at less frequent intervals or when sufficient inducement offers.

*“Financial position of Deutsche Ost-Afrika Linie. —*The company reports for the year 1907 a surplus of £82,211, showing a decrease of £1,114 compared with the year 1906. No dividend was paid to the shareholders, all but a minute fraction of the surplus being written off. This unsatisfactory result is attributed in part to the general commercial depression and to the restrictions imposed upon the company by the terms of the subvention agreement. Particular local influences, however, affected the various sections of the service in different ways.

* The point of call in the United Kingdom was changed from Dover to Southampton in July, 1908.

"The traffic with British South Africa suffered heavily from the sharp competition of the British lines, the passenger traffic being especially small owing to the relatively low speed of the German steamers and the additional delay caused by calling at the two ports in German South West Africa.

"To German East Africa the passenger and cargo traffic—especially the latter—showed a decrease from 1906, owing to the temporary cessation of railway construction, but a great recovery in this respect was to be expected in 1908 and the following years, owing to the unprecedented railway extensions which had now received the sanction of the Imperial Reichstag.

"On the other hand, there was a considerable increase in exports from German East Africa, and still more satisfactory results are anticipated from the increased cultivation of sisal, rubber and cotton. Exports from the German territory round Lake Victoria *viâ* Mombasa also largely increased.

"In spite of the alleged unsatisfactory financial position of the Deutsche Ost-Afrika Linie as a whole, it is impossible to believe that the service is anything but remunerative as far as the East African section is concerned. It is a rare occurrence for a vessel of this line to arrive at or to leave East African ports without a heavy cargo and a full complement of passengers. The great majority of the passengers from Europe by the east coast route disembark at East African ports, notably at Mombasa and to a less extent at Dar-es-Salaam. On the homeward voyage by the same route the vessels generally carry a large number of British passengers from Durban and Lorenzo Marques, and it is evident that this longer but more interesting route to the United Kingdom is increasing in popularity with travellers from South Africa, with whom time is no object as compared with the pleasure of visiting fresh and little-known places.

"It can only be assumed, and there appear to be ample grounds for assuming, that the sections of the line which, so far from proving remunerative, consume the profits of the east coast sections, are that between Europe and the Cape by the west coast route, where the line has to compete with the speedier and better known British lines and the section between Zanzibar and the Cape.

"*Bombay Line.*—The financial position of the Bombay Line, which has now been improved by the inclusion of three vessels from the main line, is pronounced to be unsatisfactory.

"Reference has already been made under 'Trade with the United Kingdom' to the disabilities under which British trade suffers in respect of high freight charges and the rebate granted to German shippers."

The report contains some interesting remarks upon the subject of Indian and European immigration into German East Africa.

"Indian immigration.—The immigration of British Indians into German East Africa appears to be somewhat increasing, the number for 1907 being computed at about 200. This increase is no doubt due in part to the prohibitive measures adopted in British South Africa against Indian immigration. Their presence is regarded with favour by the Colonial Government, who consider that they exercise a very useful intermediary function as small shop-keepers and retailers to the natives. They set up their small shops wherever an opening is to be found, and there are no towns and few villages of any importance in the interior where one or more of them are not to be found.

"There are others, however, and they appear to form the large majority of the white population, who regard the immigration of Indians with extreme disfavour, depicting them as only waiting for the extension of the railways to swarm over the whole country and get possession of the best part of the trade of the interior.

"It is difficult to understand why the presence of the Indian should actually be so undesirable for East Africa. He is accustomed to a tropical climate; he is a born merchant and man of business; and it is scarcely his fault that the idleness and lack of enterprise of the native African has given him a practical monopoly in the small retail trade with the coloured population. Moreover, the Indian does not need the reserve of capital which is an absolute necessity to the small European shopkeeper; he can exist on an amount of food and capital which would be an impossible pittance for a European, and under conditions in which a European in a tropical country would quickly go to the wall. Again, as a skilled mechanic and artisan he far surpasses the native, and he can accept a rate of pay which, from its lowness, precludes any possibility of competition by a European. His unpopularity may be due to a large extent to his reputed extortionate dealings with the careless and improvident native as moneylender and pawnbroker.

"European immigration.—An increase considerably above the average is reported in the numbers of European immigrants to German East Africa in 1907, and a still larger increase is expected to result from the strong Colonial movement which has recently shown itself in Germany. A better class of educated immigrants is observed with much satisfaction by the Colonial Government, but it is confessed that there are still many whose ignorance and the carelessness with which they face their new life, and their consequent dependence upon the Government for

assistance in the slightest circumstances of difficulty, render them a hindrance rather than a help to the development of the Colony.

"The type of colonist really needed is the man of some practical experience of agriculture, with a more than vague idea of the difficulties which will beset his path, and possessing above all a reserve of capital large enough to tide him over the times of failure which possibly may, and in many cases probably will, meet his first efforts as a planter. The small settler cannot hope to succeed without very great efforts on his own part, and, beset as he is with the many difficulties arising from limited resources, he is inclined to regard such restrictions or regulations as the Government may see fit to impose upon his operations—in regard especially to such matters as the recruitment and payment of labour—as an unwarranted interference with his own personal liberty and an uncalled-for assumption of regard for the welfare of the native to his disadvantage."

It is instructive to find that the labour questions, which have caused so much anxiety to the British East Africa authorities, have their close analogies in the German possessions.

"*Labour question.*—Much is heard on all sides among the planters of German East Africa about the so-called 'labour question,' and the subject is frequently discussed at length, and often with considerable heat, in the columns of the Colonial newspapers which are published at Dar-es-Salaam and Tanga.

"The impartial observer finds some difficulty in believing that an actual scarcity of labour can possibly exist in a country possessing a native population of some eight or ten millions as against only a mere handful (479) of planters. But although the material is certainly present in abundance, there undoubtedly exists a very great difficulty in the matter of bringing it to the agricultural districts and supplying it to the planters. In considering this difficulty it must be borne in mind that European undertakings are at present concentrated in a comparatively small area at a few centres, such as Usambara, Moschi, and on the Pangani River, and that natives will not be induced to leave their far distant homes in the interior to work on these plantations, unless they are convinced that they will benefit their condition by so doing. It is obviously absurd to contrast the vast population of the country with the comparatively minute needs of the European planters, and to deduce therefrom the fact that the native is incorrigibly lazy and should therefore be compelled by constraint or force to work on the plantations. The East African native is undoubtedly lethargic and unambitious for himself, and the development of the country and the needs of the European planters are matters of supreme indifference to him. His own needs are few, and lie chiefly in the region of his stomach,

and he is sufficiently human not to want to work longer than the satisfaction of these needs demands. In these circumstances it is not a compliment to his intelligence to expect him to undertake laborious work under a European task-master, who is practically, if not technically, free to impose arbitrary conditions of labour and to withhold part of his pay in the shape of fines imposed at his own discretion, without any practical means of redress on the part of the native.

"The first step, therefore, in the solution of the so-called 'labour question' must be the more considerate treatment of native labourers by planters, who, faced as they are by all kinds of difficulties, may perhaps be excused, though not justified, in regarding the native as existing merely for the satisfaction of his own needs and, when the native does not see eye to eye with him on the subject, in feeling resentment against a Government which refuses to come to his aid by passing a law for the compulsion of labour.

"The Government, on the other hand, has espoused the cause of the native, and while prepared to render every possible assistance to the planter in facilitating the recruiting, transport and supply of labour, is determined not to countenance compulsion in any shape or form. A Labour Ordinance framed in this sense is shortly to be adopted, and it is hoped that it will do much, by the impartiality of its terms, to solve the labour difficulty.

"A final solution of the question, however, is considered by many authorities to exist only in the extension of the railways. It is obvious that these extensions will render possible the transport of labour from great distances to the locality where it may be required at the moment, with a great saving of time and expense. Further, it is said that the extension of the central railway to Tabora *via* Kilimatinde will open up a country which is eminently suitable for European plantations, and will thus lead to the decentralisation of such undertakings. Above all, this railway when completed will tap the Wanyamwesi country around Tabora, a populous district noted for the excellence of its labour.

"Other critics find the only solution of the labour difficulty in the taxation of the native up to a point at which he will be compelled to leave his small plot of ground and become a wage-earner."

The German Government is showing considerable activity in the matter of railway construction, and full information is given as to the new railways either definitely sanctioned or projected.

"*Railway extensions.*—The year 1908 will remain a red-letter year in the history of the Colony by reason of the sanction

given and the sum voted by the Imperial Reichstag for very considerable railway extensions.

"Usambara Railway.—The extension of the Usambara Railway has been sanctioned to the right bank of the Pangani River at the foot of the Pare Range, a distance of 28 miles beyond Mombo, the present terminus. The estimated cost of this extension is £175,000, or over £6,000 per mile. It is expected to be completed towards the end of 1910.

"In addition to this, the sum of £7,000 has been voted for preparatory work in connection with the further extension of the line to the foot of the Kilimanjaro and Meru Mountains, and £3,000 to form a reserve fund, making £192,500 in all.

"The contract for the extension has been given to the firm of Lenz and Co., who built the section between Korogwe and Mombo; work was commenced about September, 1908, and some 11 miles of rail had been laid by the end of the year.

"The land on both sides of this extension has already been fully taken up. The further extension of the line to the Kilimanjaro is regarded as urgent, as there are already large European plantations in existence at its foot, which at present have no other outlet for their produce than across the British border, as export is rendered impossible by the presence of the tse-tse fly.

"Central Railway.—The extension sanctioned for the Central Railway is a much larger and far more important one, namely, from Morogoro to Tabora *via* Kilossa and Kiliamtinde, a distance of 440 miles. The estimated cost of this extension is £3,500,000, or nearly £8,000 per mile, and a further sum of £750,000 has been granted for the purchase of additional shares in the Deutsche Ost-afrikanische Eisenbahngesellschaft.

"The contract for the extension was given to the firm of Philip Holzmann and Co., who were also the successful contractors for the Baghdad Railway. Work was begun in July, 1908, at various points along the route, and by the end of that year the rail was laid as far as the Mkata River, some 20 miles beyond Morogoro. It is estimated that the whole extension to Tabora will be completed by the end of 1914. The first section between Morogoro and Kilossa (51 miles) is likely to be completed by the end of March and opened to traffic by the end of June, 1909.

"The requisite funds for these extensions, which amount to a total of nearly £4,500,000, will be provided in the form, not of an Imperial grant as hitherto, but of a Colonial loan, which will have to be extinguished and the interest paid by the Colony itself.

"Advantages anticipated.—The advantages which are expected to accrue from the extension of the Central Railway to Tabora are, from the agriculturist's point of view alone, the

opening up of the rich Kilossa district to European planters; the facilitated export of cattle from the rich grazing land of Ugogo, Turu, &c., which the existence of cattle sickness has rendered almost impossible up to the present; the facilitated supply to European planters on the coast of labourers from the thickly populated Unyamwesi district; and the increase of the productive power of the country by popularising the culture—to mention only the most important native products—of cotton, groundnuts and rice.

“The continuation of the Usambara Railway to the Kilimanjaro and Meru Mountains is expected to result in the opening up of broad districts to European plantations of rubber, sisal and cotton; the further exploitation of the rich timber possession of West Usambara; and the creation of a receptive market for the agricultural and animal products of the settlers in the healthful district at the foot of those mountains.

“*Projected railways.*—The ultimate destination of the Central Railway will probably be Ujiji on Lake Tanganyika, which could be reached in about four years from Tabora. There does not appear to exist, at present at any rate, any idea of extending the Usambara Railway beyond Mount Kilimanjaro. Should it be found desirable to possess a line between Lake Victoria Nyanza and the coast, the Central Railway could be extended from Tabora to Muanza, an undertaking which would occupy about two years. At present the Uganda Railway performs a very valuable service for German East Africa by carrying the bulk of its ‘interior’ trade, and the Imperial Government appears willing that it should continue to do so, even to the great pecuniary advantage of the British line, rather than enter into a competition, which would not only entail expenditure out of all proportion to the advantages obtained, but also probably result in the financial embarrassment of both undertakings. On the other hand, however, the Government appear to be fully alive to the fact that railways, either projected or actually under construction, are threatening the land frontier from Portuguese, British and Congolese territory with the loss of a considerable ‘interior’ trade.

“*Nyassa Railway.*—The much-talked-of railway from the coast to Lake Nyassa still remains in the clouds, and it is not likely to take definite shape at any rate until the two more important lines are well on their way to completion. The starting point at first suggested for this line was in the neighbourhood of Kilwa, but it appears that the hinterland of Kilwa has a very sparse population—it was decimated in the late rebellion—and it is therefore probable that the line, if it ever becomes an accomplished fact, will take the form of a branch line from the Central

Railway, either at Morogoro or Kilossa, and run thence south-westwards to Wiedhaven *via* Mahenge."

In concluding a report which is replete with information and of more than usual interest, Mr. Douglas Young writes as follows:—

"Although it is difficult to restrain all expression of enthusiasm at the great strides already made in the development of German East Africa, any attempt to predict the future of the country would be peculiarly rash at the present moment. The Colony now seems to have reached a critical stage of its existence. On the one hand, it has passed so far and with such conspicuous success from the purely experimental stage that large interests have now been staked in it; but, on the other hand, it would be unwise to augur a brilliant future from this first flush of prosperity, until sufficient time has elapsed for that success to be maintained.

"The future success of the country seems largely to be bound up with the success of the European plantations, which is in turn dependent upon various internal and external conditions, such as the supply of native labour, the continued possibility of extensive cultivation, the cost of production, and the maintenance of prices at the present level.

"But there is another important point for consideration. The Colonial Government is faced with the necessity of reconciling the somewhat antagonistic elements which compose the economic life of the Colony—a problem not unknown in East Africa. Firstly, there is the native population which owned the land before the German occupation, and expects the pledges given by the protecting Power to be fulfilled. Secondly, there is an alien element in the Indian population, chiefly composed of British-born subjects, who have done much to develop the trade of the country, and demand in return security and recognition in the land of their adoption. Lastly, there are the planters and settlers, who have staked hopes and fortune in the Colony and demand from the Government assistance in their undertakings, even at the expense of the native and Indian populations, whose existence in the country they are inclined to tolerate only in so far as it furthers their own interests. In addition, there are the people at home, who ultimately provide the Colony with the means of existence, and consequently demand a voice in the direction of affairs.

"In one important particular, however, German East Africa would appear to differ from, and hold an advantage over, the neighbouring Protectorate. It occupies an acknowledged premier position among the Colonies of the mother country, who can in consequence lavish upon it her chief attention and support, and

in it are centred the chief hope of that long dormant spirit of colonisation which has found recent expression in the so-called 'Colonial movement' in Germany. As a result of this movement it has been visited within twelve months by both the Chief Secretary and Under Secretary for the Colonies. As the immediate outcome of the former visit, a considerable scheme of railway extension has been sanctioned. In the latter case the visit comprised a long 'trek' from Lake Victoria Nyanza to the coast by way of the Kilimanjaro highlands, and its ultimate effect upon the future development of the Colony is awaited with almost feverish interest by the colonists."

QUARANTINE IN THE BRITISH WEST INDIES.

In 1904 the second West Indian Quarantine Conference met at Barbados, and all the Colonies there represented, except Jamaica, entered into a convention in 1905. They adopted as quarantine law the Regulations drawn up by the Conference, and we launched on a new era with bright hopes. Now, in 1909, there is throughout these Colonies a feeling of dissatisfaction with the existing quarantine arrangements. The uninstructed lay public now regards with alarm the relaxation of the old precautions as much as it formerly resented the restrictions imposed by the shot-gun quarantine system; the Governments and health officers of the several Colonies are still mutually distrustful, and there is not yet a feeling of unity of purpose and action; and the thoughtful medical bystanders regretfully admit that in the West Indies we are no nearer the ideal hoped for as a result of the Conference and conventions.

As a delegate to the Barbados Conference the writer is loth to believe that this unhappy state of things is altogether to be attributed to fault in our work. Our regulations were first drafted by Theodore Thompson, an expert of the highest authority, himself a representative of Great Britain at the Paris Conference of 1903, on the lines of the regulations adopted by the International Sanitary Convention. They were discussed in minutest detail, amended and added to in a long sitting of eleven days by men who had great experience of West Indian conditions. It may be mentioned that the scope of the West Indian Convention is wider than that of the International, in that it covers small-pox and yellow fever as well as plague and cholera.

Further, there has been established, in accordance with the suggestion of the Conference, a Central Quarantine Authority, on which all the contracting Colonies are represented, to suggest from time to time alterations of the Regulations which advance of knowledge or new conditions may render expedient.

The British West Indies may, therefore, be considered well equipped and advised in matters of quarantine, and yet we are not satisfied, and things do not work smoothly. It may be useful to examine our position in the hope that we may, in part at least, find explanations of our shortcomings.

While the writer is not actually employed in quarantine work, yet he is in a position to learn much of the official side of it, and has often to act as health officer. Also as a medical man and a West Indian, acquainted with nearly all the contracting Colonies and most of their health officers, he thinks he can appreciate most of the phases of the question. It is not proposed here to present a scientific or logical proof of any theory, in fact such a course could only cause offence and increase resentment between the Colonies if one pursued it; but merely to express the convictions of an observer on a subject in which he is keenly interested.

In the first place let us compare the principles which underlie the old and the new quarantine measures. The conditions of modern life with its free inter-communication, trade and travel render the shot-gun system of quarantine unbearable, and all civilized countries are in consequence getting rid of it. The inconvenience to the people in the infected place, the absurd restrictions of trade, the financial loss to individuals and governments are in no way compensated by the partial protection from diseases which somehow still elude the most stringent precautions.

In the pre-convention days I have known a steamer refused pratique in St. Vincent because, while working cargo at Barbados, where there was small-pox, the rope sling had been handled by Barbadian lightermen and returned on board. I was once unable to get from Barbados a case of calcium carbide, which had been warehoused there for transhipment to St. Vincent, because Barbados was in quarantine, and all cargo thence was refused. Recently, since the convention of the British Colonies, a lady who embarked from St. Vincent and stayed some days in St. Kitts *en route*, was detained fourteen days at a quarantine station in the Danish island of St. Thomas because there was plague at Trinidad, and St. Vincent and St. Kitts were not imposing shot-gun quarantine against Trinidad.

And this condition of rigid suppression of trade had to continue for months; the routes of steamships were sometimes dislocated; private, commercial, ecclesiastical, and official business had to be postponed, or time had to be lost in irksome confinement in small quarantine stations or smaller vessels. All this stringency of the old system was based on the simple principle of excluding every theoretical possibility of infection, however remote.

But the principles embodied in the new regulations are firstly to find the least precaution necessary to exclude probable infection; or at any rate, having regard to all circumstances, to accept a reasonable risk and make a practical compromise between convenience and safety. Secondly, it is intended to direct our precautions against the known modes of infection of each disease so as not to waste effort in useless measures. Thirdly, each place is expected to put itself in such a state of internal protection that chance infection from without will have but little tendency to spread. And lastly, while free pratique is granted to healthy ships, and free entry under surveillance to healthy persons, each infected Colony is required to protect its fellows in the Convention by early notification, by examining persons before embarkation, and by disinfection of ships and their contents before sailing. The essential principles of modern quarantine, therefore, are to avoid exportation rather than to prevent importation of disease, and by the specific measures of internal preventive medicine to reduce the means of spreading disease to a minimum. Such internal measures are vaccination, mosquito and rat destruction, and a safe water supply, as well as efficient arrangements for isolation.

Formerly each place jealously concealed the fact of infection from the others, and without regard to the safety of its neighbours selfishly tried to protect itself from the rigours of quarantine. By reducing these hardships of quarantine almost to *nil* the new Regulations sought to remove the temptation to concealment. There has been, therefore, in every respect a complete subversion of the old ideas of quarantine to which West Indians were accustomed.

But there is one weak point, at any rate for the West Indies, in regulations drawn on such advanced lines, which we may here consider. They imply a mutual trust and mutual protection, and their efficiency must largely depend on the action of the infected place itself. At the Barbados Conference the question of enlarging the sphere of the Convention was discussed. It was suggested that the Imperial Government be asked to approach the foreign Governments with a view to obtaining a general West Indian Convention. Our regulations were made consistent with international and Pan-American quarantine law to facilitate a general agreement. But it was held that such a recommendation was beyond the scope of our mission, and the subject was dropped. Still we hoped that it was the intention of the Colonial Office to do something in this direction, for it was a logical and necessary corollary of our work. However, no such extension of the Convention has yet been made, and we are now in the position of possessing ideal quarantine laws based on the principle of mutual

protection, which we have to apply to cases where no mutual agreement exists. The British Colonies are in convention, but they are sandwiched with foreign Colonies, and have besides much speedy communication with several independent states, none of which are in convention with us.

We should therefore have two sets of quarantine rules to meet these two conditions of intercourse with convention and non-convention places.

Now the existing anomaly, besides being a weakness of position, also causes a want of uniformity. One Colony considers it has no right to treat arrivals from non-convention countries, except as permitted by the regulations. Another thinks the regulations only binding when a convention Colony is being dealt with, and in practice treats outsiders arbitrarily. Another, again, makes a separate law to govern quarantine of non-convention places. This diversity cannot, of course, affect the quarantine practice as between two convention Colonies, but the want of uniformity unsettles the mind of the public, and to some extent leads to distrust between the Colonial Governments. For example, one Government may impose a stringent prohibition against Venezuela for plague, and in a spirit of self-righteousness regard her neighbours with suspicion as possible channels of infection.

It has been pointed out that the Regulations are intended practically to remove the obstructions to trade and reduce the inconvenience to travellers to a minimum. Landing from a "healthy ship," that is, one on board which there has been no case of "infectious disease," a passenger is only required to present himself for surveillance for a few days, and by convention no charge should be made for this. The fact of infection naturally keeps tourists and visitors on pleasure away from an infected place, but that is the only loss that need be suffered through a frank admission of infection. But the public is long in learning this. They cannot realize that the Convention does not bind, but loosens the chain of quarantine. They still think of the old regime, and when infected a community looks with dismay at an agreement which compels it to declare itself so. On the other hand, the lay public is slow to believe that measures may be practically efficient for protection even though they appear, in comparison with the old methods, very lax.

We have, therefore, seen a Colony agitating to relax the stringency of notification for a disease with which it was itself infected, and at other times clamouring to have the law more prohibitive against infection in another place.

Every layman in the West Indies thinks himself competent to have an opinion and express it in print on technical matters of all kinds. And every unofficial is ready to condemn any action of a Government, even though it is of quite a special nature outside of common knowledge and has been advised by experts. It is perhaps hard for people in Britain to understand this phase of West Indian thought and life. The man in the street in London does not trouble himself to criticize technical matters outside the sphere of his own study and experience, even though they are matters of public concern. He, as a rate- and tax-payer, is employing special men to know, to advise, and to do; and he is satisfied that he is getting best work for his money by letting experts do it. To some extent, no doubt, the behaviour of the West Indian is due to the smallness of the communities. Those who are employed as experts in any line are familiarly known, so that they are after all prophets in their own country. The only remedies, perhaps, for the opposition of the public to progress are time and education of public opinion.

The fact that our quarantine procedure is not in agreement with that of the foreign places with which we deal operates seriously against the success of the Convention. This comes about chiefly through the action of the steamship companies. When proceeding to places where our Convention rules do not apply, a steamer is compelled, no doubt, to safeguard herself against the rigid quarantine still imposed by those places, or which it is feared may be imposed. But when ships are regularly trading between Convention Colonies it is surely possible for the captains, agents, and directors to learn the quarantine requirements of the Convention and govern their conduct accordingly. In practice, however much the Colonies may try to free themselves and each other from restrictions, the aims of the Convention are defeated by the steamship companies. They arbitrarily impose restrictions, deposits, and prohibitions based on the old lines or invented by themselves. The tables are now turned, and it almost seems as if the ships were working off an old score for the disabilities to which they were subjected formerly in the name of quarantine. A health officer often cannot tell what a ship may do in respect of his port, what she may require of a passenger, or even whether she will take passengers.

This more than anything confuses the public and keeps up the old ideas of quarantine. We say that quarantine is practically abolished, and yet they find almost as much difficulty in travelling as before.

The most lamentable failure of the Convention is seen in the distrust which still obtains between the Colonies. We have seen

that this was natural before the signing of the Convention, and the old feeling no doubt takes time to fade. But it is to be feared that there is still grave cause for distrust. The Governments, inasmuch as they are all answerable to the Colonial Office, and have besides the ultimate good of the Colonies in view without consideration of immediate and personal interests, act in good faith; but the Colonies do not yet believe in the good faith of each other. The health officers, as far as they carry out their duties conscientiously, are not to be blamed, though, like other mortals, they may sometimes make mistakes. The very nature of their work on the new lines makes them realize the wideness of scope of their responsibilities; that they should not be concerned only with the interests of a single place, but should form together a preventive system extending over the whole Convention area. But they do not know each other enough, or sometimes at all, so that each man while trying to act fairly himself does not feel quite sure about his neighbours; time and experience in the work will remove this feeling no doubt. There should, I think, be more direct communication between the health officers on matters affecting their duties. In this way there may be fostered a conciliatory spirit and due consideration for the slips of others. It is, for instance, not edifying for Colony B to excitedly condemn Colony A because the health officer of the latter had inadvertently let a case of small-pox embark on a steamer and so arrive in an infectious state at B. Rather should the attention of Colony A be quietly drawn to the incident, and condemnation be deferred until the facts were investigated.

With regret must it be said of the medical profession that we are not all actuated by a wide reaching altruistic spirit. Some doctors, it is true, in the West Indies act in ignorance of the importance of complete and early notification in modern preventive medicine. Others, again, are ignorant of the aims and requirements of our quarantine system. Among such we find a hesitancy, without actual dishonest intent, to convict their own Colony of the crime of infection.

Again, because of the unpopularity of notification, especially with the mercantile class and the press, it is to be feared that some private practitioners knowingly suppress the truth about cases of infectious disease. There is less chance of government medical officers doing this, and in the smaller Colonies, where there are usually none but government doctors, there is little temptation to this want of candour.

One hears of instances where the medical attendant has said to the patient's friends: "This is what they are calling yellow fever,

but I don't believe there is any such thing here." The family is pleased to have been spared the fuss, and perhaps expense, of preventive measures which they do not understand and do not believe in. This doctor is likely to be called in similar cases, rather than the troublesome fellow who insists on fumigation and isolation. The conscientious medical man is almost invariably looked upon as an enemy of his country, and openly abused as such in the press.

Every West Indian will admit the truth of the above remarks as applied to Colonies other than his own; many will confess they know of cases even in their own Colony which were spoken of as suspicious at the time, or which subsequent events made suspicious, but were never notified as infectious.

So general is the feeling that full notification is usually withheld, that even when the medical officers of an infected Colony were using extra diligence to discover cases, and were being abused locally for so doing, rumours were circulated in an adjacent Colony, without a shadow of justification, that cases were being suppressed.

A more charitable trust is required between Convention Colonies, and grounds for such trust must be secured by rigorous enforcement of notification under Public Health Acts, which should, moreover, be as far as possible similar in effect. A notification law has actually existed recently in a Convention Colony which was intended to prevent undue and hasty notification. The fear evidently was, not of the disease, but of its notification to other Colonies. Such legislation does not increase mutual trust among the Colonies.

We have already mentioned that the admission of infection is extremely distasteful to the mercantile section of a West Indian community. Where there is much trade with non-convention places infection certainly does bring with it much of the disadvantages of the old quarantine methods as still applied by non-convention countries. The anticipated loss of business with such countries seems to the merchants of more importance than the obligation to confess infection. This is quite evident in the press. It is, of course, most short-sighted, for an unadmitted infection is the more apt to develop into an epidemic that cannot be concealed, and in the end the Colony suffers quarantine much longer than it need have done.

We are hardly justified in accusing the mercantile class of a selfish disregard for the life and health of the masses. It is natural that the laity should think less of public health than of

every-day affairs, and so permit commercial interest to blind them to the existence of a mild infection, which the sanitary experts regard as a grave danger. More than once has it been seen that health boards, composed chiefly of merchants, have retarded the machinery of notification and prevention.

It is therefore doubtful whether at present such boards can serve any useful purpose. They can only act correctly when they follow implicitly the guidance of the medical experts. Hence, if there are experts appointed to decide issues and carry out measures the lay health or quarantine board has no place. It is undesirable that lay boards should at all control health officers or be able to influence their actions. As long as mercantile interests are allowed to interfere with such purely technical matters as quarantine and public health, and the public opposes or discountenances early notification, so long will medical practitioners be tempted to want of candour, and the distrust between the Colonies be perpetuated and justified.

Time and experience will teach the public that it is more prudent to welcome the early notice of an infectious disease, and that if a mistake is sometimes made it is better for it to be on the side of over-precaution.

It does not harm anyone to sleep under a mosquito net, even if he has not got yellow fever. The credit of a place is not damaged by the reported occurrence of an infectious disease, which is afterwards disproved or promptly stamped out. Rather is outside confidence strengthened by the sight of over-precaution.

This policy, too, will pay in our dealings with non-convention places, for as they recognize our sincerity and earnestness in managing quarantinable diseases, they will trust our statements, rely on our measures against exportation of disease, and treat us more liberally and rationally in consequence.

In conclusion, it may fairly be contended that the two main causes of our dissatisfaction with quarantine in the West Indies are the narrowness of sphere of the Convention and the uninformed and unthinking attitude of the public, especially the mercantile class, and the press. With regard to the former it is not for a private individual to insist dogmatically on a course which is of wide and international concern. But I am convinced that the extension of the Convention is the solution of the quarantine difficulties of the West Indies.

With regard to the public the cure must be left to time and education. But in the meanwhile it may be well for the Colonies

to consider whether it is not possible or desirable to take from the lay public the power of interference in a strictly technical matter like quarantine, to leave the health officer freer of control, even by Government, so that the management of quarantine may be released as far as possible from insular prejudices and commercial considerations.

C. W. BRANCH, M.B., C.M. Edin.,

Fell. Soc. Trop. Med. and Hyg.,

Fell. Roy. Inst. Publ. Health, Mem. Inst. Hygiene.

S. Vincent, B.W.I.

[Soon after this article was received the death of the writer was reported. Dr. Christian Branch was a skilled doctor and a most conscientious public officer, and his death is greatly regretted].

SOME NOTES ON WEST AFRICAN CURRENCY.

Christopher Columbus discovered America in 1498, but from all accounts he visited Sierra Leone and the Coast of Guinea in the course of earlier voyages. The Portuguese, however, are credited with having first discovered and explored the West Coast of Africa in 1482, forts being built by them at Elmina and in Angola soon after that date. No English traders appear to have visited the West Coast prior to 1544, but, during the seventeenth century, most of the maritime nations of Europe had established forts or factories there, from which slaves were supplied for the West Indies and America, as a sequel to the discovery of these countries. In 1808, and the years succeeding, all the nations concerned agreed to put an end to traffic in slaves, and the importance of the West Coast for a time diminished in consequence.

In 1787 the Peninsula of Sierra Leone (Lion Mountain), the port of which is named Freetown, was ceded by the native chiefs to Great Britain as an asylum for the many destitute negroes then in England, and in 1791 the Colony was handed over to the Sierra Leone Company, the object being symbolized by the device on the reverse of the coins struck in that year by the Company, viz., a black hand clasping a white one. Proofs of these coins, in capital preservation, are at the present time exhibited by the Bank of British West Africa, 17 Leadenhall Street, London. In 1807 the Colony was retransferred to Great Britain.

The Royal African Company held part of the Gold Coast Colony from 1667, being succeeded by the African Company of Merchants from 1750, and in 1821 the Colony was merged in the West African Settlements, under the Crown, in which Lagos was included in 1866. In 1874 the Gold Coast, including Lagos, was constituted a separate Colony, this arrangement existing until 1886, when Lagos became a separate Colony, only to be merged in the Colony and Protectorate of Southern Nigeria in 1906.

The Gambia was associated with Sierra Leone from 1807 to 1843, when the Colony of the Gambia was created, to be constituted a separate Government in 1888.

The history of the currency of these Colonies up to 1874 was, therefore, practically that of Sierra Leone.

In the early years of the nineteenth century the position of the currency of the West Indian, West African, and indeed most of the British Colonial possessions, proved an exceedingly complex and difficult one. The foregoing sketch of the early history of West Africa is sufficient to show that importations of coin from many different countries must have taken place, and in 1816, when the principles of the metallic currency of the United Kingdom were finally settled on the present basis of gold monometalism, the Imperial Government began to turn its attention to the deficiencies of Colonial currency, and in 1825 an attempt was made to introduce British silver coinage throughout the British Colonies.

In common with other Colonies, the Spanish dollar (or "piece of eight" reals) was the principal coin circulating in Sierra Leone and the—then associated—Colonies of the Gambia, the Gold Coast and Lagos, the value in commercial transactions being 5s., but for issue to troops 4s. 8d., until 1825, when, by Treasury Minute, it was altered to 4s. 4d. The prevalence of that coin and its quarters (cut frequently into five parts, which caused the Government to obtain a stamp marked W.R., surmounted by a crown, for the purpose of stamping legal quarters) made it impossible for British coin to be successfully introduced for some years. It is interesting to note that, about 1835, the Sierra Leone Government suggested that "a separate small coinage, which may serve generally for the English settlements in the West of Africa," should be issued, and in the following year £1,000 of 3d. and 1½d. pieces and £500 in pence and halfpence were issued by the Treasury. A year or so later 83,076 "cut quarters" were shipped home from Sierra Leone to be sold as bullion, and in January, 1839, on receipt of £2,500 in shillings, £2,500 in sixpences, and £2,000 in three-halfpenny pieces, the Governor of Sierra Leone, by proclamation, demonetised all cut monies or cut parts of dollars.

By orders in Council of 10th June, 1843, certain regulations established in the West Indies were extended to the West Coast of Africa, and exchange values of certain coins were fixed, the sterling value of the Spanish, Mexican and South American doubloon being 64s., the 20-franc piece 15s. 10d., the dollar of Spain, Mexico, etc., 4s. 2d., and the 5-franc piece 3s. 10½d. Later the American Eagle, at 41s., was included. The "Maria Theresa," or Austrian dollar of 1780, which was carried to many

parts of Africa, from the Nile Valley and Tripoli, although chiefly as an article of barter, was probably not found to any great extent at West Coast ports. Within recent years, however, replicas were struck for export to Northern Nigeria, but hardly as a form of currency. As in the case of British silver to-day there was no limit as to tender of silver coins, with the result that gold was practically never seen. In 1877, as a result of the depreciation of the gold price of silver, the silver dollar, worth barely 3s. 8d., was largely imported by merchants and speculators into the Colony of Sierra Leone, where its legal tender value was 4s. 2d., and English coin was therefore rare. This position was dealt with in 1880 by an Ordinance being passed under which the dollar ceased to be a legal tender. The Colonial Government, however, received the demonetised coin for a stated number of days at its old value, the amount so received being about £26,000.

In the year 1880 the 5-franc piece was demonetised in the Gold Coast Colony and Lagos, but, although the question was considered in 1880, and again in 1893, the 5-franc piece of the countries forming the Latin Union (France, Belgium, Italy and Switzerland) continued, and still continues, to be legal currency in the Gambia and Sierra Leone, at an official exchange of 3s. 10½d. The title "dollar" is frequently applied to the 5-franc piece in these Colonies at the present time.

As has been stated, the system of currency in Sierra Leone was nominally that of the Gold Coast, but the position in the latter Colony was complicated by special circumstances. Rock gold or nuggets and gold dust (which in earliest records is referred to as a considerable article of trade) passed current at 72s. per ounce, the ounce being subdivided into sixteen "Ackies" (4s. 6d. each) and each Ackie into six "takeos" (9d. each). These names "ackie" and "takoe" are found on coins, bearing on the reverse, "Free trade to Africa," issued at the end of the eighteenth century by the Royal African Company. Rock gold and gold dust were demonetised in 1889, owing to practices of adulteration. In addition to the gold dust currency, in which medium the Dutch Government (which finally ceded their forts to Great Britain in 1872) paid salaries, etc., from the year 1846, the Dutch silver coin of 2½ florins, or guilders, appears to have passed as a dollar, while sub-divisions of that coin also circulated. When, however, the value of silver fell, these coins, and also Mexican dollars, were largely imported, until the passing of the Ordinance of 1880, which restricted the currency, as in the case of the neighbouring Colony of Sierra Leone.

Advantage was also taken of the fall in the gold price of silver in 1879 in the case of Lagos, to which Colony large shipments of dollars were effected at a profit of over 10 per cent. The Lagos Government balance on 31st July, 1879, amounted to £10,920, of which no less than £9,200 consisted of Mexican, Peruvian, Chilian and Brazilian dollars.

The Gold Coast Demonetising Act of 1880 embraced Lagos, but the ten days' notice given does not seem to have been taken full advantage of here, as much hardship was occasioned to holders of dollars, who, from the 21st May, were unable to pay their duties in that form, or to exchange the coins at the value at which they had been received.

British silver coin, notwithstanding the opposition of other forms of currency, was then being exported to West Africa in increasing quantities. Pre-Victorian coins were refused, in the belief that on the demise of the Crown the coins of the reign cease *ipso facto* to have legal currency, and when the Victorian Jubilee coinage was introduced a Government notice had to be issued on the subject of the change. There was not much general difficulty, however, in getting the natives to accept the present King's Head coins, and in certain districts objection is now expressed by the natives to early Victorian coinage. From 1876 to 1880, according to statistics compiled in 1899 by the Manchester Chamber of Commerce, over £200,000 had been shipped to West Africa in British silver coin, a figure which increased, in the period from 1891 to 1895, to £750,000.

In the year 1892 the first West African Bank was established at Lagos—the African Banking Corporation, Ltd.—and, under an agreement entered into with the Colonial Office, the issue of silver coin from the Royal Mint, for shipment to Lagos, was confined to that institution. In 1893 the Corporation retired from Lagos and, in the following year, the Bank of British West Africa, Ltd., was formed, and inherited the responsibility for the control of the silver currency, their position as the Government Bank being extended in subsequent years to the Colonies of the Gambia, Sierra Leone and the Gold Coast. Thus was established a necessary central control, which, so far as possible, supplies the currency requirements of one Colony from the surplus silver coin of another, thereby preventing unnecessary shipments of a token currency from England. Where the Bank of British West Africa was established the prevalent barter system rapidly disappeared, and the demand for British silver currency increased. The nominal or face value of new British silver (which until a few years ago had a greater purchasing value in native markets than used coin) shipped to West Africa from 1894 to 1903 amounted to no less than £2,856,000, or an average of over

£190,000 per annum. No coin of higher value than the florin is sent. Of that sum £822,000, or nearly 6s. of each pound exported, was repatriated and placed into circulation at home during the same years—an onerous duty which previously entailed considerable expense to the Governments concerned. The total nominal value of British silver coin hoarded, converted into ornaments and in circulation in West Africa, is probably three to four million pounds sterling at the present time.

Bronze coin was also shipped from England to the West African Colonies, but probably in small quantities only, and in Lagos, some years ago, it stood at a discount of 10 per cent. as compared with silver coins. For instance, three bronze pennies would only exchange for $22\frac{1}{2}$ strings of cowries, whereas a silver threepenny bit commanded 25 strings. A requisition was received from Sierra Leone for a quantity of copper coins, so far back as 1822, but was not complied with. The demand for a medium of exchange in West Africa for small native transactions was formerly supplied by cowries (a small shell imported from East Africa) and, particularly in the Niger district, brass rods (value about $2\frac{1}{2}$ d.), Manillas (a kind of horseshoe of copper, valued at about $1\frac{1}{2}$ d.), and copper wires ($\frac{1}{2}$ d.) The fluctuations and inconvenience of the most popular of these, cowries, is shown by the fact that the "head" of 2,000 varied in value from 6d. to 2s. 6d. in the different Colonies.

It has already been noted that a Special Subsidiary coinage was suggested for West Africa about 1835, and the larger question of replacing British silver coinage in West Africa by a Colonial silver coinage was, in 1899, referred by the then Colonial Secretary, Mr. Chamberlain, to a West African Currency Committee under the chairmanship of Sir D. Barbour. This enquiry was made partly with a view to giving the Colonies the considerable minting profit which the Treasury declined to share, and it is interesting to note, in this connection, that the adoption of a special silver coinage is now under consideration by the Australian Government. The obvious advantages of the Imperial silver currency for the Crown Colonies of West Africa were generally recognised by the Committee referred to, although recommendations were offered in the event of a special coinage being adopted, and the question of a subsidiary coinage was answered by certain findings as to bronze and nickel coins. It was stated that British bronze coins, while circulating freely in the Gambia and Sierra Leone, were refused by the natives on the Gold Coast and in Lagos and Southern Nigeria. Statistics appear to show, however, that this objection was gradually being overcome, as the shipments of bronze coin by the Bank of British West Africa in the year 1907 to Lagos amounted to £3,680

nominal value, and to the Gold Coast Colony £1,100. The Reports of the Gold Coast Colony for 1907 and Sierra Leone for 1908 call attention to the marked increase in the use of bronze coinage.

No immediate action took place as a result of the enquiries of the Currency Committee, but, in 1906, by Royal Proclamation, the Nigeria Coinage Order came into force, and established for Northern and Southern Nigeria a special subsidiary nickel coinage of two denominations—one penny and one-tenth of a penny. These coins, which are legal tender, as in the case of bronze coins, for payments up to one shilling, have a hole in them to allow of stringing together, but do not bear the effigy of the Monarch. They are now in circulation, and the result of the issue will soon be seen. As the coins bear the inscription: "Nigeria—British West Africa," the omission of the first word would permit of their circulation in other West Coast Colonies, and thus maintain an interchangeable currency, although this might be more fully achieved by an adherence to British bronze coins, in respect at least to the penny piece.

Southern Nigeria is also taking the lead, amongst West African Colonies, in the matter of a Government note issue, which, early in the present year (1909), was consented to by the Treasury and Colonial Office. There is no doubt that a need for a paper currency indicates a progress in the development of a Colony, and the experiment, when started, will be watched with considerable interest. The value of the notes will probably be £20, £10, £5, and £1, and, if the scheme provides for their immediate convertibility throughout the Colony, the avoidance of some of the constant movement of coin, and the provision of the means of temporarily increasing the currency, should result.

That there is a demand for a higher denomination of exchange than silver coins provide, is undoubtedly a fact, and, to meet this, British gold coins, hitherto seldom met with to any extent, are now being exported to various West African Colonies by the Bank of British West Africa, Ltd. Perhaps, as in the case of the special nickel currency and British bronze coins, a postponement of the suggested note issue might show that it was rendered unnecessary at present by the increase of gold in circulation.

LESLIE COUPER.

[It is impossible to publish these notes without giving full acknowledgment to that standard work, Chalmers' "Colonial Currency," from which much information has been obtained and quoted. L. C.]

REVIEWS AND NOTICES.

A History of the United States and its People. By E. M. AVERY. VOL. III. (*Burrows Brothers Company, Cleveland, U.S.*)

THE period which this volume covers, 1660-1745, was one of continual unrest caused fundamentally by economic struggles. It was the accepted policy of the time that the chief mission of a colony was to feed its mother country. This was the object of the first Papal Bulls regarding the New World and of the charters of the early trading companies. The English colonies were to furnish raw materials in exchange for English manufactured goods. The bargain, however, was by no means altogether one sided. The Navigation Acts kept out foreign ships for the benefit of English bottoms, but on the other hand they gave a practical monopoly in many respects of the English market to the colonial planters. Nor did the restrictions intended to keep the colonies to planting and prevent them from manufacturing bear very grievously on them. The staple industries found a good market in England, where they had an advantage over foreign places by entering largely duty free. The policy in fact succeeded with the places which were content with plantations. The West Indies exported tropical products and made no attempt to rival English industries. The restrictions therefore on the whole affected them little, and the result was seen in their steadfast loyalty. In America it was different. The Prohibition Laws were an obvious and irritating interference, and the colonists, rightly or wrongly, concluded that they had the losses and the English manufacturer the gains of the system. Such a feeling is sure to arrive from a compulsory arrangement. But the broad fact remains that as business ventures the English colonies flourished, while the French did not. The greatest mischief which the policy of restriction did was elsewhere—in Ireland. It forced idleness upon a population of artisans, and the result was an

exodus. "Thirty thousand Protestants," Froude observed, "left Ulster for a land where there was no legal robbery." (Philadelphia.)

This line of cleavage was supplemented by others. The struggle between Cavalier and Puritan, the party of prerogative and the party of the people's rights, was repeated in the colonies with chaotic results at times, but with the steady growth of the Puritan party. In Carolina no Governor could long support his authority, and at one time so violent was the contention that no laws were passed for ten years or more. Massachusetts from an early period maintained a position of quasi independence. A benignant letter from the King in 1661 was answered by a declaration of rights, including the right to reject any Parliamentary or Royal imposition "prejudicial to the country and contrary to any just act of colonial legislation." In 1664 things had gone so far that men-of-war were sent from England to bring the New England Colonies into subjection. But the mother country had more serious matters to attend to, for in the following year the Dutch entered the Thames and burned English men-of-war at Chatham and the great Plague broke out in London. In this trouble Massachusetts behaved handsomely. It provisioned the West Indian fleet and rendered other service "by way of humble thanks to His Majesty for the many and continued expressions of his tender care and fatherly respect to this, his Colony." Evidently the opportunity for a sarcastic thrust was too tempting to be neglected. Afterwards the struggle with the Crown went on till in 1684 Massachusetts charter was adjudged to be forfeited. But this was of no great consequence at the time as the revolution in England followed shortly afterwards and changed the position. There was, in fact, a simultaneous revolution in England and in America. "On both sides of the Atlantic," Mr. Avery observes, "the people and popular rights were gaining ground in their long controversy with arbitrary rule and Royal prerogative." But the rise of Parliamentary power in England did not end the conflict. In the words of Mr. Goldwin Smith, "Royal tyranny ceased but Parliamentary tyranny began." The strengthening of the English mercantile system remained the object, and dictated restrictions on the Colonies.

The detailed history of the American colonies, set out in vivid style by Mr. Avery, shows clearly enough how steadily events and ideas marched almost from the commencement towards the eventual declaration of independence. The necessities of England were dictated by long and exhausting wars and it was reasonable to expect some form of assistance from the colonies. But to put this in the shape of restrictions on American trade for the benefit of English trade invited opposition. The idea of friendly combination for the common welfare is in these annals conspicuous by its absence and the art of diplomacy for the purpose of mutual

understanding unknown. The result was not only political separation but intellectual alienation. "For nearly a hundred years American historical writers habitually characterized the British colonial policy of the eighteenth century as malicious and tyrannical, but said little about what that policy really was. Meanwhile English writers were accusing their American brethren of partisan unfairness, but giving no clear idea of the system they were trying to defend."

This volume, like its predecessors, contains a remarkably full collection of portraits, maps and sketches, and is a pleasure to peruse, both from its matter and its artistic embellishments.

Essays in Politics. By A. MACPHAIL (*Longmans, Green & Co.*)

There is a good deal of plain speaking in this book, and it is refreshing to find that the writer takes a cool and impartial view of the operations of British diplomacy on behalf of Canada. Visitors to the Dominion are often on some occasion or other confronted with the representation that the negotiations conducted by the home Government with the United States have invariably failed to do justice to Canada. The explanations given in this book amply suffice to show that the situations which had to be dealt with were difficult and dangerous, and that the settlements arrived at were on the whole as satisfactory as circumstances permitted. There came a time when the Canadian authorities themselves took up the function of negotiating, but the result is commemorated by the historic words of Sir Wilfrid Laurier: "There will be no more pilgrimages to Washington."

Mr. Macphail's leading proposition, in the discussion of Canada's position, is that Canadians are paying more per head of population for the general good than England pays. In new countries the work of making life and property safe, and opening up communications has to be done *ab initio*, and the taxation is necessarily heavier for these purposes per caput than in an old country, where much of the work has been done. The inference is indicated, though not put definitely, that Canada may be reasonably exempted from the duty of assisting in the defence of the seas. We doubt whether Canadians generally would adopt this agreement. The difficulty is not really that Canada cannot afford to pay, but that a payment without a direct voice in Imperial policy could hardly be justified to the people of the Dominion. The solution of the matter will no doubt, as shown by the result of the recent conference, be on the lines of the development of local defences.

The Official Year Book of the Commonwealth of Australia.

The second issue of this publication has made its appearance. It contains detailed statistics for every year since the establishment of the Commonwealth (1901) and a considerable amount of corrected statistical information for the whole period since the first colonization of Australia. But the Year Book is much more than a collection of tables and diagrams. Different aspects of the life of the Commonwealth are dealt with historically in special articles, and it has been arranged that new subjects shall be taken up and treated in this manner in future issues of the annual. In conformity with this plan, many of the articles which appeared in the first issue of the Year Book are now reduced to synopses, while much fresh matter has been introduced. The volume reflects much credit on the Federal Bureau of Census and Statistics, which is responsible for its production.

The Canadian Annual Review for 1908. (By I. CASTELL HOPKINS.
Annual Review Publishing Company, Toronto.)

This number keeps up the high reputation of the series by the full and clear way in which it sets out the doings of the year. It is no light task to chronicle the parliamentary proceedings, the economical progress and the social advance of so vigorous a country; but Mr. Castell Hopkins never fails to give the sense of completeness and vividness. The part which the Dominion plays in the politics of the Empire is dealt with prominently.

Notes on Dominica and Hints to Intending Settlers. (By SIR
H. HESKETH BELL, K.C.M.G., revised by W. DOUGLAS YOUNG,
C.M.G. *Advocates Co., Ltd., Barbados*: 6d.)

In former generations this country sent out a goodly number of planters to the West Indies, but subsequently misfortune of one kind and another interfered grievously with the attractions. The islands have, however, in recent years entered on a new phase of prosperity which is based on careful study, and is therefore likely to endure; and the opportunities which are now held out to settlers with a moderate capital and a liking for agricultural life—such as this country can still supply in plenty—are well worth examination. This little book gives the case of Dominica. That the island is on the up grade is sufficiently clear from the fact that its trade has much more than doubled in the last decade. The products are of a very varied character, and it is not necessary, or well, for a grower to limit his work and interest to any one of them. It is desirable that a man intending to go out with the object of starting a plantation should find a companion and partner, and that before any land is taken up some months' experience of the working of estates should

be acquired. In Dominica this could be easily arranged. "There are several planters in Dominica of good birth and breeding who are prepared to let men of their own class stay with them for a few months. So far, there has been no system of taking regular pupils, nor is any premium asked. If a man is a gentleman and of congenial tastes, there are several owners of estates in the island who would be willing to teach him what they can in the way of agriculture, and board and lodge him for a couple of pounds a week."

The following account shows the prospects which are open to a settler with a capital of about £3,000.

"The island is estimated to contain 291 square miles. Almost the whole of the land along the sea-board is private property, and is laid out in a succession of cacao and lime estates. Up to about nine years ago, the whole of the interior of the island, though known to comprise fertile land suitable for most kinds of tropical products, remained practically untouched. This neglect was entirely due to the fact that the interior, owing to the absence of roads, was inaccessible. Thanks to an Imperial grant, a large area of these lands has been made available and a trunk road called the 'Imperial Road,' 18 miles in length from Roseau, has been constructed right into the heart of the island. Considerable blocks of the Crown lands, adjoining this road, have been taken up, and several promising plantations are being developed by Englishmen who have recently settled in the island. The 'Imperial Road' opens up a large extent of virgin land suitable for a variety of products. Districts having an altitude varying between 1,000 and 3,000 feet are well adapted for the cultivation of oranges, grape-fruit, nutmegs, rubber, cardamoms and other spices, while the lands that lie below 1,000 feet are considered to be more suitable for cacao, limes, pine-apples, etc.

"It is estimated that the Crown lands comprise about 100,000 acres. They are sold at an upset price of 10s. per acre. The payment of the purchase money for blocks exceeding 100 acres is spread over three or four years, if desired. The survey fees are extra, and average 2s. 6d. an acre for small blocks. The Crown lands for the most part consist of ridges and valleys; the slopes are admirably suited to tropical agriculture, and in the centre of each valley a stream of excellent water is usually found.

"It may be taken as a fair average that to purchase, clear and plant 1 acre of virgin forest will cost about £7. It will then cost £3 a year to keep that acre in proper cultivation until it yields a crop. Though in some cases, cacao, limes, budded oranges, etc., may bear when three or four years old, no profitable return can be expected in that time, and it would be advisable to reckon that £3 a year would have to be spent on cultivating

that acre for seven years, though some return may be expected before that time, more especially in the case of limes, which yield a return before either cacao or oranges.

"A prudent, temperate and practical man with a capital of about £3,000 should be able to take up 200 acres of Crown land in a selected area, and to clear, plant, and cultivate 50 acres of it for a period of seven years, at the end of which he should be possessed of a valuable estate yielding a steadily increasing income. As his clearing of 50 acres begins to give some return before the seventh year, he should utilize that return in the further development of the 200 acres.

"Cacao trees should begin to bear at the end of the fourth year, but would not be in full bearing until about the eighth year. Planters should therefore not look for nor calculate upon, any return from their cacao until it is seven years old. Limes commence to bear in their fourth year and should give a good return when six years old. Budded oranges will bear in five years, and coffee in four years. An acre of cacao or limes, seven years old, should yield a net profit of from £10 to £15 per acre."

A general idea of how a settler with a capital of about £3,000 might establish himself in Dominica may be gathered from the following statement:—

	Cacao.	Limes.
	£	£
Purchase of 200 acres of Crown land and fees ...	130	130
Clearing, planting, and cultivating 50 acres ...	1,400	1,250
Cacao house and drier	150	—
Mill, two-tayche battery, and buildings	—	300
Small dwelling house and out-officer	250	250
Labourers' houses	100	100
Living expenses for 7 years, including groom and house servant, at £100 per annum	700	700
Incidentals at £30 a year for 7 years	210	210
	<u>£2,940</u>	<u>£2,940</u>

Report on Plague in the Gold Coast in 1908. (By W. J. SIMPSON, M.D., C.M.G. *J. & A. Churchill, 2/-net.*)

The outbreak of plague in the Gold Coast was remarkable for the large proportion of pneumonic types. Many of the cases terminated with appalling suddenness. The constitutional symptoms were here of slight nature and in fact the history was sometimes nothing but sudden death.

The circumstances of the outbreak, Dr. Simpson states, seem to indicate that the potentialities of plague to reproduce epidemics

corresponding in their nature to those of the 14th century still exist under favourable conditions, that the spread of the disease may be readily facilitated by pneumonic cases with undefined symptoms, and with such epidemics do not require for their propagation or extension either rats or fleas, though they may be reinforced and maintained in a locality by rat infection. It was demonstrated that the Danysz Virus generally requires to be exalted before it can be acted upon, and that it can be exalted if sufficient care be taken. This report sets out in detail the measures taken to suppress the disease in Accra and to prevent it from spreading. Haffkine's Prophylactic was used by over 31,000 persons in the colony. A land cordon was drawn round Accra, and no person was allowed to pass out unless he had been inoculated at least a week before.

BUSINESS NOTES.

Armoured Cement Poles.

(LETTER TO THE EDITOR.)

It may be of interest to the readers of the Colonial Office Journal generally, and to the Works Departments of the various Crown Colonies in particular, to know that costly iron poles, liable to rapid oxidation and consequent failure can now be replaced by a much cheaper and practically indestructible pole of armoured concrete.

For the distribution of electric power, overhead cables are now almost generally adopted. These lines in Lagos, together with the telephones in Calabar, and the gradually increasing mileage of telegraphs in S. Nigeria, now aggregate many hundreds of miles. Considering the great capital outlay for such work it is obvious that the reliability and the cost of upkeep of these lines must become a matter of great importance.

The present system of iron poles in no way answers all the requirements of reliability and certainly not those of durability, requiring, as they do, constant scraping and painting to prevent the rapid oxidation that takes place in a climate such as West Africa.

Reflection must lead to the conclusion that an indestructible material, the upkeep of which would be very low or nil, such as ferro-concrete, is what is required, providing the cost of such material is not commercially prohibitive.

During my last tour in Calabar I succeeded in designing and making most excellent fencing and gate posts of this material at the very low cost of one shilling and eleven pence per post of seven feet in length, and these were capable of resisting a ton strain without fracture when fixed three feet in the ground.

The making of poles to carry the overhead wire for the proposed "Qwa-Falls" power scheme next attracted my attention, and

experience showed that solid poles on the principle of the seven feet posts would be much too heavy and cumbersome; on the other hand, cast iron bases, with wrought iron top lengths would, I found, be very expensive, besides being liable to collapse from internal oxidation.

To make a suitable hollow pole by casting around a frame work over a core was next attempted but without success; but this problem now appears to be solved by the use of the Siegwart pole, brought to my notice by Messrs. Preece and Cardew.

Mr. Siegwart's invention, by doing away with any external mould, overcomes the difficulties that have thus stood in the way of tubular reinforced concrete construction, and by its means hollow poles, pipes, piles, &c., of any length or strength can be made with the certainty that the reinforcement, either longitudinal or spiral, will be embedded with absolute precision in the exact position required even in the thinnest walls of concrete which may be necessary.

The process of manufacture is entirely new and ingenious, the main principle being that concrete can be wound in a ribbon helically round a hollow core, completely surrounding longitudinal reinforcing rods previously laid along the core, and keeping them in the exact position desired. Immediately after the concrete is so woven, wires of such strength as may be required are also wound spirally round the outside of the longitudinal rods and embedded in the concrete. The concrete is uniformly compressed by weighted rollers to an extent impossible by any system of hand ramming, thus rendering the whole mass dense, compact and homogeneous. A coil of webbing is wrapped round the concrete to keep it in place until it is set. The core, which is collapsible, can be removed after 12 hours, and the webbing after 3 or 4 days.

The average thickness of the walls is from 1 to 2 inches, according to the diameter. On the whole the poles are uniform in shape, and vary only in the thickness of the walls and diameter according to their length and the load they have to bear.

They consist in detail of a skeleton of longitudinal steel or iron rods tied together by a spirally wound strong wire, and the coat of concrete in which the skeleton is embedded—this same process is applicable to drain pipes up to 48 inches in diameter.

The pole, or pipe, is perfectly finished in the machine, needing only a short time for setting and drying. The whole process is quick, economical, and warrants a high class concrete of great density and homogeneity.

I have watched the making of these poles and pipes at Messrs. Cubitt & Co., Gray's Inn Road, London, and I consider the process is of the greatest interest to the technical world, and more especially

to our tropical Crown Colonies, where the prevailing moist atmosphere is so destructive to anything in the shape of Wrought Iron or Steel.

Yours, &c.,

I. T. HANKINS, A.M.I.C.E.,

Sen. Prov. Eng. S. Nigeria.

P.S.—As the foregoing was too late for your July issue, I wish to say that since writing it I have inspected with several other Engineers the new and improved plant which is automatic in all its adjustment of thickening and tapering. This machine, now at Messrs. Cubitt's, Gray's Inn Road (eventually to be removed to "Grays"), is well worth a visit from Colonial Engineers interested in this class of work. I have already arranged for several of the "Inspectors of Works" of S. Nigeria to become conversant with the details and general working of the machine with the idea of eventually making our own poles and pipes in the Colony. (I.T.H.)

Dredging the Lagos Bar.

The twin-screw pump hopper dredger, "Sand Grouse," for Southern Nigeria, has been built by Messrs. W. Simons & Co., Ltd., of Renfrew. It was launched on 8th June and tried over the sand banks in Morecambe Bay. About 2,070 tons of sand were pumped with the hopper in 54 minutes, and about 2,000 tons were emptied through the valves in 27 minutes. The average speed of the vessel with and against tide was $10\frac{1}{2}$ knots per hour. The light draught is 7 feet 3 inches forward and 10 feet 4 inches aft.

The present dredger, the "Egerton," has done good work, though working very intermittently, and vessels of 14 feet draught can now cross with much greater facility than vessels of 10 feet did in 1904. This improvement has been effected without any assistance from the Eastern mole, which has only just passed the line of the foreshore. The further extension of this mole will, however, facilitate the work of dredging, and as the "Sand Grouse" has a dredging capacity 50 per cent. in excess of the "Egerton," a further improvement may reasonably be expected. Several steamers trading direct to Europe have already entered the harbour. In June, the "Teneriffe" (Elder, Dempster and Co.) crossed the bar and came into the river; it is said there was more than 20 feet of water. Continued improvement will lead to very important results in the shape of increased trade. When a satisfactory draught has been secured it may be possible to levy tonnage dues. The Government gets no return at present for the dredging done, but would have good ground for claiming some when the draught for steamers is permanently reduced to, say, 15 feet, which means a depth of 18 feet.

Many cargo steamers from Europe could then regularly cross the bar and enter the harbour partly laden. Such a draught is in excess of that at Opobo, which is served entirely by ocean-going steamers; the shipment of palm oil and kernels alone then amounted in 1907 to 38,000 tons.

The contract price for the "Sand Grouse" was £86,065.

A twin-screw hopper barge, the "Mole," has also been constructed for Southern Nigeria, and left Port Glasgow on 24th July. The light draught is 4 feet 4 inches forward and 6 feet 5 inches aft; at the trial in stiff mud it was estimated that 90 tons of spoil were deposited in the hopper in 30 minutes.

A type of dredger which has been used on the Panama Canal is being tried by the Soudan Irrigation Department on the Blue Nile. It is constructed to manipulate one bucket about 7 ft. deep and 4 ft. diameter, capacity about 5 cubic yards. This is lowered from a powerful crane, which projects forward and scoops the bucket along the bottom, raises it, and swings it to the side. The vessel is fitted with three legs, one at each corner of the fore and one in the centre of the stern, which are lowered till they rest on the bottom; in this way the vessel is made stable, and the stern leg swings fore and aft so as to take the backward thrust of the bucket.

At Forcados a second floating dock has been ordered by the Nigerian Dry Dock and Engineering Company, capable of lifting steamers up to 8,000 tons. There is no other dry dock in British territory between Gibraltar and the Cape. Some 30 native apprentices are being trained at the engineering works of the Company, and the results of this policy will be very interesting, as it would greatly help railway construction and management if it were found practicable to train a considerable number of natives for the work.

Motor Transport.

From the blue-book on "mechanical transport in the Colonies" (Cd. 4,589) it appears that Crown Colonies in which light motor cars and taxicars are suitable are Barbados, Bermuda, British Guiana, Gold Coast, Southern Nigeria, Straits, Ceylon, Antigua, Grenada, Trinidad, Uganda.

In Southern Nigeria a motor road service was adopted in preference to a light railway between Ibadan and Oyo (33 miles), on a road without foundation but with good surface. Paraffin is exclusively used except for starting up, the price of petrol being prohibitive. The service is successful, and there can be no doubt that light motor lorries will soon secure a great import of transport that now goes on head. But there must, of course, be a fairly hard road, though not necessarily "metalled" if the character of the soil is such as to give a good surface.

Singapore Fire Brigade.

A powerful new motor fire engine has just been supplied to the Singapore Fire Brigade by Messrs. Merryweather & Sons of London, and constitutes the third motor appliance built for this brigade by the same firm. It is driven by a 50-h.p. petrol engine, and comprises a fire pump, fire brigade tender, hose reel and fire escape, all embodied in one machine. The fire pump, which is worked by the same motor as propels the vehicle, delivers 350 gallons per minute, and will throw one, two, or four jets. The hose reel, which is carried at the rear of the engine, is detachable, and carries 400 feet of canvas hose, whilst a large quantity of hose and gear can be accommodated in the main box at centre. The fire escape extends to a total height of 50 feet, and can be detached for service in a few seconds. The whole machine, loaded with men and gear, can travel at 30 miles an hour on the level, and ascend steep hills at a good speed. With its capacity for instant turn-out, its great speed, and the novel combination of fire extinguishing and fire escape plant which it embodies, this appliance should certainly prove a valuable addition to what is undoubtedly one of the best equipped brigades in the East.

Gas Engine and Cotton Seed.

An expert of the British Cotton Growing Association reports as follows:—

“A very successful experiment has been made in the utilisation of cotton seed and cotton seed cake for the generation of a gas to drive a 30-h.p. gas engine, which is used for working the mills and presses for the extraction of oil and production of oil cakes. This engine is run daily for $9\frac{1}{2}$ hours upon the total expenditure of 6 cwt. of cotton seed cake, and it is said that with the employment of cotton seed before the oil has been expressed an even smaller quantity is necessary. By the use of waste seed for gas production all the machinery might be driven without the great expense of coal, and a new and important source of economy is clearly indicated.”

Native Pottery.

An interesting experiment is being tried in Southern Nigeria in training young natives to make pottery at Ibadan, where there is suitable clay. For fuel wood and cotton-seed mixed have been tried, but the cost of cotton-seed being £3 per ton coal was practically not dearer. Wood and a few palm-kernel shells were then tried and found the most suitable. There is a great demand for the products.

Silver.

The present price of silver has disappointed some anticipations. The low figure is due to plentiful supplies, and the chief reason for them is the increasing output of Cobalt, which at present is adding from 25 to 30 million ozs. a year to the production of the world. The requirements for silver currency are growing all over the world, but no important change is likely to happen in the near future, as the Indian Government will probably be out of the market for a long time, and the Chinese trade position is uncertain. The excess of imports into China over exports diminishes year by year, and this fact explained the large stock of sycee held in the East by China (probably about £3,000,000) and in London (about £2,000,000). China is in fact at present gorged with silver, but as for the time being exports exceed imports, silver is the cheapest form of remittance, and the stock which is held as a cover against exchange is not likely to be put on the market while that continues.

Oil Gas Lighting.

By an error in printing the cost of oil, &c., per light per hour was put at p. 55 at 7d., this should have been .07d. Messrs. Mansfield and Sons, of Liverpool, inform us that they are inclined to doubt whether this figure is strictly correct, and would put it generally at .125 per 100 candle power per hour. The higher figure leaves the economical advantage of pure oil gas very apparent.

RAILWAY NOTES.

Cape.

The total earnings in 1908 amounted to £2,850,139 as against £3,469,936 in 1907, a decrease of 17·9 per cent. The loss after allowing payment of interest was £546,695. These figures are lamentable and indicate the lowest point of depression in the record of the lines. There are signs that things have since begun to improve and there is reason to believe that the worst has now been passed. The curtailment of expenditure by the De Beers Company, which affected the traffic seriously, was caused not by any local circumstance but by the heavy drop in prices. After having given full weight to all mitigating circumstances it seems impossible to avoid the conclusion that the position is economically very unsatisfactory, and that the case shows the necessity of carrying out a railway policy on well considered estimates of revenue and expenditure. Of 30 branch lines only one showed a net profit after paying interest on capital, and ten failed to pay their working expenses. The General Manager remarks, *à propos* of these losses on branch lines, that he feels sure that when the lines were authorised it was never anticipated by Parliament that they would do more than pay their way for many years to come. Probably a more optimistic view was taken at the time, but no doubt there was a disposition to allow losses in order to develop particular places and industries. The General Manager urges that "when the Railway Department is called upon to make sacrifices in order to support a particular local industry, the loss sustained in doing so shall be refunded to the Department from the general revenue of the Colony." This would be academically sound and fair to the Railway administration. But in practice it can hardly be expected that Government will drag losses into the light in this way.

A drastic step has been taken to increase the traffic. It appears that the principle adopted is that if the State provide railways the public must be compelled to use them. The particular case dealt with is that of ox-wagon competition. As to which the following statement is made:—

"During the year ox-wagon competition continued to adversely affect the receipts of the Midland and Eastern Systems, especially the latter, the transport wagon being much in evidence in the Eastern Districts.

"In my reports for some years past I have strongly advocated the introduction of legislation with a view to imposing a tax on wagons competing in districts served by railways, and I am pleased to say that Parliament has recognised the very serious nature of this competition, and during last Session action was taken in this direction, Parliament having approved the principle that when the State has provided means of transport with the money of the general taxpayer it is incumbent on the public to make use of the facilities provided.

"In order to avoid the infliction of any undue hardship on merchants who might be carrying heavy stocks, it was decided not to enforce the arrangement sanctioned by Parliament until the 1st March, 1909.

"It is hoped that the action now taken will relegate the ox-wagon to its legitimate sphere, that is, to act as a feeder to the Railways, and not as a competitor."

It was an awkward circumstance that the ox-wagon appeared to transport traffic to distant points, not only more cheaply, but often almost as quickly as the railway. Part of the explanation of this is that the railway authorities hold back consignments till they make up good loads. But there are other reasons, and the account of them is instructive.

"Comparisons have been drawn in the press, in many letters to Railway officers and in verbal statements, to show that the ox wagon transports traffic to distant points almost as quickly as the railway. It is almost overlooked that to begin with the kurveyor is not prepared to hire out his wagon for a small consignment as his rate of carriage is based on a full wagon load. The railway, on the other hand (with the exception of weights of 100 lbs. or thereabouts), conveys all goods traffic at a class rate whether a consignment consists of a few bags or a full truck load. Any comparison in time between rail and ox wagon transit when both the railway truck and the ox wagon are fully loaded is out of the question, but a similar comparison regarding a few light weight packages handed to the railway, and the full wagon load of the kurveyor is very often warranted.

"No railway can afford to send trucks direct to each point for which small quantities of goods are tendered for conveyance.

"It is only in holding back these consignments to ensure larger loads, and in concentrating the transshipment for various stations on certain centres, that an economical result can be achieved. The need for curtailment of expense in haulage justifies this procedure.

"If the public demand a quicker transit for these small consignments, the only course open to the Department would be to follow the system in vogue on the Continent and charge a percentage addition for quick transit on consignments of less than truck loads.

"Under certain circumstances, protracted transit of goods is unavoidable; for instance, goods traffic despatched, say, from a station at or near the coast, the goods being destined for a branch line where the traffic only permits a service of three trains per week, unless the goods arrive at the junction on a day when the train runs to the branch, a delay is bound to occur at the junction point. A delay might be caused if the connecting train for the branch is unable to take the whole of the load offering, and the surplus left over at the junction is insufficient to warrant the running of a special train; a further delay might occur through Sunday intervening. The most frequent cause of delay to merchandise of this description is caused through passengers, live stock and perishable traffic having preference in transit over ordinary goods."

It is clear that circumstances of this kind should be reckoned with in the consideration of projected lines. A railway can only be run to advantage when the traffic is large enough to fill the trains quickly.

Retrenchment and reduction were carried out extensively. The staff was reduced by 1,702 men and a 5 per cent. deduction was in force on salaries.

Central South African Railway.

The following is a summary of the financial results of the year's working:—

Revenue				Year	
				1908.	1907.
Passengers	...	...	...	£1,080,588	£1,093,333
Parcels	...	...	...	85,364	83,381
Goods	...	...	...	1,883,746	1,826,060
Coal	...	...	...	892,929	868,536
Live Stock	...	...	...	113,559	82,928
Miscellaneous	..	...	...	93,283	185,393
				<hr/>	<hr/>
				£4,149,469	£4,139,631
Expenditure				Year.	
				1908.	1907.
Working Expenditure	...	...	...	£1,938,274	£2,011,154
Contributions to renewals fund	...	...	...	426,733	356,281
Special expenditure charged to working	...	...	...	139	1,941
				<hr/>	<hr/>
				£2,365,146	£2,369,376
Balance, being surplus of gross earnings over gross expenditure	...	...	...	1,784,323	1,770,255
				<hr/>	<hr/>
				£4,149,469	£4,139,631

The diminution of oversea traffic and the increase of local traffic, which have been going on for some years, continue, and though the growth of local production is a healthy feature it has disadvantages from a railway point of view. For not only is the revenue per ton derived from the transport of local traffic less than one-fourth of that derived from through traffic, but the cost per ton per mile of working such local traffic is much heavier, because in the first place terminal services, which represent a considerable factor in railway costs, have to be performed at both ends of the journey in the case of local traffic and at one end only in the case of through traffic, and in the second place the bulk of the through traffic is conveyed for at least the whole distance of an engine run, while the bulk of the local traffic is carried for distances considerably less than an economical engine run. In most cases the trains must run for the full distance, whether traffic is available to the full haulage capacity of the engine or not. The very fact of there being traffic to be either detached or attached at intermediate stations without other traffic being available to take its place makes the working less economical than in the case of through traffic.

It is however very satisfactory to find that the figures show a remarkable agricultural development in the Transvaal and Orange River Colony, and the credit is given chiefly to the wisely directed and sympathetic interest and assistance afforded to the agricultural and pastoral industries by the Governments, the Directors of Agriculture and their officers.

Kowloon Canton Railway.

It is believed that the heading driving in Beacon Hill Tunnel will be completed much earlier than was expected last year, but it is not anticipated that the date then fixed for the opening for traffic—May, 1910—can be altered. The cost of the tunnel driving was much reduced during 1908, but the estimate will be very largely exceeded; this is attributed principally to the unusual hardness of the rock which is quite different from that usually met with in the colony. Some of the bridges are defective, and the unevenness of the hard stratum under the foundations has been given as a reason for this, but the principles on which they were built do not appear to be satisfactory. The expenditure, the Governor remarked in his statement to the Legislative Council on the 13th May, is not an exhilarating subject. The original estimate, admittedly a very rough one and not including many important items such as rolling stock, workshops, &c., was \$5,053,274. The last estimate is \$11,004,118, but this is for a scheme widely different from that which was the subject of the original estimate. On this the

Governor stated : " I would remind you that the mere fact of inaccuracy in estimates does not mean a reflection on British engineering skill. It is due partly to the fact that we are engaged in constructing a tunnel such as has not been undertaken in this part of the world before, and the conditions of which both as regards labour and as regards explosives were extremely difficult to foresee. The variations under the estimates are also in part due to the fact that all the data of the railway were not known, and indeed are not known fully yet. Even had the railway been in the hands of contractors many items would of necessity have been excluded, for which supplementary estimates would have been required.

The South Indian Railway Co., Ltd., have agreed to lend the services of Mr. E. S. Lindsey temporarily so that he may undertake the duties of Chief Resident Engineer on the railway."

Ceylon.

The construction has been approved of a broad gauge railway from Madawachchi to Talai Manaar. The former place is a station on the Northern Railway 142 miles from Colombo, and the latter is at the north-western end of Manaar Island. The railway will run generally in a north-westerly direction and will be about $67\frac{1}{2}$ miles long. It will pass through gently undulating country on the mainland and will be carried to Manaar Island on an embankment, with openings where necessary. Screw pile piers will be provided at the northern and southern sides of that island. It is hoped that the line will secure all the passenger shipping traffic from the south of India to the east and west, as there will be a saving of time, and transshipment at Aden will be avoided. It is proposed therefore to use 80 lb. rails and lay a road which will enable comfortable rolling stock to be run at good speed. The steepest gradient will be 1 in 132 and the sharpest curve 19·10 chains in radius.

The best means of dealing with the traffic between the termini of the Indian and Ceylon Railway appears to be by steamers from Rameswaram Island to Talai Manaar, and two piers are proposed at the end of the Ceylon line, to enable steamers 250 feet long and drawing 10 feet to lie alongside. It is expected that if all the conditions are favourable the line will be completed in two years from the date when all the land is available.

The Secretary of State has approved a proposal to extend the railway which connects Colombo with Negombo in a northward direction as far as Chilaw. Instructions have been given for the preparation of detailed surveys and estimates for this line.

Nigeria.

On 27th August, 1908, the Lagos line to Ilorin, the 247 mile point, was opened, and the occasion witnessed the meetings of the Governors of Southern and Northern Nigeria at railhead. It was hoped that rails might have been brought to Jebba by the end of the year, but this result was not achieved. Progress on the extension to Zungeru, 120 miles from Jebba, was unsatisfactory owing to the inadequate labour supply. To link up the railway systems of Southern and Northern Nigeria about 40 miles of railway to connect Zungeru with the Baro-Kano railway are required. They are being constructed by Northern Nigeria, but will be part of the Lagos Railway.

The Lagos extensions are of an improved type compared with the parent line and are being constructed at less cost.

It is contemplated to bring the railway into Lagos and to construct new wharves at Wilmot Point, and a survey has been arranged for these objects.

It was expected that the Baro-Kano line would reach Zungeru from She at the end of October, but the end of the year seems now more likely. Progress on the Northern portion of the Jebba bridge has been delayed by sickness, and completion can hardly be looked for before April.

The gross revenue of the Lagos Railway in 1908 was £146,382 and the working expenses £103,425. The net receipts were considerably less than in 1907, partly in consequence of the slackness of trade and the partial failure of the cotton crop; but a more permanent cause is that the new lines above Oshogbo cannot be remunerative for the present or for some years to come. It may fairly be expected, however, that in a little time the rails will get much of the traffic that still goes by primitive transport, especially kola nuts, and a demand may spring up for shea nuts and butter from the country north of Oshogbo.

The report states that it has not been found possible so far to replace to any appreciable extent the comparatively highly paid European artisan by less expensive coloured skilled labour. The West Indians who have been tried have not been satisfactory. A few native youths have been trained, but on the whole the natives do not appear to make much use of the opportunities offered. Doubtless the efforts in this direction will bear more fruit in time, but it is a slow process.

Gold Coast.

The revenue of the Sekondi-Coomassie line in 1908 was £151,423 and the recurrent expenditure £75,124, the net revenue being equivalent to 4.15 per cent. on the capital account. The mining

inactivity has affected every feature of business, and probably the plague affected the traffic. There are signs, if market movements go for anything, that the mines are becoming more active and a better year may be looked for. The percentage of sickness among the European staff was 3·15; this clear proof of improved sanitary conditions should greatly encourage commercial enterprise.

A survey will be made with a view to the possible extension of the Accra-Akwapim line. It has been decided to extend the Accra breakwater by 250 feet.

Sierra Leone.

This line has a 2 feet 6 inches gauge, and it is found that the average load the engines are capable of hauling as compared with the Gold Coast Railway is only one-fifth, a result which may be cited as an argument against this narrow gauge in similar circumstances. The railway suffered from the depression of trade in 1908, but the main line would have shown a profit of about £10,000 but for an extraordinary expenditure of £16,422 on foot bridges, new quarters and rolling stock.

Uganda.

The accounts of this railway for 1908-9 show a slight increase of profit over the previous year, but the traffic seems now to have got to a stationary point for the present. The Acting Manager in his report states that: "East Africa differs from most new countries in which no sooner is a Railway constructed than a large volume of traffic flows in for export. Here, up to the present, little has been produced, and the Government has not only had to construct a Railway, but is loudly called on to provide almost everything else. Unfortunately we do not run to Rain Makers (that indigenous artist so cherished by the aborigines). The exceeding scantiness of the rainfall in this part of Equatorial Africa has for the past two years unquestionably checked progress prejudicially, and very largely accounts for the disappointment experienced. On all sides one hears the same story. Extended to Uganda this scanty rainfall has resulted in smaller loads for steamers and the curtailment of our longest lead and most profitable traffic.

"Up to the present the return from reduction in rates has about equalled economies and improvement in working. Nowhere has a reduced rate largely affected earnings, for the very good reason that most of the reductions have been inoperative through the insignificant volume of traffic offered, and beyond the benefit to the settlers and residents generally in lower rates on most of the necessities of life, there is little appreciable gain."

In East Africa everything depends on the rainfall, and if this fails crops will not grow, food is dear, and the expected traffic does not make its appearance. Every shortage of an inch of rain means the loss of many hundreds of tons of export.

Trinidad.

The revenue earned in 1907-8 (£102,624) was the highest in the history of the railways, and the surplus of earnings over working expenses covers the charge for interest and sinking fund and leaves a balance of £17,320. The carriage of sugar has increased, but the principal development has been in cocoa, which was disposed of largely at high prices. The colony is to be congratulated on a remarkable recovery.

Depreciation.

At a conference of General Managers of British West African Railways, held at Freetown in April, the question of renewal funds was considered. The necessity for replacements is of course accentuated by the destructive character of the climate. At present "The West African Railways are living to a considerable extent on the capital value of the permanent way, rolling stock, &c., and leaving to a subsequent period the provision for renewals." The contribution suggested, based on the estimated life of each class of asset, is as follows :—

Permanent way material	...	5	percent.	per annum	on capital cost.
Locomotive and rolling stock	...	7½	"	"	"
Brick and stone buildings	...	2	"	"	"
Wood and iron buildings	...	10	"	"	"
Plant and Machinery	...	7½	"	"	"

On the Great Indian Peninsula Railway carriages have been introduced, built with double walls to give protection from the intense heat, wood inside and steel out and in the intervening space a sheet of asbestos material is introduced, forming air-tight "pockets" between members of the framing. An electric fan is provided in each compartment, and it is found that swivelling bracket fans are most appreciated by the public since they can adjust the fans to their liking.

Rhodesian Railways.

In our last number we referred to a report that the closing of the main line north of the Victoria Falls was being thought of, and we are glad to learn that this is not the case. Before construction was undertaken special precautions were taken to ascertain that the prospects of traffic were good, and although up to the present the expectations have not been fulfilled, we understand that there is no idea of closing the line. The railway was planned on a business footing, and in good time may bear out anticipations.

MEDICAL NOTES.

TOWARDS the end of last year the Secretary of State appointed a Departmental Committee to enquire into the West African Medical Staff. Mr. H. J. Read, C.M.G., of the Colonial Office, was the Chairman, and the other members were Dr. T. Thomson, C.M.G., of the Local Government Board, Mr. W. H. Langley, C.M.G., F.R.C.S.I., Principal Medical Officer of the Gold Coast, Mr. J. K. Fowler, M.A., M.D., D.Sc., Senior Physician at the Middlesex Hospital, and late Dean of the Faculty of Medicine, London University, and Messrs. A. Fiddian and H. C. W. Verney of the Colonial Office. The Report of the Committee, together with a despatch from the Secretary of State transmitting it to the W. African Governors, has now been published as a Parliamentary paper [Cd. 4720. Price 2½d.]. Of the recommendations of the Committee the one which is likely to arouse most general interest is that for the establishment of an advisory Committee to deal with medical and sanitary questions in East as well as in West Africa. It is suggested that the Committee should be composed of two members of the Staff of the Colonial Office, one of whom should be chairman, and other members selected for their acquaintance with special branches of medical knowledge. Expert knowledge of tropical medical research, of tropical hygiene, of hygiene and sanitary administration at home, and of general medical science and practice in the United Kingdom, would in this way be represented upon it. It is also suggested that a retired Colonial Medical Officer of senior rank should be placed upon the Committee. The Committee "should be purely an advisory body, without any executive or administrative duties." They would consider such questions as schemes for

drainage and waterworks, plans for the prevention or eradication of epidemic disease, bacteriological research, &c.; and they would advise as to the selection of candidates, and the promotion of officers to fill vacancies in the senior ranks of the Service. This part of the Committee's recommendation has been accepted in its entirety by the Secretary of State. The Committee consider that the initial scale of salary of Medical Officers in West Africa (£400, rising by annual increments of £20 to £500) is adequate, but that the opportunities of promotion are hardly sufficient, and they recommend the establishment of a new grade of Medical Officers, with salary at the rate of £500, rising by annual increments of £25 to £600, to which officers should be eligible for promotion, when recommended by the Governor, conditionally on their undergoing a special course of study when on leave. This proposal has been accepted by the Secretary of State.

The War Office has published a Memorandum by the Director General of the Army Medical Service on the transmission of Enteric Fever by the "chronic carrier," and copies of it have been communicated to the Colonies by the Secretary of State in a circular despatch. In this Memorandum it is stated that "it may be taken as established that about 3 to 4 per cent. of convalescents from Enteric Fever become chronic carriers, and that in the neighbourhood of Enteric cases a small percentage of the community may be temporary harbourers of the bacillus." Full details are given of investigations carried out in France, in India, and at Netley and Millbank, and of the method of treatment adopted, with varying degrees of success, to eliminate the Typhoid bacillus from the "chronic carrier." It is clear that research on these lines is still very far from finality.

We have received three further Bulletins (Nos. 7, 8 and 9) issued by the Sleeping Sickness Bureau.

COLONIAL STAMPS.

In our issue of January last we pointed out that the colours of the 8d., 10d., 1s. 6d., 4s. and 8s. stamps would not in all cases be found to correspond exactly with the new colour scheme, inasmuch as the colours appropriated to the Key & Duty plates are reversed. It may interest some of our readers to know how this occurred.

The scheme was originally drawn up with a view to the stamps printed from the new Universal Keyplate, like those of the Nyasaland Protectorate. When these colours came to be applied to stamps printed from the old Universal Keyplate, it was found that the larger part of the stamp would have to be printed in the singly fugitive colour. This was not desirable, and it was decided to reverse the colours.

In a recent number of "Gibbons' Stamp Weekly" a statement appeared that the Straits Settlements Government adopted a fresh design for their 1, 3, 4, and 8 cents stamps for artistic reasons. The fact was that the numbers of stamps required of these values were sufficiently great to justify the expense of special plates so as to enable these stamps to be printed more cheaply. Whenever such special plates are required, it is, of course, possible without additional expense to vary the design of the border, and to do so presents many advantages which are worthy of consideration.

ANTIGUA has received a supply of 1d. stamps in one colour.

BERMUDA has had a supply of 2½d. stamps in one colour.

CAYMAN ISLANDS are adopting a 1d. postcard and newspaper wrapper.

GAMBIA.—1d. stamps have been supplied for the first time in the red colour generally adopted by the countries of the Postal Union instead of the carmine hitherto seen in these stamps.

GIBRALTAR.—2d. and 1s. stamps have now been printed in the new colour.

GOLD COAST.—1s. stamps in the new colours have been supplied.

JAMAICA.—The last supply of stamps included 3d. and 6d. stamps in the new colours and printed from the old Queen's Head plates. The paper is, as hitherto, unsurfaced.

It has been decided in future to print all stamps over the value of 2½d. in doubly fugitive ink, and consequently on surfaced paper. This decision was not arrived at until after the printing of the 3d. and 6d. stamps, the despatch of which is chronicled above.

ST. KITTS.—6d. stamps have been supplied for the first time on surfaced and multiple watermarked paper.

MALTA.—New $\frac{1}{2}$ d., 1d. and $2\frac{1}{2}$ d. stamps have been supplied.

The penny stamp has been for some time in use with the surcharge "Revenue," but not for Postal purposes.

MAURITIUS.—A supply of the new 1, 5, 8, 12, 25, and 50 cents and R.1, Rs.2.50 and Rs.5 stamps, referred to in our issue of October last, has been despatched, and in addition a supply of Rs.10 stamps printed from the old Universal King's Head Keyplate in the colours appropriated to the 10s. value in the new colour scheme.

Letter cards of the value of 4 cents are also a new feature.

MONTSERRAT.—The following stamps in the new colours have been despatched : 2d., 3d., 6d., 1s., 2s., 2s. 6d. and 5s. The transposition of the colours referred to above will be seen in the 5s. value owing to the preponderance in area of the border over the centre.

NATAL.—2d. stamps will in future be printed in all grey, and no more $1\frac{1}{2}$ d. stamps will be supplied.

ST. VINCENT.—With reference to the note in our last issue with regard to the colour of the 2d. stamps it of course followed that the 3d. stamp when required will be printed in the colour allocated to that value in the new colour scheme, which is not sufficiently dissimilar to that in which the 2d. stamp is at present printed. A supply of the 3d. stamps has now been made ; also of 1d. and 6d. stamps with the stops under the "d" of 1d. and 6d.

STRAITS SETTLEMENTS.—30 cents stamps, as described in our April issue, and \$2 stamps in the colours appropriated to 5s. and \$100 in those appropriated to the 3d. value, but with the name of the Colony and value in green, have been despatched.

TRANSVAAL.—2d. stamps in all purple will shortly be despatched. 6d. stamps on ordinary and £1 on specially surfaced paper have been supplied. In the two latter cases the existing colours have been retained.

TRINIDAD.—A supply of the new 1d. stamps referred to in our April number has been despatched.

TURKS AND CAICOS ISLANDS.—The complete series of new copper-plate stamps have been supplied, as described in our last issue. The values are the same as hitherto.

THE GOVERNMENT OF BRITISH HONDURAS has instructed the Crown Agents for the Colonies to announce that the whole remaining stock of Queen's Head stamps is for sale in this country. The stock includes a number of 25 cents stamps surcharged "Revenue." These stamps were not used solely for revenue purposes but were, and are still, available for prepayment of postal charges. The whole series of stamps was in exclusive use for a few months ending September, 1907, owing to the stock of King's Head stamps received in December, 1906, being found to be defective.

Particulars of the stamps may be obtained on application at the Crown Agents' office in Whitehall Gardens.

The Colonial Service.

10, PARK TERRACE, OXFORD,

5th August, 1909.

THE EDITORS OF "THE COLONIAL OFFICE JOURNAL."

DEAR SIRS,

Will you allow me a word of reply to the interesting and courteous criticism in your July number of my lecture in Brussels on British colonisation in the Tropics?

You say that I am "somewhat unduly pessimistic." As Belgium possesses a Home Civil Service inferior only to our own, it seemed unnecessary to dwell with emphasis on some of our more obvious merits; on the other hand, she is now endeavouring to call into existence a colonial service, and that, too, in a region where neither the existing system nor its administration are satisfactory. In these circumstances it seemed to me most likely to profit my audience if I pointed out in some detail the errors which we had made and were making. Viewed as a complete statement of the present position and tendencies of our colonial administration, my lecture was therefore incomplete.

In reply to my charge that an insufficient number of officials at the Colonial Office have first hand information regarding the Colonies, your answer is in effect that I underrate the number who have such knowledge, and that such knowledge is a highly dangerous thing for them to possess. "The knowledge acquired soon gets out of date, and it would obviously be unsafe to rely much on it. Any attempt by the civil servants at home to judge colonial questions upon facts which they have themselves collected is sure to be dangerous." Here I think that you underrate the intelligence of your colleagues. They are not half-educated M.P.'s or globe-trotting journalists, but the pick of our English Universities, and can be trusted to use even a little knowledge in the proper way. Both the Office in Downing Street and the Crown Agents' Department are constantly required to decide questions of administration or of the purchase of supplies; at present they are frequently compelled either to confine themselves to minuting and tying up in pink tape the proposals of the man on the spot, or to decide without local knowledge between the claims of rival experts. Some of the worst mistakes of the Office in the past have been due to inability to see that the local officer was not an expert but a faddist, others to inability to see that he was not a faddist but an expert. You say that "the essential question is not how much

the handful of men in the Colonial Office have seen of the colonies, but how the local work is done by the men who are sent out to do it." I agree; but surely the best way of finding out how it is done is by going to see. "The Colonial Office criticises, controls, and assists administration;" I refuse to believe that men of the intelligence and training of the Colonial Office Staff would not criticise, control, and assist the administration of East Africa or Northern Nigeria more efficiently if to their intelligence and training were added local knowledge, and the sympathy which local knowledge gives.

I am glad that you agree with me that in the training of our colonial service there is room for improvement. The average man whom I have met goes out with the feeling that if he treats the natives in a sporting spirit of English fair play, all will be well. To me it seems highly desirable that he should add to this at least the knowledge that the tribes with whom he is to deal have highly complicated legal and social systems, based on ideas of justice differing widely from our own. To train candidates in all the minutiae of native law, custom, religion and language, is, of course, neither desirable nor possible; but to raise the present three-month course to at least six and to add to it definite anthropological instruction would do much to make the first steps of the young administrator more sure and wise. At the end of this lengthened course there should be a much more stringent examination than at present. I do not think that we should imitate the method of the Indian service and choose our candidates by examination. Better results are in my judgment attained by the present method of selection; but when candidates have been selected, their course of training should be made a reality by a stringent examination at its close.

Our differences are rather of emphasis than of principle; it is therefore unnecessary for me to worry you with a longer letter.

I am, yours etc.,

W. L. GRANT.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Captain J. QUAYLE DICKSON, D.S.O. (late Native Adviser, Orange River Colony), Deputy Commissioner and Resident, Gilbert and Ellice Islands.

Dr. T. A. DOWSE (Government Medical Officer, Fiji), District Commissioner and Government Medical Officer, Caicos Islands.

Mr. W. A. BOWRING (Local Auditor, Uganda), Island Treasurer, Cyprus.

Mr. G. A. NEVILL (retrenched from South African Constabulary), District Resident, Third Class, Nyasaland.

Mr. H. P. HART (retrenched from South African Constabulary), District Superintendent of Police, Uganda.

Mr. G. W. LYALL (retrenched from the Transvaal Civil Service), Chief Clerk in Secretariat, Uganda.

Mr. G. W. KNAPMAN (retrenched from the Transvaal Civil Service), Head Clerk in Land Office, East Africa Protectorate.

Mr. R. HART (Postmaster, Nyasaland), First Class Postmaster, East Africa Protectorate.

Dr. R. A. CLEVELAND (District Medical Officer, Cyprus), Chief Medical Officer, Cyprus.

Mr. A. EARNSHAW (Stipendiary Magistrate, British Guiana), Puisne Judge, Gold Coast.

Mr. A. F. C. WEBER (Stipendiary Magistrate, British Guiana), Puisne Judge, Southern Nigeria.

Mr. J. F. CARGILL (Resident Magistrate, Jamaica), Puisne Judge Jamaica.

- Mr. E. St. J. BRANCH (Colonial Secretary and Attorney-General, Leeward Islands), Attorney-General, Jamaica.
- Mr. H. E. W. GRANT (Colonial Secretary, Falkland Islands), Colonial Secretary, Leeward Islands.
- Mr. J. BROMHEAD MATTHEWS (Attorney-General, Bahamas), Attorney-General, Straits Settlements.
- Mr. W. S. WRIGHT (Assistant District Commissioner, Uganda), Registrar of the High Court, East Africa Protectorate.
- Mr. N. C. RUGGLES (late Assistant Resident Magistrate, Transvaal), District Magistrate, Dominica.
- Mr. A. L. CASTELLAIN (retrenched from South African Constabulary), District Commissioner, Northern Territories, Gold Coast.
- Captain W. SWIRE (Company Commander, Somaliland Standing Militia), District Commissioner, Northern Territories, Gold Coast.
- Mr. C. W. WELMAN (late of Education Department, Transvaal), Assistant District Commissioner, Gold Coast.
- Colonel C. A. FRANCIS (Commandant of Armed Constabulary, Fiji), Stipendiary Magistrate, British Guiana.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ATKINSON, J. ...	7 Oct., '09	FELL, T. E. ...	24 Oct., '09
BRANCH, H. C. ...	21 Sept., '09	FULLER, F. C., C.M.G. ...	31 Oct., '09
BARTON, P. F. ...	12 Oct., '09	FISHER, W. A. ...	4 Dec., '09
BRISTOWE, L. W. ...	27 Dec., '09	GALE, E. E. ...	20 Nov., '09
BERKELEY, H. M. H. ...	17 Dec., '09	GRIFFITH, Sir W. BRAND-	11 Nov., '09
c/o Messrs. Richardson		FORD.	
& Co., Suffolk St., Pall		GORDON, Capt. W. F. L.	18 Jan., '10
Mall, W.		HOBBS, H. J. ...	20 Oct., '09
CARTER, W. J. B. ...		HEARNshaw, W. ...	21 Oct., '09
CLARKE, R. A. ...	26 Nov., '09	HAMMOND, A. H. ...	17 Oct., '09
CULLIP, J. A. ...	17 Oct., '09	HARRISON, E. L. ...	28 Nov., '09
COCHRAN, Capt., H. P. G.	26 Sept., '09	HIGHAM, R. ...	9 Dec., '09
DUDGEON, G. C. ...		JARDINE, J. ...	18 Oct., '09
c/o Messrs. Grindlay &		JENSEN, O. ...	25 Sept., '09
Co., 54, Parliament		JOHNSTONE, Capt. B. ...	
St., S.W.		c/o Messrs. Cox & Co.,	
ELMES, G. B. ...	4 Dec., '09	16, Charing Cross, S.W.	
EWALD, Capt. F. C. T.	27 Nov., '09	JACKSON, F. W. F. ...	20 Oct., '09
c/o Messrs. Cox & Co.,		Junior Naval and Milit-	
16, Charing Cross, S.W.		tary Club, 96, Picca-	
ELKAN, C. J. ...	25 Oct., '09	dilly, W.	
Junior Naval and		LUMSDEN, A. F. ...	30 Sept., '09
Military Club, 96,		LE FANU, Dr. C. V. ...	21 Oct., '09
Piccadilly, W.		LATHAM, H. ...	31 Oct., '09

GOLD COAST—continued.

LOURY, T. M. ...	7 Nov., '09	ROBERTSON, W. C. F. ...	5 Nov., '09
MCGILL, D. ...	24 Nov., '09	RUBERY, C. ...	2 Oct., '09
McMULLIN, A. J. F. ...	10 Nov., '09	SMITH, W. E. ...	4 Nov., '09
MIGEOD, F. W. H. ...	10 Nov., '09	SEDDON, T. R. ...	7 Oct., '09
MAYALL, R. P. W. ...	29 Sept., '09	SHELLEY, C. V. M. ...	
Royal Colonial Institute, Northumberland Avenue, W.C.		c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
MULGRUE, Capt. E. C. ...	23 Nov., '09	STANLEY, R. ...	27 Nov., '09
NASH, Capt. S. D. ...	12 Oct., '09	STEWART-RICHARDSON, G.N.	
OKELL, G. ...	20 Nov., '09	TIPLADY, C. E. ...	2 Oct., '09
PALMER, Dr. H. T. ...	22 Oct., '09	TIGHE, Dr. A. B. ...	23 Sept., '09
RIBY WILLIAMS, C., C.M.G.		WALE, W. C. ...	7 Oct., '09
ROSS, H. ...	27 Nov., '09	WARDEN, Capt. E. O. ...	3 Nov., '09
Junior Constitutional Club, Piccadilly, W.		Junior United Ser- vice Club, Charles Street, S.W.	
READ, Capt. B. M. ...	30 Nov., '09	WILKINSON, E. F. W. ...	13 Dec., '09
Sports Club, St. James' Square, S.W.		WRIGHT, G. W. F. ...	15 Nov., '09
RUTHERFORD, A. ...	4 Oct., '09		

GAMBIA.

BOYD, W. ...	2 Oct., '09	MACAFFER, M. ...	28 Sept., '09
BROWN, J. ...	24 Nov., '09	PRYCE, H. L. ...	Due back
HUME, E. A. ...	Due back		29 Oct., '09
	15 Nov., '09	PIERCE, T. E. ...	26 Nov., '09
KINGDON, D. ...	8 Oct., '09	SANGSTER, G. H. ...	Due back
MEAD, F. W. ...	2 Oct., '09		11 Nov., '09
McCALLUM, J. K. ...	Due back	SPROSTON, H. F. ...	27 Oct., '09
	28 Oct., '09		

SIERRA LEONE.

ANDREWS, E. ...	14 Oct., '09	NEWSTEAD, Capt. G. P. ...	9 Oct., '09
ALLAN, Dr. C. H. ...	2 Nov., '09	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
ATTON, H. K. ...	19 Oct., '09	PROBYN, L., C.M.G. ...	25 Nov., '09
ALDWORTH, F. ...		PAGE, G. W. ...	
BARKER, E. H. ...	20 Nov., '09	RANSLEY, W. ...	Due back
CORNER, G. H. ...	7 Oct., '09		21 Oct., '09
DAVIES, J. S. T. ...	11 Dec., '09	RENNER, Dr. W. ...	14 Nov., '09
FARRAR, A. ...	21 Sept., '09	REID, A. E. ...	4 Nov., '09
GLOVER, T. T. ...	13 Oct., '09	SMITH, J. A. ...	4 Nov., '09
HOLLOWAY, W. J. ...	Due back	SMITH, H. ...	10 Nov., '09
	21 Oct., '09	SHREWSBURY, C. R. ...	6 Oct., '09
JEBB, R. R. ...	27 Nov., '09	TOWNSEND, W. R. ...	23 Nov., '09
JOHNSTONE, R. M. ...	2 Oct., '09	TINLING, J. A. ...	4 Dec., '09
LUKACH, H. C. ...		VARLEY, G. ...	27 Nov., '09
MARTIN, J. D. ...	2 Oct., '09	WARREN, Maj. H. G. ...	27 Dec., '09
MILES, W. J. ...	7 Oct., '09	WILLOUGHBY, E. D. ...	20 Nov., '09
MURPHY, Capt. E. H. ...	7 Oct., '09	WOOD-MASON, Dr. E. W. ...	15 Nov., '09
NEWTON, J. J. ...	20 Nov., '09	WHITE, R. ...	21 Oct., '09

SOUTHERN NIGERIA.

ALEXANDER, C. W. ...	16 Nov., '09	DOWERS, H. ...	31 Oct., '09
AMBROSE, Capt. W. G. ...	15 Nov., '09	DISLEY, A. F. ...	9 Dec., '09
BRIGGS, Miss E. ...	24 Oct., '09	FARQUHAR, J. H. J. ...	31 Oct., '09
BARLEY, A. ...	10 Dec., '09	FAIRBAIRN, S. A. C. ...	7 Dec., '09
BARLOW, R. J. ...	27 Nov., '09	FOSTER, E. W. ...	5 Oct., '09
BROWNE, E. M. ...	7 Dec., '09	FURLONG, A. E. ...	27 Nov., '09
BEEHAM, P. H. ...	14 Oct., '09	FINLAY, J. D. ...	
BINNY, J. M. ...	27 Nov., '09	FILGATE, R. J. ...	27 Nov., '09
Constitutional Club, Northumberland Avenue, W.C.		c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
BROWN, G. A. ...	30 Nov., '09	GREENSTOCK, A. ...	21 Oct., '09
BIRD, H. J. ...	12 Nov., '09	GRAHAM, F. R. W. ...	5 Nov., '09
BEDWELL, H. ...	31 Oct., '09	GLEDALL, E. D. ...	20 Nov., '09
c/o Sir C. R. McGrieger, Bart., & Co., 25, Charles Street, S.W.		GILCHRIST, A. M. ...	11 Nov., '09
BEATTY, G. ...	26 Dec., '09	Sports Club, St. James' Square, S.W.	
BELLAMY, C. V. ...	20 Nov., '09	GREEN, J. E. ...	
BAKER, Lt. A. C., R.N.R.	21 Oct., '09	GOODWIN, A. J. ...	26 Sept., '09
Blenheim Club, 28, King Street, St. James', S.W.		HILSDON, J. E. ...	20 Nov., '09
BAIRNSFATHER, G. ...	2 Oct., '09	HORDERN, A. D. ...	24 Oct., '09
BURTON, A. P. ...	31 Oct., '09	HOMAN, H. L. ...	20 Nov., '09
BOYSON, W. ...	19 Oct., '09	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
BALNAVE, W. F. ...	2 Oct., '09	HAWKINS, I. T. ...	14 Oct., '09
BRUCE, Maj. G. E. ...	6 Nov., '09	Royal Societies Club, St. James's Street, S.W.	
c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.		HALE, Lt. L. J., R.N.R.	15 Dec., '09
CHEETHAM, Lt. H. C.	27 Nov., '09	HOSKIN, F. ...	7 Nov., '09
V. B.		HAMPER, Capt. A. G. M.	7 Dec., '09
COTTON, E. P. ...	14 Oct., '09	N.	
Royal Colonial Institute, Northumberland Avenue, W.C.		HIVES, F. ...	27 Oct., '09
CRAWFORD, W. E. B. C.	2 Oct., '09	ISON, T. A. ...	7 Oct., '09
CHAMBERS, C. H. ...	6 Nov., '09	INGLES, F. H. ...	2 Oct., '09
COAKLEY, J. L. ...		INSLEY, T. B. ...	
CLAYDON, B. ...	15 Nov., '09	JACKSON, G. ...	
DERRIMAN, F. H. ...	11 Oct., '09	JAMES, F. S., C.M.G. ...	31 Oct., '09
DAVIS, B. ...	Due back 15 Nov., '09	St. James' Club, Piccadilly, W.	
DAVIDSON, J. ...	14 Oct., '09	KILLEHER, Dr. E. J. ...	23 Nov., '09
DUNCOMBE, H. F. ...	12 Oct., '09	KIRKLAND, J. H. ...	17 Nov., '09
Constitutional Club, Northumberland Avenue, W.C.		LAPPER, W. J. ...	6 Nov., '09
DOUGLAS, H. M. ...	15 Nov., '09	LUMLEY, G. ...	24 Oct., '09
DE LIVERA, C. ...	14 Dec., '09	LAMBERT, J. A. P. ...	10 Nov., '09
DAVIDSON, H. J. ...	21 Oct., '09	LOMAX, J. F. ...	12 Oct., '09
		LINDLIGHT, T. ...	15 Nov., '09
		McCORKINDALE, D. ...	10 Dec., '09
		MCDONALD, J. F. ...	9 Dec., '09
		MANNERS, Dr. W. F. ...	15 Dec., '09
		MORLEY, Capt. C. ...	

SOUTHERN NIGERIA—*continued.*

MANDER, R.	RYDER, D. J.	14 Oct., '09
MADDISON, T.	ROSS, W. A.	19 Jan., '10
MUIRHEAD, J.	Caledonian Club, 30,	
MCCALLUM, R.	Charles Street, S.W.	
MILLS, H. M.	ROBERTS, D.	4 Dec., '09
MOORMAN, F. W.	SMITH, F.W.	14 Oct., '09
MIRS, M. C. C.	SCOTT, J.	27 Nov., '09
MOREHEAD, Dr. H. R.	SINCLAIR, Capt. F.	26 Nov., '09
McKAY, J. H.	SELF, J.	
MORFORD, J.	STONE, J. E.	12 Oct., '09
NICOLSON, F.	SHARP, N. H.	17 Nov., '09
NEILL-KREITH, D.	SOUTH, G. F.	31 Oct., '09
NICHOLS, R. J.	SIDDLE, T.	27 Nov., '09
OGILVIE, C. S.	SHEPHERD, C. W.	2 Dec., '09
PICKWOOD, C. A.	TAYLOR, V. B.	13 Oct., '09
PATTINSON, H.	THOMAS, E. N.	21 Oct., '09
PARTRIDGE, C.	THOMPSON, Dr. F. B.	14 Oct., '09
PALMER, E. C.	WELPHY, Dr. R.	14 Dec., '09
c/o Sir C. R. McGrigor	WILLIAMS, J.	20 Nov., '09
Bart & Co., 25, Charles	WHISKER, L. P.	7 Oct., '09
Street, S.W.	WHEELWRIGHT, J. C.	21 Oct., '09
PONTIFEX, S. C. O.	WILSON, Lt. J. D.,	
Imperial Colonial Club,	R.N.R	
84, Piccadilly, W.	WIMBERLEY, H. I. A.	24 Oct., '09
ROSS, W. J.		
21 Oct., '09		

NORTHERN NIGERIA.

ANDERSON, Capt. G.	CARLETON, C. A. S.	4 Dec., '09
BOND, J.	CASTRO, G. H.	11 Oct., '09
BOYD, J. H.	COOK, J.	9 Oct., '09
BOSTOCK, D. C.	DEARING, W.	5 Oct., '09
BRENCHLEY, A.	EDWARDES, H. S. W.	25 Oct., '09
BLAKENEY, Maj. J. E. C.	EDGAR, Major F.	30 Nov., '09
Junior United Service	ELLIOTT, C.	2 Oct., '09
Club, Charles Street.	Junior Naval and	
BUCKLE, E.	Military Club, 96, Pic-	
BERESFORD, M.H. de la P.,	cadilly W.	
I.S.O.	ENSELL, A. H.	25 Oct., '09
BOWLBY, T. R.	FITZ-HENRY, W. C.	22 Oct., '09
Junior Naval and	FRASER, W. K.	11 Nov., '09
Military Club, 96, Pic-	FRANCIS, A. C.	1 Nov., '09
cadilly, W.	GABBETT, G. F. A.	13 Nov., '09
BISSELL, Capt. F. E.	GALE, F. B.	30 Dec., '09
BYFIELD, B. D.	Thatched House Club,	
BIRKETT, T.	St. James' Street, S.W.	
CABILL, J. F.	GILCHRIST, A. F.	6 Oct., '09
COATSWORTH, J. P.	GREENE, J.	27 Nov., '09
CHATTOR, E. A.	Cavalry Club, Picca-	
Junior Naval and	dilly, W.	
Military Club, 96, Pic-	GATFORD, T.	9 Dec., '09
cadilly, W.	GUY, D.	15 Oct., '09

NORTHERN NIGERIA—continued.

GLENTWORTH, J. ...	9 Nov., '09	SWANN, Dr. A. J. T. ...	1 Dec., '09
HILL, J. F. ...	21 Oct., '09	STRICKLAND, Col. E. P.,	25 Dec., '09
HOPKINSON, Capt. J. H.	1 Oct., '09	D.S.O.	
HAY, C. S. ...	28 Oct., '09	Naval and Military	
HUGHES, T. G. ...	31 Oct., '09	Club, 94, Piccadilly,	
HAYES, C. O'C. ...	6 Nov., '09	W.	
HAY, M. J. ...	14 Oct., '09	SIMPSON, Capt. J. M. ...	12 Oct., '09
HAMMOND, A. E. C. ...	2 Oct., '09	SOMERVILLE, J. ...	6 Nov., '09
JONES, W. B. ...	27 Nov., '09	Royal Societies Club,	
JORDAN, H. E. ...	10 Oct., '09	St. James' Street, S.W.	
KILLINGBECK, J. J. ...	4 Oct., '09	SCIORTINO, J. C. P. ...	3 Oct., '09
KERRISON, W. J. ...	11 Nov., '09	STACEY, R. ...	8 Oct., '09
KING, G. C. W....	16 Jan., '10	REARDEN, Miss E. M.	9 Dec., '09
LANG, D. H. ...	4 Dec., '09	SEARIGHT, Maj. H. H.	4 Nov., '09
c/o Messrs. Way & Co.,		Army and Navy Club,	
11, Haymarket, W.		Pall Mall, S.W.	
LOWDEN, N. ...	22 Oct., '09	STONE, A. M. ...	30 Sept., '09
MOWATT, M. ...	9 Dec., '09	SHAW, R. ...	2 Oct., '09
MATHEW, Maj. W. M. ...	25 Sept., '09	SHAMP, E. S. ...	25 Oct., '09
McKINNEY, Dr. H. G. ...	10 Oct., '09	TINGEY, S. ...	9 Oct., '09
NORMAN, G. B. ...	30 Dec., '09	THESIGER, G. E. P. ...	Due back
OAKELEY, Dr. A. E. ...	20 Nov., '09		6 Dec., '09
OLDERSHAW, H....	30 Nov., '09	THOMSON, W. B. ...	1 Oct., '09
POSTANCE, M. A. ...	13 Nov., '09	VERTUE, G. N. ...	2 Nov., '09
PEARSON, J. ...	12 Oct., '09	VAUDREY, W. ...	10 Oct., '09
PHILLIPS, T. B. ...	20 Nov., '09	WARNOCK, A. ...	15 Nov., '09
PUTLAND, G. B. ...	21 Nov., '09	WOODHOUSE, C. A. ...	21 Oct., '09
PURDY, Miss E. J. ...	7 Nov., '09	WEBSTER, G. W. ...	
QUINN, J. ...	15 Dec., '09		

NYASALAND.

BEST, T. A. V. ...	1 Nov., '09	NORRIS, Dr. S. K. ...	29 Jan., '10
BEAUMONT, G. N. ...	19 Oct., '09	SMITH, W. H. ...	8 Dec., '09
GORDON, R. W. ...	28 Dec., '09	TADMAN, Miss A. M. ...	
LETTIS, E. J. ...	6 Dec., '09	VERTUE, G. E. B. ...	16 Nov., '09
McRAE, Capt., H., St. G.	28 Dec., '09	WEBB, F. ...	28 Dec., '09
c/o Messrs. H. S. King			
& Co., 9, Pall Mall,			
S.W.			

EAST AFRICA.

BAKER, H. H. ...	27 Nov., '09	DODD, F. de R. ...	1 Dec., '09
CAMPBELL, C. H. ...	27 Oct., '09	DOBBS, C. M. ...	27 Nov., '09
CRAWFORD, Miss S. ...	6 Dec., '09	DALLAS, J. F. ...	13 Dec., '09
CARPENTER, L. ...	27 Dec., '09	EVANS, J. A. ...	2 Nov., '09
CURRIE, H. A. F. ...	27 Oct., '09	EVANS, J., ...	25 Oct., '09
CHEVALLIER, Dr. C. L. ...		FAWCETT, F. ...	27 Oct., '09
CRAIGIE, HALKETT, Capt. H. M.,		FISHER, C. D. ...	6 Jan., '10
Caledonian Club,		GOBLING, J. T. ...	27 Oct., '09
30, Charles Street,		HUMPHREY, R. W. ...	27 Oct., '09
S.W.		HALL, H. A. L....	27 Nov., '09
DOHERTY, A. G....	27 Dec., '09		

Colonial Officials on Leave.

179

EAST AFRICA—continued.

HARTNETT, M. ...	27 Nov., '09	MONTGOMERY, Lt. Col.	27 Oct., '09
HEMSTED, R. W. ...	6 Jan., '10	J. A. L., C.S.I.	
HAYWOOD, C. W. ...	6 Jan., '10	c/o Messrs Coutts &	
ISAAC, F. W. ...	27 Oct., '09	Co., 440, Strand, W.C.	
JAMES, G. A. ...	27 Dec., '09	PANTING, J. C. P. ...	27 Oct., '09
Westminster Club,		PATTERSON, J. ...	14 Dec., '09
Whitehall Court, S.W.		ROSS, W. Mc. G. ...	6 Dec., '09
JOHNSON, Dr. J. T. C. ...	23 Dec., '09	REID, A. W. ...	27 Dec., '09
Royal Societies Club,		SALKELD, Capt. R. E. ...	24 Nov., '09
St. James' Street, S.W.		STEPHENS, F. G. ...	27 Nov., '09
KELL, P. A. G. ...	27 Oct., '09	TOWAN, J. ...	27 Oct., '09
KENTON-SLANEY, N. A. ...	14 Dec., '09	WEBBER, C. W. ...	3 Nov., '09
New Club, Grafton St.		WALKER, H. ...	27 Oct., '09
W.		YOUNG, H. A. ...	27 Oct., '09
MILTON, J. H. ...	27 Oct., '09		

UGANDA.

ALLEN, R. C. ...	14 Dec., '09	GRAY, Capt. A. C. H. ...	24 Oct., '09
BOWRING, W. A. ...	16 Nov., '09	MOORE, S. ...	25 Nov., '09
BELL, Sir H. H., ...	3 Nov., '09	McClure, A. ...	27 Nov., '09
K.C.M.G.		NICOLSON, Capt. W. H. ...	27 Oct., '09
Conservative Club,		c/o Messrs. Grindlay	
St. James' St., S.W.		& Co., 54, Parliament	
BURTON, Capt. E. F. W. ...	3 Nov., '09	St., S.W.	
BROWNING, S. ...	27 Nov., '09	NEWMAN, F. H. ...	26 Dec., '09
COOPER, P. W. ...	27 Dec., '09	RUSSELL, J. P. ...	14 Dec., '09
CARR, S. H. ...	27 Nov., '09	SMITH, G. D., C.M.G. ...	14 Dec., '09
COLLYNS, Dr. J. M. ...	27 Oct., '09	STRATHAIRN, Dr. J. C. ...	27 Oct., '09
CUBITT, L. H. ...	27 Oct., '09	SPENCER, C. E. ...	27 Dec., '09
DAWE, M. T. ...	24 Dec., '09	TOLLAND, J. P. ...	14 Dec., '09
EDEN, C. W. Guy ...	9 Dec., '09		

SOMALILAND.

BURNSIDE, Capt. F. R. ...	1 Jan., '10	SWIRE, Capt. W. ...	
c/o Messrs. Cox & Co.,		WILBRAHAM, R. F. B. ...	4 Nov., '09
16, Charing Cross,		Bath Club, 34, Dover	
S.W.		Street, W. ...	
HIGGINS, E. S. ...	24 Oct., '09		
c/o Messrs. H. S.			
King & Co., 9, Pall			
Mall, S.W.			

BECHUANALAND.

JONES, M. ...	31 Oct., '09	MORRIS, C. R. ...	18 Jan., '10
---------------	--------------	-------------------	--------------

BASUTOLAND.

DENNY, Miss B. W. ...	13 Dec., '09	MACFARLANE, Dr. N. M.	31 Jan., '10
c/o Messrs. Coutts &			
Co., Strand, W.C.			

SWAZILAND.

HONEY, G. de S. N. ... 14 Dec., '09

GIBRALTAR.

CROOK, J. R. ...	GREENWOOD, A. C. ... 18 Oct., '09
	c/o London City &
	Midland Bk. Ltd.,
	129, New Bond St., W.

FALKLAND ISLANDS.

HURST, G. ... 5 Apr., '10

FIJI.

BOOTH, R. M. ... 2 Feb., '10 | FARRINGTON, Dr. J. ... 26 Nov., '09

CYPRUS.

BUCKNILL, J. A. ... 17 Nov., '09	GORE, Lt.-Col. J. C. ... 3 Oct., '09
CADE, C. S. ... 17 Nov., '09	MACKAY, W. J. ... 7 Nov., '09
CLEVELAND, Dr. R. A. ... 29 Sept., '09	MCDONALD, E. ... 1 Oct., '09

BRITISH HONDURAS.

CUTBERT, M. ... 24 Oct., '09 | CLEMENTS, W. H. ... 28 Oct., '09

ANTIGUA.

NUGENT, O. ... 14 Nov., '09 | OLIPHANT, Dr. F. B. ... 25 Dec., '09

LEEWARD ISLANDS.

UDAL, J. S. ... 28 Oct., '09

ST. LUCIA.

DOUGLAS, W. J. ... 10 Jan., '10 | MOORE, J. C. ... 25 Nov., '09

ST. VINCENT.

SHAW, W. S. ... 11 Oct., '09

ST. KITTS.

MCDONALD, Dr. W. M. 28 Nov., '09 | ROXBURGH, T. L. ... 24 Oct., '09

BARBADOS.

BLACKWOOD, Lord B. ...	10 Nov., '09	SMITH, F. S. ...	5 Nov., '09
BRIGGS, N. F. ...	9 Nov., '09		

BAHAMAS.

BILTCLIFFE, H. R. ...	30 Nov., '09	JOHNSTONE, R. S. ...	8 Nov., '09
DUNCOMBE, F. A. C. ...	24 Oct., '09		

TRINIDAD.

ACTON, Capt. W. H. M. ...	29 Sept., '09	GAUGHAN, J. ...	27 Oct., '09
BURROWS, A. ...	27 Oct., '09	HART, H. G. ...	12 Jan., '10
COOMBS, Commr. W. H., R.N. ...	7 Dec., '09	KNAGGS, S. W. ...	30 Nov., '09
CLARE, H. L. ...	24 Nov., '09	MOORE, W. G. ...	11 Nov., '09
COCHRANE, C. S. ...	8 Dec., '09	MACFARLANE, Dr. J. A. ...	2 Oct., '09
DUMORET, R. ...	2 Nov., '09	PANTIN, C. G. ...	10 Nov., '09
FLOOD, Miss M. T. ...	8 Nov., '09	STONE, E. F. ...	30 Oct., '09
GRAVELEY, Dr. J. G. ...	5 Oct., '09	SMITH, W. B. ...	4 Dec., '09
		SWAIN, Lt.-Col. G. L. D. ...	13 Dec., '09

BRITISH GUIANA.

BOVELL, Sir H. A. ...	14 Oct., '09	JEMMOTT, Rev., A. M. B. ...	9 Feb., '10
COOK, W. H. ...	25 Dec., '09	KING, E. H. ...	11 Dec., '09
CRICKSHANK, J. G. ...	14 Dec., '09	LOVELUCK, E. ...	28 Oct., '09
CASWELL, Very Rev. Dean. ...	28 Mar., '10	MASSIAH, E. G. ...	11 Nov., '09
DORNFORD, L. ...	28 Nov., '09	MASON, G. F. ...	14 Jan., '10
FAIRBAIRN, T. ...	9 Dec., '09	MAY, F. ...	9 Apr., '10
FOWLER, F. ...	28 Jan., '10	NUNAN, J. J. ...	5 Oct., '09
FERNANDES, Dr. F. ...	17 May, '10	PARKER, W. A. ...	28 Oct., '09
GREENE, J. B. ...	30 Oct., '09	RITCHIE, Rev. W. B. ...	23 Oct., '09
HODGSON, Sir F. M., K.C.M.G. ...	29 Sept., '09	SPENCE, R. O. H. ...	5 Oct., '09
		TENGELY, G. A. ...	31 Dec., '09
		WINCKLER, Dr. W. J. Von. ...	14 Oct., '09

JAMAICA.

ALEXANDER, T. ...	15 Oct., '09	MAUNSELL, G. E. ...	4 Nov., '09
BALFOUR, D. ...	31 Dec., '09	MORRIS, P. H. ...	28 Feb., '10
CLARKE, Sir F. ...	17 Dec., '09	MOSELEY, Dr. C. A. ...	31 Dec., '09
D'ACTE, J. ...	5 Nov., '09	NOSWORTHY, R. ...	15 Oct., '09
FACEY, L. H. ...	17 Nov., '09	ROBINSON, H. C. ...	30 Nov., '09
HOLLIS, H. ...	16 Jan., '10	SHERIDAN, J. W. ...	12 Oct., '09
HARGREAVES, Dr. G. ...	7 Nov., '09	TAYLOR, F. E. ...	28 Oct., '09
MAIR, T. ...	17 Oct., '09	THOMSON, Dr. C. A. H. ...	7 Oct., '09
MORTLOCK, H. W. ...	18 Nov., '09	THOMPSON, T. C. D. ...	5 Nov., '09
MCGRATH, G. P. ...	19 Nov., '09		

MAURITIUS.

ARMSTRONG, A. ...	5 Mar., '10	GANACHAUD, O. ...	24 Dec., '09
BERNON, E. ...	26 Dec., '09	LINCOLN, G. ...	24 Dec., '09
CANTIN, A. ...	31 Oct., '09	MAY, L. ...	26 Dec., '09
D'AVRAY C. A. ...	26 June '10	O'NEIL Rt. Rev. P. A....	28 Nov., '09

SEYCHELLES.

CHITTY, L. O. ...	7 Mar., '10
-------------------	-------------

STRAITS SETTLEMENTS.

ACTON R. D. ...	17 June '10	KILLOURBY, D. ...	31 Mar., '10
Sports Club St. James' Square, S. W.		KELLEHER, J. M. ...	16 Apl., '10
BOOMGARDT, Miss E. ...	21 Oct., '09	KING, J. L. ...	30 May, '10
BELL, W. G. ...	30 Nov., '09	KENALLY, J. ...	31 Jan., '10
BRERETON, H. ...	5 May, '10	LIVINGSTONE, A. D. ...	17 Nov., '09
BAILEY, A. W. ...	1 Mar., '10	MICHELL, W. C. ...	2 Feb., '10
COXADEN, W. A. ...	19 Jan., '10	MURPHY, P. ...	16 Dec., '09
CHEVALLIER, H. ...	14 Dec., '09	MARRIOTT, H. ...	31 Mar., '10
COSGRAVE, W. N. ...	10 Mar., '10	MURPHY, P. M. ...	12 May, '10
CRAWLEY, G. W. ...	21 Apl., '10	MEREDITH, R. W. ...	18 Mar., '10
DEWAR, Capt. A. R. J. ...	24 Dec., '09	MELDRUM, Miss I. ...	22 Nov., '09
DENNYS, S. E. ...	30 Apl., '10	PRINGLE, A. E. ...	1 Dec., '09
EBDEN, L. P. ...	17 Nov., '09	PRIOR, E. ...	21 Apl., '10
FIRMSTONE, H. W. ...	Steamer due 23 Oct., '09	ROBINSON, F. ...	24 Dec., '09
FYFE, W. M. ...	6 May, '10	SETH, G. G. ...	1 Mar., '10
GOTTLIEB, F. H. V. ...	12 Jan., '10	STUART, A. ...	13 July, '10
HUMPHREYS, J. L. ...	3 Dec., '09	TARBET, Miss J. O. ...	3 Jan., '10
HARRIES, Rev. F. W. ...	18 Nov., '09	WAIT, O. H. ...	8 Dec., '09
HART, H. ...	1 Mar., '10	WILKINSON, N. ...	4 Nov., '09
		WEBSTER, J. K. ...	17 Jan., '10

TANJONG PAGAR DOCK.

BAIRD, D. ...	11 Apl., '10	GRAHAM, J. ...	25 Jan., '10
FOTHERINGHAM, R. ...	31 Mar., '10	HOWDEN, J. G. ...	9 Feb., '10

HONG KONG.

ATKINSON, Dr. J. M. ...	3 Nov., '09	DARBY, A. J. ...	1 Mar., '10
BURNETT, G. G. ...	10 May, '10	DOYLE, O. ...	6 Apr., '10
BIRBECK, J. R. ...	11 Nov., '09	FOX, E. ...	28 Feb., '10
CHATHAM, W., C.M.G. ...	22 Feb., '10	GARROD, H. ...	5 Dec., '09
COOKE, W. E. ...	29 Mar., '10	HALIFAX, E. R. ...	23 Dec., '09
CAMERON, W. ...	2 Jan., '10	HUTCHINGS, J. ...	8 Apr., '10
CROOK, A. H. ...	1 Mar., '10	INGHAM, J. ...	31 Jan., '10
DOBERCH, Miss A. ...	Steamer due 14 Nov., '09	IRVING, E. A. ...	Steamer leaving 15 Nov., '09
DUNCAN, R. ...	16 Feb., '10	JONES, E. ...	5 Nov., '09

HONG KONG—continued.

JORDAN, Dr. G. P. ...	9 Mar., '10	PIERPOINT, E. J. ...	25 May, '10
KENT, W. ...	19 Nov., '09	SOLLY, W. J. ...	5 Dec., '09
LYON, J. A. ...	3 Nov., '09	SETH, A., I.S.O. ...	29 Oct., '09
LYONS, Capt. F. W. ...	5 Nov., '09	TERRETT, A. ...	19 Dec., '09
LEE-JONES, J. W. ...	11 Dec., '09	WATSON, A. ...	25 Oct., '09
LONGSTAFF, J. T. ...	5 Feb., '10	WILLIAMS, W. H. ...	30 Apr., '10
MACFARLANE, Dr. H. ...	18 Mar., '10	WILLIS, G. ...	31 Jan., '10
NICHOLAS, C. E. ...	19 Apr., '10	WITHERS, W. ...	28 Feb., '10

PERAK.

COLLINGE, H. B. ...	6 Nov., '09	HATCH, E. C. ...	30 July, '10
ELLES, B. W. ...	11 Dec., '09	KEILICK, D. ...	31 Dec., '09
FAITHFULL, F. F. ...	27 Jan., '10	MILNE, W. S. ...	27 Apr., '10
FRY, Dr., W. H. ...	30 Sept., '10	MONDY, A. G. ...	10 Aug., '10
FLEMING, T. C. ...	25 Feb., '10	SATOW, P. A. ...	4 Jan., '10
GREIG, G. E. ...	18 Dec., '09		

PAHANG.

BADDELY, F. M. ...	18 Feb., '10	SIMPSON, H. ...	30 June, '10
BENNETT, E. L. ...	25 July, '10	TICKELL, G. T. ...	30 Nov., '09
SUGARS, J. C. ...	4 Mar., '10		

NEGRI SEMBILAN.

JUST, A. W. ...	13 Nov., '09	WOLFF, E. C. H. ...	11 Feb., '10
SUMMER, H. L. ...	3 Apr., '10	Sports Club, St. James'	
		Square, S.W.	

SELANGOR.

AMERY, G. J. ...	25 Jan., '10	JACKSON, R. D. ...	Steamer leaving
BURNSIDE, E. ...	24 Dec., '09		12 Oct., '09
GOUGH, A. E. ...	8 Nov., '09	LUCAS, G. D. ...	3 Aug., '10
GREY, R. C. ...	13 Feb., '10	MARKES, H. J. ...	5 Nov., '09
HARRISON, C. W. ...	19 Nov., '09	MADDOCKES, W. E. ...	31 May, '10
IRVING, C. J. ...	21 Nov., '09	THOMAS, H. ...	8 Jan., '10

FEDERATED MALAY STATES.

ALDORTH, J. R. O. ...	28 Oct., '09	HUBBACK, A. B. ...	14 Mar., '10
BENNETT, T. ...	31 Oct., '09	MILLER, W. ...	11 Apr., '10
BAKER, E. M. ...	Steamer due	MOODY, R. J. ...	31 Oct., '09
	24 Oct., '09	PINKNEY, R. ...	26 June, '10
BLAIR, R. A. ...	25 Nov., '09	STURROCK, A. J. ...	14 Feb., '10
CARDEW, C. D. ...	8 Dec., '09	SHELLEY, M. B. ...	18 May, '10
CAMPBELL, A. ...	4 Aug., '10	SUGDEN, F. A. ...	3 Dec., '10
FLETCHER, Dr. W. ...	3 Aug., '10	WELLS, A. E. ...	11 Apr., '10
GRAHAM, Capt. A. M. ...	28 Mar., '10	WOOD, W. T. ...	31 May, '10
C.D.		WYATT, C. H. ...	10 Mar., '10
GREYER, E. W. ...	21 May, '10		

CEYLON.

APPLETON, H. ...	5 Feb., '10	LEGGE, J. A. ...	20 Mar., '10
ALEXANDER, E. P. ...	10 May, '10	LOVEGROVE, C. A. ...	9 Apr., '10
BOSTOCK, J. H. ...	5 Nov., '09	MAYES, A. E. ...	8 July, '10
BOOTH, F. ...	8 Feb., '10	MACPHAIL, R. S. ...	17 July, '10
BRODHURST, H. W. ...	5 May, '10	MEE, C. J. C. ...	8 Nov., '09
BAXTER, H. ...	24 Oct., '09	McCALLUM, Sir H. E. ...	Steamer due
BARTLETT, F. ...	28 Feb., '10	G.C.M.G.	11 Oct., '09
BARTON, F. ...	9 Feb., '10	MACLEOD, K. W. B. ...	10 May, '10
COTTLE, H. C. ...	12 Nov., '09	MAARTENSZ, L. M. ...	19 Dec., '09
COXON, T. ...	9 Dec., '09	MISSE, W. J. ...	31 Dec., '09
CARTE, R. G. ...	5 Feb., '10	OHLUMS, J. W. ...	Steamer due
CARSON, A. de C. ...	31 Oct., '09		5 Nov., '09
CONROY, J. ...	30 May, '10	PERRY, Sir A. ...	26 Nov., '09
DAVIES, E. C. ...	Steamer due	ROTHWELL, A. ...	11 Dec., '09
	25 Oct., '09	ROBERTSON, J. ...	17 Dec., '09
DRIEBERG, J. E. ...	19 Mar., '10	STOTE, A. ...	23 Dec., '09
DIAS, F. R. ...	3 Dec., '09	SMITH, C. ...	30 Nov., '09
de SILVA, H. ...	3 Apr., '10	SHIFTON, L. ...	4 Feb., '10
FREEMAN, H. R. ...	2 Mar., '10	SCOTT, J. ...	19 Feb., '10
FRASER, Miss R. A. ...	13 Mar., '10	SLATER, A. R. ...	4 Nov., '09
GALBRAITH, A. N. ...	28 July, '10	SCHRADER, L. W. C. ...	20 Oct., '09
GREEN, C. ...	28 Dec., '09	TEMPLETON, R. S. ...	6 July, '10
HALL, T. ...	22 Nov., '09	VAN TWEST, J. T. ...	30 Nov., '09
HANCOCKS, J. E. ...	22 Oct., '09	WEERAPERUMAL, Dr.	26 Nov., '09
HARRIS, J. ...	25 Dec., '09	A. A. M.	
JOSEPH, H. P. ...	30 Mar., '10	WHITE, H. ...	22 Dec., '09

THE COLONIAL OFFICE JOURNAL.

VOL. III.

JANUARY, 1910.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

AUSTRALIAN State Ministries are often exceedingly short-lived, but the experience of Mr. Earle's Labour Ministry in Tasmania, which suffered defeat on its very first appearance before Parliament, has been more than usually unfortunate. We are not concerned with the issues which led to this disaster; but we may be allowed to express our regret at the occurrence from the point of view of those who take an interest in political experiments. For the composition of Mr. Earle's Cabinet was determined not in the ordinary way, by the selection by the Premier of those whom he desired as colleagues, but by a direct vote of the party caucus. The expedient of elective Ministries has long been advocated by the upholders of extreme democracy in Australia; but, unless we are mistaken, it has usually been proposed that they should be elected not by a single party, but by Parliament as a whole. In this shape the proposal was very adversely criticized by Mr. Bernhard Wise in a work which we recently reviewed, and he stated that it had received no support from any ex-Minister who had practical experience of the difficulties of party politics. This statement is, we think, somewhat too sweeping, as we believe that Sir John Cockburn may be numbered among its advocates. But the idea has never yet been put to the test of

practical experience. Some of its supporters no doubt see in it a means of breaking down the party system altogether, and substituting composite "ministries of all the talents" for the existing party cabinets. It may be questioned whether this result would be achieved, and it seems clear that the change would encourage individual politicians to set personal ambition before co-operation and play for their own hands. But whatever might be the effect of the election of ministers by Parliament, their election by a party meeting would clearly do nothing to break down the sharpness of party distinctions. We are inclined to think that the advocates of this method underrate the importance of the personal considerations which affect the composition of a Cabinet. It cannot be assumed that the six or twelve or twenty most popular men in a party will work satisfactorily together in the delicate business of Parliamentary Government, and the knowledge that they owe their places to a popular vote is not likely to conduce to their sense of discipline and of responsibility to their leader. But Australian Labour parties have always kept a very tight hand on their leaders, and a Labour Premier, whether in the Commonwealth or in one of the States, can never hope to enjoy the same degree of freedom and power as a Premier under existing conditions at home.

The Commonwealth Parliament has had before it a Bill for the surrender to the Commonwealth Government by the Government of South Australia of the so-called "Northern Territory" of the latter State. The Bill provides for the ratification of an agreement concluded in December, 1907, between Mr. Deakin and Mr. Price, and since ratified, in so far as South Australia is concerned, by an Act passed by the Parliament of that State. Under the terms of the agreement the Commonwealth is to take over the whole of the Territory and the State property situated in it, including the Palmerston and Pine Creek Railway, which runs southwards from Port Darwin; and is also to acquire the Port Augusta Railway, running from the harbour of that name on the southern coast of the State northwards to Oodnadatta. The Commonwealth would thus become the owner of the two terminal stretches of the projected Trans-Continental Railway; and it is a condition of the agreement that the Commonwealth should complete the line by bringing the two terminals into connection. The Commonwealth is to take over the loan liabilities incurred by South Australia on account of its Northern Territory, amounting in all, including advances, to some £3,330,000. The State is to facilitate the construction by the Commonwealth Government of a line running westward, from some point on the Trans-

Continental Railway, to connect with the Western Australian system. It will thus be seen that, if the policy embodied in the agreement is carried into effect, Australia will at last be provided with a complete network of interconnecting railways, though, unfortunately, the difficulties arising from the use of different gauges will continue.

In connection with the important question of this proposed transfer the Commonwealth Department of External Affairs has prepared a very interesting Memorandum on the Northern Territory. This Territory formed part of the Colony of New South Wales until July 6th, 1863, when by Letters Patent it was annexed to South Australia. Its surrender to the Commonwealth is made possible under the terms of Section 111 of the Commonwealth Constitution. At the present moment the Territory is sparsely populated and little developed. Even the preliminary task of exploration is by no means complete, and its value to the Commonwealth lies only in the hope of future potentialities. Attempts at settlement date back as far as 1824, but we are told that "the population returns show that the country is still practically uninhabited," that "the mining industry at present is at a low ebb, and unable to employ more than comparatively few persons," and that "agriculture to-day is practically non-existent." A South Australian Royal Commission enumerated in 1895 a variety of causes for the failure to develop the country, but it proved easier to enumerate the causes than to remove them, and it is not surprising that South Australia should have shown a readiness to relinquish the Territory, provided that satisfactory terms could be arranged, almost immediately after the establishment of the Commonwealth. In the absence of a connecting railway, Adelaide was obviously not a convenient centre from which to control it.

Writing to the Federal Government in April, 1901, the late Sir Frederick Holder—the news of whose recent death has been received with widespread regret—drew attention to one very important aspect of the question of the Northern Territory. "I may mention," he said, "that had South Australia been willing to have given *carte blanche* to capitalists to introduce coloured labour into the Territory, a sum of money, estimated at about £10,000,000, would have been forthcoming to establish a chartered company to take over the Territory, with its assets and liabilities to South Australia, and to carry out the construction of the remaining portion of the overland railway. This offer was

declined by the South Australian Government in its own interest and in the interests of Australia." Exploitation of the resources of the Northern Territory, so far as it has proceeded at all, is, we believe, largely in Oriental hands, but the figures given in the Memorandum show that there has been no considerable influx of Oriental population. The number of aboriginal natives in the Territory is estimated at from 20,000 to 25,000, but may be considerably larger. The Europeans in 1908 numbered 1,081, and "others" 1,892. It is no doubt felt in South Australia that if the maintenance of the "White Australia policy" entails, in respect of the Northern Territory, serious economic sacrifices, those sacrifices ought to be borne, or at least shared, by the Commonwealth as a whole.

There can be little doubt that the possibilities of the Northern Territory are considerable. On the coast there is a heavy rainfall, and the country is more fortunate in the possession of navigable rivers than any other part of the continent. The soil is well suited to a variety of tropical products, and the hopes of important mineral discoveries appear to be well founded, but until exploration has been very much more general and systematic, no certain opinion can be expressed. Quite recently there is said to have been an important gold discovery in the south-west corner of the Territory, which might perhaps somewhat change the disposition of South Australia to surrender the Territory. But for many years to come it can hardly fail to be a source of expense to the government which administers it, and the shoulders of the Commonwealth are broader than those of the State, especially now that the revenues handed over to the latter are to be curtailed.

Mr. Frank Tate, the Director of Education in Victoria, has recently made an official tour in Europe and America, and has written a preliminary report which is of great interest. He has been impressed by the deficiencies of Victoria in the matter of the provision by the State of education other than elementary; and he comments on the similar deficiency until very recent years of the English educational system. But he sees much to admire in the progress now being made in the work of making good this deficiency, and the expectation, based on advice given to him at home, that he would find that Victoria had little to learn from England, was happily disappointed. It is useful to have an estimate of recent educational progress in England made by an acute and impartial observer who is not concerned with party politics, and we therefore reproduce the passage in Mr. Tate's preliminary

chapter in which the matter is discussed:—"The last of the great nations to face the problem of national education from the elementary to the highest grade is Great Britain. Long before the Education Act of 1870 her more enlightened neighbours had made very full provision for popular education, but the English Act of 1870 (which we unfortunately followed slavishly) established elementary education only. For the modern conception of national education was slow to take root in England. Her elementary schools were not established, as in America, from any belief that all the children of the State have a right to demand a fair opportunity for full mental development, nor did she take the European view that national efficiency rests upon school efficiency. Robert Lowe put the case aptly when, after the passing of the Reform Act of 1867, he said, 'We must now, at least, educate our new masters.' On the whole, popular education in England was undertaken grudgingly and distrustfully. It was unlikely, therefore, that a people who took up the business of public education in this spirit would make much of a success of it, and so it proved for the next thirty years. The idea, that popular education by the State partakes of the nature of charity, persisted long in England, and does so in Victoria to some extent. It is hard to credit that the most elaborate regulations were issued for defining the various classes of people who might rightly use State-aided schools. The schools prior to 1870 were for 'the labouring class only.' In the Regulations of the English Education Department, 1864, we find: 'Simple policemen, coastguards, and dock and railway porters may commonly be regarded as labouring men. But petty officers in those services, excise-men, pilots, and clerks of various kinds, present more difficulty, and must be judged of according to the answers to the preceding inquiries, *e.g.*, Does he rank and associate with the working men or with the tradesmen of the place?' When in Switzerland, I quoted the above regulation to a Swiss gentleman, who smiled, shrugged his shoulders, and said expressively, 'Ah, yes, that explains so much in English education.'

"There have been many attempts in England since 1870 to build up technical and intermediate education, but no comprehensive system was agreed upon until a few years ago. The Act of 1902 inaugurated a new era in public intermediate and secondary education, and since then the greatest energy has been put forth in establishing efficient secondary and intermediate schools at public expense, and the old-time prejudices have vanished, or are vanishing fast. The mother country has been slow to move, but now the movement is going forward with characteristic determination. Before I left Victoria, I was advised by many that I

should find little of interest or value in English popular education. On the contrary, I found the conditions in England intensely interesting, and of the greatest value to me, seeing that the beginnings of our own system were modelled on those of England. The pity is that while we adopted the restricted English views of 1870, we have not followed the advances made since. When, in 1895, the School Boards of England were developing higher elementary schools, we were too much occupied with the drastic retrenchment which called forth the scathing condemnation of a Royal Commission in 1899, a retrenchment whose damaging effects the Education Department is still feeling.

“ During the past six years the attitude towards public education in England has completely changed. Instead of public moneys spent on education being more or less restricted to elementary education, it is now competent for county and borough councils ‘to consider the educational needs of their area, and to take such steps as seem to them desirable, after consultation with the Board of Education, to supply or aid the supply of education, other than elementary, and to promote the general co-ordination of all forms of education.’ England has at last begun to work out a national system of education, and to follow in the footsteps of other progressive peoples.”

Missions similar to Mr. Tate's have recently been undertaken by the Directors of Education in South Australia and New Zealand, and it is to be hoped that they will lead to a healthy competition in educational matters, on the part of the dominions with Europe and with the United States of America.

The action of the House of Lords with regard to the Budget has caused many references to the Victorian crisis of 1879. That case, however, is not of much value as a precedent, for in the Constitution Act of 1854 it was specifically enacted that the Legislative Council should not have power to alter a money bill. On this occasion it was alleged that the bill contained other than money provisions, by “tacking”; but in a contemporaneous case in Tasmania the Council returned appropriation bills cut down to supplies for the first six months of the year, on the ground of excessive expenditure by the Government. Eventually the difficulty was got over by a coalition government. Throughout these controversies the Secretary of State upheld the right of the Assembly of “limiting the matter, manner, measure and time of grants of supplies to the Crown.”

A problem of the future will be how to utilise the desert spaces of the earth, and in Australia, which possesses some million square miles of land under a 10-inch rainfall, any production which may be found practicable in such regions will be an enormous gain. There is a prospect that the prickly pear, hitherto regarded as a nuisance to be cleared off as well as possible, may be cultivated in such a way as to become a valuable product. The plant if the spines are off yields an excellent cattle food, a fair amount of alcohol, a large quantity of glucose, and a fibre which might be suitable for making paper. In America a thornless or spineless plant has been produced and developed by cross-breeding, and it is claimed that it will stand arid conditions as well as the spiny varieties, and produce ten tons of feed where the wild sort only produces one.

The Transvaal has now followed the example of Canada by passing an Industrial Disputes Act, the provisions of which are closely modelled upon those of the "Lemieux Act," of which we have given an account in previous numbers. Mr. Jacob de Villiers has publicly acknowledged his indebtedness to the Canadian model. The Transvaal Act applies to the mining industry, to undertakings carried on by local authorities for the supply of gas, electric light, water or power, or for tramway or sanitary purposes, and to any other industries which the Governor may proclaim. Only white employees come within the scope of the provisions of the Act. The Act further provides for the establishment of a Department of Labour and for the appointment of an Inspector of White Labour.

Last year the Natal Government introduced a Bill providing for the cessation, at the end of three years, of Indian immigration into the Colony. This measure never became law, and an undertaking was given that a Commission should be appointed to enquire into the whole question. The report of this Commission has now been issued, and it affords interesting reading. It states with the utmost frankness that "the Indian is undesirable in this Colony other than as a labourer," but his presence in this capacity it regards as essential to the prosperity of the Colony. The Commissioners express the opinion that, allowing for the number of natives leaving the Colony for employment outside its borders, and for the fact that the native's average period of labour is not more than six or eight months, "practically the whole of the native labour supply is in employment during the course of the year." They believe that the native is able to find all the

employment he desires, and that the expansion of industries resulting from the presence of the Indian has provided the native with further openings for employment. They find that a number of industries (including sugar, tea and wattle growing, farming and coal mining) are dependent on the Indian labour supply, and must decline, or even be abandoned, were it withdrawn, and they regard it as essential that an alternative source of supply should be guaranteed before Indian immigration is discontinued.

The policy of Natal has always been to keep the Indian solely as a labourer. But the original immigration system did not conduce to this end. The immigrants could become "free" after five years' indentured service, while they were not entitled to a return passage to India for ten years. The expectation that they would either voluntarily re-indenture or become available as free labourers was not fulfilled, the majority electing to employ themselves in farming, market gardening, and kindred pursuits. In 1897 an Act was passed imposing an annual licence fee of £3 on Indians who did not renew their indentures or return to India, but it appears to have been laxly administered until 1903. Since then it has been enforced more strictly, and appears to be effecting its object. Of 7,735 Indians whose indentures expired in 1908, 3,989 returned to India and 3,304 entered into fresh indentures, while 1,233 "free Indians" whose indentures had expired prior to the Act of 1897 re-indentured, thus becoming subject to the provisions of the Act, and the Commission "feels assured that a continuance of this state of affairs will gradually cause the cessation of the settlement of time-expired Indians in the country." The report is no doubt representative of prevailing opinion in Natal, and sufficiently explains the decision of the Natal Government not to proceed with the bill for terminating the immigration of Indians. What policy the Union Government and the Government of India may ultimately decide to adopt is another matter.

The Committee which the Secretary of State appointed to conduct an inquiry into the Liquor Trade in Southern Nigeria has recently presented its Report, which has been laid before Parliament. [Cd. 4906. Price 2½d.] The document has excited great interest, and, in many quarters, a good deal of surprise. The committee summarize their conclusions in the following terms:—"There is absolutely no evidence of race deterioration due to drink. In Southern Nigeria mortality is high and disease is rife, but drink is only an insignificant factor in producing these results. There is hardly any alcoholic disease amongst the native

population, and with the exception of one or two isolated cases we found no connexion between drink and crime. On the occasions of feasts and festivals the natives often drink more than is good for them, both of trade spirits and native liquors. Individuals injure themselves both morally and physically by indulgence in drink, but the people generally are a sober people, who are able to drink in moderation without falling into excess. There appears, however, to be a tendency among some of the natives who have received a certain amount of European education to acquire drinking habits, but the prohibition of the import of 'trade spirits' would not do much to diminish this evil. As education progresses this tendency will doubtless be carefully watched. The expert evidence taken in England shows that there is nothing to complain of as regards the quality of the spirits imported into Nigeria."

It will be apparent from the above that any expectations that the Report would embody "horrible revelations" as to the prevalence of drunkenness in Southern Nigeria, and the exploitation of the vice among the natives for the benefit of European traders, have been disappointed. The Committee are evidently of opinion that wholesale charges of this character cannot be substantiated, and in a number of cases in which specific allegations were made, their investigation of the evidence has led them to the conclusion that those allegations were ill-founded. This is particularly the case with regard to a statement that at a particular school an enormous proportion of the children—60 out of 75—ranging in age from eight years to sixteen, were "regular gin-drinkers." It is satisfactory to find that this charge is completely disproved. It appears to have been based on ignorance of the native language and imperfect interpretation—a fruitful source of mistake in dealing with native populations all the world over.

The most piquant passage in the Report is one in which comparisons are instituted between the United Kingdom and Southern Nigeria. "It goes without saying that the standard of sobriety in Southern Nigeria is very much higher than that of the United Kingdom. Speaking of Abeokuta, a town of 150,000 people, one missionary, who was a strong advocate of temperance, volunteered the statement that you could see more drunken men in the Wandsworth Road in one night than you could in three years in Abeokuta. Another witness said that he had seen more drunkenness in one day in Bristol than he had seen in the whole of his experience of 13 years in Southern Nigeria. Dr. Currie, in reply

to questions asking him to compare Ibadan with places in England of which he had experience, replied that the two could not be compared:—‘You cannot compare Barnsley with Ibadan,’ he said, ‘because one is a drunken town and the other is not.’ And then asked with regard to the district round St. Bartholomew’s Hospital, he said again:—‘You cannot compare the two. Smithfield is a dirty, drunken district and Ibadan is not.’ Dr. Manners, speaking of Brass and Bonny and asked to compare them with the districts round St. Thomas’s Hospital, replied:—‘Lambeth would not compare well. I do not take Saturday nights because that would be unfair, but an ordinary night in Lambeth would not compare favourably with any village in the Brass district.’” We have been expecting a protest from some of the localities here singled out for censure. Perhaps the circumstance which seemed to make the case of Southern Nigeria suspicious was that nearly 50 per cent. of the entire revenue is derived from the taxation of spirits, but account should be taken of the fact that the tax is, relatively to the value, enormous. We are not sure, on the other hand, that there is much in the contention that bottles of gin are used as current coin. The bottles are sure before long to work out their proper destiny.

It is gratifying to find that Lancashire buyers consider that the quality of West Indian cotton is admirable and the packing well done. The British Cotton Growing Association has done valuable work in establishing sound relations between the producers and the buyers. No pains are being spared to keep up the quality. At the September meeting of the Association, Dr. F. Watts stated that some of the best work has been effected in co-operation with the planters themselves. Planters are encouraged to work on new lines to improve the quality of their cotton, more especially with regard to seed selection, and whilst a good deal of work is being done on the experiment stations, more extensive experiments are carried out in the fields in co-operation with the planters. The work of seed selection is being carried on at the experiment stations in every island where cotton is produced, in order to ascertain the most suitable varieties, both as to yield and quality, and in order to secure new and improved varieties. Dr. Watts is of opinion that it is advisable to select seed from the same district in which it is planted, this being, in his opinion, the method best calculated to improve the quality, and to produce a race of cotton capable of withstanding the pests and diseases incidental to the district. If seed is taken from a district where there are no pests or diseases, and planted in another part, it is

possible that the strain may be overwhelmed by pests there existing which the plants have not been trained to resist, whereas by selecting hardy varieties, which have become acclimatised in the district, it is possible to produce varieties which will be able to withstand the ravages of the pests, and for this purpose it is desirable to establish a good strain in every island, and to work it up to the highest pitch of perfection. At each experiment station, the Department of Agriculture is doing highly scientific work in efforts to raise new varieties, by utilising the best knowledge obtainable relating to plant life. These varieties afterwards are planted in the fields, when the work is taken up by the planters, in co-operation with the experiment station workers. Dr. Watts spoke in very high terms of the manner in which the Department is assisted in experiments by the planters, who take a considerable amount of interest in the subject; in this way it is hoped to maintain the character of the cotton now being produced, and also to keep the industry on a very high level.

The visit of Herr Dernburg to Liverpool was marked by an excellent speech, in which he made it clear that the German colonies are doing very well. Their revenue is now about £1,500,000, and there are no grants except one to German New Guinea of £40,000. If, however, the cost of local defence is reckoned in, as it should be, the total surplus, which is put at £500,000, is wiped out and turned into a deficit of £300,000. The total trade is about £7,500,000.

The Imperial Chambers of Commerce Congress, held at Sydney in September, unanimously recommended the completion of the Imperial cable route between Great Britain and Australia by a State-owned telegraph across Canada. The Congress undoubtedly got hold of a strong point. The Pacific cable is dependent on the Atlantic and the trans-Canadian systems. The Atlantic service might possibly be cheapened, but at any rate it is efficient. The Canadian service is sufficiently cheap but it is not efficient; errors and delays frequently occur, and the result is that the Pacific cable suffers a loss of business. It seems impossible to rectify the matter unless the Pacific Cable Board themselves take over the transmission of messages across Canada. The perfect plan would no doubt be the construction of a State-owned line across the Dominion, but the Pacific traffic alone would hardly support an entirely independent service. The solution may be found in some arrangement under which the C.P.R. would give the Board facilities for handling its messages itself over their system.

It is always interesting to see ourselves described as others see us, and the following extract may be quoted with this view from a recent work (published in America) by Mr. A. R. Colquhoun, which discusses the recently-acquired tropical possessions of the United States and compares British with American officials. "The careers of a majority of these men will not be brilliant, and the prospects held out do not, on the surface, seem likely to attract clever and ambitious youths. Entrance into the Indian or Colonial civil service means exile from home, separation from family, a salary adequate but by no means princely, with slow, if sure, increase. His highest hopes cannot soar beyond a colonial governorship. When at the zenith of his career he will receive a salary which, although handsome, will have to bear heavy demands in the way of entertainment, and provides no margin. If he marries, his early years will be a struggle to make both ends meet, and his later ones will involve frequent separation from wife and children and a constant effort to maintain two establishments in a manner suitable to his position. Though hard work will be required of him, if he is to pass successfully through the stages of advancement it will not necessarily accelerate his progress or bring a certain reward, for influence and luck play a considerable part in the matter. It must be explained that the influence will be of a social or family origin, and seldom, if ever, political in its character. Even in the appointment of colonial governors and viceroys, which are made by the government that happens to be in power, there is usually an absence of party motives, and although sometimes regarded in the light of rewards for brilliant services, the party question has little to do with them. As far as pecuniary advantages are concerned, it is well known that only men with large private fortunes can afford to accept many of the highest positions.

"The colonial career, therefore, seems to offer little attraction to a young American, who is not driven by force of circumstances to seek his fortune abroad, and who is brought up in the belief that to 'get on' is the first duty of man, and his chief pleasure.

"The attractions, from the British point of view, are, first, the social status which undoubtedly attaches to government service. This, unfortunately, is far from being the case in the United States, where a government career neither confers nor confirms a man's social standing—rather the reverse. Nor would such an inducement be a strong one to the best type of American, as it is to the best type of Englishman. Secondly, the element of adventure and the prospect of a wider field of interest in an unknown land have a strong attraction for the dweller in small,

overcrowded Britain, and the spirit of his forefathers stirs in many a youth the desire for fresh fields and a wider life, though after-experience too often proves that he merely exchanges the narrow circle at home for a still narrower one abroad. The spirit of adventure might prove as strong an inducement to the American as to the Englishman but for the fact that he does not need to leave his own country in order to gratify it; indeed, in leaving the United States he turns his back on many opportunities and also on a life of risk and excitement, of hard work and quick profits, which appeal peculiarly to his energetic nervous temperament. The third and most serious consideration to the Englishman is the pension which invariably attaches to government service, and this inducement has proved strong enough in many cases to weigh against more tempting offers of immediate advancement. Rather than forfeit this small but sure provision for old age, men have been known to refuse good and even brilliant offers. The pension will never, of course, be large enough to support a man and his family in affluence, but if he serves long enough it will make a decent and comfortable provision for his declining years, and, in case of ill-health or break-down, he will be secured from actual want. The Englishman as a rule looks forward with pleasant anticipations to the time when he can retire to a country-house, and, with the surety of a small but regular income for the rest of his life, can indulge in one of his many hobbies, take a leading part in local politics, and see his sons launched on careers similar to his own in their moderate expectations and honorable position.

“Such a provision for old age does not at all appeal to an average young American, who could not contemplate complacently an old age spent in calm retirement on a reduced income. American men do not think of old age in the same way as their English cousins; and if they do, it is merely a spur to them to make a ‘big pile’ as quickly as possible. Death is provided for even more universally than with us by heavy insurances, but no one who has any experience of the United States can fail to have been struck not only by the youthfulness of most men in responsible positions, but by the general assumption that youth and middle age are the only periods of life worth consideration.

“The British Government pursues a wise policy in granting liberal furloughs to all officials, and this must be taken not only as a compensation and inducement, but as a means of rendering the man more efficient. Without the long and regular respite from arduous duties and the renewal of the springs of life afforded by his visits home, the colonial official could hardly keep up, physically, mentally, or morally, to the standard required. The idea of giving long furloughs, on handsome pay, is somewhat

opposed to American theories. The rule is 'no work, no pay,' and the liberality of the United States Government does not apply in the matter of official salaries, which are invariably, and even scandalously, inadequate.

"The next feature in the life of colonial officialdom which makes it popular with Englishmen is that the work itself is congenial to them. Their whole training has made them self-reliant in the sense that they are prepared to take responsibilities and to act independently. They inherit a sense of justice, scrupulous fairness, and esprit de corps which are fostered by public-school training, despite its defects. They are not cowed or depressed by solitude if called upon to dwell far from any of their kind. Boys fresh from school or college go cheerfully to distant frontier districts where, excepting one or two other officials, they may not see a white man for months. After this period of training they often go to a more complete isolation. Such conditions would drive a Frenchman crazy; but, though there are occasional cases of break-down, some stolid Britons even grow to enjoy their isolation, helped by the natural taciturnity and self-reliance of their race and class.

"There is still, even in these days of luxury, a certain element of Spartan discipline in the lives of British boys which makes it far easier for them in after-life to enjoy such careers as these. The little chap who, at eight or nine, leaves his mother's arms for a boarding-school, has to cultivate at that tender age a self-possession, reticence, and decision which become second nature to him and lay the foundations of successful administration in later life. Not only does the rough-and-tumble of his school-days make the boy hard and self-reliant, and develop in him that knowledge of his own powers which will be so valuable to him, but he has, naturally, a capacity and love for ruling. He has no illusions as to the equality of the people he rules; on the contrary, he is firmly imbued with the idea of the superiority of the British race over any other, white or black. At the same time he has no repugnance or dislike for 'niggers,' regarding them generally with a sort of paternal tolerance. He enjoys the struggle with prejudice and ignorance, and likes to evolve order out of chaos, feeling himself the pivot on which the whole system turns.

"It must be remembered that the Indian or Colonial officer is almost invariably of gentle birth, and invariably of gentle education—in the best sense of the word a gentleman. This implies, in Great Britain, that he is acquainted with the ordinary etiquette of civilised society, that he has been taught the self-control and consideration for others on which that society has its basis, and

that he is not uncouth or rough in speech, appearance, or manner. When we remember that he will probably be sent as an interloper into the midst of communities civilised and cultivated in varying degrees, on lines quite different to our own, it is easy to see the value of such an equipment. The Oriental is peculiarly keen to notice any lack of breeding in the European he meets, and, contrary to the general belief, he can appreciate perfectly the difference between men who have and men who have not this quality. It is not necessary to adopt Oriental etiquette, with its endless ramifications; but the Indian, Chinese, or Malay is quick to notice if his European friend is deviating from what he soon learns to recognise as the European standard of good manners. There is an unwritten code of manners which well-bred men all over the world practise and by which they recognise each other."

THE ADVANCE OF RHODESIA.

PROGRESS nowadays is mostly measured by dividends, and if these are forthcoming with celerity the reputation of a new country is assured. It must be admitted that the general view in this country of our undeveloped possessions is frankly material. Mining resources command the first attention, partly because in that way money is made, if made at all, quickly, and partly because the industry readily lends itself to the flotation of companies and the luxury of a gamble. Agriculture, *pede claudo*, comes second, and receives little notice unless it produces something, such as rubber, the paying powers of which can be appreciatively discussed in the financial papers. This attitude is, of course, perfectly sound, and it is comforting to find that this country, bled though it be by the foreigner and super-taxed by the Chancellor of the Exchequer, can somehow or other produce savings year by year which are sent out in ever-increasing volume to exploit and develop the overseas territories. The money invested in this way repays this country in the form of an immense variety of products which serve either as materials for industries or as food for workers, and may therefore be regarded as part of the working capital of our manufacturers and suppliers. In many cases the development of a territory overseas is the direct and obvious result of a growing want here, and this close business connection is reflected in the attention which is constantly given to colonial industries by the financial and technical papers of this country.

It is perhaps inevitable that the personal qualities of a colonial community should be a matter of secondary consideration. The British public is proud to think that an Englishman in many

places controls a great territory and population by something which is known vaguely as moral force, and more materially as the toe of his boot. But more important than these feats of administration is the effect of colonial life on Englishmen themselves, and the character which is developed by the effort to do great things in the face of difficulties, and to carve a British settlement out of the wilderness. From this point of view the story of Rhodesia is peculiarly interesting. It is the story of a handful of men who made a home in a savage country, and who will in all probability grow eventually into a great population, British in origin and character, in the very heart of the dark continent.

The history of the community of Southern Rhodesia has been one of great expectations followed by hard times. The country has a wonderful attractiveness. The first travellers must have felt an uplifting of heart when, after passing through the gaunt desolation of the Karroo and the meagre veldt of Bechuanaland, they came at last to the rich pastures and abounding soil of Matabeleland. The beauty and promise of the country increases as Mashonaland is reached. Here picturesque rivers are passed; "the scene is full of variety; dense forests of trees are succeeded by extensive grass lands, and on all sides there are signs of great fertility of soil and richness of vegetation. Everything pleases—the greenness of the veldt, the freshness and buoyancy of the air, and the varied beauty of hill and valley." Beyond Salisbury the scenery is wonderfully majestic, and the richness of the land is testified by grass growing sometimes twelve feet high. Through this part Cecil Rhodes journeyed by ox-wagon, and it is easy to imagine how deeply he was stirred by it, "taking in and devouring its wonders, seeing visions and dreaming dreams, dreams of a population which should fill this vast territory, and visions of a day when over the country there should be dotted thousands of prosperous farmsteads, inhabited by people drawn from the over crowded cities of England."

The first foothold in the territory was obtained when, in 1888, Mr. Maguire, commissioned by Mr. Rhodes and Mr. Beit, sat down in the kraal of Lobengula, and persuaded that naked potentate to grant all the minerals in his dominions, with the necessary powers for taking them, for a consideration of £100 a month, one thousand Martini-Henry rifles with ammunition, and an armed steamboat. In the following year the Royal Charter was granted and the British South Africa Company constituted. In 1891 another concession was granted by Lobengula to Mr. Lippert, which amounted to a power to lease and grant land, in considera-

tion of £1,000 down and a rent of £500 a year, in all the territories which might be occupied by the Company, subject to the Company's rights, and to levy "rents, licences, and taxes" on the lands so leased or granted. This concession was acquired by the Company. The Royal Charter gave the Company power to acquire by grant any powers necessary for the purposes of government, and at that time it was apparently intended that any such power should be obtained from the native rulers; but in 1891 a Deed of Settlement was issued which specifically empowered the Company to make laws and ordinances and to levy taxes and raise revenue. In the same year a picked band of pioneers took possession, but it soon became clear that Lobengula was not going to give any assistance, and difficulties grew apace. The hardships, in fact, were very great. The land was new in every sense, and everything had to be done, but what made the work peculiarly hard was that the pioneers—at this time about fifteen hundred in number—were so far removed from civilisation. They were seventeen hundred miles from the coast, and their food cost them £70 a ton. The police force of 700 men was originally costing the enormous sum of £250,000 a year, but by the exertions of Dr. Jameson the force was shortly reduced to forty and the expenditure to £30,000 a year. This was made possible by the vigour of the community itself, which formed a force of five hundred men, three hundred of whom could be mounted, at a cost to the Company of about £4 a head per annum. There was an occasion on which this force distinguished itself. There was a border dispute with the Portuguese, which led to an engagement between forty of the Rhodesians and four to five hundred Portuguese and natives, with the result that the latter suffered heavy loss and fled in confusion towards the coast; the Rhodesians captured the stores and eleven machine guns, and would probably have pursued the fugitives to Beira if they had not been stopped by superior orders. This little affair, which was interesting as showing the ease with which fights can be brought about in such circumstances without any pedantic regard for diplomatic procedure, was settled up to the satisfaction of both sides. The Portuguese incident brought about the building of the railway to Beira, which was constructed by the Company by arrangement with a Portuguese company, and on its completion the cost of goods delivered fell to £10 a ton. After the conquest of Matabeleland in 1893 the Company was permitted to assume the administration of this country. In 1894 an Order in Council was issued, which provided that an Administrator, to be approved by the Imperial Government, should be appointed by the Company to govern the territories, the appointment to be for three years, and also that a Council should

be constituted, consisting of the Judge and three other members who were to be selected by the Company and approved by the Secretary of State. In 1895 came the raid of Dr. Jameson on the Transvaal, followed by an outburst of rinderpest which killed nearly all the cattle in Southern Rhodesia, and rebellions of the Matabeles and Mashonas. The burdens on the Company now increased heavily; mining was disappointing, agriculture hardly attempted. There was much discontent and bitterness among the settlers. The population which was first attracted to Rhodesia was hardly of the kind which is ready to wait with exemplary patience for developments. They went out mostly to find gold; 60,000 claims had been pegged in 1896; and in mining centres results one way or the other are comparatively quick in coming. Miners, like other people, are affected by their pursuits, and usually show a quickness of feeling, irritation or exultation, as the case may be, which is often embarrassing to deliberate administration. It was fortunate that Rhodes possessed exactly the qualities which gave him supreme influence with this community. He swayed them with wonderful power, and it was his eloquent optimism that preserved the settlement through the first and most trying period of its existence.

It was inevitable, however, that the men on the spot should rebel against a system under which the whole government was vested in a London Board. No wisdom, however angelic, on the part of a body of men sitting some 8,000 miles distant, would prevent complaints and agitations in such circumstances. In 1898 a Legislative Council was constituted, consisting of five nominated and four elected members, but as the latter were outvoted with mechanical regularity whenever any difference of opinion arose, it cannot be said that the concession had any pacific effect. In 1902 Rhodes died, and several of the Directors paid a visit to Southern Rhodesia and received deputations. The result was that in 1903 the Legislative Council was increased to seven elected and seven nominated members, presided over by the Administrator, with the Resident Commissioner as ex-officio member; but this enlargement left the two parties in practically the same position. It was an attempt at compromise which settled nothing. The difficulty was that, on the one hand the Company had to make good a heavy deficit, and therefore claimed control of the finances, while, on the other, the people who paid the taxes demanded representation and freely asserted that the expenditure was extravagant. In the meantime the Boer war added greatly to the financial strain. In 1904 the Company sent out a representative to investigate the position, and the report which resulted put the expenditure which had been laid out at over

seven and a-half millions, and treated this as a debt which the settlers owed to the Company. The representative proposed that of the above sum £5,000,000 should be paid to the Company in full settlement, and that the balance should be administered by the Company on public works. This solution was received with a howl of derision, and not only did the settlers repudiate liability for past expenditure and enquire sarcastically what they were to get for the five millions, but they questioned the right of the Company to anything more in the land than the minerals. A delegation to England failed to come to terms with the Company, or to induce the Imperial Government to intervene. But the long lane now began to turn. Politics in such cases turn on economic conditions, and when the banket boom in Mashonaland started, and a great number of small mines came to be worked, most of the discontent vanished for the time being like a lifting fog. Contemporaneously with the improving prospects, the Company took a more liberal line by granting facilities and loans to small miners, and still further reduced the expenditure. In the year 1905-6 the revenue for the first time exceeded the expenditure. In 1907 the Directors paid a visit to the country, and came back full of determination to carry on an active policy of development. This meant more capital, and an endeavour was made in 1908 to increase the capital from £6,000,000 to £9,000,000. This failed, but a sum amounting to nearly a million was raised by the issue of debenture stock, and this additional capital has greatly facilitated operations. The administrative revenue is now likely to exceed the administrative expenditure over and above what is appropriated by the Company commercially.

The cost of living in Southern Rhodesia is very largely a question of railway rates. These rates are really artificial. The natural port of the country is Beira, which is 562 miles from Gwelo as against 1,312 from Port Elizabeth, but when the line to Beira was completed the rates charged were almost the same as to the southern ports, and as the facilities at the latter were greater they secured the business. The reason why the Beira route was not allowed to charge lower rates, proportionate to the shorter distance, was that this would not have suited the Company, the interest of which was mainly to support the Vryburg-Bulawayo line. Then the Company was saddled with the interest on the debenture debt of 4½ millions on the Victoria Falls extension to Broken Hill, which earns nothing towards it, and this annual charge of about £300,000 has to be met by increasing the charges on the southern lines. Thus both the Company and the settlers suffer from the lack of success which has hitherto attended the Broken Hill mines. This trouble led to an application in 1908 to

the Imperial Government for a guarantee of debentures, but, somewhat unfortunately, the memorandum referred to Rhodesia as "rapidly becoming—if, indeed, it may not be already described as—one of the most prosperous Colonies of the British Empire"—a statement which was pounced upon as showing that no such assistance was necessary. The line, however, is in process of extension with the help of Tanganyika Concessions, Limited, to the Katanga Copper Fields (230 miles), and there is good reason to hope that this district will cause an increase of traffic over the whole system. The effect of such business would soon be marked in the reduced cost of living in Rhodesia. Then, looming in the near future, is the railway now being constructed from Lobito Bay, in Portuguese West Africa, which will join the Cape to Cairo line in Northern Rhodesia. Between this and the Beira route it is certain that eventually the traffic will be wrested from the southern ports, but Rhodesia will be the gainer. The Katanga district is believed to be so rich in minerals that four railway routes to it have been projected. Of these the Congo and Lobito lines will eventually be the best placed to secure the traffic. The rails from Rhodesia have reached the frontier of the Congo Free State and will thence proceed to the "Star of the Congo." In the meantime it is very encouraging to find that the net earnings of the whole Rhodesian system showed an increase in the last year (1908-9) of nearly £100,000.

In reviewing the administrative work of the Company one mistake stands out prominently. Far too much of the country has been granted away without any security or even likelihood that it would be worked. There is in the beginning of such things a great temptation to accept big offers, and if they are refused the cry may be raised that capital is being blocked out and development arrested. But if the grantees do not work the land, but simply hold it up till the market value has increased enough to satisfy them, the progress of the country is seriously retarded. It was soon found that mining claims had been too freely granted, and that valuable land was being largely held up. It is an invidious thing to rectify such mistakes by legislation, which imposes further conditions on the grantees, but it had to be done, and an ordinance was passed in 1908 making a certain amount of working necessary to keep claims alive.

The great problem, however, of the respective rights of the Company and the settlers awaits adjustment and the *deus ex machina*. The British South Africa Company, when they set to work to establish in the territories under their control a vigorous, progressive, and self-assertive community of white settlers, ran

much the same risk as Frankenstein did, when he succeeded in endowing his own handiwork with life. The main object of a commercial company must be to earn dividends for its shareholders, and although this particular object was perhaps overshadowed by others in the mind of the original founder of the British South Africa Company, yet the pursuit of it necessarily shapes the policy of the directors. On the other hand, no young community of European origin is ever likely to reconcile itself to the notion that its own enterprise, and the development of the country which it inhabits, should be made to subserve the interests of non-resident shareholders. Hence it is only natural that a study of politics in Southern Rhodesia at the present day should be largely a study of differences between the settlers and the directors. But this must not be taken to mean that the settlers have been selfish and ungrateful and the directors selfish and narrow-minded. Neither charge can be brought with any sort of justice. It is true that Southern Rhodesia repudiated, passionately and indignantly, the suggestion put forward by the Company's financial representative five years ago, that the country should accept an indebtedness of seven and a-half million pounds, five million to be paid over to the company in recoupment of past expenditure and two and a-half millions to be administered by them in trust for public purposes. It is true that on this and on other occasions angry feelings have been aroused and strong language used. It is true that the question of the powers of the elected members in the matter of finance is still a matter of acute controversy, and that an appeal has been made by the Legislative Council, without success, to the Imperial Government to decide certain questions, clearly of fundamental importance, still at issue between the Council and the Directors. But on the other side of the account must be set the extraordinary faith which Southern Rhodesia always showed in Cecil Rhodes, and her strong attachment at the present time to the personality of Doctor Jameson, while the constant wish expressed by the settlers throughout every phase of controversy has been that the London Board should bring themselves into closer touch with the people of the country by personal visits, and by maintaining a local representative with adequate powers. On the other hand, the Directors, if they have put forward financial proposals which were clearly impossible or unacceptable, have done so under the pressure of a most trying responsibility to their shareholders, and the sketch of Southern Rhodesian history given in Mr. Hone's volume is largely an account of a growth in the spirit of concession to local interests and local sentiment. No one who has read anything of Colonial history, who knows anything, for example, of the relations of

Massachusetts and the sister American Colonies to the home government and the directorates of proprietary companies, no one who has any experience of the differences which arise to-day, primarily over matters of finance, wherever popular representation is conceded and popular control withheld, will regard the difficulties which have been experienced in Southern Rhodesia as in any way remarkable, or as reflecting any discredit on the motives or capacity of the parties concerned.

Southern Rhodesia started on its career under the British flag under the influence of an extraordinary fever of unreasoning optimism. The vast difficulties of development, of transport, and of supply were overlooked. Little was known of the real capabilities of the country. Extravagant expectations of immense and early profits sent the shares of the Chartered Company up to a fabulous price. There was bound to be a reaction, bringing disappointment and even ruin in its train. But the intensity of the reaction was aggravated by a succession of disasters—rebellion, plague, and war—which could not reasonably have been anticipated. Looking back on the whole story, the chief cause for wonder is that the set-back has not been more permanent and more complete. From time to time there have been minor “booms,” reminiscent of the frenzy of the original exploitation, and they have been followed, as is the nature of things, by periodic depressions. But the general tendency of recent years has been one of steady advance. Growth in white population, extension of the area of settlement and cultivation, introduction of new products, expanding revenue, increasing railway receipts, all tell the story of a real growth of prosperity, and perhaps the best feature of all is the steady confidence of the people in the land of their choice. The history of nearly all human progress is a history of mistakes, first made and then found out. In Rhodesia two fundamental mistakes were made; but they are beginning to be corrected. Mining was encouraged at the expense of agriculture, and hurried exploitation by big companies was preferred to steady painstaking development by men of limited capital. If big fortunes are not being made to-day in Rhodesia, persistent effort is raising many from a position of anxiety and uncertainty to one of comfort and independence.

We have mentioned above the appeal made to the Imperial Government to act as arbiter between the Legislative Council, as representing the inhabitants, and the directors of the Company. The reply to this appeal, quoted by Mr. Hone, was to the effect that “the questions which His Majesty’s Government had been asked to decide were to a large extent matters which, unless they

could be settled between the parties concerned, did not appear under present circumstances to be susceptible of any binding solution, except by the Courts of Law, and that, even were His Majesty's Government to undertake to express an opinion, they would not be able to compel either side to acquiesce in the decision, if there should be any reason for objecting." Of these and other outstanding questions there is bound to be a settlement before very long; and it is in the consciousness that the present position of affairs is transitory and that Rhodesia is destined for a political future for which it is not yet ripe, that one may seek an explanation of the growing friendliness and mutual forbearance between the nominated and elected members of Council to which Mr. Hone bears witness. When that settlement is undertaken, the Imperial Government cannot assume the position of an independent arbiter, for it is itself a deeply interested party in the transaction. Besides the Imperial Government, the people, and the Company, there is now a fourth party to be considered—the Union of South Africa—in whose constitution a door for the future admission of Rhodesia has already been provided. We are faced with a problem in Imperial development and organization of the most extreme complexity, a problem which does not press for immediate solution, but which cannot be indefinitely postponed. Mr. Hone's temperately written and instructive volume will help many readers to estimate the nature of the factors to be taken into account. He concludes his work by considering on what terms the Company could be bought out by the people. It is obviously impossible to estimate the value of the assets. Mr. Hone considers that the proper course would be to base the negotiations on the capital invested by the Company, and an allowance of a fixed accumulated interest on it; and he urges that "the chartered shareholders have subscribed large sums of money for the acquisition and development of a new British possession, and for this they deserve full recompense, a return of their capital invested, plus a fair and moderate rate of interest for the period that it has been locked up, and compensation for ceding their rights to the people." This is in principle analogous to the proposals of 1904, but if the transaction is regarded as one of purchase and sale it may be observed that the usual business course in like circumstances is wholly different. Investments are unfortunately often unremunerative, and when it seems probable that a considerable amount of capital has been lost, or at any rate has failed for a long time to earn money, no purchaser will buy on the footing of what has been spent. Yet this is what it is proposed that the Rhodesian settlers should do. It is clear that, if it is to be a case of bargaining between the two parties, the actual position of the revenue and

expenditure at the time would be the governing factor. It is further assumed that the Imperial Government would guarantee the whole of the purchase money. If it did, it would presumably require that the amount should be conditioned by the ability of the population to meet the interest. It seems, however, unlikely that the home government would assume any such responsibility for a state, the destiny of which appears to be with the Union of South Africa.

THE DEVELOPMENT OF PAPUA.

Across Papua. (By COLONEL KENNETH MACKAY, C.B., M.L.C.
Witherby & Co. 7s. 6d.)

Wanderings Among South Sea Savages. (By H. WILFRID
WALKER, F.R.G.S. *Witherby & Co. 7s. 6d.*)

ONE morning, in the year 1883, the Colonial Office was somewhat shaken from its usual calm by the receipt of a telegram, which had not been prefaced by any correspondence, from the Resident Magistrate at Thursday Island announcing that he had set up the British flag in New Guinea and proclaimed the annexation of the Island. Several years before, the question of annexation had been discussed very deliberately. Queensland, in 1874, suggested the idea and the Secretary of State consulted all the Australian Colonies. The replies differed considerably, and eventually the Earl of Carnarvon decided to take no action. A deputation from the Royal Colonial Institute waited upon him to urge annexation. Their chief business argument was a rather curious one, being that New Guinea commanded a supposed new route to China discovered by Captain Moresby. But there was hardly a single Englishman on the Island and there was no definite commercial information of a kind likely to attract enterprise. An Australian proposal to develop the country through a company fell through, and though in 1878 there was a small rush of gold-diggers nothing much came of it. The High Commissioner for the Western Pacific in 1878 suggested annexation, by authorised proclamation, of any parts where a bona-fide settlement had been formed, and this was where the matter was left by the Home Government. There was clearly no substantial settlement at the time, and Great Britain had no disposition to undertake an acquisition which might have cost her dear.

In the correspondence the precedent of New Zealand had been quoted which cost Great Britain twelve millions; and it had been urged that in New Zealand there were only 100,000 natives, while in New Guinea there were probably several millions. The argument

had weight, and certainly in those not very distant days the military dangers from large native populations were held in greater estimation than they are now. The only consideration that really mattered was that if Great Britain did not annex the island some other power would, and that this would be intolerable to Australia. The possession of New Caledonia by France was a thorn in the side of our colonies partly because it brought a rival naval power on the scene, but still more because the island was used as a receptacle for convicts. The dangers which might occur from the escape of such convicts were a familiar topic in Australia; though such is the inconsistency of human nature that on one occasion when a party of them actually did escape to Queensland, the popular sympathy was strongly with them and against surrendering them. In the case of New Guinea it was Germany to whom designs of annexation were attributed, and the danger was strategic in character. Probably the seriousness of the matter from this point of view was overdrawn, and now that Australia is embarking on an active naval policy such apprehensions of exposure to attacks from near stations will die down. But in the eighties they were a great force in Australian politics.

The action of the Resident Magistrate proved ineffective. The Earl of Derby found nothing new in the position of affairs and declined to ratify the annexation. Not long afterwards Germany did annex New Guinea, but whether she had previously intended to do so or was encouraged to do so by Great Britain's refusal is a matter outside the records. There was, no doubt, a rumour at the time of the provisional annexation that Germany was about to take possession, and probably the truth is that the step was being considered and that the decision was expedited or influenced by the knowledge that Australia was pressing for annexation. The action of Germany, of course, occasioned great excitement in Australia and a prolonged diplomatic tension at home. Eventually a compromise was arrived at by which New Guinea, or rather such portion as was not claimed by the Dutch, was divided between Germany and Great Britain, and the neighbouring Pacific was demarcated between the two Powers by a zig-zag line which, it is safe to say, few people now remember. The settlement of the case, considering the feverish circumstances under which it was made, has worked satisfactorily. Australia has profited commercially by German enterprise in the Pacific, and has had no reason to fear the establishment of military bases there. The island itself has, so far, proved valueless financially, and the German colony requires a considerable subsidy. There are still repinings in Australia that the whole island was not secured, but it is at any rate realised, after several years of experience, that it has not yet been possible to utilise it as a working white man's country. But if the island has not so far materialised as a mere

business proposition it is full of beauty and interest. The explorer may find much to do, and the still virgin and active Mount Victory offers "a field still open for any adventurous soul with a leaning towards cremation." The difficulties of locomotion and transport are exceedingly severe, and one result of this is that travellers have eked out their actual experiences by largely drawing the long bow; in fact there has been more literary fraud in connection with New Guinea than any other place. To this the natives have themselves contributed, as whether, from an artistic sense or otherwise, they so much prefer the romantic story to the plain fact that telling the truth is said to be a lost art north of Cooktown. The extension of civilised administration, however, has brought in its train a series of matter-of-fact official reports, and the two books which have been recently written by Colonel Mackay and Mr. Wilfrid Walker record the experiences and impressions of the authors in a very straightforward way. Neither of them attempts to discuss the commercial prospects. That topic is left to the official report of the Royal Commission of which Colonel Mackay was Chairman. The desire of the Commonwealth is to encourage white settlement, and there is no doubt that there is plenty of gold in the island and that a variety of valuable products can be cultivated. Money, however, must be provided if the possession is to be developed for these purposes, and, until it is, the officials are trying to make bricks without straw. The Yodda Valley has long been frequented by miners and gold is easily got; but the climate is bad, provisions dear, and the natives treacherous. The men have to work in bands with their rifles handy, and a short time since two were speared in the legs and carried off to a native village, where they were roasted alive over a slow fire and eaten. Their death was avenged by a band of miners who gave no quarter, but it is not surprising to find that there are now only about fifty miners in the district and that most of them are beginning to leave. Mr. Walker explained that the Papuans as a rule do not torture their prisoners for the mere idea of torture, "though they have often been known to roast a man alive for the reason that the meat is supposed to taste better thus." Whatever the reason, it comes to pretty much the same thing for the victim, and the dread of such cannibalism is no small bugbear to the white officers and settlers. To quote Mr. Walker further: "We had learnt that this Dobodura tribe had a system of torture that was brutal beyond words. In the first place they always try to wound slightly and capture a man alive, so that they can have fresh meat for many days. They keep their prisoner tied up alive in the house and cut out pieces of his flesh just when they want it, and we were told, incredible as it seems, that they sometimes manage to keep him alive for a week or more and have some preparation which prevents him from bleeding to death.

"Monckton advised both Acland and myself to shoot ourselves with our revolvers if we saw that we were overwhelmed, so as to escape these terrible tortures, and he assured us that he should keep the last bullet in his own revolver for himself. This was my first taste of warfare. Monckton had had many fights with Papuans, and Acland, besides, had seen many severe engagements in the Boer war, but he said he would rather be fighting the Boers than risking the infernal tortures of these cannibals. It all, somehow, seemed unreal to me, and I could hardly realise that I was in serious danger of being tortured, cooked and eaten. It is impossible to depict faithfully our weird surroundings. We chatted on for some time, and tried to cheer each other up by making jokes about the matter, such as 'This time to-morrow we shall be laughing over the whole affair,' but the depressed tone of our voices belied our words, and it proved to be but a very feeble attempt at joking." In the end the white party killed a good many natives, but recognised the fact that they were not numerous enough to hold their own, much less to punish these brutal tribesmen. It is clear that much fighting and no little expense will be necessary before the possession can be made safe. One of Colonel Mackay's first sights on landing at Port Moresby was a gang of some twenty prisoners in leg-irons, some of whom were "waiting trial for the brutal murder of the only vegetable grower in the place"—which does not sound encouraging for the honest agriculturist,—and "chatted and laughed as if fresh vegetables were neither here nor there in their scheme of life."

The most curious people in Papua are the Ahgai-ambo, a semi-aquatic tribe, who were described as follows by Sir F. Winter, when acting Governor of British New Guinea: "The Ahgai-ambo have for a period that extends beyond native traditions lived in this swamp. At one time they were fairly numerous, but a few years ago some epidemic reduced them to about forty. They never leave their morass, and the Baruga assured us that they are not able to walk properly on hard ground, and that their feet soon bleed if they try to do so. The man that came on shore was, for a native, middle-aged. He would have been a fair-sized native, had his body from the hips downward been proportionate to the upper part of his frame. He had a good chest and, for a native, a thick neck; and his arms matched his trunk. His buttock and thighs were disproportionately small, and his legs still more so. His feet were short and broad, and very thin and flat, with, for a native, weak-looking toes. This last feature was still more noticeable in the woman, whose toes were long and slight and stood out rigidly from the foot as though they possessed no joints. The feet of both the man and the woman seemed to rest on the ground something as wooden feet would do. The skin above the knees of the man was in loose folds, and the sinews and muscles around the knee were not well developed. The muscles of

the shin were much better developed than those of the calf. In the ordinary native the skin on the loins is smooth and tight, and the anatomy of the body is clearly discernible; but the Ahgai-ambo man had several folds of thick skin or muscle across the loins, which concealed the outline of his frame. On placing one of our natives, of the same height, alongside the marsh man, we noticed our native was about three inches higher at the hips.

"I had a good view of our visitor, while he was standing sideways towards me, and in figure and carriage he looked to me more ape-like than any human being that I have seen. The woman, who was of middle age, was much more slightly formed than the man, but her legs were short and slender in proportion to her figure, which from the waist to the knees was clothed in a wrapper of native cloth.

"The houses of the near village were built on piles, at a height of about twelve feet from the surface of the water, but one house at the far village must have been three or four feet more elevated. Their canoes, which are small, long and narrow, and have no outrigger, are hollowed out to a mere shell to give them buoyancy. Although the open water was several feet deep, it was so full of aquatic plants that a craft of any width, or drawing more than a few inches, would make but slow progress through it. Needless to say that these craft, which retain the round form of the log, are exceedingly unstable, but their owners stand up in them and pole them along without any difficulty.

"These people are very expert swimmers, and can glide through beds of reeds or rushes, or over masses of floating vegetable matter with ease. They live on wild fowl, fish, sago and marsh plants, and on vegetables procured from the Baruga in exchange for fish and sago. They keep a few pigs on platforms built underneath or alongside their houses. Their dead they place on small platforms among the reeds, and cover the corpse over with a roof of rude matting. Their dialect is almost the same as that of the Baruga. Probably their ancestors at one time lived close to the swamp, and in order to escape from their enemies were driven to seek a permanent refuge in it."

Colonel Mackay writes in a natural and breezy manner, and supplies the personal impressions which are usually lacking in an official report but are necessary to a vivid appreciation of a country. His judgment of Papua's future seems to be that many parts of it are extremely well adapted for tropical produce, and that splendid possibilities lie waiting for the time when the world is hungrier and more crowded than now.

HURRICANES AND HURRICANE RELIEF.

BY HIS HONOUR F. H. WATKINS, I.S.O.

PRELIMINARY REMARKS.

FEW among those who are born or live for any considerable period in the West Indies are fortunate enough to escape the trying and disastrous experience of one or more hurricanes, and it is therefore a matter for surprise that so little knowledge is possessed by most residents in these islands about the phenomena attending these periodical visitations, especially when it is considered that even an elementary acquaintance with the conditions controlling these storms would, in many cases, be sufficient, if not to avert entirely, at least to minimize, loss of life and property on such occasions. As recent events have cogently proved, such knowledge can be of the utmost practical value, and it is with this consideration that these notes, based on the study of well-known authorities and on the experience gained by having passed through six hurricanes, are offered for perusal, with the hope that further interest in a subject so important may be awakened. Those desirous of becoming more intimately acquainted with the history, origin, movements and physical features of these terrible atmospheric disturbances will do well to study the monthly reports of the U.S. Weather Bureau, the special report of that department by E. B. Garriott (Bulletin H), and by W. H. Alexander (Bulletin No. 32), Elementary Meteorology by W. M. Davis, Cyclonic Circulation, and the Translatory Movement of West Indian Hurricanes by Vines, the Forms of Water Clouds and Rain by J. Tyndall, and the Handbook of the Hurricane Season by Bishop Westerby.

GENERAL DESCRIPTION.

Revolving Storms (Cyclones (kuklos, a wheel) in the West Indies, Typhoons in the Pacific, &c.) are so called because they revolve round an area of low pressure in which there is relatively little wind, while at the sides of this calm centre the pressure of the air, as indicated by the barometer, is very great, especially on the quarter towards

which the disturbance is moving. The winds approach the centre in spirals; the circular and centrifugal movements increasing every moment. The air circulating round the sides rises to the cloud stratum immediately above the vortex, when the air, flowing out on all sides and cooled by expansion, causes the vertical eddy to be surrounded by a thin sheet of rain, extending on an average 150 miles (some times as much as 500 to 700 miles) in front of and 100 miles at the back of the storm. The vortex varies in diameter from twenty to several hundred miles, and travels in its progressive movement westward about 300 miles a day.

Hurricanes form below the Tropic of Cancer in the Northern Hemisphere. Being cyclonic in nature, these storms cannot develop while the doldrums or calm areas of the Atlantic are close to the equator, where the inblowing currents do not unite in causing a systematic vortex, but only when the doldrums, after the commencement of the warm weather experienced at the disappearance of the trades, have sufficiently advanced northward, usually between 5 and 15 N. to allow of convectional action, hereinafter explained, which takes place, as a rule, in July or at the commencement of August. Although hurricanes have been known to arrive in nearly every month of the year, August, closely followed by September, marks the period of maximum activity of cyclonic disturbances.

CAUSES AND ORIGIN OF HURRICANES.

Before discussing the origin of cyclonic storms, it is convenient to examine briefly the general principles of the causes of the production of wind. The great principle to be grasped is that heat expands and the heated air is lighter than cool air. When, therefore, the air expands and grows lighter it is impelled upward by the cold or heavier air rushing to take its place. The heated air in any region of the earth moves towards some colder quarter, while the cold air moves to a warmer zone. Since the air is generally speaking warmer at the equator and coldest at the poles, the air from the equator blows towards the poles as an uppercurrent and the air from the poles flows beneath along the surface of the earth, although, owing to the rotation of the earth, not in a direct course. It must be remembered that the earth turns on its axis from W. to E. at about 1,000 miles an hour at the equator, which velocity gradually diminishes towards the poles, and that the air, even when apparently at rest, is moving with great rapidity. So long as the air remains in this relative condition of rest, the movement of the airs is imperceptible, but it becomes effective the moment the air is impelled to a latitude having a higher or lower rate of revolution. In the Northern Hemisphere the polar currents, blowing about two miles in depth as surface winds, are known as the Trade Winds, while the currents,

setting from a lower equatorial region to a higher latitude give rise to S.W. winds. The trade winds die off as the season advances and the air in the northern latitudes becomes warmer. A similar phenomenon connected with warm and cold currents of air, is observable in the sea and land breezes of the West Indies. Since the land becomes heated more rapidly than water, and ascending currents of air rises from the land soon after sunrise and causes the colder wind to blow in from the sea; while, after sunset, since the land also cools more rapidly than the sea, the warmer currents ascend from the water and the cooler heavier air blows out from the land.

So long as normal conditions of hot and cold air prevail hurricanes do not occur, but atmospheric disturbances are produced in those months when any area becomes saturated with heat and when the consequent ascending current is kept in motion by the abnormal rarefaction of the air above by means of the caloric given out by the water condensed during its ascent. To understand the cyclonic nature of hurricanes it is only necessary to observe how water, as it becomes heated in a vessel placed over a fire, is pushed upwards by the colder, heavier water falling down the sides by the force known as convection. The inflowing currents at the bottom and the outflowing currents at the top of the vessel are connected by the ascending currents in the centre and by the descending currents at the sides, which form a complete cyclonic circuit. The primary tendency of the colder air to take the place of that ascending in the heated air is deflected by the rotation of the earth, so that an easterly direction is imparted to the wind in the northern half of the area, and a westerly direction in the southern half, the combined effect producing a circulation round the centre of lowest pressure from W. through S.E. and N. round again to W., that is, against the movements of the hands of a clock.

So long as the ascending current can be supplied with air saturated with vapour, rarefaction continues, as do also the ascent of the air in the centre of the storm and the rush of the air to take its place. The strength of the storm depends upon the quantity of heat and vapour supplied by the currents below, for what especially causes the tremendous forces generated during hurricanes is the heat energy, which has been locked up in a latent condition in the water vapour and is set free as the water is condensed. Since it is to this latent energy that hurricanes owe their strength, they never reach unusual violence unless the air is nearly saturated with vapour, while, on the other hand, cyclones originating in the Atlantic East of the Caribbean Sea do not lose their force until they recurve and take a N.E. direction towards a colder atmosphere.

Besides their rotary movement, hurricanes have a progressive movement, travelling within the tropics from E. to W., and continuing in the temperate zone, after recurving towards the pole, from W. to E.

The track taken is held by some to be in close relation with the course of atmospheric currents, while others contend that the storm centre moves towards the region of greatest precipitation. The track thus followed is called the path of the storm, the portion of the hurricane to the right of the path being known as the right hand circle, and that on the left as the left hand circle. In the Northern Hemisphere the right hand circle is more dangerous. Until the hurricane reaches the apex of the parabola or recurving point, which is between 75 and 95 Long. W. and 15 to 25 Lat. N., and as a rule near the Bahamas in August and September, the progressive velocity increases steadily, the average rate, as above, being 300 miles a day. At the recurving point the velocity decreases sometimes to one or two miles an hour but rapidly increases on its eastward track, attaining at times a maximum of 35 miles an hour. The hurricane after recurving is thus speedily carried into more temperate regions, "where it assumes more and more the characteristics of a cyclone by spreading over a larger area and losing its violent nature as it journeys northeastward, hence it may be said that the hurricane bears in itself the seeds of its own destruction." During the recurving of the storm, islands like Grand Turk, which often lie within the parabola, feel the effects of the hurricane successively on the south, west and north.

WARNINGS OF APPROACHING HURRICANES.

Several readily accessible means are at hand for ascertaining the formation and approach of hurricanes, provided intelligent use is made of them and of one's powers of observation. Chief among these means are the movements of clouds, the appearance of the sea, the barometer and the thermometer.

CLOUDS.

So important and useful are clouds, the *Fliegende Wolken*, *Segler der Luft* of the dream of Maria Stuart or the valkyries of the air, in affording valuable information as to atmospheric changes and disturbances, that it is almost a matter of necessity that an elementary knowledge of the different cloud formations be acquired, and for this reason the following brief notes on this subject are introduced.

There are four primary forms of clouds :—

Cirrus
Cumulus
Stratus
Nimbus

Cirrus Clouds, which take their name from their resemblance to a lock or curl of hair, and are commonly called mare's tails or cat's

tails or Pele's Hair, are composed of isolated feathery masses of cloud particles from 15,000 to 30,000 feet in the higher regions of the atmosphere, so far above the surface of the earth that these particles are generally in the condition of ice crystals. It is chiefly to do with Cirrus clouds that haloes appear round the sun and moon. There are two distinct forms of Cirrus clouds. The first form, like feathery shafts, commence to appear when a cyclone is 300 to 400 miles away and converge to a spot on the horizon, indicating the centre of the disturbance and giving warning of a storm of small diameter but of considerable force, while the second kind are of zone shape and of large diameter, forecasting a storm of moderate strength. The upper currents of Cirrus clouds afford more information as to its situation and force while the storm is still at some distance, but, when the vortex is near at hand, the movements of the lower clouds are more reliable guides in determining the position and direction of the calm centre.

Cumulus or Heap Clouds consist of dense masses of cloud formation collected in the lower regions of the atmosphere (4,500 to 7,500 feet) where the amount of water vapour is greatest, and are humpback on the top with flat bases. They are, as a rule, produced by the ascending daily air currents carrying the warm moisture to the upper regions, where the clouds are chilled by the cold of elevation and expansion.

Stratus or Layer Clouds occur in the form of horizontal bands or layers, and are due to the gradual settling of the other clouds, for which reason they are common in the early morning and late evening, when the ascending currents of air are weak.

This form of cloud is least elevated of all, being under 3,000 feet, and often becoming fog by falling to the surface of the earth.

Nimbus, or Rain Clouds are dense masses of formless clouds with ragged edges, through which are often seen Cirro-Stratus clouds. When the mass of nimbus is broken up into small fragments, or if portions float below the cloud, they are called "scud."

The chief secondary forms of clouds are:—

Cirro-Stratus

Cirro-Cumulus

Cumulo-Stratus

Cirro-Stratus Clouds are whitish layers, usually forming a diaphanous veil and often giving the sky the appearance of a mackerel's back; hence such a sky which indicates approaching rain, is known as a mackerel sky.

Cirro-Cumulus Clouds, known as "Wool Sacks," are Cirrus clouds arranged in little round masses like small cumulus and point to dry weather.

Cumulo-Stratus Clouds resemble mountain masses with a stratus base.

DIFFERENT PHASES OF TYPICAL CYCLONIC DISTURBANCES.

There are several distinct phases in hurricanes, and those most prominent are :—

- (1.) The anti-cyclonic period.
- (2.) The period more immediately preceding the arrival of the vortex.

- (3.) The passing of the vortex.

- (4.) The recession of the vortex.

I. During the first phase the meteorological elements follow in reverse order the normal climatic conditions of the season of the year and those in the subsequent phases of the storm. The distinct features of this phase are :—

- (1.) An unusual rise in the barometrical readings.
- (2.) Cool weather, the thermometer falling several degrees below the normal.
- (3.) Cloudless sky of deep indigo tint.
- (4.) Anti-cyclonic winds, and the disappearance or disturbance of the land and sea breezes.

- (5.) An ocean swell from no perceptible cause.

II. In the period immediately preceding the arrival of the vortex may be observed :—

- (1.) Gradual fall in the barometer with irregular fluctuations. The fall becomes more rapid as the calm centre comes in close proximity.

- (2.) An increasing ocean swell.

- (3.) Oppressing heat with light variable breezes developing into a stronger wind from a direction between N.W. and N.E.

- (4.) A great change in the upper strata of the air, with the appearance of a reddish and purplish sky covered with what is known as the "cirrhose veil." This phenomenon, according to Father Vines, "is always observable when the outermost part of the hurricane begins to invade the place of observation.—The transparent and blueness of the sky characteristic of the past anti-cyclonic weather is succeeded by an opaqueness or veil called the cirrhose veil, so extremely subtle in the beginning as to render it almost imperceptible. Notwithstanding its subtlety, this veil exerts a very great dispersive power on the solar rays, its principal feature being the almost entire absorption of all the prismatic colours except red. These powers of dispersion and absorption are chiefly remarkable when the solar rays are compelled to pass through a great portion of the atmosphere. Consequent upon this, the rising and setting of the sun are attended by an anomalous colouration of the sky, ending or beginning when the altitude of the sun, is on an average, 15°, the colouration increasing as the altitude decreases." This cirrhose veil gradually changes as the hurricane approaches. At first, its

colour is of a whitish milk tint, but, afterwards, it appears more opaque and assumes a hue rapidly growing darker and darker, when the arc is called the bar of the hurricane which increases gradually in altitude to about 20° , but the base is concealed below the horizon.

(5.) Shortly after the bar is formed on the horizon, Nimbus clouds begin to overrun the sky in inexhaustible succession. Short intermittent showers fall and the rain sensibly increases. At first the rain is very light, of a spitting character, is accompanied by squalls of a velocity of 40 to 55 miles an hour, while the mean velocity of the wind outside of the squalls is from 35 to 40 miles an hour. As the centre approaches nearer and nearer the rain becomes continuous, although irregular in quantity, the showers succeeding each other at shorter intervals attended by furious gusts from 100 to 120 miles an hour, and now is heard the ominous hurricane whistle, which once heard can never be mistaken. Certain features connected with these showers and gusts derive special notice. In the first place, the velocity of the wind augments considerably at the beginning of, and during, the showers, for, while the wind in the body of the hurricane rarely exceeds 65 miles an hour, the wind in the gusts increases to 100 to 120 miles an hour. The duration of the showers is from one to two minutes, while the gusts last but a few seconds. Again, during the showers the wind (supposing you are facing it) always shifts to the right from 45° to 90° (four to ten points) so that if wind is blowing from N. before the shower, it will blow N.E., E.N.E. or E. during its continuance, the greatest variation corresponding with the greatest force. During the gusts the barometer oscillates violently.

(6.) While the hurricane is still at some distance sand and leaves are blown in spiral forms like miniature whirlwinds.

RULES FOR DETERMINING THE POSITION AND DIRECTION OF AN APPROACHING HURRICANE.

As soon as it has been ascertained that a hurricane is in the process of formation, it is important to determine its position and direction and, for this purpose, the following rules will be of great assistance :—

(1.) If you face the wind and it shifts to the right from N. to E., S. or W., you will be on the right hand semicircle and the hurricane will pass to the south ; if, however, the wind shifts to the left from N. to W., S., E. and N., you will be on the left semicircle and the hurricane will pass to the north.

(2.) If the bar remains stationary on the horizon, while the barometer descends rapidly and the velocity of the wind and the showers continue to increase, you are in the direct path of the storm. The more tenaciously the surface winds cling to the N., the greater the probability also of the centre passing directly over you.

(3.) When the storm commences, the centre will be from eight to ten points on the right hand of the wind, about ten points when the barometer has fallen 3-10 of an inch, and about eight points when it has fallen 6-10 of an inch or upwards.

(4.) If the movements of the wind take place rapidly the centre is not far off, on the other hand, if the changes are slow the vortex is either at a distance or is recurving.

(5.) As has been stated, the Cirrus clouds radiate from a divergence focus which marks the position of the vortex.

III. The features of the vertical calm are :—

(1.) An abatement in the velocity of the wind.

(2.) The calm in the vortex is relative, for the wind is seldom less than six, though never more than ten, miles an hour, and this calm is interrupted by sudden gusts, of 20 to 30 miles in velocity, which continue for only a few seconds and are variable in direction blowing from all parts of the compass.

(3.) The sky overhead is clear.

(4.) The barometer, after making a sudden drop, which records the minimum reading, oscillates violently for a few moments, remains stationary for a time, and then begins gradually to ascend.

IV. The principal phenomena making the recession of the vortex are :—

(1.) The wind suddenly increases from six to ten miles an hour to gusts of 80 to 90 miles an hour. These gusts are especially to be dreaded on the sea on account of their unexpected arrival.

(2.) The wind blows from the quarter diametrically (180° or 16 points) opposed to the direction of the gusts immediately preceding the period of vertical calm. At times these winds are of greater intensity than those in front of the cyclone, the axis of the storm then being, as a rule, inclined from W. to E.

(3.) Shortly before, or simultaneously with, these gusts, the barometer continues to rise appreciably and ascends until the hurricane is passed.

(4.) Shortly after the gusts appear the showers recommence but with less intensity before the calm and, as the vortex recedes, all the other phenomena, observed in the second phase, recur in exactly the reverse order of succession.

PRECAUTIONS TO BE TAKEN ON LAND AND AT SEA.

I. On Land.

About the middle of July have a thorough examination of shutters and fastenings, and have number painted on the shutters corresponding to those on the doors or the windows to which they are attached, so that when warning of an approaching storm is

given barring up can be done with as little delay and confusion as possible.

(2.) When barring up a house, begin with the side likely to be exposed first to the hurricane, that is N.E., as a rule, before the vortex is passed and then pay particular attention to the S.W. side. If the centre is to pass to the south, secure the N. and E. sides, if to the North, the N. and W. sides.

(3.) During the vertical calm open up the north side for the purpose of ventilation.

II. At sea.

The following are among some concise rules to be observed during revolving storms in the Northern Hemisphere which are published by the Hydrographic Department of the Board of Trade :—

(4.) “ If the seaman has reason to think that his vessel is in the direct path of the storm, he should run with the wind on his starboard quarter until the barometer has ceased falling. If she is in the right hand semicircle, she should remain hove to on the starboard tack ; if she is in the left hand semicircle, she should run with the wind on the starboard quarter.

(5.) “ Should a vessel not have sufficient room to run in the least dangerous semicircle, she should heave to on the port tack.

(6.) “ If in a harbour or at anchor, the seaman should be just as careful in watching the shifting of the wind and ascertaining the direction of the centre, as by so doing he will be able to tell on which side of the storm he is situated and be able to act according to circumstances.

(7.) “ Should the centre of a storm pass over a vessel, the wind, after blowing furiously in one direction, ceases for a time and then blows with equal fury from the opposite direction. This makes a confused pyramidal sea, which is especially dangerous.”

DISTRIBUTION OF HURRICANE RELIEF.

Hurricanes, though frequent and inevitable visitants of most of the West Indian islands, involve a more or less long departure from normal conditions, and entail loss of life and property and absence of productive employment owing to the interruption to the carrying on local industries. Chief, therefore, among the problems to be faced after similar calamities are the temporary feeding of the destitute, the temporary and permanent housing of the homeless, the provision of employment to enable sufferers to resume their means of livelihood and relief to those who have lost the bread-winners of the family ; in other words, to restore normal conditions and to prevent, as far as it is practicable, the ensuing demoralisation which is productive of more lasting harm to the community than material lost.

Immediately after a hurricane the question of providing food and shelter at once has to be confronted; with regard to shelter, much depends upon the number of public buildings, schools, etc., left standing, and it is important to see that effective measures are taken for the separation of the sexes and for the observance of elementary sanitary precautions. Some of those taking advantage of the shelter given should be employed in keeping the buildings and surroundings clean. In Montserrat, in 1899, tents were supplied as shelters by the military authorities of St. Lucia.

It is, unhappily, a common belief among the lower classes in the West Indies that it is the duty of the Government to provide food gratuitously to everyone after all tropical disasters, and it is essential from the very first to disabuse their minds of such an erroneous idea, for the sight of free food being distributed seems, in many instances, to act as much as a demoralising stimulant as alcohol. A little firmness in this particular at the commencement will prevent much trouble and misunderstanding later on. Under no consideration should food be given gratuitously, except in the case of those unable to work, and remuneration for relief works should not be given in cash but in the form of tickets upon stores or shops where food can be obtained at all hours, and the danger of crowds gathering round relief centres is avoided. The rate of remuneration given for relief work should not be such as to compete with the wages ordinarily paid to labourers and others, but on such a scale as will enable the recipient to maintain himself and his dependants in food until he can find an opportunity of resuming his regular work. As a rule, two-thirds of a labourer's pay should be allowed to those with a family to support and one-half to single men and women, but much depends upon whether ground provisions are scarce, or whether the food consumed at the time has to be imported. Relief centres for the distribution of food are open to the objection that they are provocative of scenes of confusion and disorder, and that they tend to encourage the idea that food is to be obtained without work, whereas, if the recipients of relief are able to obtain their daily supplies in the ordinary way through the stores, they are more likely to lose the demoralising desire for free food and to be willing to return to their ordinary occupations. The prices at which all kinds of food (alcohol excepted) are to be thus obtained, should, of course, be arranged with the storekeepers upon whom orders are given, so that no advantage can be taken of those presenting tickets. This system of distributing food, besides diverting the minds of the labourers from the abnormal conditions existing, has the further advantage of helping the storekeepers to maintain their usual stock of imported goods and of removing from the latter the temptation of raising the prices of their goods to an exorbitant extent during

a period of scarcity. Where supplies of food are sent from outside, it is also better for those in authority to hand them over for distribution in the manner above suggested, to the storekeepers, who should be given a commission upon the amount of the goods thus disposed of, and for the receipts from the sales to be paid into the general relief fund.

Generally speaking, there are, for some time after a hurricane, numerous ways for providing work, namely, clearing debris, opening up roads, restoring huts moved off their foundations, while carpenters can be usefully employed in rendering habitable houses unshingled or slightly damaged so as to relieve the congestion at the shelter centres, and masons will be required for repairing culverts and small bridges. After the more urgent preliminary works are completed, care must be taken to guard against funds being wasted upon unnecessary labour and to see the expenditure devoted either to useful and productive public works or, better still, in aiding, wherever practicable, those employers of labour who have suffered in the disaster to resume the employment of those dependent upon them for work. In the Turks and Caicos Islands the saltpond owners, who had had to face a succession of disastrous wet seasons and were quite unable to repair the damage to their ponds sustained in the hurricane of 1908, were enabled by a grant from the public reserve funds to employ their labourers in placing their ponds in thorough repair. This method of relief gave, at once, opportunity for present and future productive work, benefitted the sufferers of all classes, and solved the perplexing question of employment, which, the longer unanswered it remained, increased more and more daily the danger of demoralisation among the labourers.

Immediately after a disaster likely to call for special measures and relief, it is wise to obtain, before time is allowed for considering how the amount of losses can be conveniently exaggerated in the hope of assistance, a description of the damage sustained by each individual from policemen or other reliable persons detailed for that object.

When provision has, in the first instance, been made for the primary requirements of food, shelter and temporary employment, the attention of those responsible for the distribution of the funds available for relief purposes has to be directed to the more permanent assistance of those who have sustained loss of property or who have been deprived of the support of the bread-winner of the family. In this particular, the following passages of a preliminary report of the Assistance Committee, appointed for providing houses and means of support to the survivors of the earthquake in Kingston, are deserving of careful consideration, coming as they do from a body coping with the results of an appalling catastrophe, entailing losses of every description, and able to profit in their action by the

experience gained in the distribution of relief after the Jamaica hurricane of 1903.

"The Committee," says the report, "on assuming their functions, found themselves in the position of administrators of a charitable trust, their duty being to interpret and carry out, to the best of their judgment and ability, the intentions of the contributors of the Assistance fund. They therefore deemed it right to proceed as nearly as possible as they would have proceeded had they been private persons dispensing their own money in charity for the purposes prescribed by the Assistance Committee Law with the general and governing aim of repairing the crippling damage inflicted by the earthquake on the city and community of Kingston. They did not hold themselves under any quasi-legal or mechanical obligation to observe as between cases in the same class a superficial uniformity in their awards, nor could they regard the mere fact that an individual had suffered loss, even severe loss, by the earthquake as necessarily entitling him or her to any share of the funds. They had to investigate and exercise discrimination and constantly to control their procedure by reference rather to the intentions and desires of the donors than to the expectations of applicants for assistance. And they regarded the intentions of the donors as being rather to provide for the future than to attempt to redress the past."

Money was not only allowed by the Assistance Committee for the restoration of houses, but was also applied in all deserving cases where statements of loss were received in respect of (a) loss of occupation (b) injuries and disablement (c) loss of bread-winners and (d) loss of any other source of income not specified. Grants, however, were not given to persons on account of their having lost furniture, clothing, plate, jewellery, cash or other personal property, but, in cases where persons were found to be destitute, the provision of absolutely necessary furniture, such as bed and bedding, was authorised. The provision for widows and orphans was considered in the first instance and was given in such amounts as to preserve the beneficiaries from absolute destitution, and then grants were allotted for the restoration of houses on a scale varying from one-tenth of the amount of the damage calling for repair to the full amount in the most necessitous cases.

In the smaller West Indian Islands more especially, it is desirable that all subscriptions and other forms of relief, as well as all disbursements made, should pass through the public treasury accounts on vouchers required by the financial regulations of Crown Colonies and be subjected to strict audit, the wages to labourers employed on public or private relief works being paid to the recipients in presence of responsible public officers.

As earthquakes, hurricanes and eruptions are the natural obstacles to unimpeded progress in the West Indies, it seems but reasonable

that adequate provision in the form of systematic insurance should be made to enable all concerned to deal expeditiously with the consequences of these inevitable periodical visitations by reserving a certain proportion of the public revenue for this purpose. The amount of revenue to be earmarked to meet such contingencies would naturally be determined by the average period between the disasters in individual islands and should eventually be raised to a sum equal to the average annual revenue. The existence of such an insurance fund, which is justifiable on the same grounds as the expenditure on armaments is deemed necessary by larger nations as a precaution against foreign aggression, would prove of inestimable benefit to all classes of inhabitants, for both employer and employee could, with equal justice, participate in the times of necessity, in the distribution of funds to which they had contributed. The chances of undeserving persons obtaining relief would, moreover, be materially reduced because members of local committees would be more reluctant in recommending grants from moneys in which they were more personally interested. As has already been said, the demoralizing after-effects of the distribution of gratuitous relief have inflicted more lasting evil on the West Indies than the material losses of hurricanes and similar calamities, severe though those losses have often undoubtedly been. The custom of trusting invariably to outside assistance on such occasions and of what is vulgarly known as "passing round the hat" on the slightest provocation, has too long prevailed. Much as the ever present feelings of sympathy and ungrudging and lavish assistance from the Mother Country and from sister islands, which, in their turn, have experienced like catastrophes are to be appreciated, this reliance on extraneous aid is not conducive to healthy effort or independent character, qualities unfortunately lacking to an appreciable extent in the West Indies.

Disasters of appalling magnitude will, at times, occur when local effort is paralysed and unable to meet adequately the situation; but every endeavour should be made to discourage appeals for outside generosity, even for the very selfish consideration of the danger of crying "Wolf" too often. In view of the frequency and inevitableness of such emergencies, each island should be prepared with some rough scheme of action for meeting with the exigencies of the moment. The existence of a substantial reserve fund enables such a scheme to be drafted on definite lines and, by the knowledge of what funds are available, facilitates prompt and economical action which otherwise is impossible in the uncertainty as to the ultimate response to appeals to sources of fluctuating sentiment and sympathy.

BANKING IN WEST AFRICA.

SEVENTEEN years ago all the West African possessions of the British Empire were entirely without banking facilities. A standard money currency was unknown to the millions of natives inhabiting the coast line and hinterland of the British West African Colonies, and practically the whole trade of those Colonies was conducted upon a system of barter.

The only use for a money currency at this period was for the payment of Customs duties to the Government by the European merchants. Even for this purpose money played but an insignificant part as the Government were in the habit of accepting from all the more important commercial houses drafts issued by themselves on their European houses for the payment of the greater portion of the Customs duties, although this method of payment was obviously undesirable from a sound financial standpoint.

In the year 1892, the African Banking Corporation of London opened the first bank in West Africa at Lagos, now the capital town of Southern Nigeria.

It is impossible for those not intimately acquainted with West Africa, and the characteristics of the native inhabitants, to appreciate the difficulties which the establishment of a bank in that country involved. The African Banking Corporation, after an experience of just over twelve months in Lagos, were glad to retire from their venture, and the lack of success which attended their experiment is not difficult to explain. The directors of the African Banking Corporation, although widely known and highly respected in London and South Africa, were unknown personalities to the West African native. In order to achieve success in West Africa, it was imperative that any bank opening there should have as its promoters and local representatives men personally known to and respected by the natives themselves.

To Sir Alfred Jones, K.C.M.G., the credit must be given for being the founder and creator of banking in West Africa.

In the year 1894, subsequent to the withdrawal of the African Banking Corporation from Lagos, Sir Alfred Jones (then Mr. A. L. Jones), the senior partner of the great West African shipping firm of Elder, Dempster & Company, founded the Bank of British West Africa, Limited. The appearance of his name (a household word in West Africa) upon the directorate immediately commanded for the bank the respect and confidence of the natives. Thus the successful flotation was made of what was to become the pioneer bank in West Africa, an institution destined to be the means of introducing a standard money currency throughout the length and breadth of our West African Colonies.

From its inception, the Bank of British West Africa was entrusted with the Government account, and this gave the natives added confidence in the concern, as it was regarded practically as a Government department.

Looking back upon the early days of banking history in West Africa, it is interesting to remember the hostility which was at first manifested by the large European mercantile houses to the advent of a bank. Their attitude, however, is not difficult to understand when it is remembered that almost all of the trade was in the hands of a very few powerful firms and that, as practically the whole of the trade was conducted on the barter system, at enormous profits to the European merchants, the introduction of the English silver currency (which is legal tender to any amount in British West Africa, and which has been from 1894 to the present time the standard currency) was not welcomed by them.

It is an incontrovertible fact, however, that the establishment of a money currency in a vast country like British West Africa, with its almost limitless wealth and resources, was of paramount importance as a civilizing factor. Indeed, it may rightly be held that currency, more than anything else, tends to the rapid development of the commerce and resources of any country just awakening to the benefits of civilization.

The introduction of a properly constituted Bank in West Africa had at once an immediate and striking effect. It began to broaden the basis of trade and, by providing financial assistance to the smaller European merchants, brought the trade of the country into the hands of the many instead of leaving it in the hands of the few. It also brought the natives to realize the benefits of a money currency compared with the old system of barter.

The most obvious and important advantage obtained by the natives of West Africa through the introduction of a money currency may here be briefly described :

In the years preceding the establishment of a bank, the natives from the interior of the Colonies were in the habit of bringing down

to the coast towns the raw products of the country (palm oil, palm kernels, rubber, ivory, gum, etc.) for the purpose of exchanging such with the European merchants. Payment for these products was made by the European houses principally by means of manufactured goods of all descriptions, rice, tobacco, spirits, brass rods and small copper rings known as manillas. It is obvious that this method of exchange could not prove of lasting benefit to the native, and there was naturally a limit to the demand for such commodities. It follows, therefore, that no particular advantage was to be gained by the natives by fostering and preserving the cultivation of the products of the country.

With the establishment of a standard money currency and the introduction of a bank, however, these obvious disadvantages rapidly disappeared: the natives were not slow to realize that money had a value far greater than any other form of exchange, providing as it did for the acquisition of wealth in a practical form.

The bank offered an inducement (in the shape of generous interest allowed on monies placed on deposit) for the encouragement of thrift, and as, at the present time, the natives have entrusted to the Bank some £800,000 sterling on current accounts and fixed deposits, it will at once be seen how the altered conditions have been understood and appreciated.

Through the medium of the Bank, British silver from the year 1894 to the present time has been poured into our West African possessions—over three and a half million pounds sterling having been shipped to West Africa during this period.

Just as the Bank of England is deputed to control the silver currency in Great Britain, so the control of the silver currency in British West Africa is very wisely left by the Royal Mint and the Colonial Office solely in the hands of the Bank of British West Africa. Only those versed in the difficulties connected with a purely silver currency can appreciate the onerous responsibilities of such a control. When the stocks of silver in one colony become excessive, the bank (at its own expense) moves the redundant coin to another colony where silver is required, and thus prevents the undue inflation of the currency which would otherwise arise through indiscriminate importation.

In practically all the British West African Colonies the year is divided into two seasons—a very rainy season and a dry season. The latter as a rule lasts from four to six months (from November to April), and it is during this period that the bulk of the produce of the country arrives at the coast towns from the interior for sale and shipment to Europe.

The Bank, at such times is called upon to supply from its various Coast branches enormous sums of money to the European mercantile houses in order to finance their purchases of produce. It will thus

be readily understood that it is imperative in the interests of the trade for the Bank to provide its various West African Branches with adequate resources for all possible demands, which have to be provided for apart altogether from the permanent cash reserves necessary at all the Bank's branches to meet the demands likely to be made on current and deposit accounts.

For this purpose, some months prior to the commencement of each produce season, the Bank at its various branches in West Africa gradually increases its normal reserves by accumulating British silver coin, and in addition large sums are shipped out annually from England by the Bank in anticipation of the trade requirements.

This part of the banking business of West Africa alone requires the most careful and intelligent consideration, and it is interesting to note that, at no time in the history of the Bank in West Africa, has it failed to supply in full the demands of the community for silver.

From the establishment of the first branch in West Africa at Lagos, the Bank of British West Africa rapidly opened other branches in the Gold Coast, Sierra Leone and Gambia Colonies, and at the present time this Bank has branches and agencies at every town of importance on the Coast Line and in the interior throughout the whole of British West Africa.

It would be impossible for even those who are experts in banking conditions in Great Britain to realise the difficulties and anxieties encountered in conducting a great banking business in West Africa. Special knowledge (born gradually of an intimate acquaintance with the conditions of the country and the habits of the natives) is an absolute essential for success; and an important factor in the success which the Bank of British West Africa has attained, is that all its senior officials, both at home and abroad, have been in the service of the Bank from its inception.

It is impossible adequately to describe in detail within the limits of a short article on West African Banking the benefits which have accrued to the West African possessions of the Crown by the introduction of a money currency and banking facilities, but they may be very briefly summarized as follows:—

(a) The abolition of the barter system, under which the commercial possibilities of a country cannot develop.

(b) The substitution of a money currency, through which the natives have learned the value of money and the advantages of thrift.

(c) The expansion of trade owing to the facilities the Bank offers in financing merchants (1) in England by advances on their outward shipments of merchandize, and (2) in Africa by advances against the homeward shipments of the produce of the country.

(d) The advantages gained by the Colonial Governments (1) through the bank assuming the onerous duty of controlling the silver currency; and (2) in the immense saving in expenditure effected in the Treasury Departments owing to the Bank taking charge of the revenue of the Colonies, and undertaking the transmission of Government funds to and from London.

Among the most remarkable instances of the commercial development of West Africa are the birth of the Cocoa industry on the Gold Coast, and the commencement of cotton growing in Nigeria. The unprecedented increase in the export of cocoa, and the steady growth in the output of cotton, have only been rendered possible by the banking facilities now obtainable in West Africa; and the more important European houses engaged in the West African trade are now the first to bear testimony to this.

The following statistics (kindly provided by the courtesy of Mr. A. H. Milne of the Liverpool Chamber of Commerce) are a remarkable proof of the wonderful increase in the principal imports and exports of the West African Colonies where the Bank has established branches. The figures given date in each case from the establishment of the Bank in the respective Colonies, and show, for comparison, the corresponding figures taken from the latest available returns.

SOUTHERN NIGERIA.

	£
1894 Imports from the United Kingdom and other countries	929,333
1908 Imports from the United Kingdom and other countries	4,284,830
1894 Exports to the United Kingdom and other countries	1,014,088
1908 Exports to the United Kingdom and other countries	3,409,288

GOLD COAST.

1897 Imports from the United Kingdom and other countries	910,540
1907 Imports from the United Kingdom and other countries	2,366,195
1897 Exports to the United Kingdom and other countries	857,793
1907 Exports to the United Kingdom and other countries !... ..	2,641,673

Banking in West Africa.

233

SIERRA LEONE.

£

1898	Imports from the United Kingdom and other countries	606,248
1908	Imports from the United Kingdom and other countries	813,699
1898	Exports to the United Kingdom and other countries	290,991
1908	Exports to the United Kingdom and other countries	736,754

GAMBIA.

1901	Imports from the United Kingdom and other countries	252,647
1908	Imports from the United Kingdom and other countries	390,739
1901	Exports to the United Kingdom and other countries	233,666
1908	Exports to the United Kingdom and other countries	374,137

NOTE.—The following figures show the value of the Cocoa exported from the Gold Coast :—

£

1891	... ..	4
1900	... ..	27,280
1908	... ..	540,821

These figures are the most eloquent testimony to the benefits which have accrued to the West African Colonies by the introduction of banking facilities into West Africa.

ROY WILSON.

P.S.—Since this article was written the Bank of British West Africa has sustained a severe loss through the removal, by death, of Sir Alfred Jones, K.C.M.G., the Founder and Chairman of the Bank

The Institution remains a monument, among many others, to his foresight and ability in promoting large measures for the benefit of the trade of the Empire.

R. W.

REVIEWS AND NOTICES.

The Legislation of the Empire, being a survey of the legislative enactments of the British Dominions from 1898 to 1907. Edited, under the direction of the Society of Comparative Legislation, by O. G. A. BEDWELL, with a preface by the Rt. Hon. the EARL OF ROSEBERY and an introduction by Sir JOHN MACDONELL (4 Vols. : *Messrs. Butterworth & Co.* ; 2 Guineas).

FOR the purposes of this survey it has been necessary to examine more than eighteen thousand Acts, and in his suggestive preface the Earl of Rosebery views this vast output with some feeling of apprehension. "We cannot," he remarks, "shut out from ourselves the prospect that increasingly the Legislation will endeavour to raise and fortify the new structure of society, somewhat empirically, by means of legislation. Now, I watch this process with some vigilance and more anxiety, because I belong to that small school which does not believe that Law, in the long run, can greatly ameliorate humanity. I am not sure that I do not incline to that small heresy (if it be a heresy) that the State is most fortunate which achieves its own development by the character and individual efforts of its own citizens, and with as little support and guidance as possible from legislation. At any rate, certain I am that the progress of the State which is enabled to develop itself will be more sure and abundant than that of the State which rests on legislative measures for the achievement of its destiny." These remarks raise an interesting question, and an amplification of them with some reference to individual cases would have been welcome. No doubt the best asset of a state is the good qualities of its citizens. But, in the first place, there are imperfections in the best communities, and, in the second,

great energies and activities constantly create new fields for organisation, and the additions to the statute book are largely the reflections of strong individual movements. A general review of the recent legislation of the Empire shows that the chief effort which is being made all round is to deal with pauperism, poverty, crime, disease, vice and ignorance. There is, of course, room for doubt as to the remedies for these evils, but it can hardly be said on the whole that the state in dealing with them is displacing private efforts, or is doing in one way what individual work would do in another. It is much nearer to the truth to say that in these cases the state has stepped in because individual efforts have failed and have been bound to fail, and that a far higher standard of efficiency may be set up and reached when the joint powers of the community are applied to the task than when each man is left to grope for himself. The function of law in such cases is not to suppress private work but to secure the success of whatever is good in it. For this end rules binding on all are necessary. It is obvious that individual efforts, unless they receive the sanction and support of the state in this way, would constantly be liable to be nullified by the stupidity or selfishness of some part of the community. The greatness of the volume of legislation is the result of progressive ideas, and until some final stage of perfection is within reach the legislative activity shown in such matters will be in direct correspondence with the march of thought.

In any case, it is clear that the whole Empire shows the same general trend in this matter. In the ten years covered by these volumes there were passed about 25,000 statutes. In this mass of legislation there is a striking degree of homogeneity. "It has the same aims and it generally adopts the same means. Almost all the Legislatures are making similar experiments, all making similar resolutions. I shall have to point out that the form of legislation is being 'standardised.' I may add that the same ethical level is being adopted. Thus there is unity in purpose, in spirit, and in form. The fact that for many parts of the Empire there is the same Common Law gives the legislation a similar character; much of it is intended to repair defects in that law, and to adapt it to modern circumstances; for much of it there is a common background or substratum. There is also much conscious and direct imitation of English models. Many of the Colonial Legislatures keep step, so to speak, with the English Parliament." (Introduction.)

There is abundant legislation against drink, disease, and betting, and—except in South Africa—for the protection of labour

by sanitary requirements, the maintenance of wages, the settlement of disputes, and the limitation of hours. Crime is being fought largely by indirect means. Prevention is aimed at rather than punishment, by such means as the segregation of the young and of first offenders. A large group of statutes provide for education, but it may be observed that there is very little reference to secondary education. Usually in these statutes there appears no trace of any religious difficulty, but an interesting settlement of the question has been made in the Orange River Colony, where a purely historical handbook is used in the schools (attendance at such times being optional), and dogmatic instruction may be given by any minister of religion after school hours.

The fourth volume of this work contains an analytical index to the subjects dealt with, so that a comparison of the provisions in different places may be easily made. The work has been thoroughly well done, and is highly creditable to the Society and its band of zealous workers.

The Union of South Africa. By the HON. R. H. BRAND. (Oxford; Clarendon Press. 6s. net.)

In this volume Mr. Brand gives an explanatory account of the provisions of the South Africa Act, 1909, the full text of which is printed in an Appendix. There is a very brief historical chapter and two chapters at the close are devoted to an attempt to forecast the future of politics in South Africa and of South Africa's relation to the rest of the Empire. But the treatment of these subjects is necessarily very slight, the author's object having been to describe the nature of the constitution itself, and to subordinate all other considerations to this description. As Secretary to the Transvaal delegates at the Convention, Mr. Brand had every opportunity of becoming familiar with the details of the measure as it gradually took shape, and his account of them is clear and easily intelligible. The book is intended for the general reader rather than for the expert student, and there is therefore no elaborate comparison with other constitutions or analysis of the origins of the various parts of the constitution. The student in search of these will naturally turn to "The Foundations of Union," recently published anonymously in South Africa. Mr. Brand tends, not unnaturally, in nearly all matters which formed the subject of dispute, to adopt the Transvaal point of view, and adherents of Cape Colony may find something to criticize on this score; but as a rule he is singularly free from any partisan bias.

The South Africa Act is remarkable for the absence of limitations on the power of Parliament to amend the constitution, and this feature hardly seems to us to receive adequate treatment in this volume. When several states agree to coalesce into a single unit, it is a common thing for the instrument of union to be regarded as having the nature of a treaty, unalterable except by consent of all the contracting parties. The existence of this sentiment is obvious in the case of the United States of America and the Commonwealth of Australia. It exists even in the case of the United Kingdom, as is shown whenever suggestions for reducing the representation of Ireland in the House of Commons come up for discussion. But in South Africa the States which make up the Union have been singularly confiding, and no trace of the treaty notion appears in the constitution. Mr. Brand is very doubtful as to the prospects of the new provincial constitutions proving a success in practice, and he regards this part of the South Africa Act as a leap in the dark. It is at any rate a highly interesting experiment, for which there is, so far as we are aware, no exact precedent in any part of the British dominions, and it is a testimony to the originality of the framers of the constitution.

The Cradle of New France. By A. G. DOUGHTY, C.M.G.; Litt.D.
Dominion Archivist (*Longmans, Green & Co.*, 6s. net.)

Quebec, as Mr. Doughty observes, is unique. The glory of its position is without rival. It is rich in memorials of the past, and singularly interesting as typifying the union of two great nations wide apart in political and religious views. It is the birthplace of North American Literature, for here were penned the writings of Cartier and Champlain.

The early years of the French settlement saw a great amount of hardship, and it is curious to read that at one time it was almost starving, a handful of pease or a few roots being doled out daily. The explanation was that most of the settlers still depended on France for the necessaries of life, preferring the lucrative fur trade to toilsome agriculture. They kept up, however, a vigorous social life, and the gaieties of the Canadian winter made a good start at Quebec. From the beginning they established their reputation for having large families. The paternal government of France assisted the process by sending out cargoes of girls of the poorer class, and no time was lost on their arrival.

“ Marriage in those days was a matter not of inclination but of duty. A girl must be wed when she was fifteen, and a boy before he had reached the age of twenty. For the bachelor there was no sympathy; single blessedness was not popular in high places.

“ Before the arrival of the ships with marriageable damsels, all bachelors were warned that their hunting privileges would be cancelled unless they chose a partner for life within fifteen days after the arrival of the vessels. This somewhat indecorous method of disposing of the girls left scanty time for courtship, and the most presentable youth had the best chance of securing the most attractive girl for his bride. The laggard, no doubt, met with his desert. There appears, however, to have been quite a scrimmage amongst the bachelors to obtain a point of vantage.

“ The king manifested a lively interest in the increase of the population. Writing to the Intendant upon one occasion he predicted that there would be eleven hundred births in Canada during the next year.”

The union of the two nations after the war was quickly accomplished. General Carleton, sixteen years after he had fought under Wolfe, led both English and French against the Americans under Arnold. “ Two great factors, the clergy and the *seigneurs*, assured the loyalty of the French to England. It was the aim of the clerics after the Cession to render their flocks obedient to the new order and to accept the accomplished fact recognised by France and confirmed by the Treaty of Paris. The tenets of their religion and their traditional training led them to exact submission to constituted authority. The most influential class after the clergy were the *seigneurs*. To them it was a simple matter to transfer their allegiance from one sovereign to another. With the nobles of old France, ideas of king and country were associated, and often the monarch overshadowed every other consideration. Strong monarchical convictions therefore inclined them towards the English king, and Papineau had said in 1820 that the change of allegiance caused no regret, considering the superiority of the character of George III. over that of Louis XV.”

Mr. Doughty's book is brightly written, and with an appreciation of the incidents which show character. It contains a detailed account of the buildings and monuments of Quebec and a number of interesting illustrations.

Another View of Cyprus.

In our April number we noticed Mr. Stewart's volume entitled "My Experiences of the Island of Cyprus," which gave a very pessimistic account of the climate, scenery and health conditions of the island. Mr. Anton Bertram, Judge of the Supreme Court of Cyprus, has an article in the October number of "Travel and Exploration," written largely by way of protest against Mr. Stewart's conclusions. Mr. Bertram recalls the innumerable literary and historical associations of the island, the praise which it won from Euripides and Virgil, the legends which connected Aphrodite and Adonis, Teucer and Ascanius, with it, the visit of Paul and Barnabas, the marriage of Richard Cœur de Lion, the tragedy of Othello; and he sets himself to ask whether Cyprus is an unworthy theatre for so rich a variety of drama, in the course of which the destinies of the island have been controlled in turn by the Phœnicians, the Egyptians, the Persians, the Greeks, the Ptolemies, the Romans, the Byzantines, the Saracens, the English, the Lusignans, the Templars, the Genoese, the Venetians, the Turks, and now lastly by the English again. Mr. Bertram has a very complete and thorough knowledge of the scenery of the island, and his description is likely to awake in many readers a longing to visit it. He admits that Cyprus has "tracts which are dreary beyond description"; but he claims for it also "beauties that ravish the soul." We quote a short description of the Kyrenia coast, but we commend the whole of Mr. Bertram's article to our readers:—

"When I approach the Kyrenia coast I am in danger of becoming rhapsodic. But the Kyrenia coast is *sui generis*—a thing apart. Speaking with all possible self-restraint, I say that I know no more enchanting spectacle than that long line of graceful mountain tops that stretches from beyond the romantic castle of St. Hilarion away to the distant Carpas. Far beneath you, as you cross the pass from Nikosia, lies the blue Mediterranean, and across it you see the snow-capped mountains of Asia Minor. The spring flowers here are more lavish than anywhere in Cyprus. The hill-sides are almost a carpet of cyclamen. As you descend to Kyrenia, you feel that this side of Cyprus possesses what the rest lacks. There is a certain austerity about the rest of Cyprus. Here you have the richness of Italy. Indeed, as you walk through the streets of Kyrenia and see the gardens, the flowering trees, the steep descending steps, you might think yourself in some Italian sea-side town. . . . It is much as you feel when you descend from the Engadine to the Lake of Como. Some day, the world—the English and American world, that throngs the hotels and bazaars of Cairo and makes excursions into the Egyptian desert—

will discover the Kyrenia coast. When Cairo becomes too hot to be bearable, Kyrenia is at its best. To my mind the change from the Cairo season to the cyclamen and anemones of Kyrenia must be much like coming from a ball-room into a summer garden at sunrise."

Agriculture in the Tropics. By J. C. WILLIS, M.A., Sc.D., Director of the Royal Botanic Gardens, Ceylon, &c., &c., &c. (*Cambridge University Press*. 7s. 6d. net).

Under the above title Dr. Willis has written a treatise which should prove of exceptional interest, in that it deals with tropical agriculture in a broad philosophic spirit, treating the subject from the point of view of the administrator, the student, the experiment station worker, and also of the investor, for whose advice and guidance the book is mainly written. The needs of the planter engaged in producing any specific crop have not been catered for; he, in many instances, has access to works of reference treating more or less exhaustively of the industry with which he is concerned. It does not follow, however, that this work is without interest for the planter, but it is mainly concerned with general matters of policy and development.

It is significant that modern colonial administration is steadily assimilating the idea that the correct handling of agricultural problems constitutes one of the first essentials of government, that the care for and development of the agricultural resources of our tropical possessions must be a function of government, and cannot be left entirely to industrial enterprise, and that the action of a wise government in aiding, guiding, and urging forward agricultural enterprises is the safest line of policy to ensure the maximum of development with the minimum loss of energy.

To those who are interested in this side of the question, Dr. Willis's book will form most useful and instructive reading.

In some parts of the book the aspect of the eastern tropics, and particularly of Ceylon, are obviously very present in the writer's mind. This is natural from the close association of Dr. Willis with the agriculture of these regions, and while perhaps his perspective may not be quite so accurate when he treats of some other places, it enables him to give us many faithful pictures of tropical problems under aspects not usually presented in agricultural works.

The views put forward relating to the interdependence of Land, Labour, and Capital, and the influence of each in the development

of successful tropical enterprises, may afford European readers food for thought, and they may be led to see that something more than a little capital and a determination to work hard are essential to the success of the young man who seeks to establish himself in a tropical colony. The habits of the agricultural labourer and the effect that they may have upon enterprises, as well as many similar matters, are tersely indicated in a manner calculated to throw light on some successes as well as on some failures.

The manner in which each individual crop, or group of crops, is treated is rather that of the general observer who wishes to study or indicate the broad lines of improvement or development which may be looked for or aimed at in each instance. The general nature and prospects of the crop are indicated, the methods employed are briefly sketched, and there is usually an interesting note or discussion hinting at the useful lines of policy which should be followed in order to attain greater success or to ensure stability. All this is useful and stimulating, for, while the individual planter may often be alert as regards the details of his own particular culture, he may lose sight of broad general principles, or of wants happening at a distance which may profoundly modify his chances of success.

The information given and the views expressed in Part III., dealing with the general aspect of agricultural affairs in the tropics, form interesting and instructive reading, while Part IV., which treats of Agricultural Organisation and Policy, should be carefully studied by all interested in the government of our tropical possessions, by all who are connected with botanic or experiment station work, and by all who are commercially interested in tropical agricultural enterprises.

The fact that Dr. Willis can state with conviction that without the aid of the Botanic Gardens Ceylon would have remained a small and unimportant "native possession," is a highly significant fact, the full meaning of which we trust may be recognised.

FRANCIS WATTS.

Wanderings among South Sea Savages. By H. WILFRID WALKER. (*Witherby & Co.*, 7s. 6d.)

There is still much of the primitive and romantic in the South Seas, though it is fast changing, and the enterprising traveller can find the old customs and ideas, kept in check as they may be by the new law. Thus the ex-cannibals of Fiji have not died out,

and still expatiate on the attractions of the habit. Mr. Walker heard a story by some of them of how they boiled the feet and boots of a white man for days, not knowing that they were separate, and that they did not like the taste of the boots. His narrative ranges over Fiji, the Philippines, Papua and Borneo, and every part of it shows the facility with which he got into intimate acquaintance with the natives. The account of the Dayaks of Borneo is particularly interesting.

The Nandi, their Language and Folk-Lore. By A. C. HOLLIS, with Introduction by Sir C. ELIOT (*Oxford Clarendon Press*).

This is a careful study of the customs and language of the inhabitants of the Nandi plateau, one of the most beautiful districts in the East Africa Protectorate. They have been a fighting tribe, and carried this so far as to attack the Uganda Railway, for which indiscretion they were placed in a reserve. The principal medicine man is the supreme chief, and the Nandi believe implicitly in his powers. The totem idea is well developed, and there are many curious customs interesting to anthropologists.

Mosquito or Man? The Conquest of the Tropical World.

By Sir RUBERT W. BOYCE, M.B.; F.R.S. (*John Murray*, 10s. 6d. net.)

In this volume Sir Rubert Boyce traces the history of the theory of insect-borne disease, and describes with considerable fulness the campaign which is being conducted against the mosquito. He supports the belief that the immunity of Barbados from malaria is due to the small fish known as "millions"; these have been tried elsewhere without success, but perhaps it is hardly fair to come to a conclusion from a comparatively small consignment. The book is excellently illustrated.

The Recognition of Minerals. By C. G. MOORE (*The Mining Journal*, 7s. 6d. net).

A man who finds himself stationed at some unexplored place can hardly have a more interesting hobby than prospecting for minerals, and there is always the chance that a valuable find may reward his labours. There is a story of a father who took his son to a certain scientific institution and enjoined upon the authorities

that all that he wanted them to teach the youngster was how to find gold "in paying quantities." This is no doubt a laudable aspiration, but the prospector may often miss chances if he looks only for gold. There are many comparatively rare metals, new uses for which are continually being found by modern industrial methods, and the prospector should therefore be prepared for whatever he comes across. Mr. Moore, who has been resident chemist to the Ashanti Goldfields Corporation, catalogues all the minerals of any value, explaining their characteristics and showing how they can be recognised by simple tests. The descriptions are easily intelligible, and are exactly what are wanted by the amateur who cannot follow the assays of the professional chemist.

Geology of the Cape (13th Report of the Geological Commission, Cape Town).

During 1908 the work of the survey was carried on in the Divisions of Britstown, Prieska, Victoria West, Carnarvon and Hay. Much new information was obtained about the peculiar rocks allied to the Kimberlite group occupying fissures and pipes in these districts.

Ferro-Concrete.

The monthly magazine "Ferro-Concrete" has been instituted to keep the many persons who are interested in the system abreast of current development. (2s. 6d. per annum, post free.)

Among recent Colonial publications may be mentioned a report on locusts and their destruction, by the Cape Government Entomologist; a report on the Forests of British East Africa, by Mr. D. E. Hutchins (Cd. 4723); and the proceedings of the South African Irrigation Congress (Capetown). A booklet on the erection and working of cotton gins may be commended to those who have to use these machines (Imperial Department of Agriculture for the West Indies: 4d.). The Barbados Commission's report on the Customs deals with many points of general interest as regards the collection of customs revenue and the want mainly of goods.

Among the Colonial Reports, that on the results of the mineral survey of Nyasaland (Cd. 4908), by Prof. W. Dunstan, includes an account of the coal areas near Lake Nyasa, which will be an asset of great value. The report on the cotton industry in Uganda

(Cd. 4910) explains why it became necessary to maintain the standard of quality by legislative provisions. Within a radius of 100 miles from the shores of Victoria Nyanza there are "more than a million able-bodied landowners eager to grow cotton, and at least 20,000 square miles of land eminently suitable for the production of that product."

In the account of agriculture and viticulture in South Africa (Cd. 4909), Lord Blyth discusses the various products and recommends the appointment of an Agricultural Advisory Committee for the whole Empire. The soils and climate of South Africa are, he considers, "all round equal, if not superior, for cultivation to those of almost any other part of the globe."

BUSINESS NOTES.

Motor Transport.

The annual report for 1908 of the Mechanical Transport Committee is full of interesting matter. The most important point for undeveloped countries is that the Hornsby chain track tractor has given satisfaction. This conclusion opens up new prospects for places where there are no roads or where horses cannot live. A high-speed car has been built for desert work in Egypt. The Hornsby car is built on two separate frames. The upper frame carries the six-cylinder engine, clutch, gear-box, etc., and is a standard 75-b.h.p. "Mercedes" pattern. The lower frame carries the chain tracks with their driving and guide wheels and axles. In a trial over dry soft sand, a speed of over 20 miles an hour was attained, with nine persons on board, and the running was smooth and remarkably free from undulation; a length of bearing of 9 feet was afforded by the chain tracks, the centre of the track having sunk to a depth of 2 inches. Considerable improvements have been made on the original design.

In the War Office competition for light tractors the prize was awarded to Messrs. Thornycroft, whose tractor was considered a very considerable advance on any hitherto tried.

The petrol specification has been revised to include a spirit of higher specific gravity (715 to 725), which is far cheaper than the lighter varieties. Under the worst possible conditions the engine can be started by injecting a few drops of a lighter spirit or by putting warm water in the cooling system. It should be borne in mind when special brands are asked for from the Colonies that the distillers of these makes do not always possess a bonding house at the most convenient port of shipment, and some expense and delay may be saved by ordering petrol to a specification.

The Committee have tried Elastes-filled tyres, but did not find them satisfactory. The Crown Agents have sent a car so fitted to Nigeria. "Miraculum" is not recommended, as being of no use in the case of large cuts or burst tyres. The Palmer tyre is recommended as being the best and cheapest, having about 50 per cent. longer life than the steel-studded.

Cotton.

The output of cotton continues to increase in West and East Africa, and the British Cotton-growing Association has now produced a quantity representing about £2,000,000, at a cost of £125,000. The output, however, is very small compared with the American, and more money is greatly wanted by the Association to extend its field of enterprise. An application has been made to the Government for a grant towards the cost of the pioneer work, but it can hardly be urged in support of this that Lancashire has shown itself keenly concerned in the matter. The textile industry has not been in such a condition as to suggest that the public at large should contribute to help it, and if the county principally concerned does not care to subscribe substantially for the development of cotton-growing in our own possessions, there is not much of a case why anyone else should. It is to be hoped that the funds of the Association will increase, and in the meantime it is satisfactory to notice that excellent cotton can be grown in so many of the Colonies.

Water Finder.

Our old friend the divining rod still commands a considerable following, and though recently a municipal auditor in this country refused to pass the expenditure for one on the ground that it was a pure waste of money, there is substantial evidence that there is something in the idea. The housemaid's practice of encouraging a fire to light by putting a poker in front of it was cited by Herbert Spencer as an example of civilised superstition, but it has lately been upheld on abstract scientific grounds, and possibly other like customs may be whitewashed in the same way. An automatic water finder has been brought out which is based on an undeniably scientific principle, which may be at the bottom of the many successes of the divining rod. Electrical earth currents exist in all parts of the world, and the density of such currents will naturally be greater when the strata are rendered conducting by water. It is claimed that if subterranean flowing water is present below the instrument, the magnetic needle provided will move, the strength of its swing depending on the volume of flowing

water below. A trial of the instrument has been made by the Transvaal Government, and the observer came to the conclusion that it will probably prove of value, though satisfactory results are not to be expected on days of excessive heat or when the ground is saturated after heavy rain.

The prices are £100 and £50, according to size.

The Fibre Industry.

Various enterprises are springing up for the exploitation of this product in the West Indies and Africa, and there should be good openings for them if they are well managed. In a report on the sisal industry of the Turks and Caicos Islands, it has been stated that in the first year from 30 to 40 leaves can be taken off each plant, the number diminishing each subsequent year. From this it has been computed that in ten years a plant would yield 190 lbs. of leaves, which, at $5\frac{1}{2}$ per cent. of dry fibre, would represent $10\frac{1}{2}$ lbs. weight of fibre; taking this at an average price of 3d. per lb., each plant would yield 2s. $7\frac{1}{2}$ d. Much depends on the machine used. The great German firm of Krupp has taken this matter up and sent a representative to study the conditions in East Africa, and they are now turning out a machine which it is believed will extract all the fibre from the leaves, say at least 8 per cent. The price, however, is high; we understand it is £750, without the power. There are British-made machines on the market, which are constructed on good theoretical principles, but they have not established a reputation as adapted to the working conditions. It is to be hoped that the British manufacturer will not be left behind in this matter, as the business is sure to grow greatly.

Filters.

Enquiries are occasionally made as to the best filtration system for public institutions. A series of enquiries on the subject has been recorded in the "Journal of Hygiene." Earthenware has from ancient times been recognised as a good filtering material, as it aerates water and retains matter, but ordinary filters do not prevent the passage of disease organisms. Experiments have showed that the Doulton white porcelain filter and the Pasteur Chamberland do not allow the direct transmission of contaminated matter, but do permit of indirect contamination by growth through the filter mass. This contamination was less in the Doulton than in the Chamberland filters, and on resterilisation the candles in the former again gave germ-free filtrates. As a material for pressure

filtration the Doulton porcelain preparation was pronounced to be at least the equal of the best materials on the market. But sterilisation should be carried out every three or four days.

The Berkefeld filter used to be considered an effective disease preventor, but in recent comparisons of the Doulton, Berkefeld, and Slack and Brownlow filters, it was found that the Doulton alone uniformly prevented the direct transmission of micro-organisms, the Berkefeld with one exception allowed transmission, and the Slack and Brownlow allowed transmission immediately.

The efficiency of a filter in this respect seems to depend on the porosity. The smaller the size of pore or grain the greater the efficiency. The microscopic comparisons show that the Doulton filter has the smallest grain.

Motor Fire Escape for Melbourne.

Australia is well to the fore in the adoption of motor fire apparatus, and machines of this class are to be found at Sydney, Melbourne, Adelaide, and Brisbane. The two first-named cities have each given several repeat orders, and the Melbourne Fire Brigade has just received delivery of its fourth Merryweather petrol motor appliance. This comprises a powerful 55-h.p. motor chassis, carrying a 50-ft. fire escape, together with a capacious box for accommodating hose and usual gear for getting to work from street hydrants. Several firemen can be carried, and a speed of 25 to 30 miles an hour attained. The escape, which is of the "sliding carriage" pattern, can be detached from the vehicle in a few seconds when required for use. Solid rubber tyres are fitted to the wheels, those in the rear being of twin section.

River Transport.

A scheme has been prepared by Messrs. G. Rennie & Co. for a generating tug working lighters provided with electrical motors. As soon as the cables were coupled up, the whole fleet would be ready to get under way, and as each unit is self-propelled and self-contained the man at the wheel would have control to direct his vessel round the bends. The system would have advantages on rivers where a considerable cargo can be taken up at a time. Some of the points given in favour of the scheme are that:—

"In the case of shallow draft tugs, it is well known that owing to the limited size of the propellor, and this also applies to screw in tunnel boats, a high number of revolutions has to be made in order to get the requisite power, and this is very undesirable for a high towing efficiency.

“Whereas in this system, owing to the power being split up into a number of propellers, the highest efficiency can be obtained from each propeller.

“It is also apparent that only the amount of electricity that is actually required need be generated, so that if the fleet is composed of only two barges, sufficient power will be generated for three motors only, one for the tug and two for the barges.

“Whereas in the ordinary tow boat, the machinery is generally working at its full power whether towing two or five barges or any other number.

“It is reasonable to suppose therefore that there will be a very considerable saving in the electrical unit system, and this is of the very greatest importance where the cost of fuel is a consideration.

“As regards dirigibility, it has already been pointed out that in navigating a river which is full of sand banks and shallows, it would be of the greatest convenience for such a vessel to be self-propelled, and to steer her own course.

“Everyone has seen the difficulty which a string of barges has in rounding a sharp bend in a river or in a canal, the tail barges usually swinging round and sometimes causing considerable damage to other craft or themselves.

“This difficulty is entirely overcome by the unit system, and the point is worth considering.

“With regard to the up-keep, we have every confidence in saying that there is no engine which gives less trouble than the modern electric light engine, which, being entirely enclosed and under forced lubrication throughout, requires very little attention.

“The same may be said of the modern electric motor, with which all modern factories are now equipped, and which run from year to year with the minimum of attention.

“It is therefore not necessary to have a skilled man of any sort on the lighters, and a native pilot could handle the boat with perfect ease.

“Other minor advantages, such as a brilliantly illuminated fleet at night with powerful lights to guide them, will save a considerable time in the transport of goods.

“In some cases the power boat may be put to special uses on arrival at its destination, for supplying power to electric cranes to unload the cargo, working sawmills, and other temporary machinery.

“The question of cost is naturally of great importance to the purchaser, but the outlay is not much greater than, say, a powerful stern wheel steamer and an equal number of barges, and we confidently anticipate that the extra cost of this system would very soon repay the owner.”

Irrigation Notes.

Irrigation on a large scale has been attended with such striking results in many places that people are apt to conclude that it can be introduced with success on any land. This is far from being the case; the amount of land which is suitable for irrigation of this kind is comparatively small. It is essential that there should be a substantial depth of soil, and this generally excludes the uplands. Usually proper conditions are only met with in the alluvium of rivers. The sub-soil has also to be examined to see that it admits of drainage. It has sometimes happened that irrigation water has brought to the surface such excessive quantities of salt that it has been almost impossible to continue the cultivation of the land. It should therefore be ascertained whether the soil contains any deleterious brack salts, and for this purpose a sample from the surface is useless; a piece more than one foot deep should be taken.

The small holder who makes his own storage is usually content with an earthen bank to serve as the dam. In this case the excavation for the soil should be up-stream, so as to form additional storage. High earthen dams are dangerous, and for substantial storage cement is necessary, but up to a certain point lime is good enough, and silt-laden water in time forms a fairly effective packing on a gravel floor.

A substantial earthen bank dam should be made with the help of proper machinery. The appliances used in America are generally wheel scrapers and dump wagons; the filling of the latter is done by an elevated grader, and the machine is certainly very effective for loading soil. Usually the cost would be beyond the means of the farmer, and the only plan is for the Government to provide the plant, charging for the use of it, or for a contractor to undertake the work.

The need for irrigation and the mischiefs of erosion in South Africa are dealt with in a small book entitled “Utilisation of Flood Water,” published at Cape Town. The law of the Colony has stood in the way of improvements, and though an Act of 1906 has done great good, there is room for improvement, and a movement is going on for further reform. In all such cases it is old

rights to water that stand in the way of general schemes. The Gordian knot was cut in Italy by Count Cavour's government by decreeing all rivers public property, and modern Italy owes much of its prosperity to this strong legislation.

American v. English Small Arms.

The Australian Commonwealth Government, having decided to set up their own small arms factory, invited tenders for machines, plant, and motive power on the 1st of January last year. The results were instructive, if not gratifying to British pride. The following tenders were received for machines capable of turning out 50 M.L.E. Mark III. rifles per day, or 15,000 a year:—

Bir. Small Arms Coy. ...	£150,231	...	Time, 2½ years.
Archdale and Coy., Birmingham	100,438	...	" 3 "
Greenwood and Batley, Leeds	69,141	...	" 2 " less 5 weeks.
Pratt and Whitney, U.S.A. ...	68,144	...	" 1 year and 16 weeks (subsequently reduced to 1 year.)

These tenders were considered with great care, and it became clear that the great disparity was due to differences in ideas as to the best system of manufacture. The B.S.A. Co. considered that it was desirable to provide for separate machines for each operation, but the two lowest tenderers did not share this opinion. In May, after considerable telegraphic correspondence with Capt. M. Collins, the Commonwealth Government directed that an expert should be sent to America to visit and report upon Messrs. Pratt and Whitney's works. The expert returned satisfied that the machinery there could manufacture small arms more efficiently than any European, and could in many cases turn out double the work produced by English machinery. The firm stated that any pattern of rifle could be made and any change of pattern provided for by changing the fixtures. It was further urged that there was a considerable economy of labour by the use of their machines. The War Office were consulted, and gave an opinion in favour of the B.S.A. Co.'s tender, considering that American machinery was less durable than English and therefore more expensive. The expert, on the other hand, considered that this objection to American machinery was not applicable to Messrs. Pratt and Whitney, and that the War Office was not aware of recent developments in small arms machinery in America. The price of the War Office rifle was £4. 5s., while under Pratt and Whitney's scheme it would be £3. 9s. 1d., and it is not surprising, therefore, to learn that the tender of this firm was accepted.

RAILWAY NOTES.

Ceylon.

The gross receipts in 1908 were the highest recorded, and show a steady increase of prosperity. A large sum was expended in increasing the stability of the line against slips and washaways. The old passenger carriages are gradually being superseded by modern bogie stock, and of these increasing parts year by year are being made in the Colony. The new British standard 80-lb. rail and angle fish plate have been adopted in the low country broad-gauge sections in lieu of the old 72-lb. section. The increasing traffic is making it necessary to adopt a heavier type of engine, and, as generally happens, this brings up the prospect of having to strengthen the bridges. The Mannar Line will be a splendid running road, capable of fast time and fit for heavy engines. The suburban sea-coast railway, which carries many thousands in and out of Colombo daily over an ill-equipped single line, will be improved, and there is hope that the present barn-like structures will before long be replaced by decent stations. It need hardly be said that the carriage of rubber has increased, the tonnage being 183; in 1906 it was only 37; but this is a trifling matter for the railway, which looks chiefly to rice and tea.

Mannar Railway.

The South Indian Railway authorities anticipate that they will complete the works on their side by the end of 1911.

Gold Coast.

The construction of the Accra—Akwapim Railway, which was commenced in January, 1908, has been carried on by the contractor uninterruptedly and with considerable energy, and the work has been done in a very creditable manner. It is anticipated that the line will reach Insuam (26 miles) by the end of March, and Mongoose (40) by the end of June.

The railhead of the Tarkwa-Prestea line was at 14 miles at the end of September, and will, it is expected, reach Prestea in April.

Lagos.

At the end of September the earthworks on the Ilorin-Jebba section were completed. There was no difficulty in obtaining labour, and 1,520 natives were employed. On the Jebba-Zungeru section the earthworks were completed for 49 miles; some difficulty was experienced in getting as much labour as was desired, but 3,237 natives were employed.

In spite of heavy rains, which caused much extra work, the concrete foundations for the trestle bridge on the Niger were completed, and the girderwork erected by the end of August.

MEDICAL NOTES.

In Ceylon there was more malaria, small-pox, and enteric fever in 1908 than in 1907, and this was due mainly to want of rain. Sir Allan Perry, in his very clear report, observes that: "On all meteorological conditions, the rainfall has the greatest influence on the health of the people. Drought means hardship, agricultural pursuits are hindered, foods get scarce, wells run dry; with insufficient food and water low in the wells, bowel complaints are common; with insufficient rain the breeding places of mosquitoes are not washed out, mosquitoes therefore are left undisturbed, and a large amount of malaria is the result. The influence of the rainfall as a factor in increasing disease was very marked in Colombo during the year under review. There were long periods of drought, and the rainfall for the year was below the average. There was an unusual amount of sickness from serious disease in consequence. Similar meteorological conditions existed in 1906, which was a markedly unhealthy year. The incidence of malaria is determined by the monsoon rains. If the Island is roughly divided into western and eastern longitudinal halves, malarial fevers are commoner soon after the south-west monsoon in the western half of the Island, and after the north-east monsoon in the eastern half."

But when the insanitary conditions of many parts of the Island is considered, it is not surprising that there is a good deal of sickness. Sir A. Perry advocated the establishment of "mosquito brigades" to clear the breeding grounds, as in Sierra Leone, but only three local boards promised to take any serious action, and the others pleaded that no action was necessary. The Lunatic Asylum had the worst year in the history of the institution, but a picturesque feature is that in compliance with a general desire

expressed by the attendants, a religious ceremony was performed; whether this directly affected subsequent events is a question which the report discreetly leaves open, but "apart from belief in its efficacy as an instrument, its picturesqueness and solemnity impressed the imagination powerfully," and "did much to restore courage to the faint-hearted."

Sleeping Sickness in Uganda.

The report of the Principal Medical Officer of the Uganda Protectorate on the work carried out at the Sleeping Sickness Camps shows that up to November 30th, 1908, a total of 5,081 cases had been received, some 2,000 remaining under treatment on the latter date. The tables accompanying the report show that "death continues to thin the ranks not merely of those admitted during the earliest months, but of such of these as on admission were still in the early stage of the disease. Many of those classed as 'improved' in former reports have now succumbed." The opinion is expressed that the camps have abundantly justified their existence. "Although purely from the point of view of the segregation of an infectious disease, and apart from the general preventive measures undertaken, I do not consider that the camps are or have been of any great value, they have been, on the other hand, very useful and necessary adjuncts to the general scheme for the prevention and stamping out of sleeping sickness. They have been of great value as asylums, where the sick who have been removed from dangerous areas have found refuge, and where very many persons who would otherwise have been subject to desertion, misery, and starvation have been housed, fed and medically cared for. They have also been, in my opinion, of considerable educational value. The fact that hundreds of sick have for long periods been collected in places from which *Glossina palpalis* is absent, and that the disease has in no case spread either to the attendants or in the neighbourhood, has materially assisted to impress on the natives (a task at first so difficult) the truth of that which they have been taught concerning the connection between the fly and the spread of sleeping sickness. They have thus been better able to understand the utility and *bonâ fides* of the action taken by Government to protect them from infection, and this better understanding has without doubt facilitated the carrying out of preventive measures which might otherwise have been regarded with much suspicion and resentment. An instance of this is the removal of the islanders to the mainland, which, though regarded until lately as impracticable, is now taking place with the full concurrence and assistance of the chiefs themselves." Unfortunately, the results of the attempts at curative treatment which

have been made in Uganda are far from encouraging, and the report quotes the opinion expressed by the chiefs that "though they think that many less people now have sleeping sickness, owing to the preventive measures which have been put in force, they do not yet know of any individual among their own people having recovered from the disease, with or without treatment." It is pointed out that laboratory experiments as to the influence of drugs on trypanosomes, whether *in vitro* or in the smaller animals, have proved less helpful than similar experiments in the case of many other diseases, the nature of the disease in man and in the animals experimented upon presenting wide divergences. The hopes entertained as to the curative results of atoxyl, anti-mony, and other drugs have been to a large extent disappointed, and "there is no longer question of the routine administration to all and sundry of a drug which, it was supposed, might probably effect a cure in a considerable number of cases, but rather of the careful testing of various remedies and methods of administration on series of selected cases, combined with accurate observation and tabulation of results continued over long periods." For this purpose the report recommends the establishment of a special central "investigation camp." The results of experience in the treatment of the disease by atoxyl are summed up as follows:—

"1. The improvement which occurs in many cases has not been maintained in the great majority of them.

"2. The prolongation of life which results has been of no benefit to the community, and of at least doubtful benefit to the patients themselves.

"3. Where the measures taken for preventing contact of the sick with the fly are practically complete, as in the Victoria Nyanza epidemic area, the diminution of infectivity produced by atoxyl treatment is of little value.

"4. The number of early cases which have maintained their improvement has steadily decreased, and the number of persons likely to be permanently cured is now inconsiderable.

"5. The results obtained from atoxyl and mercury do not at present seem any more likely to be permanent than those obtained from atoxyl alone.

"6. Increased experience in the use of organic arsenical remedies, combined with their practically constant supply in a chemically-pure condition, has not up to the present brought about any corresponding rate of improvement in statistics.

"7. It remains true that better results have been obtained from organic arsenic, alone or combined with other drugs, than from any other method."

The detailed statistical information embodied in the report affords terrible evidence of the ravages of the disease, and it is clear that Sleeping Sickness, like cancer, has up to the present baffled all the efforts of medical science. In each case hope for the future depends upon the ultimate success of scientific investigation, and the great concentration on the task of trained intellects and devoted labour forbids any suggestion of despair.

Doctor Bagshawe, the Director of the Sleeping Sickness Bureau, read at a meeting of the Society of Tropical Medicine and Hygiene a paper which gives a useful summary of recent advances in Our Knowledge of Sleeping Sickness. It has been reprinted, in pamphlet form, from the Transactions of the Society. The Sleeping Sickness Bureau has issued its eleventh Bulletin, and the wide recognition of the value of its work is shown by the unexpectedly large demand for its publications.

The Compulsory Isolation of Apparently Healthy Persons.

Of recent medical developments nothing has mystified more completely the man in the street than the discovery that persons in apparently good health are capable of carrying infectious germs for an indefinite period and distributing them among their friends and neighbours. These "Carriers," as they are called amongst doctors, are obviously a danger to the community, and every effort is being made in hospitals and laboratories to find some effective means of driving the objectionable bacteria from the systems of afflicted persons.

The recent action of Sir William Collins in drawing the attention of Parliament to the detention of five soldiers at Millbank Military Hospital at once interested the general public in a matter that has hitherto been confined to professional circles. These soldiers, as the result of close observation by army surgeons, were strongly suspected of harbouring and excreting the bacillus of typhoid. One of them in particular had been responsible for the outbreak of several cases in his own regiment, and other cases occurred from time to time in units which happened to be quartered in his neighbourhood. All five of the soldiers referred to, as Mr. Haldane was careful to inform the House of Commons, exhibited no signs of ill-health beyond the excretion of the bacilli. Mr. Haldane admitted that so far no cure had been effected by the use of vaccines at Millbank, though persisted in for many weeks, and he added that cases had been recorded in which the bacilli were excreted by typhoid patients two years after they had been discharged from hospital as "cured."

Obviously no one who values his liberty would wish to be confined indefinitely in hospital, especially when enjoying apparently robust health, and the solution of the "carrier" trouble clearly affects the interests of every citizen. Early in 1908 the then Medical Superintendent of the Monsall Fever Hospital at Manchester—probably the largest institution of its kind in this country—contributed to the medical journals a note on the internal treatment of typhoid fever on antiseptic lines. He used medical izal oil with remarkable results, inasmuch as he found that when the drug was administered for a sufficiently long period, the bacilli of the coli-typhoid group usually disappeared, and the patients were discharged free from any suspicion of being "carriers." During the first year that this internal antiseptic treatment was introduced at the Monsall Hospital the cases of mortality from enteric fever was the lowest on record for that institution. It will not unlikely prove that the remedy for chronic "carriers" will be found in the internal administration of antiseptics such as medical izal oil—a method of treatment now being extensively used in fever hospitals at home and abroad.

In the Trinidad Medical Report for 1908-9 the Surgeon-General comments on the fact that the vigorous and effective measures taken to combat malaria and other tropical diseases in the Island have scarcely received adequate recognition in some quarters, and that there has been a tendency to brand Trinidad with an undeserved reputation for unhealthiness and indifference to sanitation. He draws attention to the very efficient manner in which an outbreak of bubonic plague was dealt with in 1908, nineteen cases in all being notified during 1909. Three isolated cases of yellow fever were notified during the year under report. Vigorous measures were taken to reduce the numbers of *Stegomyia* mosquitoes.

We have received from the Liverpool School of Tropical Medicine Vol. III., No. 1, of *Annals of Tropical Medicine and Parasitology*. This number, which contains 256 pages, is entirely taken up with the report of the Liverpool School's Blackwater Fever Expedition to Nyasaland in the years 1907 to 1909. The authors are Dr. J. O. Wakelin Barratt and Dr. Warrington Yorke.

Volume III., No. 2, of *Annals of Tropical Medicine and Parasitology* contains three important reports by Doctors Kinghorn and Montgomery (the members of the Liverpool School's Expedition to the Zambesi in 1907-9), dealing with Trypanosomiasis in men and in animals in Nyasaland and North-Eastern Rhodesia.

Volume III., No. 3, contains articles on Sanitary Measures and Malaria Epidemics in Athens, on a form of enlargement of the spleen, accompanied by cirrhosis of the liver, endemic in Egypt, and on Biochemical and Therapeutical Studies on Trypanosomiasis (by Doctors Breinl and Nierenstein).

Volume III., No. 4, contains instalments of the extremely valuable reports of the Liverpool School's Expedition to Jamaica in 1908-9. Doctor Newstead deals with Medical and Economic Entomology, and Doctor Prout, C.M.G., with Malaria.

COLONIAL STAMPS.

Readers of these notes will probably have noticed an apparent revival of copper-plate printing recently among Colonial stamps. There is no doubt that for issues of between 100,000 and 800,000 stamps it is much more economical than the surface process, both the plates and printing being cheaper where a special design is adopted, and at least equally cheap as the Universal Key-plate stamps. The only serious objection to such stamps is that they are unsuitable for use in collection of Revenue unless the cancellation can only legally be made with proper cancelling ink. The process is also unsuitable for stamps of considerable value, because they are easier to clean, or for those printed in large numbers, because large numbers can be more cheaply printed by the surface process in more than one colour, as after the first printing the sheets must be dried and re-wetted for reception of the second colour, which almost doubles the cost of printing.

Several Colonies which use copper-plate stamps have decided to adopt the new colour scheme. It is obvious that this cannot be done to the full extent for values to which two colours are appropriated on the scheme, but the following scheme has been drawn up so as to include the leading features of each value. We name only the values in which the scheme could not be literally followed:—

<i>Value.</i>	<i>Colour of Ink.</i>	<i>Colour of Paper.</i>
3d.	Brown	Yellow.
4d.	Red	Yellow.
4½d.	Orange	White.
5d.	Sage Green	White.
2/-	Purple	Blue.
2/6	Red	Blue.
3/-	Violet	White.
5/-	Green	Yellow.
10/-	Red	Green.
£1	Black	Red.

It will be observed that there are two cases in which the colour scheme is entirely departed from. In one of these, however (the 3d. value), the difference is more apparent than real, as the brown ink on the yellow paper produces much more nearly than purple the same effect as that given by the surface printed 3d. stamp. The 4½d. stamp is in orange, because it is a value which has hitherto been seen only in one issue of copper-plate stamps, and there is no instance of a 1½d. stamp in this method of printing.

BRITISH HONDURAS.—1 cent stamps have been supplied on unsurfaced paper.

BRITISH SOLOMON ISLANDS PROTECTORATE.—Three new values have now been issued in addition to those recorded in our issue of July, 1908. These are 2s., 2s. 6d., and 5s. The colours adopted are those described above.

FIJI.—1s. postage and revenue stamps in the new colours have been supplied.

HONG KONG.—\$2 stamps have been supplied with black border and carmine centre on surfaced paper. A new 5 cents receipt stamp of a small size has been sent out, and it is intended to print no more 5 cents postage stamps, the use of which will be discontinued as soon as the present supply is exhausted.

MALTA.—The supply of the ½d. and 1d. stamps referred to in our last issue should have been recorded some time ago. The difference between the current ½d. stamp and that previously in use lies in the character of the ink used and the consequent use of unsurfaced paper for the current stamp. The ½d. stamp is now printed at one operation, but this produces little, if any, difference in its appearance.

SIERRA LEONE.—1½d. stamps have been supplied in the new colour.

STRAITS SETTLEMENTS.—The supply of \$100 stamps was recorded in error in our last number. The next supply will be printed in the colours stated in our issue for January last, and

will be of a large size, but none have yet been ordered. 50 cents and \$500 stamps, the latter a new value (see April number), and the former in the new colours, have been supplied.

MELVILLE STAMP BOOKS.—A Melville Stamp Book (6d.) gives a surprisingly full account of Papua, which, owing to constitutional changes, is exceptionally interesting to philatelists. Another issue deals with Tonga, which also has had a varied history in this respect since 1886.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Lieutenant-Colonel C. R. M. O'BRIEN, C.M.G. (late Deputy Commissioner, Transvaal Town Police), Colonial Secretary, Gambia.

Mr. F. C. WELLS DURRANT (late Stipendiary Magistrate, St. Lucia), Attorney General, Bahamas.

Mr. T. S. SIDNEY (formerly District Commissioner, Lagos), Attorney General, Leeward Islands.

Mr. R. E. NOBLE (late Magistrate, East Africa Protectorate), Legal Assistant, St. Vincent.

Mr. E. B. REECE (Chief Railway Accountant, Gold Coast), Treasurer, Gold Coast.

Mr. S. B. GOSLING (Assistant Postmaster-General, East Africa Protectorate), Assistant Postmaster-General, Gold Coast.

Major G. C. BAYLY (Local Commandant of Police, Cyprus), Commissioner of Papho, Cyprus.

Mr. F. H. HAMILTON (retrenched from the Transvaal Civil Service), Senior Assistant Treasurer, Sierra Leone.

Mr. S. F. STOKES (retrenched from the Transvaal Civil Service), District Engineer, Gold Coast.

Mr. J. F. BLAKELY (First Class Clerk, Treasury and Customs Department, British Honduras), Supervisor of Customs (Second Grade), Southern Nigeria.

Mr. J. DALTON (Chief Warder, St. Catherine's District Prison, Jamaica), Keeper of Suva Gaol, Fiji.

Mr. C. H. C. ADAMS (late Sub-Inspector, Cape Mounted Police), Assistant Commissioner of Police, Gold Coast.

Mr. H. AULIFF (late Assistant Accountant, Public Works Department, Orange River Colony), Assistant Chief Clerk and Accountant, Public Works Department, Gold Coast.

Dr. R. P. COCKIN (late Medical Officer, West African Medical Staff), District Medical Officer, Cyprus.

Mr. A. GARDNER (late Government Schoolmaster, Straits Settlements), Headmaster of Primary School, Coomassie, Gold Coast.

Mr. C. H. HART-DAVIS (District Commissioner, Gold Coast), Secretary to High Commissioner for the Western Pacific.

Colonel COLIN HARDING, C.M.G. (formerly Commandant, Barotse Native Police, North Western Rhodesia), District Commissioner, Gold Coast.

Mr. J. J. KILLINGBECK (Assistant Postmaster-General, Northern Nigeria), Assistant Postmaster-General, East Africa Protectorate.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

AUSTIN, Rev. P. B. ...	12 Feb., '10	FURLEY, G. F. ...	15 Mar., '10
West India Club,		FRASER, J. ...	12 Feb., '10
Norfolk St., Strand,		GRAHAM, C. H. ...	14 Jan., '10
W.C.		GRIMSDITCH, W. H. ...	31 Jan., '10
AGNEW, G. ...	8 Mar., '10	GARLAND, Dr. P. J. ...	28 Jan., '10
c/o The Bank of Eng-		GEAR, A. F. ...	2 Jan., '10
land, Liverpool.		GOODY, C. E. ...	12 Feb., '10
ACE, P. ...	17 Jan., '10	GRIMSHAW, H. C. W. ...	26 Feb., '10
BONIFACE, B. ...	13 Feb., '10	GORING, Miss E. R. ...	26 Feb., '10
BEAVEN, R. A. G. ...	15 Mar., '10	GIBSON, R. ...	3 Mar., '10
BRYAN, Maj. H., C.M.G.	1 Apr., '10	HOBART, Capt. E. H. ...	14 Apr., '10
Army and Navy Club,		KORTRIGHT, Capt. H. A.	22 Feb., '10
Pall Mall, S.W.		KING, S. E. ...	13 Feb., '10
BRANDFORD GRIFFITH, <i>Steamer leaving</i>		LEWIS, H. M. ...	1 Apr., '10
Sir W.	12 Jan., '10	LEWIS, I. ...	26 Feb., '10
BARRETT, F. R. ...	20 Jan., '10	LOWRY, T. M. ...	7 Jan., '10
BACKHOUSE, H. D. ...	28 Jan., '10	LEOGE, Capt. P. A. ...	26 Jan., '10
CLARIDGE, Dr. W. W. ...	23 Jan., '10	Primrose Club, Park	
CULLEN, A. J. ...	14 Jan., '10	Place, St. James' St.,	
CLARETT, H. D. ...	8 Mar., '10	S.W.	
CHURCH, J. W. ...	3 Mar., '10	LEESE, Capt. E. B. ...	14 Feb., '10
CLARIDGE, G. ...	8 Jan., '10	McADAM, J. ...	4 Feb., '10
DOWDALL, Dr. A. M. ...	19 Feb., '10	PASK, J. A. J. ...	20 Jan., '10

GOLD COAST—*continued.*

READ, Capt. B. M. ...	4 Jan., '10	SMITH, W. J. ...	13 Feb., '10
RICE, Dr. T. E. ...	20 Jan., '10	TUDHOPE, W. S. W. ...	3 Mar., '10
Sports Club, St. James'		WHYTE, Dr. R. ...	26 Feb., '10
Sq., S.W.		WELLS, G. A. ...	26 Feb., '10
RUSSELL, W. G....	24 Jan., '10	WHITE, Dr. R. O. ...	22 Feb., '10
STOREY, Dr. F. H. ...	22 Jan., '10	WALKER, Dr. G. C. ...	4 Feb., '10
SHAW, F. ...	15 Mar., '10		

GAMBIA.

BALDWIN, Dr. F. A. ...	1 April, '10	HASKETT-SMITH, W. J.	4 Jan., '10
c/o British Medical		J. S.	
Association, 429,		MOREY, G. B. ...	24 Mar., '10
Strand, W.C.			

SIERRA LEONE.

BROOKS, G. L. ...	23 Mar., '10	MOORE, G. R. ...	17 Feb., '10
BURRA, J. S. ...	2 April, '10	NORMAN, Capt. E. H. ...	26 Feb., '10
COPLAND, C. A. ...	3 Mar., '10	STEVENS, Miss I. ...	3 Mar., '10
CRAVEN, Capt. J. ...	12 Feb., '10	SMYLY, Sir P. C. ...	26 Feb., '10
HENSTRIDGE, H. G. ...	12 Jan., '10	SUPPLE, Capt. W. H. ...	23 Feb., '10
HENDERSON, S. ...	19 Feb., '10	c/o Sir C. R. McGrigor	
HUNTER, Dr. C. B. ...	26 Feb., '10	Bart. & Co., 25, Charles	
HUNT, R. L. ...	3 Feb., '10	Street, S.W.	
JONES, A. ...	3 Mar., '10	THOMAS, A. F. ...	26 Feb., '10
KEWLEY, T. E. ...	6 Feb., '10	WICKHAM, M. H. C. de	
KENNAN, Dr. R. H. ...	3 Mar., '10	C. de B. ...	8 Mar., '10

SOUTHERN NIGERIA.

ASTON, J. ...	3 Mar., '10	CRAVEN, J. C. ...	8 Mar., '10
ASHTON, Capt. C. G. G.	3 Mar., '10	CUMMINS, C. A. ...	20 Jan., '10
c/o Messrs. Cox & Co.,		COLLETT, Dr. J. W. ...	26 Mar., '10
16, Charing Cross, S.W.		COTGRAVE, Capt. R. W. F.	
AUSTIN, E. P. ...	15 Mar., '10	CORRY-SMITH, Capt. G. C.	11 Mar., '10
c/o Sir C. R. McGrigor		Junior United Service	
Bart. & Co., 25, Charles		Club, Charles Street,	
Street, S.W.		S.W.	
BURRELL, W. ...	15 Mar., '10	COLLIER, L. A. P. ...	14 Jan., '10
BLATCHFORD, A. E. ...	15 Mar., '10	CLARKE, W. F. ...	10 Feb., '10
BATE, Dr. J. B....	18 Mar., '10	COCHRANE, W. G. ...	
BOURNE, V. C. ...	4 Feb., '10	COLLINS, W. A. ...	18 Jan., '10
BENNETT, C. B. F. ...	9 Jan., '10	DITTON, W. B. ...	6 Jan., '10
BRIDGMAN, A. H. ...	26 Jan., '10	DALLIN, T. ...	27 Jan., '10
BAILLIE, J. A., D.S.O....	29 Jan., '10	DOUGLAS, H. M. ...	15 Feb., '10
Auxiliary Forces Club,		DE ROSARIO, O. ...	20 Jan., '10
Whitehall Court, S.W.		DARBY, C. ...	12 Feb., '10
CARR, H. ...	Due back	DENNETT, R. E....	26 Feb., '10
	11 June, '10	c/o Messrs. H. S. King	
CLOUGH, Dr. J. A. ...	26 Feb., '10	& Co., 9, Pall Mall,	
COWAN, A. ...	3 Feb., '10	S.W.	

SOUTHERN NIGERIA—continued.

DICKSON, S. A. ... ..	...	MERCER, E. G.	18 Mar., '10
DAYRELL, E.	8 Mar., '10	MARCH, H. T.	8 Mar., '10
c/o Sir C. R. McGrigor		Blenheim Club, St.	
Bart & Co., 25, Charles		James' Square, S.W.	
Street, S.W.		MARSHALL, E. T.	15 Mar., '10
DEARLE, F.	22 Mar., '10	MILLIKEN, A. R.	22 Mar., '10
DENNY, G.	26 Feb., '10	MARSHALL, J. F.	15 Mar., '10
DITCH, G. B.	30 Jan., '10	Grosvenor Club, Picca-	
EMERY, W.	22 Jan., '10	dilly, W.	
ELSTON, R. G.	15 Mar., '10	MYTTON, A. R.	8 Feb., '10
FOUNTAIN, E. P.	9 Jan., '10	McKINLAY, W. G.	6 Jan., '10
FREELAND, H.	14 Jan., '10	McFADYEN, T. J.	16 Jan., '10
FARMER, W.	4 Feb., '10	MORRIS, P. H.	15 Mar., '10
FORAN, Dr. P. F.	27 Jan., '10	MONCASTER, F. A.	12 Feb., '10
FALE, E. M.	8 Mar., '10	NEWPORT, Dr. H.	22 Feb., '10
Auxiliary Forces Club,		c/o Messrs. H. S. King	
2, Whitehall Court,		& Co., 9, Pall Mall,	
S.W.		S.W.	
FISHER, M. H.	24 Jan., '10	NEVILLE, A.	9 Jan., '10
GUSH, H.	20 Jan., '10	PHILLIPS, L. H.	14 Jan., '10
GRANT, Capt. E. L. T. ...		PURCELL, J. E.	
GRAY, Dr. R. W.	6 Jan., '10	PENNINGTON, A. R.	
HAWKES, J. A.	12 Feb., '10	PHILLIPPO, E. C.	28 Jan., '10
HICKS, W. T.	24 Feb., '10	PROFEIT, A.	14 Jan., '10
HENDERSON, P. D.	4 Feb., '10	PARRY, Capt. J. L. R. ...	15 Mar., '10
HOWE, J.	22 Mar., '10	PUNCH, C.	26 Jan., '10
HAND, J. St. V.	28 Mar., '10	POWELL, Dr. A. B. S. ...	6 Jan., '10
HEARNSHAW, H.	13 Mar., '10	PILLMAN, A.	
HAWES, A. B.	23 Feb., '10	ROSS, W. A.	19 Jan., '10
HOWES, R. W.	19 Jan., '10	Caledonian Club, 30,	
HARRAGIN, C. A.	12 Feb., '10	Charles Street, S.W.	
HORNBY-PORTER, C. ...	14 Jan., '10	ROBERTSON, R. B.	26 Feb., '10
Royal Colonial Insti-		RICHARDSON, Capt. T. C.	4 Feb., '10
tute, Northumberland		ROE, Dr. R. L.	15 Mar., '10
Avenue, W.C.		READ, Dr. E. H.	25 Mar., '10
INGRAM, B. S. A.	3 Mar., '10	READ, D.	12 Feb., '10
INCE, D. D.	12 Feb., '10	SCOTT, J.	8 Jan., '10
JUDGE, W.	18 Jan., '10	SALTER, J.	14 Jan., '10
JOHNS, F.	26 Feb., '10	STRACHAN, Dr. H., C.M.G.	13 Mar., '10
JERVIS, J.	6 Jan., '10	c/o Messrs. Cox & Co.,	
JONES, J. C.	6 Jan., '10	16, Charing Cross,	
KINGHORN, J. M. B. ...	26 Feb., '10	S.W.	
KENT, J.	15 Mar., '10	SMYTHE, Dr. A. W. S. ...	12 Feb., '10
KNIGHTS, E. G.	6 Jan., '10	SHERDIS, G.	4 Feb., '10
LABORDE, A. L. C.	25 Mar., '10	SMITH, E. G.	4 Feb., '10
LORAIN, Capt. E. B. ...	22 Mar., '10	STEELE, A. W. M.	
Guards Club, Pall		SKIFFER, W.	20 Feb., '10
Mall, S. W.		STUBBS, W. W.	25 Mar., '10
LYNCH, F. P.	4 Feb., '10	SOLOMON, N. V. S.	20 Jan., '10
LAURIE, Dr. R.	29 Jan., '10	Junior Conservative	
LAWSON, P. B.	20 Jan., '10	Club, Albemarle St.,	
LUBBOCK, E. N.	19 Jan., '10	W.	
McKENZIE, W.	6 Jan., '10	SMALLBONE, W.	3 Mar., '10

SOUTHERN NIGERIA—continued.

STATEN, J. T. ...	4 Feb., '10	WEIR, T. D. ...	21 Mar., '10
SIM, J. S. ...	23 Jan., '10	Royal Societies Club,	
TURNER-SMITH, E. ...	28 Feb., '10	St. James' Street, S.W.	
TODD, C. W. ...	6 Jan., '10	WOOD, Capt. S. M. ...	18 Mar., '10
THORBURN, J. J., C.M.G.	13 Mar., '10	WILSON, Dr. A. H. ...	4 Feb., '10
Sports Club, St. James'		WINKFIELD, J. ...	5 Mar., '10
Square, S.W.		WILLS, A. ...	3 Jan., '10
Tew, M. L. ...	2 Jan., '10	WALTON, J. H. ...	25 Mar., '10
TYNDALL, W. H. ...	20 Jan., '10	WAYLING, Maj. J. ...	3 Mar., '10
TALFOURD-JONES, F. ...	20 Jan., '10	c/o Messrs. Cox & Co.,	
UNWIN, Dr. A. H. ...	22 Mar., '10	16, Charing Cross, S.W.	
VAUGHAN, H. H. S. ...	3 Mar., '10	WHITEHEAD, J. H. M.	12 Feb., '10

NORTHERN NIGERIA.

ANDERSON, C. L. ...	6 Jan., '10	HORN, T. G. ...	4 Feb., '10
BOWERS, H. M. ...	21 Feb., '10	c/o Messrs. Cox & Co.	
BROWN, R. ...	19 Feb., '10	16, Charing Cross, S.W.	
BOVILL, H. E. W. ...	10 Feb., '10	HOWSE, C. ...	14 Jan., '10
c/o Messrs. H. S. King		HODGES, B. ...	9 Jan., '10
& Co., 9, Pall Mall, S.W.		JOHNSON, R. K. ...	24 Feb., '10
BLAIR, M. C. ...	29 Jan., '10	JOHNSON, Capt. E. A.,	8 Mar., '10
BLACKWOOD, R. M. ...	2 Feb., '10	D.S.O. ...	
BRETON, T. G. ...	28 Feb., '10	JORDI, P. R. ...	3 Jan., '10
CAMPBELL-IRONS, A. ...	16 Jan., '10	KING, G. C. W. ...	16 Jan., '10
Royal Societies Club,		KILLINGBECK, J. J. ...	4 Feb., '10
St. James' Street, S.W.		LEWER, Dr. H. G. ...	19 Jan., '10
DIGAN, Maj. A. J., D.S.O.	15 Mar., '10	LA CHARD, L. W. ...	25 Mar., '10
DIXON, Capt. H. B. ...	14 Jan., '10	c/o Messrs. Cox & Co.,	
DAWSON, A. E. ...	26 Feb., '10	16, Charing Cross, S.W.	
DALZIEL, J. Mac. E. ...	8 Mar., '10	LANG, D. H. ...	4 Apr., '10
DUNCOMBE-SHAFTO, F. C.	26 Feb., '10	c/o Messrs. Way & Co.,	
DIX, E. W. ...	24 Feb., '10	11, Haymarket, S.W.	
c/o The Standard Bank		LITTLEDALE, B. ...	16 Jan., '10
of South Africa, Ltd.,		LEWIS, Capt. E. H. ...	20 Jan., '10
10, Clements Lane, E.C.		LEWIN, S. ...	5 Mar., '10
DE PUTRON, H. ...	14 Jan., '10	MANUK, Dr. M. W. ...	18 Mar., '10
ELLIS, Maj. O. H. ...	16 Jan., '10	c/o Messrs. H. S. King	
FISHER, J. C. ...	18 Apr., '10	& Co., 9, Pall Mall,	
FREWEN, H. M. ...	3 Feb., '10	S.W.	
GRIMLEY, H. B. ...	16 Feb., '10	MAIR, W. D. K. ...	13 Mar., '10
GODWIN, Capt. F. A. E.	18 Mar., '10	MACARTHY, MORROGH	6 Feb., '10
GROOM, A. H. ...	31 Jan., '10	H. E., c/o Messrs. Holt	
GALE, F. H. ...	7 Feb., '10	& Co., 3, Whitehall	
GILL, J. W. ...	24 Feb., '10	Place, S.W.	
GOULD, H. ...	4 Feb., '10	MOORE, L. G. ...	8 Mar., '10
GUBBINS, S. ...	18 Jan., '10	MORGAN-OWEN, L. I. G.	16 Mar., '10
c/o Messrs. Cox & Co.,		MORAN, Capt. G. W. ...	10 Feb., '10
16, Charing Cross, S.W.		MAYNARD, H. C. ...	13 Mar., '10
GIBBS, G. W. ...	19 Feb., '10	O'LEARY, F. D. ...	20 Feb., '10
HAMMOND, T. ...	8 Mar., '10	PUCKLE, Capt. T. N. ...	15 Mar., '10
HOLME, H. F. C. ...	24 Feb., '10	PORTEOUS, Dr. E. J. ...	19 Feb., '10

NORTHERN NIGERIA—continued.

ROWE, Capt. C. F. ...	2 Jan., '10	WOOD, W. ...	18 Mar., '10
SPEAR, H. B. ...	10 Jan., '10	WINGATE, G. R. ...	12 Feb., '10
c/o Messrs. Cox & Co.,		WOODELL, L. L. ...	20 Jan., '10
16, Charing Cross, S.W.		WATSON, Dr. C. F. ...	14 Jan., '10
SILCOCK, J. A. ...	6 Feb., '10	WOOD, J. H. ...	16 Jan., '10
STONE, E. ...	28 Feb., '10	WHITTAN, W. J. ...	14 Feb., '10
STOBART, St. C. E. M....	13 Mar., '10	WEBSTER, G. W. ...	3 Feb., '10
SOPPER, F. W. ...	8 Mar., '10	Isthmian Club, Picca-	
Cavalry Club, Picca-		dilly, W. ...	
dilly, W.		WILLIAMS, Capt. E. E.	4 Feb., '10
THOMPSTONE, S. W.	3 Mar., '10	YATES, C. C. ...	20 Jan., '10
C.M.G. ...			

NYASALAND.

ARMBRUSTER, H. ...	11 Apr., '10	NORRIS, Dr. S. K. ...	29 Jan., '10
CARDEW, C. A. ...	12 Feb., '10	RIDGE, A. ...	15 Apr., '10
CRUISE, H. R. ...	3 Mar., '10	ROBERTS, R. ...	15 Apr., '10
GRIFFIN, C. J. ...	20 Mar., '10	RITCHIE, W. B....	24 Jan., '10
GORDON, R. W. ...	28 Feb., '10	ROBINS, S. ...	7 Feb., '10

EAST AFRICA.

ACTON, W. B. ...	26 Jan., '10	LOW, W. N. ...	27 Mar., '10
BLUNT, R. H. T. ...		LAMB, F. M. ...	
BAGGE, S. S., C.M.G. ...	27 Mar., '10	MONCKTON, Capt. N. ...	27 Apr., '10
BLACK, M. A. ...	28 Mar., '10	MARSENCO, J. ...	27 Apr., '10
BIRCH, H. M. ...	27 Mar., '10	NOTLEY, W. K. ...	15 Feb., '10
BOILEAU, E. K. ...	15 Feb., '10	c/o Wilts & Dorset	
CHAMIER, A. E. ...	3 Feb., '10	Bank, Ltd., Ames-	
DUNDAS, K. R. ...	27 Feb., '10	bury, Wilts.	
DEACON, P. L. ...	27 Feb., '10	Platts, W. A. F. ...	27 Mar., '10
ESPIE, H. P. ...	26 Jan., '10	PERCIVAL, A. B. ...	27 Feb., '10
FLACKE, W. A. ...	26 Jan., '10	Sports Club, St.	
GILKISON, T. T. ...	5 Mar., '10	James' Sq., S.W.	
GRIFFITHS, E. C. ...		PRICHARD, Dr. W. O. ...	2 Mar., '10
GILES, H. C. G. ...	15 Feb., '10	STANLEY, G. A....	27 Apr., '10
Cocoa Tree Club, 64,		SCHOLEFIELD, S. W. J.	26 Jan., '10
St. James' St., S.W.		TAMIER, P. S. H. ...	15 Feb., '10
HAMILTON, R. W. ...	9 Feb., '10	TURNBULL, Lt. H. J.,	
HATWOOD, C. W. ...	6 Feb., '10	R.N.R. ...	27 Apr., '10
HILL, S. R. ...	27 Apr., '10	WHITE, W. C. P. ...	26 Jan., '10

UGANDA.

DAVIS, C. K. ...	27 Mar., '10	SMITH, G. W., C.M.G. ...	19 Jan., '10
EDEN, C. W. GUY ...	9 Feb., '10	TOMKINS, S. C., C.M.G....	16 Feb., '10
JAMES, Dr. W. R. W. ...	27 Apr., '10	Sports Club, St.	
SINGLEHURST, S. G. ...	8 Feb., '10	James' Sq., S.W.	

SOMALILAND.

BOIS, Capt. J. ...	26 Jan., '10	TARLETON, Capt. F. R....	26 Jan., '10
EVERETT, Capt. L. W. D.	19 Apr., '10	c/o Messrs. Cox & Co.,	
MACKAY, Lt.-Col. J. D.		16, Charing Cross,	
O'Neill, Capt. H. dn. B.	31 Jan., '10	S.W.	
		Walker, J. C. ...	22 Jan., '10

BASUTOLAND.

MACFARLANE, Dr. N. M.	31 Jan., '10
-----------------------	-----	-----	-----	-----	-----	-----	--------------

SWAZILAND.

HARVEY, D. H.	...	17 Apr., '10	|	WILLIAMS, S. B.	...	17 Mar., '10
---------------	-----	--------------	--	-----------------	-----	--------------

CYPRUS.

MYRIANTHIS, C.	9 Mar., '10
----------------	-----	-----	-----	-----	-----	-------------

FIJI.

RANKINE, R. S. D.	26 Oct., '10
-------------------	-----	-----	-----	-----	-----	--------------

BRITISH HONDURAS.

CLEMENTS, W. H.	28 Apr., '10
-----------------	-----	-----	-----	-----	-----	--------------

ANTIGUA.

NUGENT, D.	14 Feb., '10
------------	-----	-----	-----	-----	-----	--------------

DOMINICA.

BROOKS, A. J.	...	2 Feb., '10	|	O'FARRELL, P.	...	4 Feb., '10
---------------	-----	-------------	--	---------------	-----	-------------

ST. KITTS.

BRANCH, E. R.	...	6 Feb., '10	|	FOREMAN, Dr. J. A.	...	3 Mar., '10
---------------	-----	-------------	--	--------------------	-----	-------------

TRINIDAD.

GREIG, G.	...	18 Mar., '10	|	STEVENS, J. J.	...	20 Jan., '10
LOW, A. M.	...	18 Jan., '10	|	THOMSON, Dr. A. D.	...	22 Jan., '10
ROUSSEAU, J. T.	...	11 Jan., '10	|			

BRITISH GUIANA.

ALSING, J.	...	4 Feb., '10	|	FOWLER, F.	...	28 Jan., '10
BELLAMY, W. E.	...	28 July, '10	|	HAREL, P. C.	...	29 July, '10
CHALMERS, J. C.	...	24 Feb., '10	|	JEMMOTT, Rev. A. M. B.	...	9 Feb., '10
CASWELL, Very Rev. Dean.	...	28 Mar., '10	|	MAY, F.	...	9 Apr., '10
CRUICKSHANK, J. G.	...	14 May, '10	|	MASON, G. F.	...	16 Feb., '10
DUNCAN, C. W.	...	6 May, '10	|	Williams, Rev. J. H.	...	10 Apr., '10
FERNANDES, Dr. F.	...	17 May, '10	|	Wilson, Rev. O. H.	...	29 Apr., '10

JAMAICA.

D'AETH, J.	...	5 Feb., '10	|	MORRIS, P. H.	...	28 Feb., '10
JOHNSTONE, R.	...	9 Feb., '10	|	MAUNSELL, G. E.	...	4 May, '10
MORTLOCK, H. W.	...	18 Jan., '10	|	McGRATH, G. P.	...	19 Jan., '10

MAURITIUS.

ARMSTRONG, A.	...	5 Mar., '10	|	LINCOLN, G.	...	24 June, '10
DAVSON, C. S.	...	31 July, '10	|	LESEUR-GREENE, J.	...	24 Apr., '10
EUSTAGE, W. T. A.	...	20 May, '10	|	NAZ, L.	...	26 Mar., '10
LEBERRE, Rev. C.	...	25 Oct., '10	|			

SEYCHELLES.

CHITTY, L. O.	7 Mar., '10
---------------	-----	-----	-----	-----	-----	-----	-----	-----	-------------

STRAITS SETTLEMENTS.

ACTON, R. D.	...	...	17 June, '10	KING, J. L.	...	...	30 May, '10
Sports Club, St. James'				KELLEHER, J. M.	...	...	16 Apr., '10
Square, S.W.				KILLOURNEY, D.	...	...	31 Mar., '10
BRERETON, H.	...	...	5 May, '10	LEMON, A. H.	...	...	17 May, '10
BARLEY, A. W.	...	...	Steamer due	MEREDITH, R. W.	...	...	18 Mar., '10
			3 Mar., '10	MURPHY, P. M.	...	...	12 May, '10
CRAWLEY, G. W.	...	...	21 Apr., '10	MARRIOTT, H.	...	...	31 Mar., '10
CUSCADEN, W. A.	...	...	2 Mar., '10	MICHELL, W. C.	...	...	2 Feb., '10
DENNYS, S. E.	...	...	30 Apr., '10	MASTERTON, W. N.	...	...	24 Nov., '10
FITT, J. F.	...	...	24 Apr., '10	PRIOR, E.	...	...	21 Apr., '10
FYFE, W. M.	...	...	6 May, '10	PESTANA, J. V.	...	...	10 Aug., '10
FRAYNE, J.	...	...	22 Aug., '10	ROBINSON, F.	...	...	25 Feb., '10
HOGAN, J. W. W.	...	...	3 Feb., '10	STUART, A.	...	...	13 July, '10
HOWELL, J.	...	...	12 Sept., '10	SETH, G. G.	...	...	1 Aug., '10
HOWARD, E. C. C.	...	...	22 July, '10	SADLER, W.	...	...	13 Aug., '10
HART, H.	...	...	1 Mar., '10	WILKINSON, N.	...	...	4 Mar., '10

TANJONG PAGAR DOCK.

BAIRD, D.	...	...	11 Apr., '10	GARTSHORE, J.	...	...	22 July, '10
GRAHAM, J.	...	...	25 Jan., '10	HOWDEN, J. G.	...	...	9 Feb., '10

HONG KONG.

BURNETT, G. C.	...	...	10 May, '10	LONGSTAFF, H. T.	...	...	5 Feb., '10
BRENNAN, D.	...	...	23 Apr., '10	LEMESTET, F. P.	...	...	26 July, '10
CHATHAM, W., C.M.G.	...	...	22 Feb., '10	MILLINGTON, Miss	...	...	5 Oct., '10
COOKE, W. E.	...	...	29 Mar., '10	A.M.T.			
CROOK, A. H.	...	...	1 Mar., '10	MACFARLANE, Dr. H.	...	...	16 Mar., '10
CROFTON, R. H.	...	...	12 Oct., '10	NICHOLAS, C. E.	...	...	19 Apr., '10
DUNN, S. T.	...	...	10 July, '10	PIERPOINT, E. J.	...	...	25 May, '10
DARBY, A. J.	...	...	1 Mar., '10	PHILIPS, H. R.	...	...	24 Oct., '10
DOYLE, D.	...	...	6 Apr., '10	PURDEN, A. F.	...	...	20 May, '10
FOX, E.	...	...	28 Feb., '10	PERKINS, T. L.	...	...	24 July, '10
FOLRY, D.	...	...	20 May, '10	PIGGOTT, Sir F. T.	...	...	14 June, '10
GREY, B. W.	...	...	31 July, '10	SPENCER, J.	...	...	20 May, '10
HUTCHINGS, J.	...	...	8 Apr., '10	WILLIAMS, W. H.	...	...	30 Apr., '10
HOLLINGSWORTH, A. H.	...	...	19 Oct., '10	WITHERS, W.	...	...	28 Feb., '10
JORDAN, Dr. G. P.	...	...	9 Mar., '10				

PERAK.

ANDERSON, R. O. N.	...	...	18 Aug., '10	FORD, Dr. D. Mc. N.	...	...	8 Oct., '10
COSGRAVE, W. N.	...	...	Steamer due	HATCH, E. C.	...	...	30 July, '10
			15 Mar., '10	MONDY, A. G.	...	...	10 Aug., '10
EVERDELL, F. C.	...	...	27 Aug., '10	MILNE, Dr. W. S.	...	...	27 Apr., '10
FLEMING, T. C.	...	...	25 Feb., '10	OWEN, J. F.	...	...	23 May, '10
FRY, Dr. W. H.	...	...	30 Sept., '10				

PAHANG.

BENNETT, E. L. ...	25 July, '10	SCOTT, W. D. ...	31 Dec., '10
SUGARS, J. C. ...	28 Feb., '10	SWETTENHAM, J. P. ...	25 June, '10
SIMPSON, H. ...	30 June, '10	TICKELL, G. T. ...	31 Mar., '10
SUTTON, F. E. ...	1 Apr., '10		

NEGRI SEMBILAN.

DOWDEN, R. ...	21 Oct., '10	WOLFF, E. C. H. ...	11 Feb., '10
SUMNER, H. L. ...	3 Apr., '10		

SELANGOR.

AMERY, G. J. ...	25 Jan., '10	IRVING, C. J. ...	21 Mar., '10
BURNSIDE, E. ...	24 June, '10	LUCAS, G. D. ...	3 Aug., '10
c/o H. S. King & Co.,		MADDOCKS, W. E. ...	31 May, '10
9, Pall Mall, S.W.		SCROBY, C. ...	28 Sept., '10
DINSMORE, W. H. ...	30 Nov., '10	VAURENAN, F. A. ...	16 Oct., '10
	Steamer due	WORTHINGTON, A. F. ...	8 Aug., '10
GREY, R. C. ...	17 Feb., '10		

FEDERATED MALAY STATES.

CAMPBELL, A. ...	4 Aug., '10	MOSCROP, J. ...	25 Dec., '10
FLETCHER, DR. W. ...	3 Aug., '10	PINKNEY, R. ...	26 June, '10
GRAHAM, Capt. A. MC.	28 Mar., '10	PHILLIPS, G. H. ...	10 Oct., '10
D.			Steamer due
GREGORY, S. M. ...	4 Jan., '11	STURROCK, A. J. ...	3 Mar., '10
HUBBACK, A. B. ...	14 Mar., '10	SHELLEY, M. B. ...	18 May, '10
HUME, W. J. P. ...	14 Dec., '10	WELLS, A. E. ...	11 Apr., '10
LEGGE, R. H. ...	11 Sept., '10	WOOD, W. T. ...	31 May, '10
MILLER, W. ...	11 Apr., '10	WYATT, C. H. ...	10 Mar., '10

CEYLON.

APPLETON, H. ...	5 Feb., '10	LEGGE, J. A. ...	20 Mar., '10
ALEXANDER, E. P. ...	10 May, '10	LOVEGROVE, C. A. ...	9 Apr., '10
BRODHURST, H. W. ...	5 Aug., '10	MORRIS, R. F. ...	30 Apr., '10
BARTLETT, F. ...	28 Feb., '10	MCQUILLAN, J. ...	8 Mar., '10
BARTON, F. ...	9 Feb., '10	MACLEOD, K. W. B. ...	10 May, '10
BOONE, A. P. ...	25 Jan., '10	MACPHAIL, R. S. ...	17 July, '10
BROOKES, G. ...	2 Apr., '10	MAYES, A. E. ...	8 July, '10
BOOTH, F. ...	8 Feb., '10	OORLOFF, DR. F. ...	14 July, '10
CONROY, J. ...	30 May, '10	PAGDEN, A. S. ...	16 June, '10
COOK, A. L. ...	9 May, '10	PHIPPS, J. ...	28 Feb., '10
CARTE, R. G. ...	5 Feb., '10	ROBERTSON, J. ...	28 Jan., '10
DREIBERG, J. G. ...	19 Mar., '10	ROCKWOOD, DR. D. ...	14 Feb., '10
DE SILVA, H. ...	3 Apr., '10	SOUTH, W. ...	3 May, '10
FRASER, Miss R. A. ...	13 Mar., '10	SHIPTON, L. ...	4 Feb., '10
FREEMAN, H. R. ...	2 Mar., '10	SCOTT, J. ...	19 Feb., '10
GREEN, C. ...	28 Mar., '10	SMITH, C. ...	28 Feb., '10
GALBRAITH, A. N. ...	28 July, '10	TEMPLETON, R. S. ...	6 July, '10
HUNT, E. ...	3 Feb., '10	VINCENT, Col. A. C. F.,	11 Feb., '10
JOSEPH, H. P. ...	30 Mar., '10	C.M.G.	
KITCHEN, W. J. ...	2 May, '10	WOODHOUSE, G. W. ...	22 July, '10
LAMBERT, J. ...	29 Apr., '10	WALKER, J. ...	9 Mar., '10

THE COLONIAL OFFICE JOURNAL.

VOL. III.

APRIL, 1910.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE London season this year will have a special attraction for overseas visitors in the Festival of Empire, the chief events of which are to be held at the Crystal Palace from 24th May to 16th July. The principal feature is a great series of London Pageants, which will be presented twice a week, alternately every afternoon and evening. The house, 81, Piccadilly, has been generously lent to the Council by Mr. Burdett-Coutts, M.P., for the purpose of reception. There can be no doubt of the stimulating effect of the appeal to the eye which is afforded by well-devised pageants, and on this occasion it is certain that under the able direction of Mr. Frank Lascelles the spectacle will be an excellent one, and the *mise en scène*, as planned by Sir Aston Webb, will be superb. The public spirit which has led to the undertaking is in every way admirable, and will be widely appreciated. One notable result of it is that the railways promise to do the journey to the Palace in fifteen minutes.

The programmes and souvenirs are published by Messrs. Bemrose & Sons, 4, Snow Hill, London.

Reports from Canada indicate that the period of depression which set in in the autumn of 1907 has wholly passed away. Last
VOL. III., No. 4. T

season's agricultural results were very favourable, and their consequence was to bring a large amount of money into circulation. Favourable weather permitted navigation and outside operations in connection with railway construction to be continued until an unusually late date, and the year 1910 opened with exceptionally favourable prospects. The improvement during the past year is, as usual, reflected in the immigration returns, which show an increase of twenty-five per cent. over those for 1908, the quality of the immigrants also, it is said, showing a marked improvement. The general tendency of both wages and prices was in an upward direction. There was very great activity in railway construction, no less than 1,057 miles of new rails being laid in Western Canada alone. Altogether upwards of 4,000 miles of railway lines were under contract during the year, and the process of settlement in the new districts opened up went on with great rapidity.

In no country in the world have progress and prosperity been so closely bound up with the development of the means of communication as they have been in Canada. It was the construction of the Canadian Pacific Railway which first gave a sense of unity to the Dominion, and rendered it possible for British Columbia and Nova Scotia to feel themselves united by the bonds of a common nationality. In more recent years every fresh railway line constructed has served to open up new tracts of territory, to pour a flood of fresh settlers on the land, and to add to the great area of wheat cultivation. Canada is at present engaged on the construction of the National Trans-continental Railway, which will duplicate the line of communication between the Atlantic and the Pacific; and she has proclaimed her intention of proceeding at an early date with the construction of the Hudson's Bay Railway, which will open up an entirely new route of transit to Europe. But these projects, gigantic as they are, by no means exhaust the possibilities of the future. Last February an interesting debate took place in the Canadian House of Commons on the subject of the Georgian Bay Canal scheme. Mr. Pugsley and Mr. Fielding, who spoke for the Dominion Government, both professed themselves as strong supporters of the proposal, though the latter, in his capacity as Minister of Finance, felt bound to utter a word of caution as to the capital commitments of the Dominion, and was unable to give any definite promise that the scheme would be put in hand at an early date. But a proposal so strongly supported is not likely to remain a mere project for an indefinite period, and some particulars of the work contemplated will be of general interest.

The scheme is essentially one of river and lake canalization. It proposes to utilise natural waterways, which fortunately exist in an

almost continuous line from Georgian Bay, the north-eastern arm of Lake Huron to Montreal, the most important and the furthest inland of Canada's ocean ports. The line of the proposed canal would supply the most direct and shortest route from Lake Superior to the sea, and it is reasonable to suppose that it would become the natural outlet for east-borne freight from the west, including probably some of the Western States, as well as the "prairie provinces" of the Dominion. The total length of the proposed canal would be 440 miles, of which from 410 to 420 would follow the line of existing natural waterways. The aggregate length of purely artificial waterways would be no more than 28 miles, while over an additional 80 miles dredging or excavation would be requisite to procure the proposed minimum width of 300 feet and minimum depth of 22 feet. The total rise from Montreal to the summit would be 650 feet, and it is suggested that this should be overcome by 23 locks, ranging from 5 to 50 feet in lift, while four locks from 21 to 29 feet in lift would be required for the descent of 98 feet from the summit to Georgian Bay. Ample water storage is available, and it would be possible so to control the spring floods in the river reaches traversed as to obviate all risk of overflow, and give a maximum current in the canal, under extreme conditions, of three miles an hour. A minimum length of 650 feet and a minimum width of 63 feet is proposed for the locks, which would be equipped with double pairs of upper and lower gates. The total cost of the scheme is put at \$100,000,000. The time which would be occupied in transit by a vessel with a maximum speed of 12 miles per hour is estimated at 70 hours, and the season of navigation would average 210 days, from May to November. It will be realised that the scheme prepared is one of the largest ever attempted, but it is undoubtedly within the resources of the Dominion, and sooner or later it will be carried into effect. It is estimated that a "barge canal" with a depth of 14 feet could be constructed along the same route for a sum of from \$30,000,000 to \$40,000,000; but as the bulk of the navigation on the Great Lakes is effected by vessels drawing from 15 to 20 feet of water, and having a carrying capacity of from 5 to 13,000 tons, the adoption of this less ambitious scheme would involve breaking bulk twice, and would merely supply the Dominion with a duplicate of the 14 foot waterway from the Great Lakes to the Atlantic, which it already possesses. In these circumstances the costlier project would probably prove in the end to be the more profitable.

The commercial agreement recently concluded between Canada and Germany seem to have given rise to a certain amount of misunderstanding in the English press, and a short statement of the events which led up to it may be of service to our readers. Prior to

1898 the tariff relations between Canada and Germany were regulated by the Anglo-German treaty of 1865. This treaty contained no specific reference to Canada or to the British North America Provinces as then constituted ; but it applied to the whole Empire. The provisions of the treaty were materially different from those which are usually found in British treaties with foreign countries. Many of the old British treaties, not specifically relating to Canada, but applicable to the Empire at large, contain what are known as most favoured nation clauses. The effect of such clauses is that the British Government guarantees to the contracting nation the most favourable commercial advantages that may be granted to any other foreign country. The provisions of the treaty with Germany were much broader. The treaty provided that no other or higher duties should be levied in the British colonies on the products of Germany than on the products of the United Kingdom. This treaty and another of similar character were long regarded as objectionable, from a colonial point of view, as being an obstacle to freedom of commercial relations between the mother country and the outlying portions of the Empire. Representations from the colonies against the continuance of these treaties were made on several occasions. After the granting of a preferential tariff to Great Britain by Canada in 1897 the British Government denounced these treaties, and they were terminated on the first day of August, 1898. After that date German goods were entitled to admission into Canada under the General Tariff. Germany resented this state of affairs, and penalized Canada by subjecting Canadian products to the higher duties of the German tariff instead of the Conventional Tariff duties which had previously applied. Steps were taken by the Canadian Government to remonstrate against what was deemed to be an injustice to Canada. It was pointed out that the tariff relations between the United Kingdom and the colonies were matters of domestic concern with which no foreign Government could reasonably interfere ; that Germany should not claim the same privileges as were granted by the Dominion to the mother land ; and that Canada was granting to Germany the same terms as were granted to other foreign countries. Germany, however, refused to accept this reasoning and continued to impose the penalizing duties on Canadian products. After protracted and unsuccessful efforts to induce the German authorities to withdraw their demand for the same treatment as was accorded Great Britain, it was deemed necessary to apply to the products of Germany the surtax authorised by Section 7 of "The Customs Tariff, 1897," and accordingly regulations were made by an Order in Council of date the 28th day of November, 1903, subjecting articles, the produce or manufacture of Germany, to a surtax of one-third over and above the duties specified in the General Tariff. From that date up to the present time the products

of Germany imported into Canada have been subject to the duties of the General Tariff and of such surtax, and Canadian products imported into Germany have not received the benefits in any case of the Conventional Tariff rates. Under the agreement now concluded the special surtax hitherto levied by Canada upon German imports is suspended, and they are admitted under the term of the General Tariff, while in return Canada receives the benefits of the German Conventional Tariff upon a specified list of products. There is, it will be seen, no question of the granting to Germany of the special concessions made to France under the Franco-Canadian commercial convention, still less of the special advantages enjoyed by the United Kingdom by virtue of the Preferential Tariff.

On May 31st the South African Act of last year comes into operation, and the first Union Government must be formed. An influential body of opinion in South Africa has been in favour of a departure on this occasion from the old lines of political cleavage, and the formation in the first instance of a coalition government, or, as Dr. Jameson expresses it, a "government of the best men." This proposal is inspired by two principal motives, both of them deserving of all respect and sympathy: the desire to eliminate the last trace of racialism from politics, and the desire to concentrate the best efforts of the best minds of the country on the very complicated mass of constructive work which awaits the first Union Parliament. The proceedings of the South African Convention have shown how rich South Africa is in practical statesmanship, and how much can be accomplished by co-operation between the representatives of widely different schools of political thought. There is also a feeling that with the accomplishment of Union new problems have arisen, and that the old political parties in South Africa have become to some extent obsolete. But such an arrangement could only be carried out by general agreement, and of this there seems now to be but little prospect. The leaders of both parties in the Transvaal, and of the Progressives in the Cape are understood to favour the idea of coalition. But Mr. Merriman believes in party government upon the lines which are habitual in self-governing British communities. He considers it essential that there should be a strong government and a strong opposition, and that political problems should be dealt with in South Africa as they are elsewhere by methods which are the resultant of two opposing forces. Mr. Merriman apparently has on his side the leaders in the Orange River Colony, and so long as these two strong sections of opinion hold aloof no coalition seems possible. The question is clearly one for South Africa to decide for herself, but the discussion upon it has been followed with the closest interest at home. In any case the work of the future government will be

simplified by the return of prosperity, of which there are now abundant indications in South Africa, and the visit of the Prince and Princess of Wales, which has been definitely decided on, though the official invitation cannot be issued until after the 31st May, will be made under pleasant auspices.

It will be remembered that in the earlier drafts of the South African constitution provision was made for the election of the House of Assembly in accordance with the principles of proportional representation, but that this part of the scheme was ultimately abandoned, principally on account of the opposition of the Cape and Orange River Colony delegates. Mr. Merriman, who has a sturdy dislike of anything "new fangled," is known to have been strongly hostile to the idea. On the other hand, the Transvaal delegates were equally strong in its support, and Mr. Smuts shortly afterwards gave practical evidence of his faith in it by carrying through the Transvaal Parliament a measure applying the method of proportional representation by means of the single transferable vote to the municipalities of Pretoria and Johannesburg. The first election under the new Act took place in October last, and an interesting report on the results has been written by Mr. John H. Humphreys, Honorary Secretary of the Proportional Representation Society, whose services were borrowed by the Transvaal Government from the Imperial Post Office, in which department he is an official. It is noteworthy that the percentage of spoilt ballot-papers attributable to the new system was only 0.95 in Pretoria and 2.35 in Johannesburg. The higher percentage in the latter case is attributed to the cosmopolitan character of the population, and the consequent difficulty of instructing the voter in his new duties. The results show that the various groups or parties secured a representation closely proportionate to their strength, and thus what may be regarded as the primary object of the system was attained. In each case the ex-Mayor headed the poll, which would seem to indicate that the system facilitates the success of candidates with a good record of public service behind them. Press opinion on the results was, upon the whole, very favourable. Mr. Humphreys' detailed analysis of the voting should prove invaluable to the Royal Commission which has the question of Proportional Representation under its consideration at present.

The question of the reconstitution of the House of Lords recalls the numerous discussions which have taken place in the colonies as to the advantages or disadvantages of a bicameral system, and the respective merits of a nominated and an elective upper house. The system was exported from this country as a matter of course, and

without any particular discussion, though in the case of the Australian colonies the reason—a curious one considering the time and circumstances—was given that the existence of the upper chamber would help to bring about federation. In all the Australian colonies, the upper house was at first nominated, except in South Australia, where a strong fight was made for the elective principle. The nominated houses neither enjoy the consideration nor possess the strength of the elected; in practice they have been somewhat torpid and apt to sit infrequently. The elected houses on the other hand have a sense of power and responsibility, and enter into conflict with the lower house with much greater confidence and resolution than nominated members would show. Thus, while democratic principle favours the elective as against the nomination method, the result is to erect a stronger barrier against the lower house, and this has been seen in a long series of “deadlocks.” Moreover, the double electoral franchise is obviously undemocratic, and in most cases the higher franchise has been continually widened. That the bicameral system has survived in face of these objections is evidence that it has a practical value in the eyes of the majority. The reason for this is not only, as is so often urged at home, that an upper house restrains the Government from acting contrary to public interests or the public will, but because the system gives stability to work done. A municipal body, which is dominated this day by one side and the next day by another, freely overturns its own institutions and destroys its own work. The bicameral constitution ensures a considerable amount of respect for what has actually been done, and avoids the waste of sudden and revolutionary changes.

When the upper house is nominated, the Government can practically fill up vacancies with its own supporters, and in times of stress the Governor may be called upon to increase the number of members, so that immediate additions can be made. This, it need hardly be said, puts the Governor in an awkward position. It is difficult to refuse, because this means declining to accept the advice of the responsible ministers, and it is embarrassing to agree, because the object is avowedly to pack the upper house. In a New Zealand case, which caused no little stir some twenty years ago, the Colonial Office was drawn into the controversy, and the despatch which was eventually written (after a decorous interval to allow the heat of the dispute to evaporate) has always been regarded as a masterly example of the art of saying nothing in well-chosen terms.

A remarkable proposal was made in February before the Royal Society of Arts by Mr. R. Enock, F.R.G.S., the short substance of which was that the big municipalities in Great Britain should

acquire land estates in the Colonies, as an investment, and with a view to transplanting as many families as possible from their own district to them. He prophesied that this process will absorb the unemployed; that "the Poor Rates, in the course of a few years, will have disappeared, and there will be no inhabitants for their mean streets and slums." He urged that all the municipalities would have to do is to "acquire lands, forests, and mines in the Colonies, and to work them on business principles: and these will have yielded returns—a matter of common occurrence—with hundreds of London companies."

This is a beautiful picture, and it can only be with much regret that any incredulity can be expressed. Everyone has felt the contrast between the overcrowding and unemployment of the old country on the one hand, and the vast empty spaces which are to be found in the British Empire, and it would certainly seem that the remedy is to transplant the surplus population to the vacant territories. But when it is proposed that municipalities should carry out this work by deporting their unemployed and employing them on their colonial estates there is a formidable difficulty at the outset. Colonial life requires vigorous workers, and it is obvious that the municipal *émigrés* would not be of that class. The problem of unemployment would quickly be solved if the unemployed were, as a rule, fit for colonial careers. But this is what they are not, and any scheme which assumes that they are is doomed to failure. In short the attempt would not be on "business principles," and certainly would not be made by any of the "hundreds of London Companies." The municipal problem of unemployment is at bottom that of boy and girl labour. It is at this period that the unemployable are created, and schemes for transporting redundant population of this kind to places where better chances are offered are on sound lines.

If an example is wanted to show how Mr. Enock's scheme would work out, a good one can be found in a report made to the Canadian Government of the results of afforestation work provided in 1908-9 by the Leeds Distress Committee to give employment. Of 181 men engaged only 15 worked for the full 16 weeks allowed by the Act. The cost per acre came to £13 12s. 1d., whereas in the case of the permanent staff it was only £7 4s. 5d. Moreover, long experience has shown that the idea of planting a whole settlement from an old country in a new one is bad. The newcomers must take their place in the existing community and utilise its work and experience.

Lord Blyth has made an interesting suggestion in the interests of Imperial Development. "If an Imperial system were inaugurated under which the State offered special prizes for the best varieties of

cotton, wool, wheat, barley, oats, maize, rubber, &c., produced in each of our Colonies and Dependencies, we should be astonished at the amount of emulation which would be evoked, the number of 'considering caps' that would at once be put on, and the advance in quality that would in a very short space of time be visible; an improvement which would soon spread to every part of His Majesty's dominions." It has been objected that such prizes would be equivalent to bounties, and, therefore, open to the objections which are urged against any preferential treatment. This is hardly just. No one objects to the prizes which are offered at agricultural shows and similar occasions, and the recognition of a good sample of any product is a very different thing from the artificial encouragement of the industry. The Government grading of fruit and similar articles is in the spirit of the proposal. But it would be a long and rather invidious task for the Home Government to make selections over so vast a field. After all the produce brokers are always on the look-out for anything good, and are quite ready to push anything saleable. A great amount of investigation is continually going on into new supplies of such goods as tropical timber, the rarer minerals, chemicals, etc., and though Government departments help very much in such matters, the market is, on the whole, the best judge of what is wanted and what will serve.

South Africa, having been united by statute, will no doubt lose no time in dealing with the problems of railway administration. One of the points which call for early settlement is uniformity of rates. It cannot be expected that the public will tolerate widely different rates for similar services. The Central South African Railways are greatly cheaper than the Cape and Natal lines; thus, for imported flour and meat they charge 4d. where the Cape rate is 9·75d. and the Natal rate 12d. Then through rates differ widely from local rates, and under amalgamation there is no reason for this. At present local produce enjoys preferential rates over imported goods, and one result of this is that local produce is tempted away from the district even when it could be used there; thus in Natal locally grown sugar is sent away whilst Mauritius sugar is imported and used. Such breaches of natural laws bring about their own revenge. Another matter is to determine the share of each of the three Cape ports in the percentage of the overseas trade allotted to the Cape. The intention under the recent adjustment was that the Cape should get 15 to 20 per cent. of this traffic, but it appears likely that it will not secure so much, and the three ports which have spent so much to fit themselves for a big business will feel no little disappointment. It seems altogether improbable that the Delagoa line traffic will be cut down, and the remedy of the Cape lines is to encourage the development of their own districts.

The wine industry in South Africa seems to be the only one which has not increased during the last twenty years, and much discontent is felt at this failure, especially as undoubtedly the wines produced are now of much better quality. Many large districts in the Cape Colony are more or less dependent on viticulture, and it has been estimated that half the white population of the Colony live in these districts. It is difficult for these people to contemplate with equanimity the stagnant condition of the industry, when they hear, for instance, that Algeria, which in 1874 produced 4,000,000 gallons of wine, or about the same quantity as South Africa, now turns out about 130 millions. The chief explanation is that the average South African prefers whisky or beer to wine. Perhaps, after a suitable course of evolution he will succumb to climatic influences, and become a wine drinker like the inhabitants of similar regions in Europe. But at present there are no signs of such a transformation. The Cape dweller spends four or five times as much on whisky alone as the whole output of wine represents. The Transvaaler is still more hopeless. In wine-drinking countries there is no great necessity for restrictive legislation, and where such restriction exists, and can only be enforced with difficulty, it is certain that there is much excess of spirit drinking. In the Transvaal some 1,200 people—amongst them many white women—are annually imprisoned for illicit liquor dealing. Without prejudice to the claims of temperance, it may be hoped that in South Africa grain spirit may be largely displaced in time by wine. Apart from the moral aspect, the wine industry has given South Africa much of its most picturesque country and many of its most beautiful homes. Not much has been done, however, to organise the industry. Cape wine is practically unknown in this country, and no particular efforts have been made to introduce it in other British Colonies.

The Royal Commission has finished its inquiries in the West Indies and returns home to deliberate and draw up its report. The evidence taken brings out one point clearly, and that is that the Colonies have their own individual interests and views, and look at the question of a commercial arrangement with Canada with different eyes, according to the extent to which their trade is bound up with the United States. It cannot be expected that Jamaica, where the fruit and other industries are mostly dependent on the United States, will have the same views as other islands which are not so closely connected with the States or so much under American commercial control. The apprehension of retaliation by the United States has had some effect. It does not seem at all likely that any such idea is well founded, and a country which has so recently annexed tropical countries could hardly treat a commercial agreement of the kind contemplated, which to a considerable extent would

be the result of those annexations, as an unreasonable or unfriendly act. But if a colony is satisfied with its present trade it can hardly be urged to lower its tariff to Canada. No doubt some colonies will be willing to try an arrangement, and it will not be very difficult to select a list of articles on either side the duties on which will be lowered. Thus the duty on flour is much the same in the different islands, and could be lowered to Canada in exchange for a corresponding benefit. There is a general agreement that means of communication should be improved, and this object would of course be assisted by any scheme which provides for an increase of trade.

The trade movements in the Gold Coast and Ashanti necessitate frequent transfer of large sums in specie from one part of the country to another, and a note issue would to a great extent do away with their trouble. A proposal has been brought forward for the issue of Government notes of the value of £25, £10, £5, £1, 10s., and possibly 5s., and the maintenance of a coin reserve in the local Treasury of at least one-half of the issued amount of notes; the remainder of the reserve would be invested in approved securities, as in the Straits Settlements. The Chamber of Commerce in the colony have been consulted, and other replies on the whole are not encouraging. The objections usually made to such a scheme are that there is a risk of loss to the revenue, and that notes may circulate disease; but any bank is only too glad to be allowed the privilege, and there is no evidence that notes do communicate disease.

For a long time the Home Treasury used to discourage the idea of State notes, but their views underwent a change in 1885, when the Oriental Bank became insolvent. The notes of this bank had a large circulation, and the Governor of Ceylon, Sir Arthur Gordon, fearing a panic and without waiting for the sanction of the Secretary of State, gave the notes a Government guarantee. The case showed how easily a Colonial Government might become responsible for the notes of private banks, though it had no control over the proceedings of the bank, and the Treasury changed its views. The State alone can issue notes without regard to profit, and can therefore give absolute security and immediate convertibility.

An experimental anthropological survey has been conducted by Mr. N. Thomas under the Government of Southern Nigeria, and a peculiar feature of the work done is that certain phonograph records have been taken by him and are believed to possess linguistic and ethnological value. These records have been deposited at present with the Royal Anthropological Institute. The process opens up a new field in such enquiries and will no doubt be used more and more.

The decision of the Union-Castle Mail Steamship Co. to extend their East Africa sailings which before this year ended at Beira, as far north as Kilindini, is a very welcome step, though it is not exactly as much of a new departure as some newspapers at first concluded. Passengers and freight from Great Britain will as a rule be transhipped at Durban, and the service will therefore not be more "direct" or "through" than that given by the British India via Aden. The plain fact is that there is no direct service because there is not enough direct trade. If the Uganda Railway decided to give up wood for coal entirely this would make a material difference, but it can hardly be expected that this step will be taken to augment freights. There is, however, a prospect of further railway extension both in the East Africa Protectorate and in Uganda, which will mean, in the first instance, an increase of outward cargoes in the form of railway material, and ultimately an increase in the amount of shipments to Europe of local produce. But for the present the extended service will look locally for most of its business, and the increasing shipments of Natal coal have no doubt influenced the decision. There has been considerable agitation in this country for a direct service partly on sentimental grounds, and partly through the apprehension that the German steamers divert to Germany trade which otherwise would go to this country. Thus the Select Committee on Shipping Subsidies (1902) recommended that a subsidy should be considered for a direct service, because "British trade is handicapped by foreign subsidised steamship lines." The three-weekly German steamers, however, call at Southampton, and the statistics indicate that Great Britain is very far from being pushed to the wall as some critics seem to think. In fact, Germany, instead of getting a sweeping advantage from its subsidy (said to be £67,500 a year), does a smaller trade with British East Africa than does the United States, and not much larger than Holland or France. The figures for 1908 are as follows :—

	Imports from					£
United Kingdom	299,498
British Possessions	214,895
United States	64,103
Germany	60,502
Holland	47,978
	Exports to					
United Kingdom	96,685
British Possessions	82,515
United States	68,081
Germany	46,811
France	66,564

A recent handbook on Nyasaland issued by the Emigrants' Information Office states that European women appear to stand the climate better than men, probably owing in a large measure to their leading a less exposed life. This is not the usual experience in the tropics, as on the whole men keep their health and vigour much better than women, and this is attributed to the more out of door life which they lead, and the greater amount of exercise taken. Possibly, however, this is true chiefly of the official classes, and is less applicable to planters, who are more exposed to chills and exposure to the direct sun's rays. The maintenance of health in a hot country is something like walking on a tight rope, and a slight deviation either one way or another may be very serious. It would be unreasonable to expect that families exported direct from Great Britain to hot climates should thrive, and there is reason to believe that, even when the temperature is comparatively cool owing to the elevation of the land, the sunshine to some extent overpowers their constitution. The result is physical and intellectual deterioration, and there are unfortunately plenty of examples of it. No doubt acclimatisation is possible, but it is not to be expected in one generation, and it is an interesting question how long it takes and what is the necessary process. It must clearly be gradual. The first nomad races did not remove far in one lifetime; the wave of migration was necessarily slow, and gave man a reasonable chance of accommodating himself to changing surroundings. Only in this way can acclimatisation be secured; the laws of nature cannot be overturned by steamboats and locomotives. The hope that the British race may flourish in its tropical possessions, in the sense of being able to work physically in them, depends on a process of evolution stage by stage. This is going on in Australia and South Africa. Thus, in Queensland a great amount of sugar is now being produced by white labour, and there is every prospect that such work will increase. At the last Colonial Conference exception was taken by Mr. Deakin to a circular of the Emigrants' Information Office in which it was stated that it was very questionable whether farm labourers from this country "would be able to work on arrival under the tropical conditions that prevail in North Queensland," and he urged that such a statement was in effect a misrepresentation, as much white labour was actually being employed on sugar plantations with excellent results. Both points of view, however, may be, and probably are, correct. Most, at any rate, of the labour then being done on the plantation was by Australians, men who regularly went north at the cutting season. These include, Mr. Deakin said, some of the finest specimens of manhood Australia possesses. It does not by any means follow that the labourer fresh from this country could stand the work. The case is, however, excellent testimony in favour of the belief that the white race can, if it takes fairly gradual steps, accommodate itself to

hot climates. The essence of the matter is slow transition, and there is good reason to believe that the great British communities which live on the fringe of the tropics will in time be able to occupy them. The hope justifies the idea of a White Australia—an aspiration which is having no little effect elsewhere.

There are very few cases where a white race has lived for any length of time in the tropics so that the climatic effects can be seen, and the difficulty is, of course, that an exotic settlement seldom remains pure-blooded. There is, however, an interesting case in Jamaica. In the Seaford Town district there is a colony of Germans who are of pure blood as, with rare exceptions, they have refused to intermarry or cohabit with the natives. They were brought over by Lord Seaford as an industrial experiment. They have lost their language, and some of their national customs, but still preserve all the essential characteristics of their race, being industrious, sober and vigorous, and their standard of living and morality is much higher than that of their neighbours. So far the case goes to show that the European can thrive by the side of the black ; but on the other hand these Germans have a considerable amount of leprosy, from which the natives of the district are free. The particular spot, however, in which the Germans live is at the bottom of a hot and humid valley, and dry salt fish forms the main part of their diet. The existence of this mysterious disease is not in itself a proof that European physique deteriorates in the tropics. A full investigation of the Seaford Town case would doubtless be interesting.

Pending the adaptation of the white man, it may be observed that far and away the best results in tropical possessions are obtained by encouraging the natives to produce on their own account. Both in West and East Africa the plantations run by European settlers or managers give insignificant results compared with private native productions, and the expediency of stimulating industry in this way is becoming more evident every year.

Nyasaland can produce the best quality of cotton, but progress has been slow, and the chief reason seems to be that the natives prefer food crops. The same thing has been seen in the West Indies, where the coolies have shown a preference for work on sugar plantations even when better terms were offered to them on other estates. No doubt the teeming plenty of a sugar or like plantation appeals more to the instinct of the native than a crop grown for industrial purposes. Nyasaland was long ago marked out as a suitable place for cotton growing, as Livingstone, who discovered it,

went there a second time in consequence of the American civil war, to investigate its possibilities for this purpose. It is believed that this was at the instance of the Queen and the Prince Consort, who had a strong feeling that Great Britain should not be dependent on slave-grown cotton. The result of the war put an end to this consideration; but Livingstone in his report urged that the industrial development of Zambesia would destroy the slave trade there. The difficulties of transport, however, prevented anything being done. A few years afterwards the African Lakes Corporation, originally a branch of the Church of Scotland's Mission, entered the field, but was crippled by its struggles with the Arab slave traders. This trade has only recently been put down, and the opening of the Shiré Highlands Railway from Blantyre to Port Herald has made a vast improvement; transshipment, however, is necessary three times before the sea is reached, and an extension of the railway to Beira is much to be desired, as well as inwards to Lake Nyasa. In the methods of cultivation the territory has now learnt much from experience. Coffee used to be planted on heavy red clay, a mistake not made now; and disastrous results followed from the use of Egyptian cotton, for which the season is too short. Live stock have given much trouble, but there is every prospect that careful crossing will greatly diminish the difficulties. There is abundant evidence that Nyasaland, which has a population of nearly a million workers, is going to be a great asset.

The report of the East Africa Survey Department for 1908-9 states that triangulation has been carried from the base near Nairobi to Mombasa. There are many obstacles to the work, one being that hilltops are often held in veneration by the natives as the abode of their spirits. It is remarked that on the coast fifteen miles is usually the limit of vision, but in the highlands it is forty miles. The topographical work is chiefly occupied with the Nairobi district. A "Rapid Allotment" scheme was carried out at a cost of 4-9 cents. per acre. A type of beacon recommended as the most permanent is one of angle iron six foot high set in one foot of concrete and one of earth, and it is remarked that much money would have been saved by the adoption of substantial beacons from the first. It is hoped that a good deal of estate work will be completed in the succeeding year, and this will appease the discontent of settlers; but the staff have worked under great disadvantages, such as sickness and the difficulties of communication.

An arrangement has been concluded with the Western Land Syndicate, of Hull, under which it is likely that British Honduras will come forward as a much bigger supplier of that progressive

comestible, the banana. The Syndicate gives the Government the land on its estates required for laying the railway (the Stann Creek line), with wood and ballast, and undertakes to cultivate annually increasing areas. The railway is already completed as far as the Western boundary of the Syndicate's land, and will be laid for a further $3\frac{1}{2}$ miles. The Syndicate has commenced cultivation, and the only difficulty ahead seems to be the scarcity of labour. Hitherto the United Fruit Co. have had a practical monopoly in the banana trade, as they have been the only customers, and the new development may introduce a more healthy position for growers.

The Crown Agents have sold a Uganda elephant (from India) to Mr. Carl Hagenbeck of Hamburg for £150. The condition is that the animal is not to be infested by tsetse flies, and is to be gentle and in no way ill natured. It will be interesting to see what will happen if Mr. Hagenbeck is not satisfied on these points and the elephant is returned on the Crown Agents' hands; it would perhaps be out of place in the pattern rooms. The case, however, may be the precursor of others, and there may yet be a deal over the mysterious Central African monster which has been talked of lately. This particular elephant can, we believe, look back upon an interesting past. Experiments were made with it as a draught animal, but were in the first instance frustrated by the fact that its harness burst asunder when it sighed. Special chain harness was then supplied, but the animal drew its vehicle—a heavy Woolwich truck—at a tremendous pace, regardless of intervening obstacles such as tree trunks, to the complete discomfiture of the cargo. Its value as a means of transport was impaired by the fact that its carrying capacity on tour only equalled exactly the amount of rice which it was necessary to take with it as food supply. But it contributed not a little to the prestige of British rule. The natives of Uganda, who never found out for themselves the use of the wheel, view the motor-car with comparative indifference, but their respect for the power which can tame and discipline the elephant is unbounded.

THE EMPIRE'S TIMBER SUPPLY.

IN a recent number of the "Journal" the lamentable consequences of deforestation on agriculture were discussed, and since then several reports have come to hand which show the wide range of this mischief and the rapidly increasing importance of dealing with it. It is coming to be generally realised that trees in masses are absolutely necessary to allow the beneficent rain to percolate through the soil as it should. It is not now believed that forests cause any substantial increase of the rainfall, but it is abundantly clear that, when rain does fall, the humus, mosses and roots of trees act as floors to absorb and hold up the water. But for this the uplands would be stripped of their soil, which would be washed down to the rivers, in the end choking up estuaries and harbours, and leaving desolation and sterility in the place of luxuriance and fertility. We may add here one further illustration of the evil, taken from a recent report. "China is the best instance of a land that never cared for forestry. She builds houses now of little poles, uses for fuel saplings, shrubs, herbage. Her children literally comb the hillsides for bits of roots and shrubs for fuel and fodder. The land is bared to the bone. It is a land of floods. Villages are swept away, hard-tilled fields ruined, starvation always stalks in China. Alternate floods and water-famines follow the waste of forests. And in this unfortunate country the work of destruction is still going on. Within the last century hundreds of square miles of country have been converted into a treeless, waterless waste; and what has been the result? The Hwang-Ho and the other great rivers of China are periodically flooded, and millions of lives are sacrificed simply because the forests in northern China have been cut down and never replaced. They cut off the trees, then the shrubs, then the grass, until not a single living thing remained on the mountain-sides. The rain washed the soil from the rocks. With infinite patience every year they build terraces wherever they can to save a little of the soil for agriculture. The once fertile valley-lands are covered with gravel

and rocks, the *débris* of floods. The territory that once was fertile is now bare ; its flourishing cities are falling into decay ; the land is becoming uninhabitable.

There is, however, another aspect of the matter which is hardly less important. The world's supply of timber is rapidly diminishing, and great efforts will be absolutely necessary before long to cope with the demand. All forms of building industries will suffer. Mining will become vastly more expensive, and there will be a corresponding rise in coal and iron. The railways, unless a substitute for the wooden sleeper is found, will be profoundly affected, and the cost of transportation will rise. Farming will be more expensive. Water-power for lighting, manufacturing and transportation will be affected. Irrigated agriculture will suffer most of all, for the destruction of the forests means the loss of the waters as surely as night follows day. With the rise in the cost of producing food, the cost of food itself will rise. Commerce in general will necessarily be affected by the difficulties of the primary industries upon which it depends. In a word, when the forests fail, the daily life of the average citizen will inevitably feel the pinch on every side—and the forests have already begun to fail.

The supply in Great Britain, it need hardly be said, is not nearly sufficient for its requirements. About 4 per cent. of its area is under wood ; whereas in Sweden, which principally makes up the deficiency, the percentage is 51, and in Russia and Austria-Hungary, the other two European exporting countries, it is about 34 and 30. In Germany the percentage is 25, and in France 17, and both these countries import much more than they export. The figures show how vastly behind the United Kingdom lies. The most destitute country in Europe is Ireland, with a percentage of only 1·5. The Government is now taking up afforestation, but probably this is mostly with the motive of finding work for the unemployed ; the price of land in this country, and the more immediately remunerative purposes to which land can be put, prohibit any private attempt to grow timber on a substantial scale.

In Canada the forests are of enormous extent, and seem at first sight sufficient to allay apprehension for a long time to come. The total surveyed forest area is estimated at 1,657,600,000 acres, which is more than that of the whole of the United States and Europe combined, and this does not include a vast amount of unsurveyed land. Taking the total at two billion square acres, and assuming a low average of 30,000 feet per acre, the superficial feet of timber amounts to 60,000,000,000,000—a figure which cannot be grasped. Much is heard of the destruction done by forest fires and reckless cutting, but millable timber is again produced after twenty-five years. Dr. Bell's account of the natural process of renewal is interesting :—"The dead trunks of the larger trees generally stand

for many years after a great fire. In the summer following one of these conflagrations the blackened ground becomes partly covered by a growth of herbaceous plants, berry-bushes, and shoots from the roots and butts of deciduous trees which have retained some vitality, besides numerous small seedling trees. The huckleberry-bushes, which are very common for the first few years, especially on rocky, siliceous ground, bear abundant crops of fruit. They have sprung from large old roots, which are almost everywhere present in the thick woods, although their tops are quite inconspicuous, and bear few or no berries. In fifteen or twenty years the ground is covered with poplars, birches, willows, etc., to a height of about 30 feet. By this time the dead trunks of the old *brule* have lost most of their branches, and the smaller ones have fallen down. If we look under this growth we shall discover many healthy young conifers overshadowed by the more rapidly growing deciduous trees. At the end of about fifty years the conifers are everywhere showing their heads in the form of sharp apices, their dark colour contrasting strongly with the lighter shades of the other trees. In the race to get above the deciduous trees they develop tall trunks with the branches high up. In one hundred years the poplars are dying and falling down, and the canoe-birch has attained maturity and soon after shows signs of old age. Meantime the older conifers have overtopped the other trees, and given a new character to the general appearance of the forest. The younger conifers of various ages which have been springing up from seed every year take possession of the ground left by the decay of the first occupants, and in about 150 years the forest has again become almost entirely coniferous. Such is the rotation of crops of trees which is perpetually going on in these regions. Perhaps one-third of the whole area consists of second growths of less than fifty years, one-third of trees from fifty to one hundred years old, while the remaining third may be a hundred years and upwards." From this and the immensity of the area it follows that the supply cannot give out within any calculable period. This is no doubt reassuring from the point of view of the ultimate fate of mankind. But for commercial purposes it is necessary to bear in mind the practical limitations of distance and transport. These limitations are now distinctly asserting themselves. Mr. Sheck, a forest expert attached to the German Consulate in Montreal, in December, 1905, reported to his Government that, after most careful investigation of the matter, the time had practically arrived when, outside spruce and birch, no timber could be exported from Canada. He stated that the best quality of white-pine had almost entirely disappeared, that there were insignificant supplies of red-pine, that the supplies of low-grain timber, cedar, and hemlock were rapidly disappearing, that all valuable hardwood was at the vanishing-point; but that there were large supplies of spruce, balsam-fir, Banks pine,

birch, and poplar. For example, he found that in 1881 17,000,000 ft. of white-pine (the most important Canadian timber) had been felled and used, but that in 1891 the fall was down to 9,000,000 ft., and in 1901 it was only 2,250,000 cub. ft. Oak yielded 5,500,000 ft. in 1881, but only 1,800,000 ft. in 1891, and 100,000 cub. ft. in 1901; larch, which in 1881 furnished 4,500,000 cub. ft. and in 1891 3,500,000 ft., had practically disappeared in 1901; and so on in proportion. In fact Canada has begun to import. In 1904 she imported 11,000,000 ft. of hickory, chestnut, and cherry, and 46,000,000 ft. of oak, together with 15,000,000 ft. of pitch-pine, 2,500,000 ft. of ash, and 1,250,000 ft. of walnut.

No doubt Mr. Sheek probably alluded chiefly to the eastern provinces of Canada. But the statistics are none the less significant, and in an admirably full report on "Forestry in New Zealand," by Mr. W. C. Kensington, the conclusion is arrived at that it is certain that the forest resources of Canada will be taxed to their greatest extent before long to supply the United States and European requirements, and that the present fairly low price of timber (especially Oregon pine, which has been largely used in New Zealand) cannot be expected to last much longer.

In Australia there are many valuable timbers, but the proportion of the forests to the whole area is small, and more timber is imported than is exported. India is much the largest customer for the export. It is estimated that in New South Wales the hardwoods suitable for commercial purposes will, allowing for future growth, last at the present rate for 47 years, and the softwoods for 28. In Western Australia, the wooded area is estimated at some 98,000,000 acres; the export is chiefly of jarrah, and the depletion of this tree is proceeding at a rapid rate (about 60,000 acres per annum).

Africa has large quantities of exceedingly hard and heavy wood of the ebony class, but these are not suitable for building purposes.

In India the State forests cover one-fourth of the area, and are treated on the principle of a sustained yield, but there is not much prospect of any large supply for export except of teak and myrobolans.

It may be added that in the United States it is calculated that the timber supply will fail to meet requirements in from nine to thirty-three years, according to the allowance made for future growth. There are, on the other hand, immense forest areas in Siberia, but the difficulties are so considerable that the export is at present very small.

The general conclusion seems clear that, while there is no prospect of a world famine in timber, the supply on the whole is rapidly becoming more and more remote, with the attendant increase of cost. Every country will be compelled to make more use of its own potentialities. The British Royal Commission of 1908 stated

that a forest of 9,000,000 acres would yield the quantity now imported, and that there is a sufficient quantity of land now mostly devoted to sheep which would be suitable for timber. The cost of clearing and planting varies from about £3 to £7 per acre. In France and Germany state plantations have been cultivated for generations, and with highly satisfactory results. The advantages of cultivation as compared with natural growth are very great. The proper trees can be selected, the waste of nature is avoided, and by scientific forestry a continuous crop is yielded.

The annual growth of timber in an acre is for a long time well under £5 in value, and therefore in private hands artificial cultivation is practically out of the question. But timber deserves encouragement on public grounds. The argument that it conserves rain does not appeal to every country, but some benefits are universal. Woodlands protect against strong winds to the advantage of both fields and flocks. They act as resting places for birds, the great insect destroyers, and where they are absent plagues of insects are apt to arise. They arrest erosion and landslips. They shelter game, and sport does not interfere with the economic management.

Furthermore, though the market value of the annual growth of timber is small, it should be borne in mind that this is a raw material which lends itself to many industries. Thus the scarcity of it in Great Britain means, not merely that we have to pay for foreign produce, but that a great deal of the work done on it is carried out in the country of origin, and not in Great Britain. This is an inevitable tendency; the country which has a supply of a raw material can turn it on the spot into a more or less manufactured article more conveniently than the importing country, which would have to pay freight on the full weight of the original material. In the case of timber a considerable saving is effected in this respect, by doing work on it at the place of production, and thus the want of trees tends to drive out of the country a number of trades and handicrafts.

There are thus substantial public grounds for afforestation as a government work, or for the exercise of care and forethought in those places where forest areas are large. Where the land is in the occupation of natives, as in India and West Africa, it is particularly important that forests should be protected from the destruction which results from the habit of "shifting" cultivation. In many places this wide-spread custom is more destructive than any amount of exploitation for forest purposes, as it means the total destruction of the timber and serious injury to other territories within the same water system.

THE RUWENZORI COUNTRY.

THE Report of the British Section of the Uganda-Congo Boundary Commission contains, in addition to the technical results of the Commission's labours, a great deal of matter of general interest. The work of triangulation was carried on in the face of difficulties of the most varied nature. The sphere of operations included the great range of Ruwenzori, with its snow-clad peaks rising to a height of nearly 17,000 feet out of almost impenetrable forest, and the Valley of the Semliki to the west of the range where the tremendous rainfall gives rise to atmospheric conditions most baffling to geographical work. Readers of Signor de Filippi's account of the Duke of Abruzzi's expedition will remember his graphic account of the perpetual rain and mist which made life almost unendurable and constantly thwarted the efforts of Signor Sella to obtain photographic records. Additional difficulty and danger was caused by the attitude of the natives in some of the districts traversed by the Commission, particularly in the Ankoli district, lying to the east of Lake Edward (formerly Lake Albert Edward).

"Shortly before the Boundary Commission arrived at Ihunga in March, 1907," writes Colonel Bright—"a Chief (Kasabanti) was attacked by the natives. His men, with the exception of one survivor, were killed, while he was taken prisoner, and on the following day murdered in cold blood. Kasabanti was employed by the Katikiro of Ankoli to collect hut tax, and possibly may have been injudicious in attempting to collect this tax from natives who were not well disposed towards the Government.

"I was requested by the local authorities, should opportunities offer while working in the neighbourhood of where this massacre took place, to arrest any natives who had taken part in it. Apparently, at first, the natives looked on the Commission as an expedition sent against them to avenge Kasabanti's death. Through fear, or perhaps in expectation of a reward, some natives brought in men said to have been concerned in the deaths of Kasabanti and his

party. They were brought to the British camp by the informers, and were arrested without any difficulty, and sent under escort to Mbarara.

"The south-west of Ankoli has always been an unsettled country, and possibly the apparent ease with which Kasabanti's party had been destroyed encouraged the native inhabitants to attack small parties of the Boundary Commission. The mail was attacked, and small parties carrying letters or convoying stores were interfered with. A soldier within a short distance of camp was caught by a band of natives and severely wounded. A Swahili porter was killed and mutilated before the rear-guard could come to his assistance. The Congolese Commission lost three men, killed while encamped at Karambi. A small party of men drawing water in the vicinity of a camp had spears hurled at them and arrows shot into their midst.

"In April a caravan of friendly natives from the country to the west of Karambi, who had brought supplies of food, told me that they could not return to their homes on account of the open hostility of the natives, so I decided to send an armed escort with them. The caravan was attacked while on their way to their homes, and the escort was unable to return. The soldiers rightly remained where they were till they could be brought back to safety, rather than run the risk of being "cut up." On being informed of what had occurred, I sent Corporal C. Kirkland, Rifle Brigade, with a section of Sûdanese to bring them back. The party travelled very light and rapidly, but while returning, after having been joined by the escort sent up with the native caravan, they—a party of sixteen rifles under a white man—were attacked, and were compelled to fire on the natives. One of the attackers was killed in this encounter.

"With the exception of Ruzumburu, in which country the natives were friendly, the inhabitants of the frontier districts of Ankoli caused the Commission much annoyance. Each officer and non-commissioned officer had to be accompanied by an escort while away from his camp, either visiting trigonometrical stations or sketching. The Commission was necessarily split up into small parties to enable the survey to be carried on with rapidity. Each camp had to be guarded, and porters carrying stores and provisions to the various camps had to be accompanied by an escort. The work entailed on the troops was heavy, the soldiers being constantly employed either on guard or escort duty. Small parties were often attacked and compelled to fire on the natives in self-defence. In Toro, including Buamba, to the west of Ruwenzori, Mboga, and Bulegga, the population were extremely friendly. This was especially noticeable in Buamba, which had a short time before been the scene of operations by the Congolese troops. There the natives themselves removed the barricades across the tracks on the approach of the

British caravans to enable them to pass through their villages through which the tracks in the forest run.

"The Lendu country adjoins Bulegga. Feuds between village and village disturb the whole country, which is also raided by more powerful tribes from the north. These natives are treacherous, and suspicious of white men.

"They caught two runners carrying a letter, beat one of them severely and cut the tongue of his companion nearly in half. At the same time a Swahili porter, carrying a mail and following the caravan along a narrow track through high grass, was set upon and speared to death, the murderers decamping with the mail, which was never recovered.

"Mr. J. O. Haldane, Collector, of Toro, made an attempt to arrest the men guilty of this outrage. Accompanied by a few soldiers and armed constabulary, he accomplished a difficult march by night through the mountains to the village in which the murderers were said to live. He arrived there just after dawn, but unfortunately they escaped.

"A Sûdanese soldier, accompanied by two porters, disappeared, and no trace of them was ever found. They were following one of the caravans, owing to his having misunderstood his orders, and there can be no doubt but that they were killed by the Lendu.

"Shortly afterwards, in the same district, a small party of seven men were treacherously attacked, and narrowly escaped. These were accompanied by some unarmed Lendu, who volunteered to act as guides. While some of the soldiers were drinking at a stream they were suddenly fallen upon; the Soudanese were completely taken by surprise, and found themselves in an ambush. There were numbers of the Lendu armed with spears, and till then concealed in the tall grass waiting for the soldiers to pass. They succeeded, however, in fighting their way through, and reached one of the British camps without any loss.

"The treacherous nature of the Lendu was hard to deal with, it being impossible to distinguish between friend and foe. The same natives who were apparently friendly, and brought supplies of food for sale to the soldiers and porters, were the men who waited and watched for any chance that might present itself to enable them to kill any stragglers, or ambush small parties."

The Commission lost five men killed and four wounded, while three men were drowned, and one soldier and 17 Swahili porters died of disease. The European members enjoyed good health on the whole, only one of them suffering from fever to an extent sufficient to cause serious anxiety. A special tribute is paid to the good conduct of the escort under trying circumstances, and the trained Indian signallers lent by the 4th Battalion King's African Rifles are highly praised.

Captain Jack, R.E., summarises in an interesting manner the main features of the Semliki Valley and the range of Ruwenzori :—

“The Semliki or Etuli flows out of the north end of Lake Edward along a broad, shallow valley. At the south end this valley is open, with the usual spear grass and thorn trees, and no streams. Going northwards this is replaced by the densest elephant grass, covering both the low land and the slopes of Ruwenzori; and the elephant grass in its turn gives way to forest.

“This eastern extremity of the great Equatorial Forest is here often of the greatest density, though not always tropical in character. It extends unbroken from the highest parts of Ruwenzori across the valley, and away to the west. To the eye it presents a most remarkable and unending vista of trees, whose tops have the appearance of an undulating green sea, and which reveal hardly a trace of the rivers, hills, and swamps, or the villages and inhabitants that may be beneath. Paths from village to village exist, but are often rough and indifferently marked, and without a guide it is easy to get lost.

“During the wet seasons an excessive amount of rain falls in this valley; the ground becomes sodden, and the trees and bushes of the forest constantly drip with moisture. The presence of so much humidity presents some curious effects. Every morning when the air is first warmed by the rays of the rising sun, one sees flecks and wreaths of mist rising from the mass of trees; first from the beds of rivers and streams and curiously marking their courses; later, from all parts. These gradually increase, coalesce, and, still rising, form an impenetrable bank of cloud over the whole valley, which usually hangs there all day. From the upper parts of the mountain it would frequently be impossible for days and perhaps weeks together to form any conception of what sort of country lay to the west.

“At the north end of the valley is again an open grass country covered with euphorbia and palm trees, and very level. Through it the river flows with many twists and turns to the Albert Lake.

“The Semliki is throughout its course a fine broad river from 60 to 100 yards in width. It is broken in places by falls and rapids.

“Its total fall is about 960 feet in a length of 155 miles, from 3,000 feet, the height of Lake Edward, to 2,037 feet, the level of Lake Albert.

“Lying between the Semliki Valley and the open country north of the Lake Edward depression is the long ridge of Ruwenzori, 70 miles in length from south-west to north-east and 29 miles across at its widest part. At the south end it subsides gradually into many broken foothills, elsewhere it rises with astonishing suddenness from the flat lands in its immediate vicinity. Its steepest slopes are on the western side, where also there is a greater vertical fall than on

the east. On its extreme north and south extremities are found short grass and thorn trees only, but with that exception the mountain is almost entirely covered with thick forest and elephant grass, and, except where there are native paths, is practically impassable. The forest reaches a height of a little over 14,000 feet, and above this altitude (which implies only the central and highest group of peaks) are bare rocks, ice, and snow. Rivers descend from the glaciers through deeply scoured valleys on east and west. In the snow region are a few small lakes.

"The snow peaks of Ruwenzori, which form such a striking and curious feature in this latitude, are comprised in an area of about 55 square miles in the central part of the mountain. They consist of three main groups or 'massifs,' that reaching the greatest height being on the west, the other two respectively north-east (Johnston's Duwoni), and south-east of the first. North of these three are two smaller peaks visible from Fort Portal, and south is a chain of lower heights which can be seen from Katwe. The height obtained by the Commission for the summit was 16,794 feet, former heights obtained being, by Captain Behrens, R.E., 16,618 feet, and by H.R.H. the Duke of Abruzzi, 16,815 feet.

"Owing to the fact that the peaks are on the western side of the mountain, the highest points are obscured from view from the low ground on the eastern side by the intervening spurs and foot-hills. From Katwe and Fort Portal snow peaks, but not the highest points, can be seen; from the hills on the east some 15 to 20 miles from the mountain a good view of the whole can be obtained when clear.

"The western side is, however, the best place from which to see the peaks. Here the mountain falls very steeply in numerous craggy precipices and forest-clad slopes, and from the neighbourhood of Beni a most beautiful view can be obtained. The pure white snow of the peaks glistening in the rays of the rising sun, or tinged with rose colour at the close of day, offers a most beautiful view to those who are fortunate enough to see them in the brief intervals in which they are clear.

"But the summit of Ruwenzori is the most exclusive and difficult object for observation. During the months of July and August, when the Commission was working on the hills to the east of the mountain, and in a most favourable position for observing it, not only the peaks, but the whole mountain, was entirely invisible on account of the thick mist which prevails at this time of year. On the other hand, in the rainy season, when the air is clear, the highest parts are very rarely free from cloud.

"The snow line in the valleys comes as low as 13,200 feet, but on the hill-tops it appears, curiously enough, to be higher, for no peak was observed of a lesser altitude than 14,600 feet that had snow on it, except occasionally and temporarily.

"The mountain is, considering its impassable character, fairly closely populated, its inhabitants living in very neatly kept small villages in the secluded valleys, and up to a height of 7,000 or 8,000 feet."

Captain Iredell, of the King's African Rifles, contributes some valuable notes on the native inhabitants of the districts traversed by the Commission. In the kingdom of Ankoli the principal races are the Bahima and Baëro. The former occupy the position of an aristocracy; the latter are cultivators and serfs.

"In appearance the Muhima is totally different from the surrounding negroes. Except for his hair, which although tightly curled and growing in tufts is not so woolly as that of the negro, he might easily be mistaken for a very dark Egyptian. In some cases the features are strikingly aquiline, and united with a tall, lithe figure and beautiful hands and feet, combine to make the Muhima an exceedingly handsome man. A striking proof of the superiority of the Muhima is that they have penetrated as far as Mbalukwa's country west of Lake Albert, and are everywhere found installed as chiefs.

"The Baëro, on the contrary, are a distinctly Bantu race. The fact that for years they have supplied the Bahima nobles with concubines has done much to spread the Galla blood, but still there can be no doubt that the Baëro are a negroid and inferior race.

"*Religion*.—The Bahima believes vaguely in an all-powerful deity, who is associated mainly with rain, thunder, and other weather phenomena. They endeavour to propitiate various devils, most of whom are connected with the prevalent disease, by erecting joss-houses, in which food and beer are placed; otherwise the Bahima have no religion.

"To the Bahima devils, the Baëro add a considerable number of their own, the most noticeable being Magaso, who eats their bananas in great quantities."

The Bahima have some skill as ironworkers, and manufacture a graceful kind of pottery. Details are given with regard to a considerable number of other tribes, and especial interest attaches to the account of the pygmies, rumours of whose existence were so long treated with incredulity.

"The Batwa or Bambutu inhabit the Semliki forest and the extension of the Etuli forest south of Mboga. They stand about 4 feet high, and are long armed, short-legged, and very ugly, being usually distinctly prognathous. The legs are disproportionately short, the feet very large, and the body is covered with a sort of down.

"Both sexes affect a state of complete nudity. They have their own language, but usually talk a little of the language of their big neighbours.

"There can be no doubt that the pygmies are the race the lowest in the human scale found in Africa. They have no religion and no industries. No attempt is made to till the open glades, but they depend entirely on game and what they can steal from their neighbours.

"Though there are several different tribes they have no tribal organization. Each family shifts for itself, but it is the custom for a group of families to attach themselves to a big negro chief, and in return for food to assist him to fight his battles.

"The standard of morality of these little people is distinctly high. It is said, however, that when they have come in contact with Soudanese or Swahili the women quickly degenerate.

"The poisoned arrow is the favourite weapon of the dwarf both for fighting and hunting, at which they are exceedingly adept. All the wild animals living in the forest are killed for food, even the elephant. Pit-falls, snares, and heavily weighted spears are used, but their favourite way of hunting an elephant appears to be with poisoned arrows. These are shot into him, and the great beast is followed until he dies, when the dwarfs camp round the body and live on the flesh until it is finished. It is impossible not to be struck by the manner in which nature has shaped the Batwa to suit the dense forest in which they live.

"They are, strange to say, remarkably intelligent. A Mubutu was brought from Mboga to Fort Portal by a missionary, and eventually converted to Christianity. In a short time he was teaching in the school.

"Yet another race inhabits this forest area. The Banande appear to be related to the pygmies, but not of them. They are much bigger and more simian in appearance. They do not seem to be at all numerous, but are found in ones and twos hanging round the Baamba or Bavira villages. It appears that they are absolute pariahs, literally living on what they can pick up.

"They are usually rather light in colour, very brute-like in appearance, and markedly prognathous."

One of the members of the Commission spent six weeks at Karangora, at a height of nearly 10,000 feet on the northern spur of Ruwenzori, under very trying weather conditions. The whole report is a record of excellent work performed in the face of very great difficulties, and the Members of the Commission deserve warm congratulations on their achievement. The report is illustrated with maps, diagrams and photographs, the latter including a photograph of a model of Ruwenzori and the Semliki valley prepared at the War Office. Colonel Bright, by the way, remarks that both these names are erroneous.

“ Ruwenzori is merely the anglicized form of the Lu-Toro words ‘ru enjura,’ meaning ‘of rain.’ Either of the words ‘Ruenjura,’ or ‘Gambaligala,’ the Lu-Ganda name for the mountain, and signifying ‘they me hurt,’ probably referring to the strain caused to the eyes when looking up at great heights, would be more suitable than Ruwenzori, which neither means nor signifies anything. Ru-Nsoro, or the elephant’s head, is another designation applied by natives to this mountain.

“Semliki is not the name of the river now generally known as that in Europe. The river is the Eturi, or Etuli. Semliki was a chief long since dead, who lived on its banks, and whose name has been given to it in error.”

Custom, however, has made them so familiar that they are hardly likely now to be displaced.

THE FRENCH IN THE SEYCHELLES.

THERE is no trace of human habitation in the Seychelles Islands before the French settlement in 1756. The group lay on the road between the Portuguese fortress of Mozambique and the trade centres of Surat, Bombay and Goa, and no doubt many calls and not a few shipwrecks occurred there. Buccaneers found a convenient resting place, and there is a firm belief locally that there is buried treasure; indeed, it is said that in the Seychelles insanity usually takes this form. But these things are not history, and the records begin with the expedition of discovery fitted out from the Isle de France (Mauritius) in 1742.

The first French expedition left no trace, but in 1756 the frigate "Le Cerf" took possession, and a "pierre de possession," bearing the Lilies of France surrounded by the cordon of the Saint Esprit and surmounted by the Royal Crown, was set up as a token of sovereignty. This is now guarded as the most ancient monument in the colony, albeit the Crown and Lilies have been defaced, probably during the revolutionary period. The name was derived from the Vicomte Moreau des Seychelles, Controller of Finance under Louis XV. The captain of "Le Cerf" praised the port, but concluded that no advantage could be obtained from a permanent settlement owing to the mountainous character of the interior. So he sailed away, leaving only the pierre de possession and a flag. Another expedition arrived in 1768, and for several years persistent efforts were made to cultivate the land. They all ended in failure. The sad story of the principal exploiter is worth quoting, as it shows glimpses of a larger world.

"Meanwhile, Brayer du Barré, a person of great persistence of character and an indefatigable correspondent, commenced his enterprise on the island of St. Anne. He obtained from M. Poivre at Government expense the freighting of the 'Thélémaque' with what he felt necessary to establish himself, and succeeded in bringing, over a colony of fifty persons, white and black, from the Isle de Bourbon.

He asked for much more which he did not get, *e.g.* a company of Artillery to fortify his possessions and grants of land comprising the island of St. Anne, Cerf, Silhouette, La Digue and Curieuse and portions of Mahé and Praslin. But he spent most of his time at Isle de France in formulating further demands and in writing to the personages about the Court of Louis XV., to exercise their patronage in his favour. The list of his correspondents at Versailles affords room for reflection on the constant changes of officials both in the Colonies themselves and at Versailles. He addresses letters and maps to the Duc du Praslin, de Boyne, (whom he must have exasperated by styling him indifferently de Boyne or de Boine or de la Boyne), the Duc d'Eguillon, the Comte d'Estaing, de Maurepas, de Vergennes, and de Sartine; he demands the protection of the Chancellor, the Comte de St. Florentin, the Princess de Marsan and the Marquis de Nesle to help him. He begs of all in turn to help him and to oust his rival Gillot and the base usurper Hangard. But he dissipated his energies in asking for more and neglected the unfortunates whom he had induced to form his colony: and the day of retribution arrives. His mismanagement was denounced in 1773 by de La Perouze, who on a voyage from Pondicherry was obliged to put in at Mahé under stress of weather and reported his establishment as being in greatest disorder, the men dying of famine and occupied in destroying the turtles and tortoises instead of cultivating the land. The Chevalier de Tornay and Maillard de Meslé, who had succeeded MM. Poivre and Desroches in the administration of the Isle de France, now took action, refusing to ratify the concession of 1770, and obtained a judgment in 1775 condemning Brayer du Barré in the cost of the original equipment sent by the 'Thélémaque' five years before. This was the end of Brayer du Barré; in vain he appealed to a Minister on the ground that he was a Norman by birth; in vain he produced a certificate that at an earlier period of his life he had for three and a half years managed a lottery at Rouen. He was arrested for having invented a story of a silver mine and for having inveigled 30 or 40 colonists of Isle de France to emigrate to St. Anne's Island. He was ultimately released in 1776 and died at Pondicherry two years later."

Perhaps the French Government would have troubled itself little over the possession, but for the consideration, familiar in colonial histories, that another power would take it. The English occupied Diego Garcia and the fear arose that they would seize the Seychelles. Accordingly an officer was sent to them with detailed instructions, which are interesting as being exceedingly well calculated to stop or crush any enterprise. "It was forbidden to any inhabitant to take tortoises, carets, coconuts, and even wood without the permission of the Commandant. No person from the Isle de France might trade without written permission. No bachelor was

eligible for a concession of land which was to be granted only to creoles of the Isle de France or the Isles of Seychelles who were married. All existing concessions were to be revised and the extents fixed in proportion to the needs of each inhabitant. No colonist might sell his property without the authority of the Administrators at the Isle de France, and any one leaving the Colony without presenting a solvent successor was to forfeit his possessions to the royal domain. Under these restrictions, the Colony was not likely to prosper, even although thought had been taken for the growth of a population which should be attached to the soil. Malavois was a prolific writer and compiled descriptions of every conceivable kind (pp. 222-318). This conscientious officer remained in the Colony until 1802 but was succeeded in his official capacity by Mr. Esnoul in 1792, whose instructions reflect the great events which were then occurring in France. He takes with him a 'reproduction' of the national Constitution agreed to by the Convention; he reduces taxation (of which the details nowhere appear); he institutes universal suffrages for the election of all public functionaries and judges and a colonial assembly voting the law; and he proclaims the general amnesty. All this must have somewhat puzzled the handful of colonists, who no doubt shouted for liberty, equality and fraternity, provided that the maxims were not extended to slaves."

The period of the struggle with England illustrated the troubles of holding an island in war time, especially when a revolution occurs at home. The Commandant Quéau de Quinssy, capitulated no less than seven times, and after the surrender in 1810 of the last French stronghold in Indian seas he remained calmly in possession and undisturbed for five years, until in 1815 the colony was assigned to England. A noteworthy incident under his administration was the arrival of 70 French prisoners who had been deported for complicity in an alleged attempt to kill the First Consul. One of these was the citizen Jean Rossegord, a well-known figure in the storming of the Bastille, and as a general in quelling the revolt in La Vendée. Convicts, however, were no more popular in Seychelles than they have been in other colonies, and in this case the revolutionary arrivals included in their subversive doctrine the liberty of the blacks. This was not to be endured, and accordingly 35 of them were put on board a ship and consigned to the tender mercies of the Sultan of Anjouan, where 29 died and the other 6 escaped.

The Seychelles Government have published a collection of documents mostly from the state archives of France which cover the period from the date of the first expedition to the cessation of French authority. The collection is due to the enthusiasm and industry of Monsieur A. A. Fauvel, and an excellent introduction by the Governor, from which we have taken extracts, sums up the leading events. It is rather surprising, in view of the smallness of the

group and the precarious nature of the tenure, to find that so much literature took place. The character and products of the island were reported on with no little detail. It was recognised that the group would not be very interesting on account of agriculture and commerce, but it was believed that it would be a valuable stopping place for refuge and refitment. Schemes of improvement were drawn up with elaboration, but nothing was or could be done with an enemy virtually in command of the seas. It was impossible to defend the place, and the only course open to the commandant when an English cruiser sailed in was to surrender with as much grace as possible. The logical completeness of French instructions is illustrated by the terms in which this case is referred to and which may be quoted as an example of good style under trying circumstances.

“ La guerre que le cabinet de Londres vient encore de déclarer vous rejette il est vrai, dans une situation fâcheuse et délicate, pour laquelle je ne puis, dans ce moment, vous donner d’autres instructions, et, (dans le cas où les ennemis se présenteraient aux Seychelles, pour y commettre quelques hostilités), que de prendre auprès de celui qui seroit chargé de cette expédition ou qui l’entreprendroit de son gré, toutes les mesures convenables pour garantir les habitans des désastres qu’un homme furieux, ou des ennemis irréconciliables, peuvent ordonner. Par conséquent, de traiter avec lui pour obtenir les conditions les plus favorables, et même pour empêcher toutes discussions à cet égard, vous pourrez proposer les mêmes arrangements que vous aviez faits en 1794. Au surplus, je m’en rapporte à votre zèle et à votre courage, persuadé que vous ne souscrirez rien qui puisse être onéreux aux colons et déshonorant pour votre nation et son pavillon.”

WITH THE GOVERNOR ON TOUR.

(IN THE LAND OF THE SOUTHERN CROSS.)

PERHAPS one of the most interesting of the multifarious and never ending duties of a Staff Officer to a Colonial Governor is when he accompanies his Chief on a tour in the colony, away from the seat of Government, from the main trunk road, and, as may be, across country, particularly if one happens to be serving in a 'big game' country, and His Excellency is a sportsman. The preparations for the journey; orders to the different Government Departments concerning transport; the transmission of mails and telegrams to the Governor's camp at all times, wherever it may be; escort and various other arrangements as to horses, servants, tents, commissariat; who is to come and who to remain at Head-Quarters, &c., all interesting details occupying a good deal of time before the journey can be commenced. These being settled, and all official business cleared off up to the last moment, everyone ready of those who are accompanying His Excellency, we go to a new life for a time, some riding, others in a twelve-team mule wagon, the driver holding the long and heavy reins, and the conductor the whip, long enough to reach the leading mules, one loud crack of it, which echoes in the porch at Government House, and we start away. In addition to the ordinary servants, cooks, butlers, grooms, &c., each Staff Officer takes one of his own native servants who helps to pitch his tent; to cut grass, when it is not wet, to put under the waterproof sheet as a bed—a bed of grass, not of roses—and to look after his master generally. The first day out is usually uninteresting, as the camp has to be pitched a short distance from the starting point. Afterwards, day by day, the journey becomes more interesting and eventful. Herds of game may be seen; rivers may become suddenly swollen, owing to a heavy downpour of rain, and there is difficulty and danger in crossing them, because of the great volume of water, and the strong, and swift current. The roads having become heavy in consequence of a sudden tropical storm, the transport conveying the provisions, &c., may be delayed, and, travelling with it, the

servants. Dinner will then be very late, and so on; and, when it is ready, very likely, under the circumstances, the wagon containing the camp tables, stools, &c., will not have arrived, and so the Vice-regal repast will have to be served on the 'floor,' on the whitest of white tablecloths. But, in spite of all difficulties, the itinerary must, as far as is possible be adhered to. Long before the Governor arrives at a given point, the inhabitants of the country round about know that he is coming. The native chiefs come to the camp to "Salam" to the "Great White Chief," bringing offerings in kind according to their rank and wealth—an ox, chickens, eggs, grain, &c. There is quite a degree of ceremony in the proceeding. The procession with the offerings is quite formal. First a number of native girls carrying on their heads the baskets containing the chickens, eggs and grain; next a number of young men, and then the older men. These things are, of course, accepted, and some presents given in exchange to the chief of the tribe—usually blankets, of which the natives are very fond. There is great joy and excitement among the camp servants when these parties arrive, because they generally have a "Choosing," *i.e.*, all the girls form up in line and the "boys" opposite. (All natives are called "boy," even though they be 30 or 40 years of age or more.) Each girl is to choose whichever "boy" she prefers—they probably have never seen each other before, and most likely would not meet again. This is done by the girl crossing over to where the "boy" she chooses is standing and administering a sound smack on the cheek, then returning to her place. When each one has chosen there is much gaiety and laughter among the favoured "boys," and a proportionate disappointment among those who have not received the coveted smack in the face. The servant that I had with me was small in stature and plain featured (many of the natives are remarkably fine looking). Anyhow, on each occasion when there had been a "Choosing" he was passed over. He was very upset about it, and no doubt had been chaffed by the other servants who had been chosen. Having suffered for some time from neuralgia, I had with me a very small bottle of Creosote. He had seen this when unpacking my baggage. One day he came into my tent. I had not called him, there was nothing for him to do. I was in camp alone doing some work, the others having gone off shooting. I could not accompany them, having a broken collar-bone owing to my horse having fallen into a "Mere cat" burrow. And here I am reminded of a little incident that happened during the early part of a tour in a tropical part of the country. Being an invalid for the time being I had to take as much rest as possible. One morning at breakfast in the mess marquee the magistrate of the county, who was in attendance, and who shared my tent on the night previous, apologised for a disturbance he had made in the early morning, and hoped he had

not awakened me, at the same time explaining that he had been killing a snake (Black Mamba) that was crawling up my bed.

I could not think what my faithful James (his name was Jim) wanted : not money, for there was neither village, town nor store for miles away where he could spend it. With halting steps and much "Salaming" he approached, and after some hesitation explained how "his heart was sore. He had not been chosen. He was very unhappy. Would not the 'Great Chief' help him? He was sure there was some way." No, there was nothing. After some thought he said, "but the little bottle! Has not the 'Great Chief' some medicine?" Explanation as to the use of creosote was of no avail, all he wanted was "some of that." I handed him the bottle and told him to smell it, and then say if he still wanted some. That was quite sufficient. He was, however, then perfectly happy and convinced that, having "tasted" the "*Muti*" (medicine) he would be chosen at the next and future camps ; and so he was.

"MIMOSA."

BUSINESS NOTES.

Business Enterprise in the Colonies.

There has been recently a marked rise in the energy with which the resources of the Colonies have been studied in this country, and numerous exploitations show the willingness of the capitalist to put his money into places which are under the British flag. Not only is a great industrial rise in process in Canada and Australia, but the less developed territories are receiving much attention. The utilisation of the Newfoundland forests for newspaper purposes is noteworthy, and it may be hoped that this development will lead to the veteran colony becoming better known to prospectors and sportsmen. A company with a capital of £1,500,000 has been formed to cultivate tropical products in Papua, and as labour is the chief factor in such schemes it will be interesting to see what the company can make of the New Guinea native. The West African colonies are being ransacked for oil, and the adoption of this fuel by the Admiralty gives a great stimulus to the search. The vast soda lake in East Africa is to be brought into commerce by a railway. The fibre industry is being energetically developed. There can be no doubt that the expansion of new methods will cause an ever increasing demand for tropical products, and in the main investments of capital in such cases will be sound. Finance nowadays is carefully guided by science, and in production the degree of speculation gets smaller and smaller. The great activity of rubber companies is due to high prices, which are the result, not of any combine or other manipulations, but of the supply being overtaken by the demand. The supply of such an article responds somewhat slowly to an increased demand, and the greater output promised by the companies is even now, having regard to the proportion of natural and planted rubber which come into the market, hardly likely for a considerable time to depress prices much. The production can be increased almost with precision, and this gives great stability to the industry

as compared with enterprises where the yield is more or less speculative. Oil unfortunately belongs to the latter class. The Nigeria Bitumen Company has an enormous territory and has already spent a very large sum in drillings; they have yet to reap the advantage, but certainly deserve the credit of having established the fact that oil is to be found. Other explorers are sanguine of success, and the results of their efforts will be watched with no little interest. It will be well for them to bear in mind that the rough country encountered requires suitable drills; if this requirement had been properly studied much time and money would have been saved.

Rich alluvial deposits of tin have been discovered in the Bauchi, Zaria, Nassarawa and Kabba Provinces of Northern Nigeria, and mining operations have commenced: with the advance of the railway, this industry is likely to grow greatly and offer openings for capital. The tin is of very high quality and fetches from £6 to £8 more than Cornish tin. The Niger Company are now likely to reap no little benefit from the provident bargain, which Sir George Taubman-Goldie secured for them on the occasion of the transfer, that the Company should have a royalty on all minerals mined in its territories, but they can fairly claim the credit of discovering and opening up the field. The railway advance, to which we refer under that head, brings fruition near.

Nyasaland is another place which is undoubtedly rich in minerals, and an increase of prospecting may be looked for.

By a recent regulation, any company which desires to obtain a licence for boring for oil in Southern Nigeria must show that it has a capital of at least £25,000 immediately available. This requirement is not deterring substantial concerns.

The Rubber Market.

There were previous to this year some 175 registered plantation rubber companies in this country, and their annual production was about 3,000 tons. Almost an equal number of companies were registered early this year, and it is anticipated that their production will in four years amount to 9,000 tons. But the world's production is 70,000 tons, of which Brazil alone contributes nearly 40,000, so that this anticipated addition to the supply is not a great matter in comparison with the rapidly increasing demand. The Brazil supply is not increasing despite the high prices, but no doubt there will be a substantial increase from the companies other than those above referred to and from other indigenous rubber. It is impossible to anticipate what this increase will amount to, but from a general calculation of the acreage taken into cultivation it seems probable that in four years the plantation supplies will equal the present world's output of 70,000 tons. They will thus command the market,

and probably large interests will contrive to steady and maintain the prices. A regular price, even if high, will tend to stimulate the use by manufacturers, many of whom have been seriously embarrassed by the recent violent fluctuations.

Rubber in the West Indies has so far failed to attain the profits made in the East, and one reason is that the best seeds have only been used rarely. A good deal of planting, however, is now going on, and taking into account the value of "catch crops" in the islands, the industry should prosper in suitable places.

Notes on Tropical Products.

The cultivation of the soy bean is rapidly extending, and promises to be a considerable feature of West African production. It has been cultivated in China and Japan from the earliest times, but has only become generally known in recent years. It has a remarkably high percentage of protein and fat, and when used as a fodder gives excellent results. In a new place the growth is sometimes disappointing, as has happened in the West Indies; but this is because the beans do not flourish until the soil is infected with the tubercule organism. The prospects, commercially speaking, seem good.

The English oil-seed crushers have found the crushing of the bean highly lucrative, and have favoured it recently to the exclusion of cotton-seed and other oleaginous seeds. The agricultural reports everywhere are highly laudatory, and the oil can also be used in soap-making and to some extent for paints.

A great increase of sisal growing has taken place recently, and the price has dropped heavily. India is a great producer and cuts the price. The industry does very well still in the Bahamas and other very suitable places. But having regard to the market tendency, much discretion is advisable in places which are not so well favoured for the cultivation. The requirements of each locality require special study, as the life and yield of the plants vary greatly. For every 100 acres a capital of about £200, generally speaking, is required, and a large estate is necessary to support the machinery. Obviously, the industry is not one for the small planter, except in cases where co-operation is possible.

Caravonica tree cotton is the subject of many experiments, chiefly in Lower Mexico. The bush is perennial, requires little attention, begins to bear at seven to eight months after sowing, and gives a remarkable yield. Some lots have been sold in Liverpool at rather higher prices than sea island cotton. There is, no doubt, a future for this industry in hot but not excessively rainy countries. It is to be tried in Papua.

Rubber Cultivation.

Expert opinions on this subject are now much more precise than they were not long ago, and some main conclusions may be stated shortly :—

(1.) The best tree for plantation is generally the *Hevea Braciliensis*, but not all seeds of these trees are good, and there must be selection. In West Africa, *Funtumia Elastica* produces good results and is, in many places, more free from insect pests than non-indigenous varieties.

(2.) The aim in cultivation should be to obtain the largest possible area in bark and the largest possible girth in the basal part. Wider planting is necessary for these purposes than has been usual—say 100 trees per acre. The girth is obtained by pinching the terminal bud when the tree is about 10 feet high, and this is followed by forking, but trees so treated are rather liable to fungus attacks.

(3.) The flow of rubber from the first tapping is thick and apt to harden quickly. This is prevented by fixing a drip-tin just above containing water and a little ammonia. When the latex becomes thin and watery the tree should be given a rest.

(4.) In the case of *Hevea* trees the new incision must be quite near the previous one. This is because incisions in this case stimulate and increase the flow. Good results are obtained by re-opening the old wound, removing as thin a layer of bark as possible. There are many special knives to ensure thin parings and save the bark.

(5.) A slanting cut is as efficacious as the old V-shaped cut. The best plan is to make a vertical groove in the bark from the base to five or six feet high, and then make long slanting incisions about a foot apart to it (the “herring-bone” system); the incisions yield the latex, and the groove conducts it to the ground.

Cocoa.

The Southern Nigeria *Gazette* contains the following instructions :—

“ The young cocoa trees should be planted at least 15 feet apart and as far as possible the ground should be kept clear of weeds, dead branches and other rubbish. Farmers should be induced to plant only such a number of trees as they can properly look after with the labour they can get. If plantations are larger than this they are certain to be neglected and they then become centres of infection for the spread of diseases due to fungoid and insect attacks. Although a farmer may for a short time get a little more cocoa from a large number of trees, yet if he has more than he can look after he will in the end lose more by their becoming diseased from neglect and the diseases spreading to other trees.

"Where more than one main stem rises from the ground all but one must be removed by pruning; the strongest and healthiest being generally left. From the above main stem not more than four lateral branches should be allowed to develop; any branches in excess of this number being removed by pruning. All suckers should be removed except where they are required to replace dead or diseased trees. Where the *Amelonado* variety of the cocoa plant is cultivated, care should be taken that the main branches, which in this variety have a tendency to bend down towards the earth, are either supported by sticks or pruned in such a manner as to prevent that tendency. Once the tree has developed into the required size and shape, all weak branches and those bending towards the ground or overlapping should be pruned off. This should be done while the branches are young, since large branches should not be pruned more than is absolutely necessary."

Brussels Congress of Tropical Agriculture.

For a subscription of 15 francs copies will be supplied of all the official publications, which will probably include a volume of papers read at the Congress.

Minerals of Southern Nigeria.

A report by Professor Dunstan shows that the sands and concentrates examined contain a number of minerals: quartz, ilmenite, zircon, rutile, monazite, tourmaline, staurolite, kyanite, felspar, and limonite. Many of them also contain gold, topaz, titanite, and magnetite. A few carry small grains of chrysoberyl and corundum. One or two contain *traces* of tinstone and columbite. But on the whole there seems no evidence so far that the minerals are of sufficient value to repay working on a large scale. There is, however, much lignite which would be of great service as fuel and might also be used for the production of gas for lighting and heating. This material may be extremely useful in cheapening locomotion.

"Probably the chief use of the material in Southern Nigeria, at any rate at first, will be for firing locomotives and for steam-raising on river steamers.

"Destructive distillation experiments with these Nigerian lignites confirm the experience of gas engineers with lignites in general, that they have a tendency to yield gas of low illuminating power. This, however, is of less importance than formerly, since gas is most economically employed as an illuminant in association with incandescent gas mantles, and when so used its heating power is the most important factor, the intensity of the light obtained depending on the temperature to which the mantle is heated.

"Gas from these Nigerian lignites would be quite suitable for use in this way and for general industrial purposes as a source of heat and power. Such of the lignites as are high in 'volatile matter' could be advantageously employed in this manner.

"It was observed that some of these lignites, when kept freely exposed to the air, showed a tendency to disintegrate, and this may prove a difficulty in storing the material in quantity for industrial use. This matter was referred to in the previous report (*loc. cit.*), and it was then suggested that if this difficulty was experienced in practice 'briquetting' should be resorted to. There are two systems of briquetting fuel in common use: (1) that generally used for lignite and peat on the Continent, in which the ground lignite is subjected to high pressure, when the heat thereby developed results in the formation of some 'lignite pitch' which binds the lignite together; (2) that generally used in the United Kingdom for coal, in which the ground fuel is mixed with tar, pitch, starch or other binding material, and then compressed. Large consignments of the Nigerian lignite have been asked for so that briquetting trials may be made with it, and the results of these will be dealt with in a later report of this series. It may be noted, however, that if the Nigerian lignite can be briquetted successfully this may have the effect of increasing its calorific value, and in any case of rendering it practically unaffected by exposure to air and moisture, which will materially enhance its industrial value."

Lake Magadi.

It has been known for many years that a great soda "lake" lay south of Nairobi, and a concession of the territory was granted in 1904 to the East African Syndicate in the shape of a lease for 21 years. Later in the year a new syndicate came into existence with the name of the F.A. Syndicate, which appears to be a playful way of carrying on the succession, and this body acquired an option of acquiring the property, but nothing seems to have come of this. The difficulty in the path was the transport, and there was also some apprehension whether a few manufacturers and dealers who control the market would fight against the introduction of a vast amount of natural soda. There was no question about the magnitude of the deposits. They constitute a solid mass of at least 20 square miles, and are fairly pure. It is much the biggest field of the kind in the world. Eventually an agreement was concluded last year with a new company (Messrs. Samuel and Co.), which was formed to take over the lease. The main features of this document are a new lease by the Government for 99 years; the construction of a branch railway by the company from the Uganda Railway to the field (a distance of some 60 miles), equal to the standard of the latter railway; the provision of land free for this purpose; an under-

taking by the Uganda Railway to carry up to 160,000 tons of soda annually; an undertaking by the Company to despatch at least 250,000 tons in the first five years; payment to the Government of a royalty on raw soda of 2s. a ton; railway rate of $\frac{1}{2}$ d. per ton over the Uganda Railway, subject to later revision. The Government will work on the lines on the principle of adjusting the rates to the expenses, and the Company is to provide £200,000 to meet the necessary increase of rolling stock.

Mr. F. Shelford has made a reconnaissance for the railway.

Oil as Fuel.

The discovery of oil in Nigeria and other places will, it may be hoped, lead to the use of oil for fuel locally, as though oil generally costs more than coal it will hold the field when it is produced against imported coal. After many experiments the Admiralty adopted a burner to atomize the oil which we believe has worked satisfactorily. There is some danger of fire, and a high-flash point should be obtained if the heat in any spaces in the vessel which the vapours might reach is very great, as sometimes happens in confined parts. The Admiralty flash point is 200°, which is more than mercantile practice requires. In determining a safe flash point, it should be remembered that inflammable vapour is distilled from oil at temperatures considerably lower than that of the flash point: thus when the flash point is 150° F., such vapour is evolved at 100° F.

Electric Lighting.

It is often desired to have a general idea of the cost of providing a small town with an electrical installation. A scheme providing for about 2,000 lamps (equivalent to not less than 3,000 lamps fixed in consumers' premises) over a fairly wide space, would require two units of plant, each having a capacity of about 50 kilowatts, with a storage battery capable of supplying about 100 50-watt lamps for six hours. The cheapest generating plant is with gas engines, and the cost would work out as follows:—

Two gas engines, 80-h.p.	...	...	£2,220
Two dynamos and boosters, 50-kilowatt output	...	...	880
Switchboard	...	...	500
Battery	...	...	240
Erection, say	...	...	760
			<hr/> £4,600 <hr/>

If oil engines were installed the cost would be increased by £370; if steam engines and boilers, by £510. The choice turns chiefly on the local cost of the fuel required.

The other expenses may be put roughly as follows :

Building	£1,000
Distributing mains (for 17,000 yards of main)	5,500
	<hr/>
	£6,500
	<hr/>

Thus the whole cost would be :

Plant	£4,600
Building and mains	6,500
Contingencies (at 10 per cent.)	1,110
	<hr/>
	£12,210
	<hr/>

A resident engineer, a skilled white mechanic, and four to six labourers would be required.

The above scheme would entail working costs of about £1,000 a year, assuming that 45,000 units were consumed, and the output could be increased to 80,000 units without any further cost except in the fuel. With a charge of 8d. per unit an output of 45,000 units would cover the working expenses, but nothing more ; with a sale of some 100,000 units at 6d. per unit sufficient income would be provided to cover all charges, including depreciation and sinking fund.

In private houses each 16 c.p. metallic filament lamp should consume from 10 to 12 units per annum ; hence at 8d. per unit the average annual payment would be from 6s. 8d. to 8s.

A fair conclusion is that if a demand is made for some 1,500 lamps this may justify making a start, as the first demand is sure to be rapidly increased owing to the fact that the uses to which the lamp can be put are more readily appreciated after supply has been given.

Electric Power.

The alternating current system is convenient for lighting purposes, but for power it has some drawbacks, particularly where workshop driving is concerned. The most important of these disadvantages is the difficulty of obtaining variations of speed. A limited amount may be obtained, but at considerable expense and at the cost of much lower efficiency. With continuous current, speed variations in the ratio of three or even four to one may be readily obtained, and for machine-tool work these wide speed variations are being demanded more and more. Especially is this the case for machines with individual motors, such as the larger lathe, heavy drills, planing machines, &c., as a large number of speeds are required for these classes of work and mechanical gearing to effect

them would be cumbersome and expensive. For workshop practice there is now a general consensus of opinion that the continuous current motor is the better one.

The wiring is more complicated on a two-phase system, requiring four separate conductors to each motor, switch and starter, as against three for a three-phase system and two for a continuous-current system.

Generating Plant.

To get good results from a producer gas plant, anthracite beans are the correct fuel, and the price of these may be high and the supply difficult in many places. A suction gas plant requires about $1\frac{1}{2}$ lbs. of anthracite per kilowatt hour.

The Diesel engine uses crude petroleum, and the fuel costs are about half those for a producer gas engine. It is in use at the Hong-Kong Electric Light Station.

A 400 h.p. gas engine and alternator using gas on the suction principle from anthracite has been sent by Messrs. Mather and Platt to the Gold Coast, where it will be used to transmit power to the Taquah Mine of the Prestea Block "A" Co. The coal required is said to be about one-third what is required by a steam plant, and can be imported over the railway at a rate which makes it more economical than the local timber.

Whenever generating plants of over 700 h.p. are required, it is now almost universal practice to instal steam turbines. For small sizes steam engines are still more economical, but when the above size is reached the turbine becomes rather cheaper to work from its superior condensing power; it is also cheaper, takes up less room, and is better adapted to the work.

A turbine shaft will in time show signs of wear due principally to vibration at the pedestal bearing and require adjustment. This involves taking it down and putting it back, and when there is only a single plant this means generally an inconvenient interruption. The best plan is to duplicate the machinery or provide accumulators, but if this cannot be done the work should be stopped notwithstanding the inconvenience, as the machinery is sure to suffer if the wear is not rectified.

Gas Engines.

Last year Mr. G. Lingwood, of the Waterworks Department, Barbados, investigated in this country the suitability of gas engines and producers for pumping purposes. His report, which has been printed, gives full statements of the plants offered by the leading makers, with prices.

Clayton Disinfecting Machines.

Several recent reports have been received on these. In the Gold Coast, 312 buildings were disinfected in six months, and much of the present security is attributed to the process. The large engine was tested in a room containing insects and a culture of Danyaz vines, with the result that the first was killed and the second rendered sterile. The small engine was not found so efficacious as the large. In Southern Nigeria several ships have been disinfected with absolutely satisfactory results. A suitable length of hose should be ordered if it is desired to reach the hold of large steamers. In British Honduras both machines were found satisfactory, but it is suggested that the fittings should be more flexible to admit of easier handling in harbour. An additional outfit can be supplied to give greater flexibility in special circumstances, and it is not desirable to reduce the diameter of the hose (6 inches), as this reduces the efficiency of the machine.

Beacon Lights.

The Engineer-in-Chief to Trinity House has designed a simple port light showing a flashing light. It has a simple capillary burner and no complicated machinery; candle power, 3,000. It requires a light trestle to carry it. It will maintain itself in action all night without attention, but in common with other lights requires lens and lantern glass to be cleaned every day, if possible. Price, complete with tower and ladder ready for erection, about £500.

The Wigham Lights are cheaper but not so powerful, and are said to require frequent attention and adjustment.

As regards acetylene lighted beacons, the cost of a third order light with tower and acetylene gas producing plant for maintaining the light for thirty days, the intensity of the beam being 2,500 candles, would be about £1,600. The cost is less if the keepers can attend daily to the production of the gas required.

At a height of 100 feet the geographical range is about 16 miles.

Particulars of Traction Engine, Wagons, and Water Tank, for Service in Somaliland.

The engine was made by Messrs. Fowler & Co., Ltd., to War Department Specification and Inspection.

Diameter of cylinders: high pressure $3\frac{1}{2}$ ins., low pressure 7 ins. Length of stroke 8 ins.

Working pressure in boiler 200 lbs. per sq. in.

The engine is capable of pulling a load of 7 tons gross on ordinary hard roads, the gradients not exceeding 1 in 12, at an average speed of four miles per hour.

Should the nature of the ground be very soft, this gross load would require to be reduced, for two reasons; the resistance of pull required to move the load is increased when the wheels of the wagon and engine sink into the ground, and the effective power of the engine to produce a pulling effort is reduced if wheels slip and do not get a proper grip of the ground.

When difficulties of this nature are experienced, it may be necessary to adopt one of the following methods:—

1st. By securing projecting cross plates known as “spuds” to the driving wheels in order to improve the grip of the wheels on the ground.

2nd. By the use of the winding rope of the engine: this winding rope may be used in various ways.

(a) Disconnect the engine from the wagon and let it proceed on ahead by itself for a distance admissible by length of rope. The wheels of the engine must then be scotched to prevent their turning or the engine moving, and the engine is then able to exert a very great pulling effort by means of the winding rope and drum. By securing a snatch block on the wagon the amount of pull can be still further increased, but this should be adopted with great care in order not to cause undue strain to the frame of the wagon.

The length of winding rope of engine is 100 yards, and a spare length of 100 yards is also supplied with the engine equipment.

(b) If the ground should be too soft or slippery for the engine to move at all, even when not secured to the wagon, it may be necessary to use the winding rope to warp the engine along. In order to do this some sort of holdfast in the ground is necessary; if trees are not available, artificial holdfasts must be made, either with picket posts or by sinking a baulk of timber in the ground.

If the ground is known to be soft and generally bad it is always advisable to proceed very carefully. It will be found to be more economical to start with very light loads to ascertain definitely what the surface will stand without it being necessary to resort to either the use of “spuds,” or the “winding drum;” of course, if bad places occur only occasionally and are not very extensive a full load could be taken, and winding resorted to if necessary, but as a general rule, it may be taken that the working load should be reduced when there is doubt about the state of the ground to avoid the necessity of the use of “spuds” or “winding rope.”

The consumption of coal and water will be found to be influenced very much by the nature of the surface of the road. The pull required to move a vehicle on a good hard level road is about 80 lbs. per ton of load, and in very soft sand the pull necessary might be increased to as much as 500 lbs. The consumption of coal varies directly as the work done, or in other words, as the pull to be exerted. What the actual consumption of fuel and water will be can only be

ascertained by trial. It is much better to arrange for a trial run, say, of ten miles, to get this information, than to get into difficulties by supplies running short.

Good Welsh coal should be used if possible, of a semi-bituminous nature, not too friable as to break up too easily in the furnace. The boiler is designed to burn almost any kind of coal, but there is nothing to gain by using a cheap and inferior quality of coal.

The amount of coal consumed will depend also very considerably upon the skill of the driver.

The boiler should be thoroughly washed out after steaming for one hundred hours. A small pump is supplied for the purpose.

When water of unknown properties is being used in the boiler of a traction engine, its action on the internal surfaces of the boiler should be very carefully watched, and any pitting, grooving or excessive deposit should be reported in order to get technical advice as to whether the safety of the boiler is likely to be affected.

The water should be tested every day or two to ascertain that it has no acidity. A small quantity of soda should be added to the feed water daily. Water can be tested by means of blue litmas paper. If the water turns the blue paper to red the water is acid, and should be run off and more soda used in future. Under no circumstances should oil or grease be allowed to get into the boiler.

If for any reason the engine is laid up, the boiler should either be completely filled with water slightly alkaline, or else quite empty, and the inside made thoroughly dry and the boiler permanently sealed, trays of lime being placed inside the boiler.

The boiler fittings should be kept thoroughly clean and free from leakage. The efficient working of injectors depends very largely upon their internal fittings being clean. The safety valve must be tested to make sure that it is free to act.

The lubrication of all working parts of the engine must receive very careful attention. Failure to attend to regular and systematic lubrication is a cause of great expense and inefficiency.

For efficient lubrication, attention must be given to the quality of the lubricant used for the particular purpose.

The lubricating oil used in the steam cylinders is "oil, cylinder, mineral," and for bearings, "oil, compound engine," and "Rangoon."

In tropical climates or in the summer in England, it is advisable to thicken the "oil, compound engine," or "Rangoon," by adding the "oil, cylinder, mineral." This applies especially to the main axle bearings.

All lubricators and pipes leading from lubricators to bearings should frequently be examined and cleaned, if necessary, to make sure that the passage is quite clear.

"Oil cylinder mineral" is also used for lubricating the axles of wagons. The axles of wagons in the tropics should be lubricated several times during the day, and frequently tested to ascertain if they are running hot.

Charcoal Fuel.

Mr. D. E. Hutchins, in his report on the forests of British East Africa, makes the following recommendation of charcoal fuel made from wood. "As a means of utilising the quantity of waste wood in the forests of the Protectorate, the making of compressed charcoal bricks seems worthy of consideration. For this purpose it would be necessary to make charcoal in a kiln. This would produce besides charcoal, wood vinegar, tar, and wood creosote. One hundred lbs. of wood (dried at 300° Fah.) yield when calcined about 30 lbs. of charcoal and 70 lbs. of gaseous products. Of the 70 lbs. of gaseous products, 63 lbs. is crude wood vinegar, from which about 4 lbs. of pure Acetic acid is obtained. The wood vinegar would furnish a useful bye-product with a local sale to some extent. The wood creosote would be used for creosoting sleepers. The tar would be used for compacting the charcoal into bricks.

"There would be considerable economy in the use of such brick fuel in place of wood fuel, particularly where it had to be carried long distances, as in the case of the steamers on Lake Victoria Nyanza. It might even be possible to make it in sufficient quantities to supply the ocean steamers at Mombasa. Its calorific power would be equal to (or superior to) coal, and be more than double the calorific power of the best hard firewood. Only about half the weight of kiln-dry wood is heat-producing, of air-dry wood less, and of partially seasoned wood much less. Almost half the weight of even kiln-dry wood is useless oxygen (cellulose 49·3 per cent.; average wood about 44 per cent.). There is also over five per cent. of useless hydrogen, and one or two per cent. of mineral ash. So that chemically about half the weight of even kiln-dry wood produces no heat on combustion. This may be compared with the 81 per cent. carbon in English steam coal.

"In converting quite dry wood to charcoal in a kiln more than two-thirds of the weight goes. In making charcoal in the ordinary way the weight is diminished by three-quarters or even more, and the bulk by one-half. The economy of carbonising the wood is thus apparent, but to get the charcoal into a useful compact form that would burn well, the charcoal would have to be compressed by machinery and mixed with tar, nearly, in fact, repeating the process by which coal was made geologically. Such a process would be expensive, but, as we have seen, it would save from one-half to

three-fourths the cost of carrying wood fuel, and it would furnish creosote which is expensive stuff to import, as it cannot come with ordinary ships' cargo.

"In America, carbonising plants have been erected on a large scale in order to utilise the saw-dust from the saw-mills. This accumulates in enormous quantities and becomes a nuisance difficult to dispose of. Charcoal from these factories is produced at astonishingly cheap rates, and in quantity which is in excess of the demand for charcoal.

"The carriage of wood fuel for use on the Uganda railway forms no inconsiderable portion of the traffic at present. The traveller passes numerous trains loaded with nothing else but wood fuel. The substitution of bricks of compressed charcoal would do away with one-half or three-quarters of that carriage—the carriage chemically of a quantity of useless water and oxygen. This carbon brick fuel is free from the sulphur in coal and thus corrodes the boilers less. It also produces less smoke."

Wireless Telegraphy.

It is proposed to establish wireless telegraphy at Antigua, Montserrat, Nevis, and St. Kitts. The difficulty in such places is that the principal towns are dominated by high hills and are practically screened so far as radio-telegraph waves are concerned, except in the one direction towards the sea. Thus, between Antigua and Plymouth in Montserrat the hills of the latter island intervene directly, and it is therefore advisable to select a site on the east coast.

The sites should be about 400 feet square and on high ground with a clear slope to the sea; the soil should not be rocky.

An Australian conference has advocated the establishment of wireless telegraphy between Australia and New Zealand, and New Zealand and Fiji, and generally with the Pacific Islands.

An order has been placed with Marconi's Wireless Telegraph Company for an installation between Aden and Berbera.

Agricultural Implements.

The common reproach that British manufacturers do not study Colonial conditions has some basis, at any rate as regards this class of goods, and the fact accounts for the greater popularity of American appliances. One point that should be considered is the applicability of implements to dry farming conditions, where the ground is hard. Here the moldboard plough cannot be kept in the ground; the disc

penetrates better, is self-sharpening to some extent, and does not require much repair. The alfalfa renovator (American) is made on the principle of a disc harrow, and is good for pulverizing soil for grain crops. There is also an effective weed-killer, like a tooth-harrow, but hammered out at the end and with cutting parts turned at right angles to one another.

There is an increasing use of drought-resisting grain and plants, and a vast amount of agriculture will in no long time be carried out in low rainfall countries.

Dried Food Products.

The portability of foods dried in such a way that the addition of water restores them to their original state makes them very convenient for expeditions and undeveloped places, but it must be remembered that evaporation by heat destroys part of the substance; thus a milk powder may be obtained in this way, but it does not become milk again by the addition of water. The proper method is to dry up the water by passing a current of warm air through the liquid in spray. The result is that the liquid is instantly robbed of its water, but no vital entities are destroyed. This is the process by which the dried egg and milk products of the Casein Company are made, and the *Lancet* states that they are an obvious advance on such food preparations.

Stamping Presses.

These are frequently required for the impression of revenue duties, and in some cases, such as the duty on cheques, rapid handling is necessary. The press therefore should be self-inking; the cost of one such as is approved by the Inland Revenue is about £30, and its rate of production of stamps averages from 700 to 1,200 an hour, according to the efficiency of the operator. For long and continuous work the dies should be hardened; such a die with complete date stamps is supplied for about £10 10s. It is desirable to provide a cast-iron stand and mahogany work table top (£6 10s.).

Dredging and Reclamation.

It is generally important that dredgers should work continuously at the task of deepening, and if they have to unload themselves this cannot be done. To permit continuous dredging it is necessary to provide either (1) a floating pipe line, or (2) a flotilla of tugs and barges with a floating auxiliary pumping plant. The floating line interferes with navigation, and is objectionable if the dredger is not close to the land. The barge system (which can be seen in Holland)

entails an additional plant in the shape of tugs and barges and the auxiliary suction plant at the commencement of the pipe line, and unless the works are on a big scale the expense may be prohibitive. A rough estimate for two tugs, ten 350-ton barges, and the floating auxiliary pumping plant is £60,000.

At Lagos £40,000 has been spent on reclamation works in the last ten years, and it is under consideration whether the barge system should be adopted. In favour of this it may be urged that not only are large reclamation works at Lagos required, but others could be carried out, once the plant is provided, at Forcados, Calabar and Bonny

The Weaving Industry in London.

In London there are many trades being carried on about which the general public are in complete ignorance ; not the least surprising of these being that of weaving canvas hose. This is essentially a north country industry, yet for many years past the weaving of canvas hose has been carried on by Messrs. Merryweather & Sons, at their fire-engine factory in Greenwich, where a considerable quantity is turned out every week.

The operations involved in the manufacture of canvas hose are many. The yarn is received into the factory in huge hanks, part of which is known as warp yarn and consists of several strands threaded together. The remainder is called weft and contains 15 to 30 strands, according to the class of hose for which it is intended. The yarn is first taken in the hank and wound upon a ryce—(a frame-work wheel, somewhat resembling the skeleton of a windmill with the sails removed)—and from thence it is wound upon large reels or bobbins in the upper part of the winding machine. The weft yarns upon the reels are then placed in another machine and wound upon smaller rollers called “shuttle pirns,” after which they are ready for the loom. The bobbins containing the warp, however, are placed in a large frame known as a “creel,” which carries hundreds of bobbins at one time, and the ends of the yarn from the bobbins are carried through a kind of grid or comb to the beaming machine, the various threads as they converge upon one point presenting a web-like appearance. The beam is simply a large and heavy iron reel, upon which the threads, when drawn off the bobbins, lie perfectly parallel and even.

When the warp has been “made up” the beam is transferred bodily to the loom, and after certain preliminary operations have been performed by the weaver the pirn is placed in the shuttle, and the actual process of weaving commences. The shuttle flies to and fro, threading the weft through the warp, and pulling it at the

same time so as to ensure the production of a tightly woven material. As the hose is made it passes, still tightly stretched, beneath the loom to the back, where it is carried up to a beam above upon which it is automatically coiled.

After a piece of hose is completed it is taken off the loom and passed through a coiling and measuring machine, which automatically records its exact length, and here, as far as the weaving shop is concerned, its history ends, the testing being done in another department.

The British Central Africa Co., Ltd., which has steamers plying between Beira and Chinde and between Chinde and Port Herald, has revised its through rates, and in some cases reduced those for produce homeward, with the view of encouraging the agricultural interests of Nyasaland. The Union-Castle 1st and 2nd class fares for passengers to Chinde (from Southampton) run from £30 9s. 0d. to £47 5s. 0d., as against £35 15s. 0d. to £52 5s. 0d. by the German Line; but the Aberdeen Line from London remains the cheapest (£28 7s. 0d. to £37 16s. 0d.).

Cargo for Nyasaland.

The Union-Castle Company, in connection with their new service with East African ports, have undertaken to take cargo, shipped by their steamers, from Beira to Chinde by craft belonging to either the Deutsche Ost-Afrika or the British India, and have undertaken that no delay will occur. The distance is 132 miles. No large steamers can cross the bar at Chinde, and all cargo has to be transhipped at Beira. The German Line has large sea-going barges towed by powerful tugs between the two places, and this of course helps them greatly to secure business. The Chinde trade is greatly increasing. Sugar, maize, cotton and tobacco have good prospects.

Shipment Declarations.

It is unfortunately a common practice to evade the law and the regulations of shipping lines by giving false descriptions of consignments. Detection is difficult, and many a parcel of dangerous explosives is shipped under the designation of some harmless chemical. Some vessels which have mysteriously disappeared may have owed their fate to this practice. There is often no penalty at the port of discharge for the false declaration. Some time ago some cases, described as containing cow-hair, arrived at London from Calcutta.

They actually contained birds' skins, the export of which from India is forbidden ; but the customs authorities here, though they detected the fraud, were helpless, and the skins were triumphantly carried off.

Usually there is no statutory provision making it a criminal offence to make a false declaration. There was recently a prosecution at Bloemfontein for a false declaration that certain wool, which was in fact from Cape Colony, was produced in the Orange River Colony. It was argued that the purchaser would be prejudiced as a higher price is given for the Orange River wool ; but the law requires something more than a possibility, and, as it was not shown that any one suffered, the argument of fraud failed and the accused was acquitted. In the origin, of course, these declarations were called for solely for statistical purposes, and from this point of view penal provisions would be out of place ; but, if they are used for the purpose of imposing on carriers or misleading purchasers, it would seem reasonable to make wilful misstatements punishable.

RAILWAY NOTES.

Narrow Gauge Railways.

A writer in the *South African Railway Magazine* puts in a plea for the narrow gauge on the ground of the special circumstances in South Africa. His argument is that a narrow gauge line is right when it is not expected that the undertaking will be directly remunerative. "As it is the deliberate policy of the country to spend public funds even when a return cannot be looked for, it is evident that it is the duty of the Government to provide that transport which is cheapest in capital cost and working, and if a narrow gauge railway can do the work required, not to build a much more costly standard gauge line, which is capable of doing far more than will be given it to do." He goes on to urge that a 2-ft. gauge line can be built for one-half the cost of a standard gauge line, and that the working costs are in Natal 4s. per train mile on the narrow gauge, as against 6s. on the standard, with an equal train service.

The narrow gauge, or rather the light railway, has been in late years severely denounced by many eminent authorities. But the data vary so greatly in different localities that it would be unreasonable to apply any argument generally. In England and America the railways are private property, and if a line is built it is in the expectation that there will be eventually a paying traffic. This implies that the line must have a substantial carrying capacity, and there has been abundant experience that in these circumstances the light line is indefensible. The same experience has been established in India, where on the whole the traffic is bulky. Where comparisons have been made, it has generally been concluded that the advantages to be gained by having a light line are small and the drawbacks considerable. A large number of items of expenditure remain the same as when a heavy line is built—survey, purchase of land, fencing, stations, workshops, and so forth. In earthworks the slopes are the same in both cases, and the only difference is the

width, this difference is proportionately smaller in large earthworks, and has been put at about 3 per cent. in the extreme case of a cutting 50 feet in depth with flat slopes. In bridges, for equal wheel-loads the difference is hardly appreciable. The chief difference is in ballast and wooden sleepers; if, however, steel sleepers are used it is small. For equal loads the weight of the rails is unaffected by the gauge.

The conclusion which these facts establish is that it is unsound policy to lay a light railway where there is a reasonable chance that there may be traffic enough for a heavy line. Many a light line has come into disrepute because eventually traffic has come in from unexpected sources and the carrying capacity has been found insufficient. But it by no means follows that narrow gauge railways are never justifiable. The difference in capital cost is very considerable when large earthworks, bridging and purchases of land are unnecessary, because then the works required are limited to those which vary entirely according to the description of the line. A narrow line can negotiate very sharp curves, and in country where this ability saves expensive construction works the saving is considerable. The cost of maintenance and the working expenses are less. In Ceylon the Northern Railway, 5 ft. 6 in. gauge, cost Rs. 60,437 per mile, and the estimated cost if it had been 2 ft. 6 in. along cart road was Rs. 30,228.

It is clear that for pioneer lines intended to open up new country, where the traffic is light, the cheapest possible system should be adopted, and if the country is an easy one a light line can be adopted. Low speeds and light trains should then be the rule, and many expenses will be avoided which are inevitable where there is fast running—signals, platforms, sheds, &c. Probably only one train a day each way will be necessary, and the object should simply be to get it through somehow, so long as it effectually beats bullock or other transport. The rails should not be too heavy for the light vehicles to be used, as these run better over a fairly yielding and elastic road-bed. The rail joints should be "staggered," *i.e.*, the joints in one rail made to come opposite the middle of the opposite rail; this tends to prevent the rails from being too stiff laterally to give easy running at the sharp curves. It should not be overlooked that the cutting of a new tract and the erection of bridges and culverts can often be saved by laying a narrow line mostly along an existing road, but of course this must be above flood level.

The mistake is to build a cheap light line through difficult country when a comparatively large traffic is to be expected. The gauge itself is a secondary consideration in the cost, the nature of the country being much more important. A remarkably cheap line was the Wushishi-Zungeru, which in the first instance cost about £1,400

a mile, though further ballasting and the improvement of the bridges were proceeded with afterwards, and some Government services were not reckoned in this calculation; the line satisfactorily fulfilled its purpose in the transport of materials from the head of navigation on the Kaduna River to Zungeru. Here the country was exceptionally easy, and a surface line was obtained for almost the whole distance, and the case is very different when difficult country is encountered. The break of gauge is a very serious matter if bulky traffic is to be handled, and any line which is intended to become a trunk line should be of broad gauge.

West Africa.

Proposals have been made to relay certain parts of the Lagos Railway by making deviations from the existing track so as to do away with difficult curves and gradients. An expenditure of £171,257 is contemplated. A great advantage in economical working is anticipated, as the heavy goods engines would take much bigger loads, the percentage of increase in one case being as much as 90 per cent. The elimination of sharp curves will ameliorate wear and tear of rolling stock. The case shows the importance of not accepting severe gradients and curves until it is quite clear that they are unavoidable. Large engines cannot pass round any curve sharper than one of five chains radius, and crossings should not be less than one in eight.

Good progress has been made with the completion of the buildings and ballasting on the Ilorin-Jebba section, and probably the whole of the work (to 293½ miles) will be finished and finally handed over to the Open Lines Department by June, and the cost, exclusive of expenditure on works not contemplated in the estimate, will be within the sanctioned estimate.

On the Jebba-Zungeru line better progress was made towards the end of the year; the native labourers were at first reluctant to cross the Niger and go into new country, but their fears gradually diminished.

On the Baro-Kano Railway the rails reached Minna in November. Subsequent progress has been rather slow, owing chiefly to a scarcity of labour and also to the difficulties of transport. In view of these circumstances the bridge work ahead is formidable. The task has throughout been a heavy one, and the rains of last season added greatly to it; at one time it was said that ten miles of earthworks were being washed away in a day. The original programme was extended by the decision to avoid difficult country by taking the line from Baro to Minna instead of to Zungeru, and to build a branch from Minna to Zungeru to connect with the line from Jebba;

this branch became an urgent matter as it was desired to send the materials for the Jebba bridge over it. But the result is that completion to Kano will be seriously delayed. From Minna to Jebba is about 170 miles. On the other hand, there are indications that the commercial prospects of the line will be good. The tin industry in Bauchi is likely to be a valuable asset for it, and when the railway reaches Zaria it is likely that extensions for this purpose will be mooted. The Nigerian Tin Corporation has already taken up the question, and it appears that money would be forthcoming for a branch line of 120 to 140 miles.

Good progress had been made by January with the root-wall and work-yard of the Secondee Harbour, and two temporary slipways were erected on the foreshore. At Accra the works on the breakwater extension and the jetty progressed satisfactorily, and it was anticipated that in May there would be ample water along the breakwater to enable surf boats to land their material there.

British Honduras.

The necessity of clearing heavy forests and the absence of an adequate local labour supply made it extremely difficult to estimate the cost of the Stann Creek Railway, and the cost is now put at £111,000. The work has been well done, and there is reason to believe that the line is better than any in Central America (exclusive of Mexico). The cost would have been less if proper labour-saving appliances had been provided. The receipts from the open section have been as good as might have been expected and the prospects are good.

Uganda.

This country is obviously one that might be made the channel of communication between Central Africa and the Indian Ocean, and a comparatively small amount of work would be sufficient to attract the Congo trade to the Uganda Railway. The Nile connects the Victoria Nyanza with Lake Kioja, a distance of 47 miles; but there are rapids, and as the country is easy, a railway could be built at low cost along the bank of the river. From the latter lake to the Murchison Falls (165 miles) the journey could be done by steamer, and a short tramway could cut out the Falls. It has been calculated that the whole journey from the Congo Free State to Lake Victoria could be done in about 36 hours, and to Mombasa in 3½ days. The bulk of the Uganda Railway traffic comes from the hinterland of Victoria Nyanza, and the development of transport facilities would attract much more.

To make a connection with Egypt it would only be necessary to lay a railway beyond Lake Albert to Gondokoro (about 100 miles), and from Alexandria it would be possible to reach Mombasa in 18 days.

In this connection reference may be made to the Annual Report on the Uganda Protectorate, which gives an encouraging account of the progress and prospects of the cotton industry :—

“Cotton-growing may now be said to be established as the most important industry in this Protectorate. It is important to the country, inasmuch as it is a native industry, and one which gives home employment to thousands of natives. The progress which has been made in Uganda in cotton cultivation is now well known, and the following table showing exports gives at a glance an idea of the progress made during the last four years :—

—	1905-6.	1906-7.	1907-8.	1908-9.
	Cwts.	Cwts.	Cwts.	Cwts.
Ginned cotton	858	3,500	12,911	10,246
Unginned cotton	—	—	4,263	12,805

Reducing the unginned cotton to ginned by calculating it as containing 30 per cent. of lint, the table will be more comparative, and the figures work out, approximately, as follows :—

—	1905-6.	1906-7.	1907-8.	1908-9.
	Cwts.	Cwts.	Cwts.	Cwts.
Ginned cotton	858	3,500	14,190	14,087

It will be observed that there is a slight decrease in the exports for the last year. There should have been a considerable increase, but the growers in certain districts, for various reasons, held back their seed cotton from sale early in 1909. It was from two to three months later than usual in reaching the gineries, consequently a portion of the 1908 crop does not figure in the exports as might have been expected.”

Ceylon.

The Manna Railway is progressing well, nearly half the jungle clearing being completed on the first 24 miles early in February. The small contractors had some four miles of earthwork in hand at rates varying from 15 to 20 cents a cubic yard. Contractors from India will be invited to take up work, as it is desired to use as little local labour as possible.

Trinidad.

Arrangements are being made to proceed with the proposed lines from San Fernando to Siparia, and from Tabaquite to Poole; but the first cannot be commenced at present owing to a legal question which has arisen with the Cipero Tramways. Extensive alterations in Port-of-Spain stations are contemplated. A loan will be required before long to cover the expenses.

Renard Road Trains.

This system has been officially tried in India, and an account of the trials is given in a Ceylon report. The report states that the driving of the motor is quite simple; any one who has learnt to drive a motor-car would soon be capable of driving a Renard locomotor.

One of the most important features of the Renard train is the system of steering adopted. Steel cables diagonally attached actuate the swivel rods of the end wheels of each follower and direct those wheels to the radius of whatever curve the locomotor is driven upon; as each axle arrives at the tangent of the curve taken by the locomotor, the wheels are automatically set to the required radius and accurately follow in the track taken by the locomotor. The accuracy and safety with which the train threaded its way when driven through congested traffic and round sharp corners in the streets of Calcutta were in every way most satisfactory.

When the train is proceeding forward the steering is directed entirely by the driver, who steers as though he were driving the motor only, knowing that the vehicles behind will accurately follow the course set by the motor. When it becomes necessary to back the train its direction is controlled by an assistant who steers the end wheels at the rear of the train by means of a rod temporarily attached, the duty of the driver being then confined to reversing the engine of the motor and steering to follow the last truck.

A trial was made of the turning capabilities of the train. To effect this a circle was described, the diameter of which, measured inside the track of the inner wheels, was 52 feet 6 inches. Subsequently another trial was made, when by the assistance of a man pulling the steering wheels of the locomotor as it proceeded on its course beyond the angle at which the steering lever would operate, a curve of 34 feet five inches in diameter was accomplished.

The train is fitted apparently with ample brake power. There are two brakes operating on a drum on the Cardan shaft on the motor, one of which is in reserve in case of damage to the other; there is also a slipper brake, which operates on the driving wheels of the locomotor. In addition to the above there is a hand-brake on

each of the vehicles, which operates on a drum on the Cardan shaft. A brake test was made on October 22nd, when the train was running at a speed of twelve miles per hour; the train was brought to a stop within a length of 12 feet without inconvenient shock."

The following general remarks are made:—

"The road on which the trials under review were conducted is sufficiently severe both in alignment and gradients, to serve as a test of the Renard train's capabilities of negotiating hill roads such as exist in Ceylon.

"Generally speaking, the trials have demonstrated that the gradients on the Ceylon roads are not too severe for these trains to travel over, and that the curves, with certain exceptions, are not sharper than they can manage.

"A train loaded with over 14 tons successfully ascended long gradients of 1 in 18 to 1 in 25, and gradients as steep as 1 in 12, and in one instance a gradient of 1 in 11 on a curve of 20 feet radius, on which it stopped and re-started without difficulty; on this occasion the engine was geared to the lowest of the four top speeds, there being, besides these speeds, four lower speeds which can be utilised on severer hills or when heavier loads require them.

"It is recommended, however, that on all roads on which it is proposed to run these trains that gradients, if steeper, be improved where practicable so as not to exceed 1 in 17 or at the worst 1 in 15, and that curves of less than 50 feet radius be eased.

"Before these trains are allowed on any road it should be first ascertained whether existing curves are of suitable radius, and whether the bridges are of sufficient strength. It should be also carefully considered whether the width of the road will admit of other vehicles passing; if not, it would seem necessary that passing places be constructed.

"The Chief Engineer of the Railway Board of India, who attended the trials, approached the Renard train representative with a view to having a modified design of the train prepared, with the overall width of the train reduced to 5 ft. 6 ins., for use on hill roads, as it was found that the train practically monopolised the whole road to the exclusion of other traffic. A revised design on these lines will in all probability be made.

"From what I have observed in the working of Renard trains during both the trials in Calcutta and Assam, I am fully convinced the competent supervision of a European engineer having a first-rate knowledge of petrol motors is absolutely essential, and that as the driving of the train requires much greater skill and mechanical knowledge than that demanded of the driver of a locomotive on rails, only European drivers, preferably those trained to drive these trains at the Daimler Co.'s works, should be employed, at any rate until local drivers have been trained and found competent.

"It cannot be stated too emphatically that the staff in charge of the Renard train, including the leading mechanics at the depôts, should be the best obtainable.

"In order that the best results may be obtained in the cost of running and maintenance, the best course would probably be that the pay of the drivers be fixed on a basis of fixed pay and mileage performed, so as to conduce to careful driving.

"It has been frequently shown during the trials that no necessary expenditure in keeping the train in thorough repair, in the pay and sufficiency of the staff employed, and in the supply of lubricants should be grudged, and that ample time should be arranged for periodically, say every six months, for thoroughly overhauling the motor, otherwise increased cost of maintenance, unreliability of running, and unnecessary depreciation in the value of the stock will assuredly follow.

"An ample supply of spare parts should be at all times available.

"Trains running on hill roads with constantly varying gradients should not be overloaded, so that the necessity for changing speed and the resulting damaging effect on the gearing may be avoided as much as possible.

"It was noticed during the trials that when the train exceeded 9 to 10 miles per hour, the rear wagon swayed a good deal, and as swaying is attended with danger, a limit of speed should be enforced."

On the important question of the effect of the train on the surface of the road, the following observations are made:—

"With a view to forming some idea as to what damaging effect the train produced on the road surface, I examined the surface several times after the train, both when running light and when heavily loaded, had passed over the road; but the effect was so slight that none was observable.

"In considering, however, to what extent roads may be affected by Renard trains as compared with known results of cart traffic, the following points should receive attention:—

"(a) The heaviest loaded axles in the train are furnished with wheels having tyres 8 inches wide, and the weight on each of these wheels is 2 tons 1 cwt., this will give a pressure on the road surface of 5.2 cwts. per inch breadth of tyre; whereas in the case of a loaded bullock cart, the gross weight of which is say 2 tons and the wheel tyres 1½ inches wide, the pressure per inch breadth of wheel tyre is 11.4 cwts., or more than double that in the case of the Renard train.

"(b) In addition to the lesser wearing effect of the train on the road surface that may be expected for the reason shown in (a) above, a still further reduction in the wear may be looked for owing to the train being spring-mounted on all axles, whereas bullock carts are without springs.

"(c) In the ordinary nature of things trains are not driven along one track, such as bullock carts follow; the wear is therefore distributed over a greater surface of the road, and less destruction to the road should result.

"(d) On the other hand, the higher speed of the Renard train will doubtless cause greater wear than the slower moving bullock carts.

"(e) Again, when the road surface becomes worn and depressions are forming, the increased hammering effect on the sides and bottom of each depression, which would result from the greater speed of Renard trains, would unquestionably tend to destroy the surface more rapidly.

"(f) The diameter of the wheels of the Renard train being somewhat shorter than those on bullock carts, the weights are distributed over a less area of contact with the ground, and would therefore have a slightly more damaging effect, more especially when depressions are forming.

"Though it is impossible to calculate or foretell what wear on the road surface may be produced by Renard trains, and consequently to what extent the cost of maintenance may be affected, it would not be surprising if experience eventually showed that such heavy transport travelling at higher speed than bullock carts proved far more destructive than the latter.

"When roads are worn, the speed at which trains are driven should be reduced otherwise destruction of the road surface would inevitably be hastened.

"To obtain the best results, both in reduced cost of upkeep of roads and in lessening the damaging effect to the machinery of the train that would follow from jolting over uneven surfaces, roads should be maintained in as good order as is practicable.

"On roads where Renard trains are running excessive camber to the surface should be avoided, so that the full width of the wheel tyres may bear upon the ground."

Oils.

There are standard specifications for the various oils required for railway purposes, but it would perhaps be hazardous to say that such specifications cover the whole ground, and that oils made under them would be uniformly the same. Uniformity is practically secured by adopting established brands of well-known makers; but there is much uncertainty as to which are the best. Considerable value, therefore, attaches to a Ceylon report based upon experience of various kinds. For loco. engine oil the "H.H." oil of the Vacuum Oil Co. is recommended; for cylinder oil, Messrs. Wakefield & Co.; for carriage axle oil, the Vacuum Oil Company's Indian carriage axle oil.

Fire Resisting Applications.

It is often desirable to protect timber on railways from fire, and there are some fire-resisting paints on the market which appear to be to some extent effective. The painting must be renewed if there is much wear. The methods of immersion in a chemical solution are not believed to be very lasting in their effect. A certain amount of protection is afforded by a coating of Portland cement wash or white-wash. This is inexpensive and easily renewed.

Carriage Roof Lamps.

Leakage of oil is a common nuisance, but it is often largely due to want of proper care in filling and trimming. The oil chamber should be filled to overflowing before screwing the cap into the opening, and the leather washer should be so tightly screwed into position as to form an absolutely air-tight bearing, for if the slightest quantity of air is left in the chamber, or if the cap joint is not made perfectly air-tight, the air will act on the top of the oil and force the oil through the pipes and out past the wick. The lamp should not be re-lit without refilling the chamber. If a thinner quality of oil than colza is used the tendency to leak is greater.

Tare and Load.

With full loads the bogie wagon of large capacity has an advantage over smaller vehicles, as the proportion of tare to paying load is less in a bogie wagon than in a four-wheeled wagon. Wagons of a tare of 4 tons 2 cwt. are found to carry 8 tons, and of 8 tons 19 cwt. to carry 15; while a bogie of a tare of 15 tons has a carrying capacity of 40 tons. But in places where it is often difficult to find full loads this advantage may be outweighed, and a limit of capacity to say 20 tons may be advisable. The ratio of tare to capacity is reduced by the use of steel.

Axle Greases.

These in hot climates sometimes deteriorate greatly and become so thin as to be unfit for use. The process begins with a loss of water by evaporation, and this liberates fat particles and lowers the melting point. Even if a sample shows a sufficiently high melting point, if the barrels are filled before the grease is cooled and set the grease is deleteriously affected by movement. It should therefore be provided in the contract that this grease should be perfectly cold when put into barrels. The amount of water should not exceed 50 per cent. and the melting point should not be lower than 180° F.

The Undergrounds.

The increasing necessity for underground communication is illustrated by the construction of a subterranean system entirely for goods and mails. It need hardly be said that this is in Chicago; but other large towns are likely in time to copy. Not only is a new line added to the facilities for transport, but the advantage for loading and unloading are enormous. In an open air system a great amount of labour is required to get the goods to the tracks, but here the business houses load and unload direct by elevators from the line and connections into their buildings, and *vice versa*. All the cartage in fact of every kind is done by the railway, and this frees the open air building from much encumbering traffic, and makes it more convenient for general purposes. Another use of the line is to take away excavated earth where new buildings are to be erected, so that the workmen have merely to shoot the stuff down a chute into the cars. The railway is a paying concern.

"Powellising."

It is claimed by the Railway Departments of Western Australia and Victoria, that "Powellising" renders the seasoning of timber unnecessary. The Powell process consists of heating green wood in a solution containing 30 per cent. of molasses. The boiling point of this is several degrees higher than that of water. The result is that the watery matter (sap) in the woods boils first. It is driven out of the wood cells, together with any air they contain, escaping through the solution in the form of bubbles. As soon as the ebullition ceases the solution is brought rapidly to the boiling point, and it is then allowed to cool off. The wood cells, which at this stage may be likened to those of an empty sponge, gradually absorb the solution. After they have become filled, and the time will depend on the size of the piece treated, the timber is taken out of the boiling vats and is placed in steam-heated kilns to get rid of the superfluous moisture. The cells now contain a saccharine matter which, through chemical change, has become part of the wood itself, and the effect of this "Powellising" is to make the timber impervious to dry rot, and to the attacks of white ants, which give considerable trouble in the northern parts of this State.

Insects and Railways.

The passenger train from Mombasa was recently held up three times between Makindu and Kiu. The causes of the stoppages were millions of caterpillars crossing the line. The engine wheels crushed the insects, and the juices from the bodies made it impossible for the

wheels to obtain sufficient grip on the wet rails. The driving wheels revolved, but on the same spot on the line. The difficulties were overcome through the stoker walking beside the engine and throwing sand down on the rails.—*East African Standard*.—The common black ant was the cause of two goods trains being considerably delayed near Sherwood Siding lately. On the second occasion it was some four hours before the driver was able to leave this extraordinary pest behind. It seems that whole hosts must have been on the march and crossing the railway lines in bands of about a yard broad, with intervening spaces, for a distance of fully half a mile. The wheels skidded to such an extent on the slain masses that the trains were brought to a standstill.—*Rhodesian Herald*.

Construction and Revenue Accounts.

It is important that all railway expenditure should be brought to account properly, and the general principle is that the capital account should bear the cost of all new works and plant, and all improvements of and additions to old works and plant; while the revenue should bear the cost of repairs and renewals incurred after the opening of the line.

The following average figures of the world's railways are useful as a basis for comparisons. The gross revenue per train mile is 6s. 7d.; average cost of running a train one mile, 4s. 2d.; average profit per train mile, 2s. 5d.; proportion of ordinary expenses to gross revenue, 63 per cent.

MEDICAL NOTES.

Anchylostomiasis, as it occurs in Barbados. (By C. J. MANNING, M.R.C.S., L.R.C.P. (*Barbados*).)

The disease was recognized long before the discovery of the minute creature that causes it. The result is that it is known by a great many names. During the construction of the Mt. Cenis and St. Gothard tunnels it played havoc with the health of the workmen; they rapidly lost strength and became unfit for hard work. The death rate was high, and seriously interfered with the success of those great engineering undertakings. It was there known as "*La maladie des tounells*" or tunnel anæmia. It is known in the French West Indies as *cachexia aqueuse*, *Malcœur* and *mal d'estomac des negres*. In the Brazils it is *opilatis cançao* or *opilacao*. In Ceylon it is known as *Beri beri*. Some authorities assert that in Assam it is known as *Kala azar*, and there it is a very fatal disease.

It is also the cause of brick makers' anæmia, miners' *cachexia*. Egyptian chlorosis and tropical chlorosis. As soon as the parasite was discovered which causes the disease it was known as *anchylostomiasis*, *Dochmiasis*, or better still as *miners' worm disease*.—

The disease has long been known in Egypt, Westphalia, Hungary, Germany, in the mines of Cornwall, Australia, India, Ceylon, South America, and West Indies, as a matter of fact in all tropical and subtropical countries.

It is essentially a disease of poverty and malnutrition. It is not a very difficult matter to rid a patient of the worms, but the trouble usually is that he goes back to the contaminated water from which he got the disease. The real remedy is sanitary improvement, and this is often difficult to carry out. The following remarks of Mr. Manning may be quoted as supporting the view put forward in our last number that quarantine is not the way to deal with the mischief.

"There is a great want of uniformity in our sanitary system throughout the eleven parishes of this colony, and we sorely need

a properly organised department of public health. Each vestry has its own ideas of sanitation, and as most of the vestrymen are not skilled sanitarians, and as unfortunately parochial medical officers are as a rule not appointed on the sanitary board of a parish, widely different methods are adopted by each board for regulating the sanitation in the parish immediately under its control. Economy rather than efficiency seems to be not infrequently the guiding principle, and the inevitable result is that in the event of an outbreak of any epidemic in a parish careless in its sanitation, a disease like yellow fever thrives and spreads amid the filth, and defies the so-called sanitary authorities, in spite of sulphur fumigation and in spite of a steady, persistent and often futile destruction of the *stegomya fasciata*. A nucleus is thus formed in these insanitary districts from which disease spreads and invades other parishes more careful in their sanitary arrangements. Trade is seriously interfered with—stringent and often absurd quarantine rules are enforced too late to do much good, except to interfere with commerce, and practically bring to a standstill all free intercourse with other ports. Tourists cease to visit the island, steamship companies avoid us, and we have to spend thousands when a few hundred rightly applied might effectually have saved the situation had we been properly armed with all the necessary precautions of modern preventive medicine.

“Our sanitary relations with neighbouring colonies are by no means satisfactory, and in our efforts to stamp out diseases that are *endemic*, diseases that under certain favourable climatic conditions periodically make their appearance in our midst, whether we have quarantine regulations or not; we are only successful in destroying our intercolonial trade, and of breeding bad blood amongst our neighbours with whom we ought always to be on terms of good agreement, our intercolonial trade is paralysed, and our financial losses terrible.

“In making the above statement it must be clearly understood that I have not the least intention of speaking disrespectfully of our vestry system, but I do wish to make it clear that as far as relates to the sanitary government of the colony we are far behind the times, and present arrangements are not suited to the requirements of modern preventive medicine. No doubt the vestry system is right in principle and is one of the strong bulwarks of our time honoured constitution, and I should at all times be amongst the first to support and defend it by every means in my power, but nevertheless as far as sanitation is concerned it needs very thorough and careful remodelling because it is altogether out of date.

“Everlasting change seems to be one of the inevitable attributes of all true progress, and whilst no sane man could for a moment doubt that firearms are necessary for success in war, and in

sport, we must admit that his chances of success would indeed be small who persistently clings to obsolete methods and takes the field with either arquebus or flint and steel.

"I honestly believe it would be better to do away with our present quarantine restrictions altogether, and have all persons coming from an infected port kept under strict medical surveillance until such time as is considered safe to withdraw it. If any infectious or contagious disease appears let the patients be removed at once to Pelican island, or any other convenient isolation hospital, and at all risks let us look around and see what other ports like New York or London are doing ; and above all other considerations let us avoid everything like hysteria whenever we contemplate the formulation of quarantine regulations."

Pellagra.

An influential committee has been formed to raise a fund of £1,000 to meet the cost of an investigation into the causes and nature of the disease known as "pellagra." This disease has during recent years been widely prevalent in parts of Italy, France, Spain, and Roumania, and has now been discovered to be of frequent occurrence in tropical countries. The malady is of an essentially chronic character, and chiefly affects the cultivators of the soil. It usually commences in the spring, and appears in the first instance as a general *malaise*, accompanied by a red rash upon the skin, limited to the unclothed parts of the body, and looking like a severe sunburn. About July or August of the first season the symptoms disappear ; but the spring attack of the second year is usually more severe than that of the first ; and with each successive year the patient becomes more like a mummy, his skin shrivelled and sallow, his muscles wasted, his movements slow and languid, and his sensibility diminished. After a certain stage the disease passes into a profound disorganization of the nervous system, with partial paralysis of groups of muscles, and in the more chronic cases these symptoms often terminate in hopeless insanity. A large number of pellagrous peasants end their days in lunatic asylums, while many more drag out a miserable existence in their native villages. The changes discovered after death are all of such a character as to indicate a general tissue degeneration, more especially of the brain and nervous system ; but the tendency to melancholy, imbecility, or mania, and the curiously mummified state of the body, are quite peculiar to the disease, and point to some special cause for the group of symptoms with which they are associated.

The disease was for long supposed to be due to the extensive use of damaged maize as an article of diet ; but the known area of its incidence by no means coincides with that of maize consumption, and

it has now been proved to exist in areas where maize is not a common article of consumption.

It is seriously prevalent in many parts of the British Empire and its dependencies. It is common in Lower Egypt, where in certain villages Dr. Sandwith found as many as 36 per cent. of the inhabitants to be affected. Dr. Lavinder found it to be still more common in Upper Egypt. Drs. Cuthbert Bowen and G. C. Low have recognized it in Barbados, and several authors have mentioned its occurrence among the Zulus and Basutos in South Africa. At the Tropical Section of the meeting of the British Medical Association in Edinburgh, Dr. Sandwith showed pictures and photographs of pellagra which were independently recognized by three members from India as representing a condition which they had often seen among out-patients without knowing its name; while Dr. U. Ray wrote in 1902 that he had observed several cases during a short stay in one of the districts of North Behar. When we take into consideration the slow course of the disease, its ordinary limitation to field labourers, and the improbability of a correct diagnosis in places where it is not frequently encountered, it is not surprising that in many places pellagra should have escaped observation among the natives of tropical countries. Its early recognition is, nevertheless, a matter of grave importance, for wherever its occurrence has been noted for any length of time it has shown a marked tendency to slow but steady extension. During recent years it has become increasingly prevalent in many parts of Italy. In the United States a few sporadic cases had been observed from time to time, but since 1906 the disease has rapidly increased, and numerous cases have been reported from thirteen States. Such a tendency to spread calls for very serious attention, when it is considered that the disease when once established in a locality remains there; and it is difficult to overlook the example afforded by sleeping-sickness of a disease which, long believed to be also a food disease (manioc poisoning), or a form of nostalgia peculiar to the transported negro, has suddenly invaded the greater part of Tropical Africa.

Among the various hypotheses concerning the causation of pellagra which from time to time have been formulated and abandoned, that which attributed it to the use of diseased maize has been the most warmly advocated, but with very little agreement as to the precise manner in which the result was brought about; whether by some noxious chemical agent generated in the maize itself by decomposition, or by the growth in it of some micro-organism. The more closely the maize hypothesis was considered the greater became the difficulties in the way of accepting it; and, at the meeting of the British Medical Association in 1905, Dr. L. W. Sambon, after calling attention to these difficulties, suggested that, in all probability, pellagra was protozoal in its origin; that is to say, that, like sleeping

sickness and syphilis, it was dependent upon the presence in the blood of a microscopic living organism. This organism, in the case of sleeping-sickness, is now proved to be communicated to man by a variety of the tsetse-fly; and Dr. Sambon believes sand flies to be the most probable carriers of pellagra. Dr. Sambon holds a very prominent place among the investigators of blood parasites, both in mankind and in the lower animals, and his suggestion has been accepted as a highly probable one by a number of skilled observers in many of the countries in which the disease is prevalent. Not the least significant of the facts by which it is supported is the favourable action of arsenic in the treatment of the disease, as in that of the declared trypanosomiotic affections. Dr. Sambon's hypothesis has received the support of Sir Patrick Manson, who not only endorses it in the new edition of his book on tropical diseases, but has repeatedly urged the necessity of investigating pellagra on account of its prevalence in Egypt, in the West Indies, and in other localities. It is certain that the time has come at which the disease should be studied by the light of existing knowledge of the action of insects in the diffusion of parasites, knowledge which has thrown so much and such invaluable light upon many of the most obscure problems of tropical pathology.

It is intended that Dr. Sambon should himself proceed to a pellagrous area in order to investigate the conditions of the disease, and the various bloodsucking flies which are to be found there. His previous experience in the study of the protozoal parasites both of man and of the lower animals renders it probable that, if there be such a parasite in pellagra, it will not escape his observation. It is also intended that he should be aided by properly qualified assistants, and that any important results which he may obtain should be studied with a view to confirmation by other members of the committee, who will either work at the material sent home, or, if necessary, will join Dr. Sambon in the field. Arrangements will also be made for the co-operation of native medical practitioners and naturalists.

The Colonial Office has contributed £150 towards the fund, and contributions have also been made by the London and Liverpool Schools of Tropical Medicine.

Enteric Fever.

A further White Paper (Cd. 4712) has been issued containing a report by the Director-General of the Army Medical Service on the transmission of Enteric Fever by "chronic carriers." Particulars of the treatment of a number of cases by the administration of lactic acid bacilli and other means are given, but while it appears to be shown that the degree in which the patient is infected can be mitigated, there is as yet no conclusive evidence of the possibility of a

complete cure. It is suggested that in the "chronic carrier" the typhoid bacilli in the organs are surrounded by areas of dead tissue through which no curative agent can penetrate, and that until the contents of these areas have been discharged—a process which may take some years—no cure can result. Particulars of recent outbreaks believed to be due to the "chronic carrier" are given.

Sleeping Sickness.

A despatch by Sir Hesketh Bell containing a Report on the Measures adopted for the Suppression of Sleeping Sickness in Uganda has been published in the Miscellaneous Series of Colonial Reports (No. 65, Cd. 4990. Price 5d.) It is a document of exceptional interest, containing a full account of the first appearance and spread of the disease in the Protectorate, the discovery of its cause by Sir David Bruce, the various efforts made to cope with it, and the final adoption and successful completion of the immensely difficult policy of removing the entire population of the fly-infested areas to districts outside the danger-zone. Upwards of 100,000 persons have been thus removed, and it is a tribute to the extent to which the Uganda Government enjoys the confidence of the natives, that it has succeeded in carrying out this gigantic task with the assistance of the native chiefs without provoking any serious degree of discontent. Sleeping Sickness remains at present an incurable disease, and the only methods by which mortality can be reduced are the destruction of the tsetse-fly which conveys the infection and the removal of the population from fly-infested areas. The former operation has been carried out on a considerable scale, but it cannot be entirely achieved. The success which has attended the latter may be gauged by the fact that the deaths from the disease in Buganda and Busoga, which are estimated to have exceeded 200,000 between 1898 and 1906, fell to about 5,000 in 1907 and to 3,662 in 1908, while the returns from the Kingdom of Buganda for the first six months of 1909, showed a mortality of only 459. The Sleeping Sickness Bureau has issued the 13th, 14th and 15th numbers of its Bulletin, and has also published two skeleton maps showing (1) the present distribution in tropical Africa of Sleeping Sickness and the different varieties of tsetse-fly, and (2) that if Sleeping Sickness and *Glossina palpalis* only.

The Advisory Committee for the Tropical Diseases Research Fund has issued its report for 1909. The contributions made to the Fund by the Imperial, Indian and Colonial Governments are, it is satisfactory to learn, to be continued for a further period of five years, and the Committee state that there is a prospect of further small contributions from Colonies which have not hitherto contributed. The Appendices include reports upon the measures taken to combat malaria in the different tropical Colonies.

The Colonial Services Supplementary Estimate passed by the House of Commons on March 3rd included the first instalment of £1,000 for the promotion of entomological research in connection with tropical diseases under the directions of a Committee over which Lord Cromer presides. It was received with warm approval, Sir William Collins and Doctor Addison, who speak with expert medical knowledge, emphasizing the importance of the work.

The Veterinary Bacteriological Laboratories, Transvaal.

The study of cattle disease is of the first importance to South Africa, and it is very satisfactory that excellent provision has been made for it. In 1896 the country was devastated by rinderpest, and one result was that some laboratory premises were provided in 1898; in the first session (1907) of the new Parliament under responsible government, the matter was taken up wholeheartedly, and a sum of £40,000 was voted for new buildings. On the 1st of October, 1908, the premises were ready for occupation, and are on a scale that will compare with any similar institution in Europe.

An excellently written and illustrated report has been issued describing the equipment of the buildings, and containing several expert essays. Certain cattle diseases, such as anthrax, are caused by specific bacteria, and others, such as rinderpest, though due to ultravisible organisms, are spread by direct contagion; all these are non-tropical, in the sense that they exist in cold climates. The tropical diseases are either due to protozoa, or to specific ultravisible organisms which are, like protozoa, dependent for their propagation on a host in the form of a tick or an insect (heartwater, horse-sickness, blue-tongue). These latter are more or less new to science, and in their case immunity by means of injected virus is more difficult to obtain. Experiments and observations are being made on a large scale, and the institution takes its place among the first of its kind.

Beri-Beri.

An inquiry concerning the etiology of this disease, by Drs. Fraser and Stanton, has been published at Singapore. A number of observations made it clear that the disease has its origin in, or at least an intimate connection with, white rice, and that it did not appear when, under similar conditions, parboiled rice was eaten. But no organisms were found in patients which could be considered causative agents of the disease, and further investigation will be undertaken with a view to discovering the cause.


An Insect Destroyer.

A notice has been promulgated in the *Jamaica Gazette* that a mixture called "Paranaph," for the extermination of fleas, may be obtained from the Jamaica Agricultural Society at 2d. per pound. The mixture is stated to destroy fleas with perfect certainty, and a room thoroughly washed with this emulsion is freed from insect life. With one gallon a room 12 ft. square can be thoroughly treated in five minutes. It is a special mixture of kerosine oil, soft-soap and naphtha, and can also be applied to the destruction of scale-insects, green-fly and (with certain additions) ticks. It can be made up in this country.

The Analysis of Drugs.

Messrs. Evans, Sons, Lescher and Webb, Ltd., have issued notes of the examination of various products which are especially interesting as bearing on the question of adulteration. It is satisfactory to find that commercial samples are with few exceptions practically pure. The remarks on quality deserve the attention of medical authorities.

According to the *Lancet* an excellent means of ventilating bungalows in hot countries is to erect a zinc shaft 10 ft. high with a hole 22 ins. square in connection with the top of the room. It should be painted black. Air is admitted through a similar but horizontal shaft on a verandah with a diaphragm formed by a wet sheet.



REVIEWS AND NOTICES.

Orangia: Geological and Archæological Notes, by I. O. JOHNSTON
(Messrs. Longmans, Green & Co. 10s.)

The main industry of "Orangia" is farming, and the population is on the whole fond of the calling and contented with its life. The disadvantages, however, are great, and it is not surprising that no little disappointment has awaited the enthusiasts who believed that great developments were possible. The chief difficulty is that the suitable land is in the possession of a small number of owners, who will neither sell to others, nor themselves introduce up-to-date methods. This quality of steadfastness, while excellent in some respects, is apt to prove inconvenient to other people who are in haste to improve the world. Then the greater part of the country is semi-arid. This would not be gathered from the statistics of the rainfall, which is fairly plentiful, but it is in the shape of torrential falls, which are largely wasted. The third trouble is the locusts and insects. The locusts at times are so thick as almost to obliterate the sun, and their depredations are terrible. A great campaign, such as has been conducted in other countries, will have to be carried out against this plague before agriculture can thrive. The want of rain is not fatal. The remedy is dry-farming, and, as has been remarked elsewhere, a great future lies before this process in such countries.

Naturally the outsider takes more interest in the mineral character of the state. Of this Mr. Johnston gives a full account, and the description of the diamond mines is a valuable one. There are also chapters on the prehistoric implements which have been found in considerable quantities, and a delightful series of illustrations reproducing aboriginal pictroglyphs and rock-paintings. It is curious to notice that the earlier engravings showed a free and bold power of drawing which becomes stiff and conventional in the later. This seems to have been the case in Europe, and is one of the signs of the closer attachment of the more primitive races to nature. The animals, as Mr. Johnston observes, show real artistic merit; when the

human figure is attempted the result is grotesque in the extreme. This grotesqueness is not due merely to inability to draw; the primitive drawing is not a copy of things as they are seen, but an expression of what the worker knows and thinks, and thus the human figure is shown in a way which brings out the points, such as tallness, or some movement, which the worker thinks most of, and is therefore without any sense of proportion.

To Abyssinia through an unknown Land : An account of a journey through unexplored regions of British East Africa by Lake Rudolf to the Kingdom of Menelek. By Capt. C. H. STIGAND, F.R.G.S. (*Seeley & Co., Ltd.*, 16s. net).

The Colonial Office List map of British East Africa contains a warning that the boundary with Abyssinia has not been delimited, and though the task of delimitation has, since the publication of that map, been carried out by Major Gwynn and his colleagues, the country remains to a large extent a *terra incognita*. Abyssinia is a mountainous country surrounded by waterless deserts. It can only be entered at a few places and then by narrow and precipitous tracks cut along the mountain sides. Between this country and the highlands of British East Africa lies a desolate and waterless region, for the most part uninhabited and uninhabitable. It is impossible for our colony to expand in this direction, and the development of the future will lie to the fertile and populous regions westward. But for the explorer who wishes to break new ground the territory affords excellent opportunities, and Capt. Stigand used them by taking a route which no other European has trodden. He traversed a rocky and waterless country infested with a low bush with diabolical thorns, but he came across a good deal of grassy plain and abundance of game. An ominous piece of news is that a new illness has just appeared on the Omo river, which from the description appears to be sleeping sickness. If so, the tribe of the locality will probably be exterminated. Capt. Stigand thinks that the insect must have come from the swamps of the Nile, as it is now infecting the upper waters of the river.

The chief interest of the book lies in its description of the ideas of the natives. Capt. Stigand evidently spared no pains to understand their ways of thinking, and got on remarkably well with them throughout.

Dry Farming in America : A report by Mr. W. Macdonald, presented to the Transvaal Government. (*Printing Office, Pretoria*).

This report contains an account of a tour undertaken with the object of studying the system and results of Dry-farming in America. The conclusion is clear that it is profitable and has taken a firm hold.

Deep ploughing and frequent harrowing make a mellow earth which yields excellent crops, while if left hard and dry it would produce nothing. A power engine, steam or gasoline, is practically necessary to plough the land deeply, and government co-operation would greatly assist matters in this respect. The cultivation of the dry lands of South Africa and Australia on this method will eventually make an enormous difference in land settlement.

"Travel and Exploration" (January).

A composite article, to which Sir H. Johnston is one of the contributors, discusses outfit and equipment, in particular tents, beds, mosquito nets and medicines. It is pointed out that though green canvas is more expensive than white, it is preferable because it resists rot, owing to the sulphate of copper which it contains, and termites. The object of outfitters for travellers is to make one article serve more than one purpose, and a good deal of ingenuity is shown in the endeavour; but it seems to be carrying a good idea to excess when a mattress is devised which, on occasion, can be used as a raft. More likely to be of use is the japanned steel bath, fitted with a wicker lining and a lid so that it can be used as a portmanteau. Such an article has also been used in Nigeria as a shield against poisoned arrows. Pith helmets and putties are condemned, and on what seem good grounds. If a helmet is used, care should be taken to order the type which gives protection to the neck from the sun.

"Science Progress" (No. 15. *John Murray* ; 5s. net).

An article on "Palæolithic Races and their Modern Representatives" sums up the finds of prehistoric man. Till recently the Gibraltar skull was the best example of the Neandertal man, but with this exception our colonies have still to contribute to these interesting discoveries. Mr. Parkin gives an excellent account of Para-rubber cultivation, in which his Ceylon experience figures largely. Recent scientific works are reviewed by well-known authorities. An article on Halley's Comet attributes the victory of William the Conqueror at Hastings to its opportune appearance in 1066, and very pertinently enquires "What language can convey the full significance of this conclusion?" It is a relief at any rate to find that the writer does not attach the same fell significance to the Comet's reappearance in 1910.

A list of Colonial Laws dealing with Patents, Designs, Trade Marks and the Marking of Merchandise, and Regulations issued thereunder, has been published in the *Miscellaneous Series of Colonial Reports*. (No. 70, Cd. 4,996, price 1d.)

COLONIAL STAMPS.

REGISTRATION ENVELOPES.—It may be of interest to note the advantage of indicating by means of one stamp the fact that postage has been paid as well as Registration fee.

The cost of a new embossing die where a Registration die already exists is somewhat prohibitive, but when a new one is being ordered the combined stamp, as used by the Imperial Government, can be adopted without extra expense.

Another way of producing a combined stamp at a nominal cost is by means of an electrotype obtained from the King's head postcard die, as in the case of Gold Coast.

It is worthy of note that it is impossible to produce a satisfactory electrotype for printing a combined stamp from a postage stamp die owing to the wording which appears thereon and which would cause confusion.

A few Colonies have not yet adopted the newer form of Registration Envelope, the flap of which fastens in front. This is particularly suitable where a combined stamp is used. Such an envelope has the advantage of displaying all the evidence of prepayment on one side, and the change can be made without expense.

BERMUDA is about to celebrate the tercentenary of the Colony's Establishment by a completely new issue of stamps of a design which will, we think, be of a much more artistic character than the existing issue. The first value to be sent out is the $\frac{1}{2}$ d., which will be immediately followed by the 1d., 6d. and 1/- values. No order has been received for the other values, which will be $\frac{1}{4}$ d., 2d., $2\frac{1}{2}$ d., 3d. and 4d.

The design will show in an upright oval a 17th century ship in full sail, with the Cross of St. George at each masthead, similar to that which was used on the reverse of the piece known as Hogmoney, described and depicted on page 101, Vol. I., of Sir J. H. Lefroy's "Memorials of the Bermudas."

Hogmoney, it is interesting to note, was the earliest attempt at introduction of currency in Bermuda. It was a brass token for payment to labourers, and exchangeable for provisions, etc., to the value in pence indicated on the face at the store of the Chartered

Company. The coin was never popular, tobacco being preferred as a medium of exchange.

The new stamps will permanently supersede the existing "Arms" issue, and will be printed in single colours by the steel plate process, the new colour scheme described in our last issue being followed.

CEYLON.—A very extensive alteration will shortly be made in the stamps issued by the Colony. Separate telegraph and foreign bill stamps are to be abolished, and postage stamps will be used in their place. This entails a revision of the values represented in the series of postage stamps. Six new denominations will be introduced, *i.e.*, 10 cents, 50 cents, Rs. 1, Rs. 2 and Rs. 10, and five denominations for which there is a comparatively small demand will be abolished, *i.e.*, 4 cents, 12 cents, 75 cents, Rs. 1.50 and Rs. 2.25. This will leave thirteen denominations of postage stamps which will be used for all postal and telegraph purposes, and for the purpose of foreign bill stamps; of the above stamps new plates will be provided for the existing 2 cents, 5 cents and 6 cents stamps, and for the six new denominations referred to above. The 3 cents, 10 cents, 15 cents, 25 cents, 30 cents, 50 cents, and Rs. 1 stamps will be printed in sheets of 240, the 5 cents stamps in sheets of 480, and the remaining values in sheets of 120 stamps.

The colours of the stamps other than the 3 cents, 6 cents and 15 cents stamps, which will be in the Postal Union colours, will be as follows, and the figures of value will be in colour on a plain ground.

Value.		Key Plate.	Duty.	Paper.
2 cents	...	Orange.	Orange.	White.
5 "	...	Purple.	Purple.	"
10 "	...	Sage Green.	Purple.	"
25 "	...	Grey.	Grey.	"
30 "	...	Blue Purple.	Green.	"
50 "	...	Brown.	Brown.	"
Rs. 1	...	Purple.	Purple.	Yellow.
2	...	Red.	Red.	"
5	...	Black.	Black.	Green.
10	...	Black.	Black.	Red.

The paper will be unsurfaced with the possible exception of the 5 cents value.

FEDERATED MALAY STATES.—The State of Trengganu, which passed under British Protection in July, 1909, is on the point of making an issue of stamps bearing the Sultan's portrait in the centre. The values will be 1, 3, 4, 5, 8, 10, 20 and 50 cents, and \$1.

FIGI.—2½d. and 6d. stamps in the new single colours are now on order.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Major J. A. BURDON, C.M.G. (First Class Resident, Northern Nigeria), Colonial Secretary, Barbados.

Mr. GEORGE SMITH (Registrar-General, Cyprus), Colonial Secretary, Mauritius.

Captain C. H. ARMITAGE, D.S.O. (Provincial Commissioner, Ashanti), Chief Commissioner, Northern Territories, Gold Coast.

Mr. R. T. ORPEN (Police Magistrate, Southern Nigeria), Resident Magistrate, Jamaica.

Captain A. M. FLEURY (District Commissioner, Gold Coast), Local Commandant of Police, Cyprus.

Mr. H. F. PICKWOOD (late District Superintendent of Police, Northern Nigeria), Out-Island Commissioner, Bahamas.

Lieutenant G. A. E. POOLE (Gold Coast Regiment, West African Frontier Force), Assistant District Commissioner, Gold Coast.

Lieutenant H. B. POPHAM (Gold Coast Regiment, West African Frontier Force), Junior Assistant Colonial Secretary, Gold Coast.

Captain G. C. CORRY-SMITH (2nd Battalion, Southern Nigeria Regiment, West African Frontier Force), Assistant District Commissioner, Southern Nigeria.

Lieutenant R. M. BLACKWOOD (2nd Battalion, Northern Nigeria Regiment, West African Frontier Force), Assistant Resident, Northern Nigeria.

- Mr. J. H. DUFF (Assistant Master, Bo School, Sierra Leone),
Inspector of Schools, Jamaica.
- Mr. W. A. FLACKE (Second Class Postmaster, East Africa Protectorate),
Provincial Postmaster, Southern Nigeria.
- Mr. H. J. HARRIS (Postmaster, Fort Jameson, North-Eastern Rhodesia),
Provincial Postmaster, Southern Nigeria.
- Mr. G. P. LEWIS (Postmaster in the East Africa Protectorate),
Assistant Postmaster-General, Northern Nigeria.
- Mr. G. F. MASON (Third Class Clerk, Treasury, British Guiana),
Assistant Postmaster-General, Northern Nigeria.
- Mr. H. D. BRASSINGTON (Fourth Class Clerk, Treasury, British Guiana),
Financial Assistant (Second Grade), Southern Nigeria.
- Mr. G. A. TENGELY (Fifth Class Clerk, Customs, British Guiana)
Supervisor of Customs (Second Grade), Southern Nigeria.
- Mr. J. ALEXANDER (retrenched from the Transvaal Civil Service),
Assistant Accountant, Marine Department, Southern Nigeria.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ARCHER, A. M. ...	... 27 May, '10	COUZENS, S. ...	... 7 May, '10
AUSTIN, Rev. P. B. ...	... 12 April, '10	COLLIER, Dr. J. H. ...	... 13 May, '10
West India Club,		DEACON, T. ...	... 28 June, '10
Howard Hotel, Nor-		DUGON, Dr. T. H. ...	... 17 June, '10
folk St., Strand, W.C.		DAVIS, F. ...	... 2 May, '10
ADAMS, J. C. ...	... 19 April, '10	DOCKRELL, E. ...	... 9 April, '10
ATKINSON, Dr. A. W. ...	... 10 June, '10	DAVIES, G. M. ...	... 13 April, '10
ABRAMS, A. B. ...	... 4 July, '10	FURNELL, Capt. G. O. M.	9 April, '10
ANDERSON, J. ...	... 4 June, '10	FORD, A. G. ...	... Due back
ATTERBURY, J. L. ...	... 27 June, '10		16 June, '10
BAUERLE, W. ...	... 17 June, '10	FESTING, Major A. H.,	16 July, '10
Grosvenor Club, Picca-		D.S.O., c/o Messrs.	
dilly, W.		Barclay & Co., Caven-	
BRECKENRIDGE, Capt.		dish Square, W.	
T. W. ...	... 17 April, '10	GREEN, Miss E. F. ...	
BURKE, B. ...	... Due back	GRANT, W. A. ...	... 17 April, '10
	25 May, '10	HOBART, Capt. E. H. ...	... 14 April, '10
BRYAN, Maj. H., C.M.G.,	1 Apr., '10	HUDSON, A. ...	... 13 April, '10
Army and Navy Club,		HAMER, A. G. ...	... 26 April, '10
Pall Mall, S.W.		HARRY, H. P. ...	... 7 July, '10
CLANCEY, C. ...	... 3 April, '10	HOLLOWAY, J. H. ...	... 11 July, '10
CROWTHER, F. G. ...	... 17 April, '10	KELLY, Dr. P. J. ...	... 24 June, '10
CUNNINGHAM, A. B. ...	... 17 June, '10	KITSON, Major A. W. ...	... Due back
United Empire Club,			19 July, '10
Piccadilly, W.		LINDSAY, W. ...	... 1 May, '10

GOLD COAST—*continued.*

MORCOM, H. C. ...	24 Mar., '10	SIMMS, H. ...	3 April, '10
MAIN, F. G. ...	20 May, '10	STEVENS, J. ...	24 April, '10
MAY, Dr R. M. ...	27 April, '10	STANLEY, H. E. T. ...	9 April, '10
MARLOW, Capt. J. ...	7 May, '10	SOUTTER, P. W. ...	24 April, '10
MATHIESON, G. V. ...		SPENCER, E. C. ...	21 June, '10
OMAN, D. J. ...	19 May, '10	SMITH, W. ...	17 June, '10
PATERSON, J. B. ...	3 April, '10	TWEEDY, Dr. E. H. ...	13 April, '10
PAULL, E. D. R. ...	2 Aug., '10	WALSH, J. ...	9 April, '10
POTT, P. A. H. ...	23 May, '10	WAKEFIELD, W. ...	27 April, '10
PALMER, R. ...	6 June, '10	WHITTALL, P. F. ...	24 April, '10
PARK, A. ...	27 June, '10	WALKER-LRIGH, Major	31 May, '10
RIDGWELL, S. ...	17 June, '10	A. H. C.	
RICH, Capt. C. S. ...	4 May, '10	WHEELER, Capt. H. T. C.	15 May, '10
RILEY, R. U. ...	24 June, '10	Junior United Service	
ROGERS, J. A. ...	20 June, '10	Club, S.W.	
REW, Major C. E., D.O.	13 May, '10		
Army and Navy Club,			
Pall Mall, S.W.			

SIERRA LEONE.

ASHLEY, J. E. ...	11 June, '10	McCONAGHY, Dr. J. ...	21 May, '10
ALEXANDER, Dr. W. N.	21 May, '10	ORPEN, Dr. R. W. ...	21 May, '10
ANDERSON, Major G. D.	3 April, '10	Ogilvie, A. N. ...	5 April, '10
c/o The Hong Kong		New Club, Grafton	
and Shanghai Bank,		Street, W.	
Lombard Street, E.C.		PICKIN, J. J. ...	4 June, '10
BURRA, J. S. ...	2 April, '10	POOL, J., Junior ...	13 April, '10
COPELAND, G. ...	27 May, '10	SMITH, J. C. ...	17 July, '10
CONBROUGH, W. E. ...	27 May, '10	STEWART, B. ...	
CORRIE, J. S. M. ...	7 May, '10	SPENCE, A. ...	17 April, '10
DAVIES, W. A. N. ...	13 May, '10	VIRET, A. P. ...	27 April, '10
Sports Club, St. James'		c/o Royal Colonial In-	
Sq., S.W.		stitute, Northumber-	
ESPERT, R. W. ...	24 April, '10	land Avenue, W.C.	
FOSTER, M. N. ...	24 April, '10		

GAMBIA.

BALDWIN, Dr. F. A., c/o British Medical Association, 429, Strand,	
W.C. ...	1 April, '10

SOUTHERN NIGERIA.

APPLIN, E. G. ...	6 June, '10	BIDDELL, A. W. ...	
ANDERSON, H. ...	11 June, '10	BOURNE, A. ...	17 June, '10
ASHLEY, F. N. ...	4 June, '10	BAKER, T. W. ...	27 April, '10
ALDER, J. F. ...	11 June, '10	BROWN, Capt. W. R. ...	3 June, '10
ADAM, Dr. T. B. ...	9 May, '10	BELL, G. G. ...	9 April, '10
ADAMS, E. R. U. ...	19 April, '10	BURN, J....	3 April, '10
BLACK, F. H. ...	9 April, '10	BURROUGH, Capt. H. S.	23 May, '10
BLACK, J. H. ...	16 May, '10	Auxiliary Forces Club,	
BAIN, A. ...	23 April, '10	2, Whitehall Court,	
BONNEY, P. C. H. ...	23 April, '10	S.W.	

SOUTHERN NIGERIA—continued.

BEVERLEY, Capt. W. H.	11 June '10	LESLIE, K. M.	9 April, '10
Royal Societies Club,		LEIGH-LYE, Capt. F. M.	17 April, '10
St. James' St., S.W.		LEIGHTON, E. V.	9 April, '10
BURT, F. W.	4 June, '10	McKENZIE, N. S.	13 May, '10
BYRNE, Capt. W. D.	24 June, '10	MARTIN, H.	11 June, '10
CARR, H.	Due back	MOORE, Capt. C. W.	13 May, '10
	11 June, '10	MAY, G. C. McF.	20 June, '10
COTGRAVE, Capt. R. W. F.	1 May, '10	MAJENDIE, V. H. B.	6 June, '10
CARTER, O. G.	11 June, '10	MILNE-STEWART, J. D.	13 May, '10
c/o Messrs. Cocks,		MAYER, T. F. J.	13 May, '10
Biddulph & Co., 43,		MORLEY, G. S.	24 June, '10
Charing Cross, S.W.		MACLAINE, Dr. S.L.G.D.	
COCKIN, M. S.		MOLINEUX, C. R. N.	11 June, '10
CURRIE, Dr. J.		MOULE, L. H. D'O.	1 May, '10
CHAMLEY, H. P.	3 April, '10	McEVoy, R. J.	24 June, '10
CAVANAUGH, B. G.	14 June, '10	MORRIS, P. H.	15 April, '10
CLARK, R. C.	11 June, '10	McLAURIN, J.	13 May, '10
CULLEN, R. A.	26 May, '10	MARTIN, A. R. P.	7 May, '10
DALE, C. E.	6 May, '10	MANSFIELD, H. B.	
DUNLOP, J. M. M.	11 June, '10	NICHOLS, E.	1 May, '10
DAYRELL, E.	8 April, '10	NEVILL, Miss E. K.	24 June, '10
c/o Sir C. R. McGrigor,		NEALE, Dr. A. E.	
Bart., & Co., 25, Charles		NICHOL, T.	8 May, '10
Street, S.W.		OWENS, J.	24 April, '10
DON, W.	2 June, '10	OBORNE, E. W.	17 June, '10
DARBY, F. J. d'E.	25 April, '10	PROSSER, J. A. B.	27 May, '10
DICKSON, S. A.	13 April, '10	FLOWRIGHT, J. T.	Due back
EDWARDS, W. W.	23 May, '10		17 Aug., '10
FARMER-COTGRAVE, H.H.	23 April, '10	PECK, R. W.	4 June, '10
FISHER, W.	11 June, '10	PEDDIE, J. L.	2 April, '10
FOX, Capt. R. M. D.		PURVIS, T. H.	27 April, '10
GRAY, E. A. S.	21 May, '10	ROUSSEAU, G. D.	3 April, '10
GINGELL, S. J.	24 April, '10	ROSS, G. R.	
GRIFFITHS, C. J.	9 April, '10	RAWLES, H. L.	24 June, '10
GATWARD, P. J.	26 April, '10	Royal Societies Club,	
GARDNER, P. J.	21 May, '10	St. James' Street, S.W.	
GERRARD, H. V.	21 May, '10	REEDER, W.	31 May, '10
GOLDSMITH, A.	7 May, '10	RAYER, A. E.	13 May, '10
GREENWOOD, E.	27 April, '10	ROSE, D. D.	17 April, '10
HANSON, E. C.	21 May, '10	SUTHERLAND, R. C.	25 Aug., '10
c/o Royal Colonial In-		SKILTON, G.	14 June, '10
stitute, Northumber-		STEELE, W. M.	24 April, '10
land Avenue, W.C.		STEELE, A. W. M.	1 April, '10
HUGHES, Capt. I. L.	27 May, '10	SCRUBY, C. B.	1 May, '10
HUBBARD, O. G.	17 July, '10	STER, W. C.	24 April, '10
HUGHES, F. J.	17 April, '10	STREET, L. D.	3 April, '10
HAMMETT, F. T.	17 April, '10	SPEAK, G. T.	17 April, '10
HENDERSON, P. D.	4 April, '10	SMITH, W.	9 April, '10
HITCHENS, P.	13 May, '10	TIPPER, Dr. E. H.	1 May, '10
HOLT, J.	17 April, '10	THOMPSON, P. G.	13 May, '10
INGLIS, P.	9 April, '10	TALBOT, P. A.	7 July, '10
JONES, T.	1 May, '10		

SOUTHERN NIGERIA—continued.

VASSALL, Capt. P. S. ...	14 June, '10	WILSON, G. ...	17 June, '10
Orleans Club, St.		WENNERBERG, W. ...	13 May, '10
James' Street, S.W.		WALTON, G. L. ...	1 May, '10
WOODBURN, A. ...	9 April, '10		

NORTHERN NIGERIA.

ALEXANDER, Dr. D. ...	31 July, '10	LYCETT, T. ...	24 April, '10
AYLING, J. ...	11 June, '10	LONG, J. ...	7 May, '10
BREMNER, J. ...	3 May, '10	LANG, D. H. ...	4 April, '10
BURNS, W. ...	11 May, '10	c/o Messrs. Way & Co.,	
BERESFORD, M. J. de la P.	17 April, '10	11, Haymarket, S.W.	
BOYD, C. E. ...	6 June, '10	LONGHURST, F. H. ...	7 May, '10
BLAKE, E. ...	11 June, '10	LOBB, Dr. H. P. ...	11 April, '10
BLAKE, Capt. L. H. E. ...	4 July, '10	Royal Societies Club,	
BROWNE, G. S. ...	10 June, '10	St. James' St., S.W.	
BERTRAM, F. G. ...	11 May, '10	McALLISTER, A. ...	13 May, '10
COLE, S. J. ...	13 May, '10	MACKAY, G. ...	17 April, '10
CHAPMAN, R. S. ...	13 May, '10	McCAY, Dr. F. W. ...	19 May, '10
CHISHOLM, G. S. ...	13 April, '10	McLEOD, Capt. A. A. ...	3 May, '10
COCKS, E. W. ...	27 May, '10	Caledonian Club, 30,	
COGAN, F. J. E. ...	17 April, '10	Charles Street, S.W.	
c/o Messrs. Cox & Co.,		MASSY, H. R. S. ...	3 May, '10
16, Charing Cross, S.W.		MANUK, Dr. M. W. ...	18 April, '10
CATOR, D. ...	21 April, '10	c/o Messrs. H. S. King	
COLLISON, P. L. ...	19 April, '10	& Co., 9, Pall Mall,	
DENTON, Miss M. G. ...	6 May, '10	S.W.	
DUPIGNY, E. G. M. ...	24 June, '10	PORCH, M. P. ...	30 June, '10
Royal Societies Club,		PRAGNELL, T. W. ...	4 July, '10
St. James' Street, S.W.		Cavalry Club, Picca-	
FRASER, N. A. P. ...	31 May, '10	dilly, W.	
FENERAN, E. C. ...	13 July, '10	PALMER, H. R. ...	8 April, '10
Junior Naval and		RAY, S. ...	24 April, '10
Military Club, 96,		ROSE, Major T.A., D.S.O.	3 April, '10
Piccadilly, W.		SWANSON, J. ...	21 April, '10
GOWERS, W. F. ...	23 April, '10	TRAILL, Capt. H. L. N.	11 July, '10
GREENWOOD, J. O. ...	14 June, '10	TWEEDIE, T. ...	9 April, '10
GILBERT, E. A. ...	4 June, '10	TREMEARNE, Capt.	15 June, '10
GIBB, J. ...	1 May, '10	A. J. N.	
GRAVES, F. G. H. H. ...	17 May, '10	WILLAN, Dr. R. ...	25 April, '10
HEWBY, W. P., C.M.G.,	6 July, '10	WARD, Miss M. A. ...	17 May, '10
HUNT, A. W. ...	23 April, '10	WRIGHT, H. E. ...	1 May, '10
HALL, Dr. W. H. A. G.	17 May, '10	WHITE, Capt. I. H. G. ...	1 May, '10
c/o Messrs. Grindlay		Junior United Service	
& Co., 54, Parliament		Club, S.W.	
Street, S.W.		WILEMAN, G. A. ...	17 April, '10
HIGGINS, A. ...	18 April, '10	c/o Messrs. Way & Co.,	
HAMMOND, T. ...	8 April, '10	11, Haymarket, S.W.	
HATHAWAY, R. M. ...	13 May, '10	WEBSTER, W. J. ...	20 June, '10
INNESS, W. D. ...	17 June, '10	WATER, B. E. M. ...	4 April, '10
INGLIS, T. ...	24 June, '10	c/o Messrs. Stillwell &	
KAY, A. S. ...	6 June, '10	Sons, 42, Pall Mall,	
KIRKPATRICK, G. ...	1 April, '10	S.W.	
LE FANU, R. N. ...	10 June, '10		

NYASALAND.

BANNERMAN, J. ...	25 May, '10	JEPSON, A. H. ...	30 April, '10
COLVILLE, E. F. ...	2 July, '10	KEEBLE, J. B. ...	21 May, '10
DOBSON, D. D. ...	23 May, '10	McCONOMY J. ...	...
EASTERBROOK, A. D. ...	25 May, '10	ROBERTS, R. ...	15 April, '10
FARRAR, N. ...	2 July, '10	WRIGHT, F. S. S. ...	12 June, '10
HAMPE-VINCENT, P. C. ...	4 Aug., '10	WALKER, Lt.-Col. H. A.	...
HEWITT-FLETCHER, S. ...	7 May, '10		

EAST AFRICA.

BELL, H. F. J. ...	7 Aug., '10	HINDE, S. L. ...	27 April, '10
BREADING, Major G. R.,	30 July, '10	c/o Sir C. R. McGrigor	
D.S.O.		Bart., & Co., 25, Charles,	
BROWN, Miss E. R. ...	27 April, '10	Street, S.W.	
BRADNEY, P. E. ...	27 May, '10	LAMB, F. M. ...	...
CAMPBELL, W. F. G. ...	27 June, '10	LINTON, S. E. ...	9 July, '10
DONOVAN, S. C. ...	27 June, '10	c/o Messrs. H. S. King	
ELLIOT, F. ...	7 July, '10	& Co., 65, Cornhill,	
EWART, R. M. ...	30 June, '10	E.C.	
FILSELL, H. S. ...	19 May, '10	MONCKTON, Capt. N. ...	27 April, '10
c/o Messrs. Cox & Co.,		MARSENJO, J. ...	27 April, '10
16, Charing Cross,		NEAVE, Capt. C. A. ...	...
S.W.		ROBERTSON, Dr. A. ...	30 July, '10
HORNE, E. B. ...	27 July, '10	SLATTERY, T. ...	27 May, '10
HEMSTED, C. S. ...	30 July, '10	STANLEY, G. A. ...	27 April, '10
HAYES-SADLER, Capt.	6 June, '10	TURNBULL, H. J. ...	27 April, '10
E. R., c/o Messrs.		Motor Club, Coventry	
Grindlay & Co., 54,		Street, W.	
Parliament St., S.W.		TURNER, P. S. ...	27 May, '10
HORNE, H. H. ...	19 June, '10	WHITE, W. C. P. ...	26 April, '10
HILL, S. R. ...	27 Apr., '10		

UGANDA.

BOAZMAN, H. ...	27 April, '10	RENDLE, Dr. A. C. ...	23 July, '10
JAMES, Dr. W. R. W. ...	27 April, '10	SINGLEHURST, S. G. ...	8 May, '10
JACKSON, W. E. ...	12 June, '10	TABUTEAU, Maj. C. H. M.	20 April, '10
Sports Club, St.		Junior Naval and	
James' Sq., S.W.		Military Club, 96,	
MCGREGOR, J. T. W. S.	27 April, '10	Piccadilly, W.	

SOMALILAND.

CORDEAUX, Capt. H. E. S.,		DANSEY, Capt. C. E. ...	25 April, '10
C.B., C.M.G., United		DANIELL, H. A. ...	21 April, '10
Service Club, Pall		Junior Naval and	
Mall, S.W.		Military Club, 96,	
CASE, Capt. H. A. ...	18 July, '10	Piccadilly, W.	

SOMALILAND—continued.

GEPP, Capt. E. C.	<i>Steamer leaving</i>	PHILLIPS, Capt. G. F. ...	6 July, '10
	12 June, '10	PIPON, Capt. R. H. ...	18 July, '10
GORDON, Capt. J. F. S....	24 July, '10	REID, Capt. E. H. ...	4 July, '10
MURRAY, Capt. B. E. ...	4 July, '10	SLADEN, Capt. G. C. ...	

BASUTOLAND.

CLEMENTI, L. ...	18 July, '10
------------------	--------------

SWAZILAND.

PERKINS, Capt. R. C., D.S.O. ...	30 Sept., '10
----------------------------------	---------------

BRITISH HONDURAS.

CLEMENTS, W. H. ...	28 April, '10	MAXWELL, F. M., K.G.	7 July, '10
		c/o Royal Colonial Institute, Northumberland Avenue, W.C.	

FALKLAND ISLANDS.

ALLARDYCE, W. L., C.M.G. ...	27 Sept., '10
------------------------------	---------------

FIJI.

RANKINE, R. S. D. ...	26 Oct., '10
-----------------------	--------------

DOMINICA.

O'FARRELL, P. ...	29 April, '10
-------------------	---------------

JAMAICA.

MAUNSELL, G. E. ...	4 May, '10	SMITH, J. A. G. ...	22 July, '10
---------------------	------------	---------------------	--------------

TRINIDAD.

GREIG, C. ...	THOMSON, Dr. A. D. ...	22 July, '10
---------------	------------------------	--------------

BRITISH GUIANA.

ALSING, J. ...	4 May, '10	HAREL, P. C. ...	29 July, '10
BOSCH REITZ, C. J. ...	24 June, '10	c/o Royal Colonial Institute, Northumberland Avenue, W.C.	
BELLAMY, W. E. ...	28 July, '10		
COX, C. T., C.M.G. ...	7 Aug., '10		
CHALMERS, J. C. ...	24 May, '10	MAY, F. ...	9 July, '10
CRUICKSHANK, J. G. ...	14 May, '10	ROWLAND, Dr. E. D. ...	27 April, '10
DUNCAN, C. W. ...	6 Aug., '10	SPAW, Capt. V. B. ...	25 May, '10
FERNANDES, Dr. F. ...	17 May, '10	WILSON, Rev. O. H. ...	29 Apr., '10

MAURITIUS.

DAVSON, C. S. ...	31 July, '10	LINCOLN, G. ...	24 June, '10
EMTAGE, W. T. A. ...	20 May, '10	LESEUR-GREENE, J. ...	24 Oct., '10
HANNING, T. W. ...	25 June, '10	NAZ, L. ...	26 July, '10
LEBERRE, Rev. C. ...	25 Oct., '10		

STRAITS SETTLEMENTS.

ACTON, R. D. ...	17 June, '10	LEONARD, T. A. ...	20 Jan., '11
Sports Club, St. James' Square, S.W.		LEMON, A. H. ...	17 May, '10
BAUGH, C. ...	13 June, '10	MAY, C. G. ...	6 Dec., '10
BOWER, Capt. W. M. L. ...	15 Feb., '11	MASTERTON, W. N. ...	24 Nov., '10
BRERETON, H. ...	5 May, '10	PESTANA, J. V. ...	10 Aug., '10
FRAYNE, J. ...	22 Aug., '10	SPOULE, P. J. ...	20 Feb., '11
FYFE, W. M. ...	6 July, '10	SELLS, H. C. ...	24 Nov., '10
HOWARD, E. C. C. ...	22 July, '10	SETH, G. G. ...	1 Aug., '10
HOWELL, J. ...	12 Sept., '10	Common Room, Gray's Inn, W.C.	
JAMES, E. B. ...	27 July, '10	SADLER, W. ...	13 Aug., '10
JOHNSON, E. E. ...	1 Nov., '10	STUART, A. ...	13 July, '10
KING, J. L. ...	30 May, '10	TAYLOR, Miss E. ...	22 June, '10

TANJONG PAGAR DOCK.

BINNIE, J. ...	31 Oct., '10	SPENCE, R. ...	8 July, '10
GARTSHORE, J. ...	22 July, '10	WHEELWRIGHT, J. W. ...	8 July, '10

HONG KONG.

BURNETT, G. G. ...	10 Nov., '10	FOLEY, D. ...	20 May, '10
CROOK, A. H. ...	1 Sept., '10	GREY, B. W. ...	31 July, '10
CROFTON, R. H. ...	12 Oct., '10	HOLLINGSWORTH, A. H. ...	19 Oct., '10
DUNN, S. T. ...	10 July, '10	KOCH, Dr. W. V. M. ...	16 Nov., '10

HONG KONG—continued.

LEMFESTEY, F. P. ...	26 July, '10	PURDEN, A. F. ...	20 May, '10
MILLINGTON, Miss A.M.T.	5 Oct., '10	PIERPOINT, E. J. ...	25 May, '10
MELBOURNE, C. A. D. ...	5 Oct., '10	PERKINS, T. L. ...	24 July, '10
PIGGOTT, Sir F. T. ...	14 June, '10	SPENCER, J. ...	20 May, '10
PHILIPS, H. R. ...	24 Oct., '10	WILLIAMS, W. H. ...	30 April, '10

PERAK.

ANDERSON, R. O. N. ...	18 Aug., '10	LOVERIDGE, J. C. ...	23 Oct., '10
COCK, E. A. L. ...	30 April, '11	MONDY, A. G. ...	10 Aug., '10
EVERDELL, F. C. ...	27 Aug., '10	MILNE, Dr. W. S. ...	18 May, '10
FORD, Dr. D. McN. ...	8 Oct., '10	NEUBRONNER, E. W. ...	3 April, '11
FRY, Dr. W. H. ...	30 Sept., '10	OWEN, J. F. ...	23 May, '10
HATCH, E. C. ...	30 July, '10		

PAHANG.

BLATHERWICK, T. C. ...	30 June, '10	SUGARS, J. C. ...	Steamer due
BENNETT, E. P. ...	25 July, '10		20 Dec., '10
SWETTENHAM, J. P. ...	25 June, '10	SIMPSON, H. ...	30 June, '10
		TICKELL, G. T. ...	30 June, '10

SELANGOR.

BURNSIDE, E. ...	24 June, '10	IRVING, C. J. ...	...
c/o H. S. King & Co.,		LUCAS, G. D. ...	3 Aug., '10
9, Pall Mall, S.W.		MADDOCKS, W. E. ...	31 May, '10
DINSMORE, W. H. ...	30 Nov., '10	SCROBY, C. ...	28 Sept., '10
GERRARD, Dr. P. N. ...	24 Aug., '10	VANRENNEN, F. A. ...	16 Oct., '10
GRAHAM, J. ...	27 May, '10	WORTHINGTON, A. F. ...	8 Aug., '10

NEGRI SEMBILAN.

DOWDEN, R. ...	21 Jan., '11	SUMNER, H. L.
----------------	--------------	-------------------	-----

FEDERATED MALAY STATES.

CAMPBELL, A. ...	4 Aug., '10	MAUNDRELL, E. B. ...	5 Mar. '11
FLETCHER, Dr. W. ...	3 Aug., '10	PHILLIPS, G. H. ...	10 Oct., '10
GREGORY, S. M. ...	4 Jan., '11	PINKNEY, R. ...	26 June, '10
HUME, W. J. P. ...	14 Dec., '10	SHELLEY, M. B. ...	Steamer due
KEMPLER, E. J. ...	18 May, '10		24 May, '10
LEGGE, R. H. ...	11 Sept., '10	WOOD, W. T. ...	31 May, '10
MILLER, W. ...	23 May, '10	WELLS, A. E. ...	Steamer leaving
MOSCROF, J. ...	25 Dec., '10		12 April, '10

CEYLON.

ALEXANDER, E. P. ...	Steamer due	LAMBERT, J. ...	29 April, '10
	28 May, '10	LAURENCE, H. B. ...	2 Aug., '10
BANKS, A. ...	8 Aug., '10	LEWIS, A. ...	2 Aug., '10
BOWES, F. ...	24 July, '10	MORRIS, R. F. ...	30 April, '10
BOONE, A. P. ...	25 April, '10	MCQUILLAN, J. ...	8 June, '10
BRODHURST, H. W. ...	Steamer due	MACPHAIL, R. S. ...	Steamer leaving
	8 Aug., '10		28 April, '10
BOOTH, F. ...	22 June, '10	MAYES, A. E. ...	8 July, '10
c/o Messrs. T. Cook		MACLEOD, K. W. B. ...	Steamer due
& Sons, Ludgate Circus,			12 May, '10
E.C.		PAGDEN, A. S. ...	16 June, '10
CONROY, J. ...	30 May, '10	ROCKWOOD, Dr. D. ...	30 April, '10
COOK, A. L. ...	9 May, '10	RUSSELL, T. B. ...	2 Jan., '11
CHURCHILL, A. F. ...	13 May, '10	SENIOR, B. I.S.O. ...	27 Dec., '10
DE SILVA, H. ...	2 April, '11	SAUNDERS, R. G. ...	6 Sept., '10
FLETCHER, W. W. POLE	27 Oct., '10	TEMPLETON, W. S. ...	18 May, '10
GREEN, C. ...	25 July, '10	TEMPLETON, R. S. ...	6 July, '10
GALBRAITH, A. N. ...	28 July, '10	VINER, J. W. ...	30 April, '10
HAYNES, E. C. ...	21 Nov., '10	WOODHOUSE, G. W. ...	22 July, '10
HUNTER, T. G. ...	31 May, '10	c/o Royal Colonial In-	
JOSEPH, H. P. ...	30 Mar., '11	stitute, Northumber-	
JONES, W. J. ...	4 Nov., '10	land Avenue, W.C.	
KENT, C....	16 July, '10	WALKER, J. ...	9 Sept., '10
KITCHEN, W. J....	2 May, '10	WAIT, W. E. ...	1 Dec., '10



THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. III.

JULY, 1909.

No. 1.

CONTENTS.

EDITORIAL NOTES

The Naval Conference—South African Union—The New Commonwealth
Ministry—Shipping Questions—Papua—Wages Boards and Sweating—
Hong Kong University.

COLONIAL LOAN ISSUES

THE SETTLEMENT OF TRADE DISPUTES IN CANADA

THE EROSION OF LAND

THE COLONIAL OFFICE AND THE CROWN COLONIES

ANURADHAPURA

REVIEWS AND NOTICES

Sir Charles Lucas on Canada—Mr. Wise on Australia—The Colonies and
Imperial Defence.

BUSINESS NOTES

RAILWAY NOTES

MEDICAL NOTES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICIALS ON LEAVE OF ABSENCE

CEYLON.

ALEXANDER, E. P. ...	<i>Steamer due</i>	LAMBERT, J. ...	... 29 April, '10
	28 May, '10	LAURENCE, H. B. ...	... 2 Aug., '10
BANKS, A. ...	8 Aug., '10	LEWIS, A. ...	... 2 Aug., '10
BOWES, F. ...	24 July, '10	MORRIS, R. F. ...	... 30 April, '10
BOONE, A. P. ...	25 April, '10	MCQUELLAN, J. ...	... 8 June, '10
BRODHURST, H. W. ...	<i>Steamer due</i>	MACPHAIL, R. S. ...	<i>Steamer leaving</i>
	8 Aug., '10		28 April, '10
BOOTH, F. ...	22 June, '10	MAYES, A. E. ...	... 8 July, '10
c/o Messrs. T. Cook		MACLEOD, K. W. B. ...	<i>Steamer due</i>
& Sons, Ludgate Circus,			12 May, '10
E.C.			16 June, '10
CONROY, J. ...	30 May, '10	PAGDEN, A. S. ...	... 16 June, '10
COOK, A. J. ...	9 May, '10	ROCKWOOD, DR. D. ...	... 30 April, '10
CHURCHILL, A. F. ...	13 May, '10	RUSSELL, T. E. ...	... 2 Jan., '11
DE SILVA, H. ...	2 April, '11	SENIOR, B., L.S.O. ...	... 27 Dec., '10
FLETCHER, W. W. POLE ...	27 Oct., '10	SAUNDERS, R. G. ...	... 6 Sept., '10
GREEN, C. ...	25 July, '10	TEMPLETON, W. S. ...	... 18 May, '10
GALBRAITH, A. N. ...	28 July, '10	TEMPLETON, R. S. ...	... 6 July, '10
HAYNES, E. C. ...	21 Nov., '10	VINER, J. W. ...	... 30 April, '10
HUNTER, T. G. ...	31 May, '10	WOODHOUSE, G. W. ...	... 22 July, '10
JOSEPH, H. P. ...	30 Mar., '11	c/o Royal Colonial In-	
JONES, W. J. ...	4 Nov., '10	stitute, Northumber-	
KENT, C....	16 July, '10	land Avenue, W.C.	
KITCHEN, W. J....	2 May, '10	WALKER, J. ...	... 9 Sept., '10
		WAIT, W. E. ...	... 1 Dec., '10

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND

R. V. VERNON, of the Colonial Office.

VOL. III.

JULY, 1909.

No. 1.

CONTENTS.

EDITORIAL NOTES

The Naval Conference—South African Union—The New Commonwealth
Ministry—Shipping Questions—Papua—Wages Boards and Sweating—
Hong Kong University.

COLONIAL LOAN ISSUES

THE SETTLEMENT OF TRADE DISPUTES IN CANADA

THE EROSION OF LAND

THE COLONIAL OFFICE AND THE CROWN COLONIES

ANURADHAPURA

REVIEWS AND NOTICES

Sir Charles Lucas on Canada—Mr. Wise on Australia—The Colonies and
Imperial Defence.

BUSINESS NOTES

RAILWAY NOTES

MEDICAL NOTES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICIALS ON LEAVE OF ABSENCE

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKRAFF, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON." |

Esmond Hotel,
"AESRUP, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

*Passenger Lifts, Electric Light throughout,
Bathrooms on every Floor,
Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.
Heated throughout.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT.

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BLOOMSBURY, LONDON."

Thackeray Hotel,
"THACKERAY, LONDON."

Esmond Hotel,
"ESMOND, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicide power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Vladuot Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4487.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES: — Monolithic Construction, | Light, Durable,
Economical, Fireproof, | Vibrationless, Sanitary.

More than 16,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories,
Grain Silos, Coal Hoppers,
Reservoirs, Wharves, Jetties,
Retaining Walls, Piers, Bridges
up to 200 ft. clear span, Water
Tower, Swimming Baths, Water
and Sewer Pipes, &c., &c., are
now in use.

A LARGE NUMBER OF
WELL-MATURED FERRO-
CONCRETE PILES OF
DIFFERENT LENGTHS AND
SECTIONS KEPT IN STOCK
AT OUR HULL DEPÔT READY
FOR IMMEDIATE SHIPMENT.

MERRYWEATHERS' PATENT "Greenwich Gem" Steam Fire Engine.

THE LIGHTEST AND BEST STEAM FIRE ENGINE ON THE MARKET.



ADVANTAGES.

Fire Door and Machinery at rear.

Accessibility of Valves.

Simplicity of Machinery.

No Steam Pipes to cause trouble.

A FIRE BRIGADE CHIEF writes:—

"The 'Gem' is so compact and handy that it can easily be stoked and worked by one man—a fact that does not apply to other Fire Engines."

Adopted by London and other Fire Brigades all over the World.

MAKERS OF EVERY DESCRIPTION OF MOTOR FIRE APPARATUS.

MERRYWEATHERS' "London Made" DUB-SUB CANYAS HOSE, woven on Improved Looms at Greenwich Road Works. It is capable of standing great pressure, and is therefore suitable for the most powerful Steam Fire Engines and Pumps.

WRITE FOR CATALOGUES AND LISTS.

MERRYWEATHER & SONS Ld.
63, LONG ACRE, W.C.; & WORKS, GREENWICH, S.E.,
LONDON.

ESTABLISHED OVER 200 YEARS.

HUGO GRIEBERT & CO.,

Dealers in Rare Postage Stamps.



IMPORTERS OF UNUSED AND
USED COLONIAL STAMPS. 

*Buyers of Important collections of Postage Stamps,
Mixed Lots of Used and Unused Stamps purchased.*

A Specialty made of importing large quantities of surcharged stamps that are provisionally issued from time to time in the Colonies and other Countries. A good commission paid for prompt and immediate supplies.

Stocks or Government Remainders of obsolete Unused Stamps

PURCHASED AT HIGHEST POSSIBLE PRICES.

 We have bought by far the largest quantity of such Government Remainders that have been for sale in the various Countries within the last Twenty years. 

Full particulars of quantities, &c., should be communicated to us immediately.

WE ONLY BUY FOR CASH through our Bankers, THE LONDON CITY AND MIDLAND BANK, who settle on our behalf through their Agents in any part of the world.

A Specimen Number of "Griebert's Philatelic Notes and Offers" sent gratis to all applicants.

HUGO GRIEBERT & CO.

Five Gold, &c., Medals at various Philatelic Exhibitions.
Member of the Jury, Rotterdam, 1907

170, STRAND, LONDON, W.C.

Telegrams and Cables: "GRIEBERT, LONDON."

A. B. C. Code, 5th Edition.

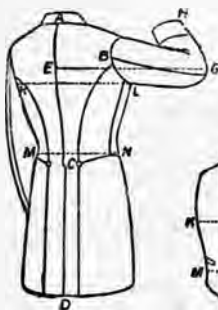
ADVERTISEMENTS.

W. EVANS & CO.,

We keep a varied and select Stock of **FIRST-CLASS MATERIALS**, employ only **FIRST-CLASS CUTTERS** and **FIRST-CLASS WORKMEN**—Hence the Secret of our Success.

INSTRUCTIONS FOR SELF-MEASUREMENT.

By following these instructions we guarantee good fitting and comfortable clothes.



FOR COATS OF ANY DESCRIPTION.

A to C	.....	Inches
C " D	.....	"
E " B	.....	"
B " G	.....	"
G " H	.....	"
Brest measure, fairly tight over waistcoat	.....	"
Waist measure, over waistcoat	.....	"

FOR WAISTCOATS.

A to C	"
--------	-------	---

FOR TROUSERS AND BREECHES.

Side from A to N	.....	Inches
" " A " B	.....	"
Leg seam C " D	.....	"
Round waist A	.....	"
Round seat G H	.....	"
Round knee M to N	.....	"
Round foot O to P	.....	"

PATTERNS POST FREE.

EXPORT DEPARTMENT.

Customers sending for any of the following clothes, stating colours and the kind of garment required, enclosing a draft or P.O.O. (Crossed London & South-Western Bank, Ltd.), adding cost of carriage enumerated below, will save considerable time, as all orders will be executed and despatched in about a fortnight from the date of receiving same. Customers living in any part of the world can rely on having the same fit and attention as if they visited our establishment.

ADDITIONAL MEASURES FOR ALL KINDS OF BREECHES.

Round small (just below knee) moderately tight..... Inches

Round widest part of calf..... "

Desirable to know.—Height, approximate weight, whether erect, normal, or inclined to stoop.

RIDING AND HUNTING BREECHES, £2 6s., £2 15s., £3 6s.

EVENING DRESS SUITS, silk lined, 25 6s., 26 6s., 27 7s., 28 6s.

LOUNGE SUITS (Blues, Tweeds and Flannels), in tropical, medium and heavy weight, £2 10s. to 51 guineas.

NORFOLK SUITS, £3 10s. to 5 guineas.

OVERCOATS, light, medium and heavyweight, £3 10s. to 6 guineas.

TROUSERS, Tweeds, Cashmeres and Flannels, 10s. 6d. to 35s.

Approximate cost of carriage (parcel post) per suit of clothes to the Colonies, and other countries, &c. (which must be added to cost of suit):—Canada, 6s.; Cape Colony, 7s.; Transvaal and Orange River Colony, 9s.; Rhodesia, 15s. 9d.; Nigeria, Gold Coast, West Indies, Ceylon, Hong Kong, Cyprus, Egypt, Malta, Falkland Islands, Gambia, Gibraltar, India, 3s.; Australia, 6s.; New Zealand, Brazil, 8s.; Chili, 4s.; Mexico, 3s. 6d.; Argentine Republic, 4s. 10d.

Goods value £20 and upwards will be sent carriage free to any port.

OPINIONS OF THE PRESS.

"**Truth**" says:—"Our latest discovery in Tailoring is Evans & Co., who can actually fit."

"**Field**" says:—"It is with some degree of confidence that we can recommend the breeches made by Evans & Co."

"Any and every tailor will attempt breeches making, but the real artists are few and far between. Mr. Evans has made a study of breeches for many years, and takes an extraordinary amount of pains about fitting, and he has certainly solved the problem of how breeches should be made. Tightness at the knee combined with great comfort all over are very strong points with these breeches, and the cut is absolutely correct."

We have received thousands of **TESTIMONIALS** from all parts of the world from which we quote the following:—

"Hartshooffontein, Transvaal.

"Gentlemen,—Breeches ordered arrived safely, and both as regards cut and fit leave nothing to be desired. It is interesting to note that some breeches I ordered at the same time from a well-known house (giving the same measurements) fitted me like ready-made slops. I did not think it possible for you to give such a good fit from self-measurements, and any other orders which I may require I shall certainly place with your firm.

"Yours truly, C.N.B."

When sending for patterns, state kind & colour preferred.



[Reg. Copyright.]

287, REGENT ST., & 77, GT. PORTLAND ST., LONDON, W.,
Telegraphic Address:—"EVANOPLIS, LONDON." **ENGLAND**

ADVERTISEMENTS.

THE MOSS BAY
HEMATITE IRON AND STEEL COMPANY,
LIMITED.

WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS
and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

"EVERLASTING"

"EMPIRE" PLATE

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER AND TEA SETS,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE Excels all others and is the best wearing substitute for solid silver.

As far back as the 1862 Exhibition "EMPIRE" PLATE was awarded Prize Medals for excellence of manufacture, and it still retains that pre-eminence for which it was noted 60 years ago.



PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

**Queen Anne's Chambers,
Westminster.**

R. H. STEVENS & Co.,

Type Founders and Manufacturers of Printing Materials,

89, SOUTHWARK STREET,

LONDON, S.E.

Successors to V. & J. FIGGINS,

RAY STREET, LONDON, E.C.



**We have the whole of the Plant, including
Punches and Matrices, of the late V. & J.
FIGGINS, and we are adding many up-to-date
faces. We are casting Type on Point Body &
Line as well as on the old Standard Bodies.**

Some New Faces shown here.

THE

BRITISH URALITE CO. (1908), LTD.

Contractors to the Crown Agents and other Government Departments.

FIREPROOF BUILDING SPECIALITIES

(Satisfactorily tested by the British Fire Prevention Committee).

ROOFING. CEILINGS. PARTITIONS. DOORS.

CHEAP. LIGHT. DURABLE. EASILY FIXED.

FUME, ACID AND VERMIN PROOF.

Two Recent Orders :

200,000 sq. ft. for an ARGENTINE RAILWAY.

20,000 sq. ft. for an INDIAN GOVERNMENT RAILWAY.

Write for our Colonial Catalogue to

THE BRITISH URALITE CO. (1908), LTD.,

16, ST. HELENS PLACE, LONDON, E.C.

SOUTH METROPOLITAN GAS COMPANY,

709, OLD KENT ROAD, LONDON, S.E.

Manufacturers of

COAL TAR PRODUCTS.

**Anthracene.
Benzole.
Carbolic Acid.
Creosote Oils.
Dark Cresylic Acid.
Disinfectants.
Grease Oils.
Naphthalene, Granu-
lated (Crude).**

**Naphthalene, Sublimed.
Pitch.
Refined Tar.
Solvent Naphtha.
Sulphate of Ammonia
up to 20.75 per cent.
of Nitrogen.
Toluole.**

C.I.F. QUOTATIONS GIVEN ON APPLICATION.

Telegraphic Address: "Metrogas London."

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

**Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.**

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. Impervious to sun-
Non-Combustible. heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos- Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath,
plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by ½ in. thick and upwards. Manufactured
under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE **FROM** **Beira, Durban and Cape Town**

OFFERS SPECIALLY REDUCED FARES TO
CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.



6-hour & 12-hour sizes fitted
with auxillary Light.

PORTABLE **Acetylene Lamps.**

FLARE LIGHTS Each 500 to 5,000 c.p.

**PATENT ADJUSTABLE AND SELF-
CLEANING BURNER.**

Flame can be regulated without disturbing Light.

☞ No attention required after lighting. ☜

HAND FLARES.
HAND LAMPS.
HOUSE GENERATORS.

Full Particulars from the Patentees—

C. C. WAKEFIELD & CO.,
27, CANNON STREET, LONDON, E.C.

CANADIAN PACIFIC

OCEAN AND RAIL SERVICES TO AND THROUGH CANADA.

TRANSATLANTIC—Fast Line to Canada from Liverpool. Only four days open sea by "Empress" Steamers. Unsurpassed Service at Moderate Fares.

TRANSCANADA—Luxurious Train Service from Atlantic to Pacific.

TRANS-PACIFIC—"Empress" Steamers to Japan and China. Canadian-Australian Mail Service via Vancouver to Australia and New Zealand.

APPLY FOR PARTICULARS TO

CANADIAN PACIFIC RAILWAY, 62-65, Charing Cross, London, S.W.

OR LOCAL AGENTS EVERYWHERE.

CROWN PRESERVED COAL CO., LTD.,

Admiralty

Contractors.

Awards :

LONDON	1862
PARIS	1875
LIVERPOOL	1886
JAMAICA	1891

TRADE



MARK.

Awards :

ROYAL NAVAL 1891 & 1906
CHICAGO..... 1893
BORDEAUX..... 1895
MEXICAN.....1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address :—"Crown, Cardiff."
Telephone :—Nat. No. 241.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses :—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

ADVERTISEMENTS.

BANK OF NIGERIA LIMITED.

Directors.

T. STANLEY ROGERSON, Esq., J.P.
CLIFFORD B. EDGAR, Esq., J.P.

SIR JOHN KIRK, G.C.M.G., K.C.B.
ALEXANDER MILLER, Esq.

GEORGE MILLER, Esq.

Manager and Secretary—LICHFIELD H. MOSELEY, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu, Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c. &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bara-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Advances made against Shipping Documents. Banking business of every description transacted.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorized Capital	• £1,000,000.	Paid-Up Capital	• • £100,000.
Subscribed Capital	• £250,000.	Reserve Fund	• • £50,000.

Head Office: 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address:—"BULLION," LIVERPOOL.

London Office: 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address:—"ARREGLO," LONDON.

Hamburg Office: GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address:—"BULLION," HAMBURG.

Branches:

GAMBIA—Bathurst. **SIERRA LEONE**—Freetown.

GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

Agencies:

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LAHOU, OBUASSI, SALTPOND, WINNEBAH, BONNY, EGWANGA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To Bermuda outwards there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf, Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO.,

COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

EDUCATIONAL ANNOUNCEMENTS.

<p>BEDFORD. THE MODERN SCHOOL. ONE OF HARPUR TRUST SCHOOLS with very low fees. New buildings recently opened. Splendid science rooms, art rooms, gymnasium, etc. Public school life and sound education for professions, business or engineering. Bedford a specially attractive residential town. Centre for Indian and Colonial children. For illustrated Prospectus apply to the Head Master, C. W. KAYE, M.A., Oxon.</p>	<p>PARSONS MEAD, ASHTEAD, SURREY. GOOD HOME-SCHOOL for the Daughters of Gentlemen. Beautiful Grounds of six acres. Excellent Teachers for all subjects. Training for Home Life with special attention to Literature, Music and Art. References kindly permitted to the Countess of Pembroke, the Lady Robert Cecil, Mrs. Utterton and others.</p>
<p>UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH. (A constituent College of the University of Wales.) President: LORD RENDEL. Principal: T. F. ROBERTS, M.A., LL.D. PREPARES FOR DEGREES IN Arts, Science, Law, Music, and Agriculture. Hostel accommodation for over 200 Women Students. Scholarships and Exhibitions given. Apply to the Registrar, University College, Aberystwyth.</p>	<p>RECOGNISED HIGH-CLASS SCHOOL FOR GIRLS. MISS PENN receives a limited number of pupils. Large staff of resident Mistresses and visiting Masters. Individual Christian influence. Home comforts. Large house and garden. Tennis Courts and field for hockey and cricket. Riding, cycling, bathing. St. John's South View, Selwyn Road, Eastbourne. Terms on application.</p>
<p>KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON, S.W. (CONDUCTED BY THE COUNCIL OF KING'S COLLEGE, LONDON.) TERMS in 1909, beginning January 20th, April 28th, September 22nd. For Prospectus (Boarders and Day Boys), apply to the HEAD MASTER.</p>	<p>NEWTON COLLEGE, NEWTON ABBOT, SOUTH DEVON. SMALL PUBLIC SCHOOL in mild but bracing climate. Prepares boys from 8 years of age for Army, Navy, Universities and Professions. Fine buildings in 20 acres of ground. Preparatory house separate. Write for Prospectus to Rev. HEAD MASTER.</p>
<p>BROMSGROVE SCHOOL, WORCESTERSHIRE. AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £220. There are also a certain number of reserved places at reduced terms, primarily for sons of Clergymen. Apply, the Head Master, F. J. R. HENDY, M.A.</p>	<p>SCHOOLS FOR BOYS AND GIRLS. PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—UNIVERSITY EDUCATIONAL AGENCY, 122, Regent Street, W. (Est. 1868.)</p>
<p>GIRLS. BOURNEMOUTH. FONTAINEBLEAU SCHOOL, MANOR ROAD offers to Daughters of Gentlemen liberal Education, with def. Ch. teaching. Preparation for all exams. Bright home life. Res. graduates 4; language mistresses 3; gold medalist for Swedish and medical gymnastics, games, riding, cycling, fencing. Entire charge at inclusive fees taken of pupils between the ages of 7-18 whose parents are abroad. Principal: Miss O. A. ROWLAND.</p>	<p>EASTBOURNE COLLEGE. President—THE DUKE OF DEVONSHIRE. Head-Master—Rev. F. S. WILLIAMS, M.A., late Assistant-Master at Rugby School. Special Army and Engineering Classes. Physical Drill compulsory for the whole School. Cadet Corps. New Buildings, racquets and five courts, swimming bath, &c. Exhibitions for Sons of Officers and Clergy.</p>
<p>CHRIST COLLEGE, BRECON. PUBLIC SCHOOL OF 100 BOYS, preparing for Universities, Colonial Office, business and professional careers. Fees: Fifty Guineas. Admirable buildings, 30 acres playing fields, mountain air and scenery, fishing, golf. Three first classes gained at Oxford in 1908, viz., Classics, Mathematics, Science; numerous other distinctions in work and play. Resident Master for every 15 boys; close individual attention. Complete charge of pupils from abroad. Apply HEAD MASTER.</p>	<p>SCHOOL FOR YOUNG GENTLEWOMEN of good social position from all parts of the Empire and from foreign Countries. GARRATTS HALL, BANSTEAD, SURREY HILLS. Garratts Hall, a fine mansion, in beautiful grounds of forty-five acres, is situated on the crest of a hill 570 feet above sea level, among the pines of Surrey. The aim of the School is to fit girls for the best style of home life. There are all forms of games, including Golf, Hunting, Riding, Driving and Cycling. Large stabling for pupils' own horses. The education is cultured and on modern lines. There is a large staff of resident Specialists and regular visiting Masters. Sanatorium and Studio. Music, Art, Languages and Literature are made a speciality. Pupils are received in sole charge, and can travel in the vacations if desired. Address—THE LADY PRINCIPAL.</p>
<p>HOME SCHOOL FOR GIRLS. LEIGH COURT, near CLIFTON, BRISTOL. Principal, Miss MEDINA S. GRIFFITHS, assisted by an efficient staff of Teachers. Extensive and beautiful grounds afford special advantages for open-air life and games. Preparation for University Examinations undertaken, inclusive terms. Prospectus on application.</p>	

EDUCATIONAL ANNOUNCEMENTS.

LADY (Widow), living in lovely part of Sussex (Inland), would receive in her country cottage (well-furnished) one or two children, either during Holidays or for longer—or a Lady home from abroad, as Paying Guest. Good Garden, Meadow; Cyclist, and fond of out-door life. Terms according to requirements. References exchanged.

Mrs. Sewell, Nutbourne, Pulborough, Sussex.

HILL BROW, HEMEL HEMPSTEAD, HERTS.

School for Girls.

Principal—Miss WHITE.

A SMALL HOME SCHOOL, particularly adapted for girls whose parents are abroad. Small numbers. Highly efficient Mistresses and Visiting Masters. Special attention to Health and Physical Training. Reference kindly permitted to Percy Christopherson, Esq., M.A., Lockers Park, Hemel Hempstead; Mrs. H. M. Draper, 53, Chepstow Place, Kensington, W.

**OLDEN LODGE SCHOOL,
PURLEY, SURREY.**

REFINED HOME SCHOOL FOR GIRLS, situated among the Surrey Hills. Every educational advantage. London Professors for all branches of Music and Art. Every home comfort. Terms moderate. Principal, Miss GOVEY.

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.C.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. CAPT. J. C. UNDERWOOD, A.C.F., F.R.G.S., Head Master. (Registered teacher)

All LOVERS of GOOD LINEN

SHOULD WRITE TO

ROBINSON & CLEAVER, LTD., BELFAST,

who not only manufacture

**IRISH HOUSEHOLD LINENS, TABLE DAMASKS, IRISH
CAMBRIC HANDKERCHIEFS, SHIRTS, COLLARS, &c.,**

But supply the Choicest Goods direct to the public and save consumers ALL INTERMEDIATE PROFITS
Samples and Price Lists post-free to any part of the World.

ROBINSON & CLEAVER, LTD. (Manufacturers to the King), Belfast, Ireland.

To prevent delay all enquiries should be sent to 44 P. Donegall Place, Belfast.

**Schemes prepared, without charge, for
making known the advantages of any Colony
inviting Emigration. Lectures arranged.**

**Advice given gratis on all forms of advertising in Great Britain, the
Colonies or Foreign Countries.**

**Advertisements received for and inserted in all classes of News-
papers, Periodicals and Magazines at minimum rates.**

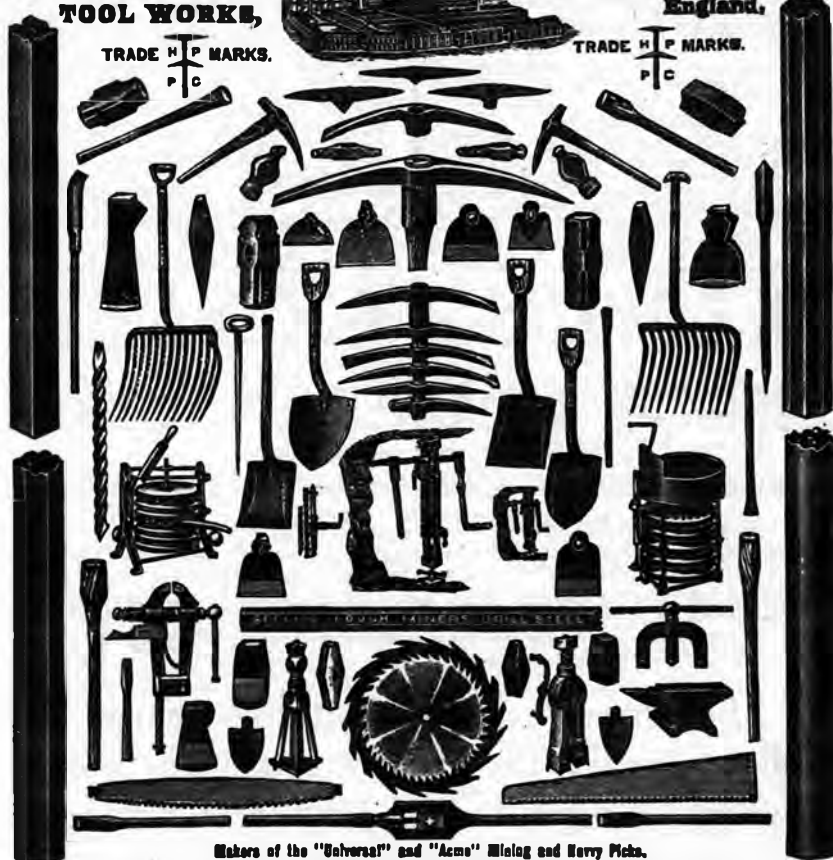
**Correspondence invited on all questions relating to newspaper
publicity.**

CROSLEY & CO. (Established 1845.)

ADVERTISING CONTRACTORS.

Offices:—57, COLEMAN STREET, LONDON, E.C.

THE
HARDY PATENT PICK Co. Ltd.,
MINING TOOL WORKS, SHEFFIELD, England,



Makers of the "Universal" and "Acme" Mining and Herry Picks.

HAND & POWER BORING MACHINES for ROCK & COAL,
PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS,
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Raps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

Simplest and most durable machines extant
for Mines and Quarries.

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

JULY, 1909.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

ADVERTISEMENTS.

MANCHESTER.

LONDON.

NEWCASTLE.

NO
SKILLED
MECHANICS
REQUIRED.



PARAFFIN MAY
BE USED FOR
FUEL INSTEAD
OF PETROL.

MOTOR VANS & LORRIES,

PUBLIC SERVICE VEHICLES, Etc.



MALAY STATES.



LACRE OFFICIAL CAR FOR USE
IN NEGRI SEMBILAN.



NIGERIA.

1909 "REPEATS."

*The following firms have
favoured us with Repeat
Orders for Lacre Vehicles
to be delivered this year,
conclusively proving that
we are maintaining our*

Standard of Efficiency,

and keeping the

Confidence of our Clients.



DUTCH EAST INDIES.



UGANDA.

Messrs. SHOOLBRED & CO.	-	-	-	of LONDON	-	1st LACRE ORDERED 1905.
Messrs. T. WALLIS & CO., Ltd.	-	-	-	"	-	1st LACRE ORDERED 1905.
Messrs. ASCHOFF & CO.	-	-	-	"	-	1st LACRE ORDERED 1906.
Messrs. HARRODS, Ltd.	-	-	-	"	-	1st LACRE ORDERED 1906.
Messrs. JONES BROS. (Holloway), Ltd.	-	-	-	"	-	1st LACRE ORDERED 1906.
Messrs. BOARDMAN'S	-	-	-	"	-	1st LACRE ORDERED 1906.
JUNIOR ARMY & NAVY STORES, Ltd.	-	-	-	"	-	1st LACRE ORDERED 1906.
CROWN AGENTS FOR THE COLONIES	-	-	-	"	-	1st LACRE ORDERED 1906.
Messrs. SPIERS & POND, Ltd.	-	-	-	"	-	1st LACRE ORDERED 1907.
Messrs. Wm. WHITELEY, Ltd.	-	-	-	"	-	1st LACRE ORDERED 1907.
THE WHITE HEATHER LAUNDRY	-	-	-	"	-	1st LACRE ORDERED 1907.
CIVIL SERVICE CO-OPERATIVE SOCIETY, Ltd.	-	-	-	"	-	1st LACRE ORDERED 1908.
Messrs. Wm. DUFF & CO.	-	-	-	"	-	1st LACRE ORDERED 1908.



Some of Messrs. Shoalbred's 45 Lacs.

Some
Large
Fleets of
Lacs.



Some of Messrs. Harrod's 29 Lacs.

**The Crown Agents for the Colonies have recently favoured us with further Orders for
15 LACRE VEHICLES to be delivered to the various Crown Colonies.**



Some of Messrs. Whiteley's 22 Lacs.

*Usually driven by men
who previously drove
Horse Vans for the
same Employers.*



Some of Messrs. Maple's Lacs.

THE LACRE MOTOR CAR CO. Ltd.,

1-2-3-4-5, POLAND STREET, LONDON, W.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Dewar House,
11/12 Haymarket,
LONDON, S.W.**

**Billiter Buildings.
Billiter Street,
— E.C. —**

AGENCY BUSINESS of every kind undertaken, also packing
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The "Handy-Cosy" Bed.

A Light Steel-frams Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER**.*

GOODLASS, WALL & CO. LTD., LIVERPOOL.



PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM:

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: Gerr. 8282.

Code:—A.B.C. 4th and 5th Editions.

Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

ADVERTISEMENTS.

CHAS. BAKER & Co.'s



STORES LTD.

High-Class Tailoring and Outfitting

AT STRICTLY MODERATE PRICES.



Special Suits for Tropical Climates.

Made from the Newest Designs
in Fine Cashmeres and Flannels.

49/6, 57/6, 62/6, 69/6.

Patterns, Fashion Book, and
Measurement Forms post free.

*Only the most Experienced Cutters and
Tailors are employed.*

ALSO . . .

SHIRTS, PYJAMAS, HOSIERY, HATS,
SUN HELMETS, BOOTS AND SHOES,
BAGS AND TRUNKS, &c., &c.

HEAD DEPÔT AND EXPORT DEPARTMENT :

271, 272, 273, 274, HIGH HOLBORN,
LONDON.

NESTLÉ'S CONDENSED MILK

ABSOLUTELY PURE.

The Richest in Cream.

UNSKIMMED, UNCOLOURED,
UNDRUGGED AND UNADULTERATED.



A comparison will
prove at once the
great superiority of
NESTLÉ'S.



The flavour is
deliciously rich and
creamy.

Free from Disease Germs.
KEEPS GOOD IN ALL CLIMATES.

ADVERTISEMENTS.

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

NESTLÉ'S CONDENSED MILK

ABSOLUTELY PURE.

The Richest in Cream.

**UNSKIMMED, UNCOLOURED,
UNDRUGGED AND UNADULTERATED.**



A comparison will
prove at once the
great superiority of
NESTLÉ'S.



The flavour is
deliciously rich and
creamy.

Free from Disease Germs.
KEEPS GOOD IN ALL CLIMATES.

ADVERTISEMENTS.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1886.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. III.

OCTOBER, 1909.

No. 2.

CONTENTS.

EDITORIAL NOTES	93
Union of South Africa—Imperial Defence—White Labour in South Africa—Development of East Africa.	
THE CANADIAN CIVIL SERVICE	102
THE ROYAL COMMISSION ON SHIPPING RINGS	107
GERMAN EAST AFRICA	116
QUARANTINE IN THE WEST INDIES	130
WEST AFRICAN CURRENCY	139
REVIEWS AND NOTICES	145
BUSINESS NOTES	152
RAILWAY NOTES	158
MEDICAL NOTES	166
COLONIAL STAMPS	168
RECENT APPOINTMENTS	172
COLONIAL OFFICIALS ON LEAVE OF ABSENCE	174

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

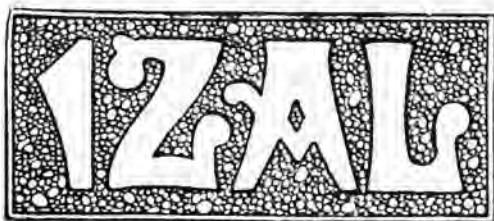
Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKHAFI, LONDON."

Thackeray Hotel,
"TRACKERAY, LONDON."

Esmond Hotel,
"AESMOP, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) *from 3/6 to 6/-*

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from 8/6 to 10/6 per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESS—

Kingsley Hotel,
BLOOMSBURY, LONDON.

Thackeray Hotel,
LONDON.

"ESMOND HOTEL,"



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,

Near Sheffield.

ADVERTISEMENTS.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

THE MOSS BAY
HEMATITE IRON AND STEEL COMPANY,
LIMITED.

WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS
and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.

MERRYWEATHERS' LONDON-MADE "DUB-SUB" CANVAS HOSE

WOVEN AT

Merryweather & Sons' Works, Greenwich Road, London, S.E.



In order to meet the demand for a

SPECIALLY STRONG CANVAS HOSE,

necessitated by the more general use of Steam Fire Engines and High-pressure Hydrants, Messrs. Merryweather & Sons have introduced their "Dub-Sus" (Double Substance) Canvas Hose.

This Hose is made of specially selected long flax of the very highest quality, and woven on greatly improved looms, which enable a hose of great strength to be manufactured, and with 15 strands instead of the 9 or 10 usually employed, and each individual thread is extra stout and strong. It is

CAPABLE OF STANDING GREAT PRESSURE,

therefore suitable for the most powerful Steam Fire Engines and Pumps. It represents the very

LATEST & BEST PRACTICE IN WEAVING CANVAS FIRE HOSE.

The special stoutness of this Hose ensures for it a very much longer life than that of ordinary Canvas Hose, as it is much better adapted to withstand the effects of the chafing and rubbing unavoidable in course of ordinary work.

The "Dub-Sus" (Double Substance) Hose, when first used, allows the water to pass through the pores somewhat freely, but after it has been in use a short time it becomes as tight as more finely woven hose.

MERRYWEATHERS' INDIA-RUBBER-LINED "DUB-SUB" HOSE

Is a Watertight Hose of the Very Highest Class.

CAUTION—See that the name "MERRYWEATHERS," the brand, appear on every length.

Indent for MERRYWEATHER HOSE.

MERRYWEATHER & SONS,
GREENWICH ROAD, S.E., and 63, LONG ACRE, W.C., LONDON.

Telegrams "Merywether, London."

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

CROWN PRESERVED COAL CO., L^{TD}.

Admiralty

Contractors.

Awards:

LONDON 1862
PARIS 1876
LIVERPOOL 1886
JAMAICA 1891



TRADE MARK.



Awards:

ROYAL NAVAL 1891 & 1906
CHICAGO 1893
BORDEAUX 1896
MEXICAN 1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address:—"Crown, Cardiff."
Telephone:—Nat. No. 241.

All LOVERS of GOOD LINEN

SHOULD WRITE TO

ROBINSON & CLEAVER, LTD., BELFAST,

who not only manufacture

IRISH HOUSEHOLD LINENS, TABLE DAMASKS, IRISH
CAMBRIC HANDKERCHIEFS, SHIRTS, COLLARS, &c.,

But supply the Choicest Goods direct to the public and save consumers ALL INTERMEDIATE PROFIT
Samples and Price Lists post-free to any part of the World.

ROBINSON & CLEAVER, LTD. (Manufacturers to the King), Belfast, Ireland.

To prevent delay all enquiries should be sent to 44 P. Donegall Place, Belfast.

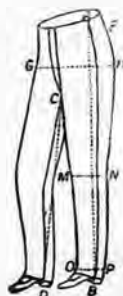
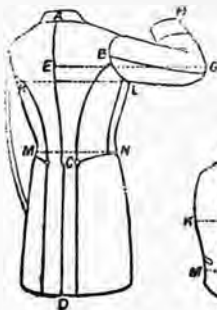
ADVERTISEMENTS.

W. EVANS & CO.,

We keep a varied and select Stock of FIRST-CLASS MATERIALS, employ only FIRST-CLASS CUTTERS and FIRST-CLASS WORKMEN—Hence the Secret of our Success.

INSTRUCTIONS FOR SELF-MEASUREMENT.

By following these instructions we guarantee good fitting and comfortable clothes.



FOR COATS OF ANY DESCRIPTION.

A to C	Inches
C " D	"
E " B	"
B " G	"
G " H	"
Breast measure, fairly tight over waistcoat	"
Waist measure, over waistcoat	"

FOR WAISTCOATS.

A to C	"
FOR TROUSERS AND BREECHES.	
Side from A to N	Inches
" " A " B	"
Leg seam C " D	"
Round waist A	"
Round seat G H	"
Round knee M to N	"
Round foot O to F	"

PATTERNS POST FREE.

EXPORT DEPARTMENT.

Customers sending for any of the following clothes, stating colours and the kind of garment required, enclosing a draft or P.O.O. (Crossed London & South-Western Bank, Ltd.), adding cost of carriage enumerated below, will save considerable time, as all orders will be executed and despatched in about a fortnight from the date of receiving same. Customers living in any part of the world can rely on having the same fit and attention as if they visited our establishment.

ADDITIONAL MEASURES FOR ALL KINDS OF BREECHES.

Round small (just below knee) moderately tight

Round widest part of calf

Desirable to know.—Height, approximate weight, whether erect, normal, or inclined to stoop.

RIDING AND HUNTING BREECHES, £2 5s., £2 15s., £3 5s.

EVENING DRESS SUITS, silk lined, £5 5s., £6 5s., £7 7s., £8 8s.

LOUNGE SUITS (Blues, Tweeds and Flannels), in tropical, medium and heavy weight, £2 10s. to 5 guineas.

NORFOLK SUITS, £3 10s. to 5 guineas.

OVERCOATS, light, medium and heavy weight, £2 10s. to 6 guineas.

TROUSERS, Tweeds, Cashmeres and Flannels, 10s. 6d. to 35s.

Approximate cost of carriage (parcel post) per suit of clothes to the Colonies, and other countries, &c. (which must be added to cost of suit):—Canada, 6s.; Cape Colony, 7s.; Transvaal and Orange River Colony, 8s.; Rhodesia, 15s. 9d.; Nigeria, Gold Coast, West Indies, Ceylon, Hong Kong, Cyprus, Egypt, Malta, Falkland Islands, Gambia, Gibraltar, India, 9s.; Australia, 6s.; New Zealand, Brazil, 8s.; Chili, 6s.; Mexico, 5s. 6d.; Argentine Republic, 4s. 10d.

Goods value £20 and upwards will be sent carriage free to any port.

OPINIONS OF THE PRESS.

"**Truth**" says:—"Our latest discovery in Tailoring is Evans & Co., who can actually fit."

"**Field**" says:—"It is with some degree of confidence that we can recommend the breeches made by Evans & Co."

"Any and every tailor will attempt breeches making, but the real artists are few and far between. Mr. Evans has made a study of breeches for many years, and takes an extraordinary amount of pains about fitting, and he has certainly solved the problem of how breeches should be made. Tightness at the knee combined with great comfort all over are very strong points with these breeches, and the cut is absolutely correct."

We have received thousands of **TESTIMONIALS** from all parts of the world from which we quote the following:—

"Hartebeestfontein, Transvaal.

"Gentlemen,—Breeches ordered arrived safely, and both as regards cut and fit leave nothing to be desired. It is interesting to note that some breeches I ordered at the same time from a well-known house (giving the same measurements) fitted me like ready-made slops. I did not think it possible for you to give such a good fit from self-measurements, and any other orders which I may require I shall certainly place with your firm.

"Yours truly, C.N.B."

When sending for patterns, state kind & colour preferred.

[Reg. Copyright.]



287, REGENT ST., & 77, GT. PORTLAND ST., LONDON, W.,
Telegraphic Address:—"EVANOPLIS, LONDON." **ENGLAND.**

ADVERTISEMENTS.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTIQUULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: Gerr. 3282. Code:—A.B.C. 4th and 5th Editions.
Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

GOODLASS, WALL & CO. LTD.,

LIVERPOOL.



— — — — —

PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

— — — — —

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.

ADVERTISEMENTS.

THE YORKSHIRE HENNEBIQUE CONTRACTING CO. LTD.,

Viaduct Works, Kirkstall Road, LEEDS.

Grams: "Ferro, Leeds."
Phone: 4457.

HENNEBIQUE FERRO-CONCRETE

THE BEST CONSTRUCTION OF ALL BUILDINGS AND ENGINEERING WORKS.

Used by the Admiralty, War Office, H.M. Office of Works, and the leading Corporations and Companies.

ADVANTAGES :—Monolithic Construction, | Light, Durable,
Economical, Fireproof, | Vibrationless, Sanitary.

More than 16,000 Examples of HENNEBIQUE FERRO-CONCRETE



Warehouses, Mills, Factories,
Grain Silos, Coal Hoppers,
Reservoirs, Wharves, Jetties,
Retaining Walls, Piers, Bridges
up to 200 ft. clear span, Water
Tower, Swimming Baths, Water
and Sewer Pipes, &c., &c., are
now in use.

A LARGE NUMBER OF
WELL-MATURED FERRO-
CONCRETE PILES OF
DIFFERENT LENGTHS AND
SECTIONS KEPT IN STOCK
AT OUR HULL DEPÔT READY
FOR IMMEDIATE SHIPMENT

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE."

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1903.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.

THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.

30 per cent. greater mechanical and tensile
strength.

Non-Conducting.

Non-Combustible.

Impervious to sun-
heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos-Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath, plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by $\frac{1}{2}$ in. thick and upwards. Manufactured under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

SOUTH METROPOLITAN GAS COMPANY,

709, OLD KENT ROAD, LONDON, S.E.

Manufacturers of

COAL TAR PRODUCTS.

Anthracene.

Benzole.

Carbolic Acid.

Creosote Oils.

Dark Cresylic Acid.

Disinfectants.

Grease Oils.

**Naphthalene, Granu-
lated (Crude).**

Naphthalene, Sublimed.

Pitch.

Refined Tar.

Solvent Naphtha.

**Sulphate of Ammonia
up to 20·75 per cent.
of Nitrogen.**

Toluole.

C.I.F. QUOTATIONS GIVEN ON APPLICATION.

Telegraphic Address: "Metrogas London."

THE
BRITISH URALITE CO. (1908), LTD.

Contractors to the Crown Agents and other Government Departments.

FIREPROOF BUILDING SPECIALITIES

(Satisfactorily tested by the British Fire Prevention Committee).

ROOFING. CEILINGS. PARTITIONS. DOORS.

CHEAP. LIGHT. DURABLE. EASILY FIXED.

FUME, ACID AND VERMIN PROOF.

Two Recent Orders :

200,000 sq. ft. for an **ARGENTINE RAILWAY.**

20,000 sq. ft. for an **INDIAN GOVERNMENT RAILWAY.**

Write for our Colonial Catalogue to

THE BRITISH URALITE CO. (1908), LTD.,
18, ST. HELEN'S PLACE, LONDON, E.C.

R. H. STEVENS & Co.,

Type Founders and Manufacturers of Printing Materials,

89, SOUTHWARK STREET,
LONDON, S.E.

Successors to **V. & J. FIGGINS,**

RAY STREET, LONDON, E.C.



**We have the whole of the Plant, including
Punches and Matrices, of the late V. & J.
FIGGINS, and we are adding many up-to-date
faces. We are casting Type on Point Body &
Line as well as on the old Standard Bodies.**

Some New Faces shown here.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorised Capital	- £1,000,000.	Called-Up Capital	- £200,000.
Subscribed Capital	- £500,000.	Reserve Fund	- £75,000.

Head Office: 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address:—"BULLION," LIVERPOOL.

London Office: 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address:—"ARREGLO," LONDON.

Hamburg Office: GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address:—"BULLION," HAMBURG.

Branches:

GAMBIA—Bathurst. **SIERRA LEONE**—Freetown.
GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

Agencies:

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LAHOU, OBUASSI, SALTPOND, WINNEBAH, BONNY, ECWANCA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

L. STANLEY ROGERSON, Esq., J.P.

SIR JOHN KIRK, G.C.M.G., K.C.B.

CLIFFORD B. EDGAR, Esq., J.P.

ALEXANDER MILLER, Esq.

GEORGE MILLER, Esq.

Manager and Secretary—LICHFIELD H. MOSELEY, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu, Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bara-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Advances made against Shipping Documents. Banking business of every description transacted.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To Bermuda outwards there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO.,

COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

EDUCATIONAL ANNOUNCEMENTS.

<p>SCHOOLS FOR BOYS AND GIRLS.</p> <p>PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—UNIVERSITY EDUCATIONAL AGENCY, 122, Regent Street, W. (Est. 1869.)</p>	<p>GIRLS.</p> <p>BOURNEMOUTH.</p> <p>FONTAINEBLEAU SCHOOL, MANOR ROAD, offers to Daughters of Gentlemen liberal Education, with def. Ch. teaching. Preparation for all exams. Bright home life. Res. graduates 4; language mistresses 3; gold medalist for Swedish and medical gymnastics, games, riding, cycling, fencing. Entire charge at inclusive fees taken of pupils between the ages of 7-18 whose parents are abroad. Principal: Miss C. A. ROWLAND.</p>
<p>KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON, S.W. (Conducted by the Council of King's College, London.)</p> <p>TERMS in 1909, beginning January 12th, April 26th, September 22nd. For Prospectus (Boards and Day Boys), apply to the HEAD-MASTER.</p>	<p>RECOGNISED HIGH-CLASS SCHOOL FOR GIRLS.</p> <p>MISS PENN receives a limited number of pupils. Large staff of resident Mistresses and visiting Masters. Individual Christian Influence. Home comforts. Large house and garden, Tennis Courts and field for hockey and cricket. Riding, cycling, bathing. St. John's South View, Selwyn Road, Eastbourne. Terms on application.</p>
<p>NEWTON COLLEGE, NEWTON ABBOT, SOUTH DEVON.</p> <p>SMALL PUBLIC SCHOOL in mild but bracing climate. Prepares boys from 8 years of age for Army, Navy, Universities and Professions. Fine buildings in 20 acres of ground. Preparatory house separate. Write for Prospectus to Rev. HEAD MASTER.</p>	<p>HILL BROW, HEMEL HEMPSTEAD, HERTS. School, for Girls. Principal—Miss WHITE.</p> <p>A SMALL HOME SCHOOL, particularly adapted for girls whose parents are abroad. Small numbers. Highly efficient Mistresses and Visiting Masters. Special attention to Health and Physical Training. Reference kindly permitted to Percy Christopherson, Esq., M.A., Lockers Park, Hemel Hempstead; Mrs. E. M. Draper, 53, Chepstow Place, Kensington, W.</p>
<p>UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH. (A constituent College of the University of Wales.) President: Lord RENDEL. Principal: T. F. ROBERTS, M.A., LL.D.</p> <p>PREPARES FOR DEGREES IN Arts, Science, Law, Music, and Agriculture. Hostel accommodation for over 200 Women Students. Scholarships and Exhibitions given. Apply to the Registrar, University College, Aberystwyth.</p>	<p>OLDEN LODGE SCHOOL, PURLEY, SURREY.</p> <p>REFINED HOME SCHOOL FOR GIRLS, situated among the Surrey Hills. Every educational advantage. London Professors for all branches of Music and Art. Every home comfort. Terms moderate. Principal, Miss GOVEY.</p>
<p>LADY (Widow), living in lovely part of Sussex (Inland), would receive in her country cottage (well-furnished) one or two Children, either during Holidays or for longer—or a Lady home from abroad, as Paying Guest. Good Garden, Meadow; Cyclist, and fond of out-door life. Terms according to requirements. References exchanged. Mrs. Sewell, Nutbourne, Pulborough, Sussex.</p>	<p>SOUTHPORT MODERN SCHOOL.</p> <p>HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.C.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. Capt. J. C. UNDERWOOD, A.C.P., F.R.G.S., Head Master. (Registered teacher)</p>
<p>PARSONS MEAD, ASHTEAD, SURREY.</p> <p>GOOD HOME-SCHOOL for the Daughters of Gentlemen. Beautiful Grounds of six acres. Excellent Teachers for all subjects. Training for Home Life with special attention to Literature, Music and Art. References kindly permitted to the Countess of Pembroke, the Lady Robert Cecil, Mrs. Utterton and others.</p>	<p>SCHOOL FOR YOUNG GENTLEMEN of good social position from all parts of the Empire and from foreign Countries.</p> <p>GARRATTS HALL, BANSTEAD, SURREY HILLS.</p> <p>Garratts Hall, a fine mansion, is beautiful grounds of forty-five acres, is situated on the crest of a hill 370 feet above sea level, among the pines of Surrey.</p> <p>The aim of the School is to fit girls for the best style of home life.</p> <p>There are all forms of games, including Golf, Hunting, Riding, Driving and Cycling. Large stabling for pupils' own horses.</p> <p>The education is cultured and on modern lines. There is a large staff of resident Specialist and regular visiting Masters. Sanatorium and Studio.</p> <p>Music, Art, Languages and Literature are made a speciality.</p> <p>Pupils are received in sole charge, and can travel in the vacations if desired.</p> <p>Address—THE LADY PRINCIPAL.</p>
<p>REDFORD. THE MODERN SCHOOL.</p> <p>ONE OF HARPUR TRUST SCHOOLS with very low fees. New buildings recently opened. Splendid science rooms, art rooms, gymnasium, etc. Public school life and sound education for professions, business or engineering. Redford a specially attractive residential town. Centre for Indian and Colonial children. For Illustrated Prospectus apply to the Head Master, O. W. KAYE, M.A., Oxon.</p>	

PURE MILK & EGG POWDER

(TRUFOOD PROCESS).

100% soluble in cold water, and will not separate in solution.
Made in Cheshire from Pure Milk from Inspected Dairies.
Double the efficiency of any other Milk Powder.

"The Lancet" says:—"We regard all these preparations with distinct favour; they are an obvious advance on food preparations dried by the agency of heat above coagulating point."

Extract from *"Army & Navy Register,"* Washington, D.C., June 27, '08. Referring to above products, says—"Further reports received from the Atlantic Fleet indicate great satisfaction with the powdered egg which was added to the list of preserved provisions furnished to the Fleet on its departure from Hampton Roads. The article has met a real need, and has established itself as a permanent article of diet."

Ex-President Roosevelt took a large supply of Trumilk and Truegg with him on his hunting expedition to Africa.

We would call special attention of Army and Navy Officers, Yachtmen, and others, to the above products, which always give the greatest satisfaction.

Free Samples and Lists on application to—

CASEIN LIMITED, Culvert Works, Battersea, S.W.

Telephone : 3031 VICTORIA (2 lines).

Telegraphic Address : LAITPROTO, London.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

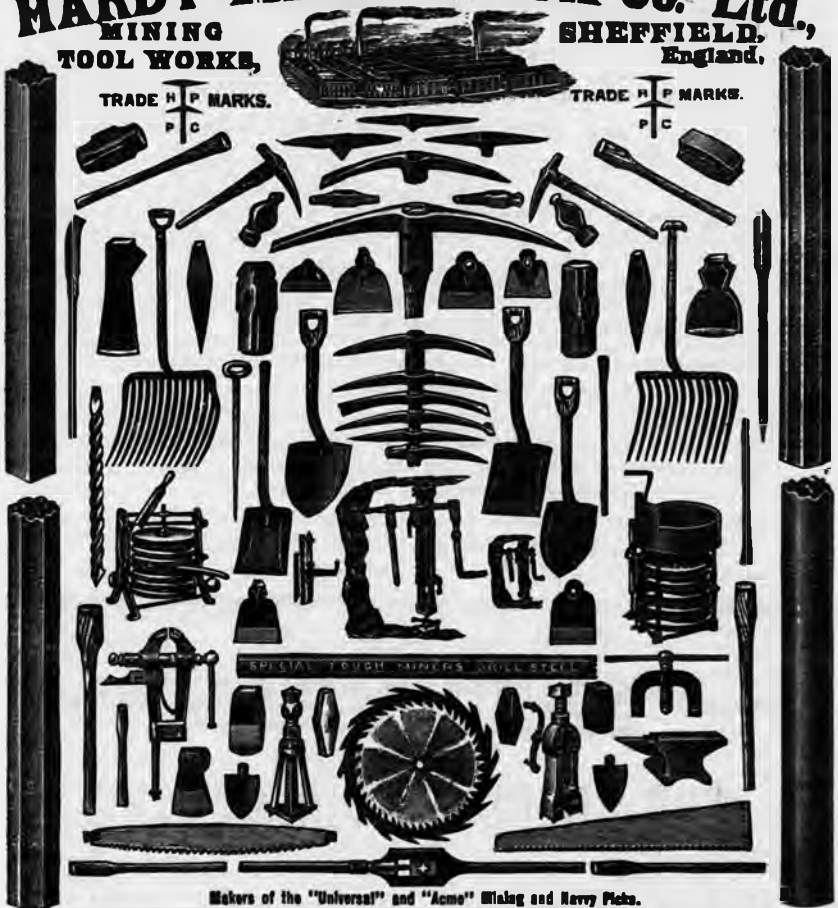
Full Particulars from the Agents :—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Hays, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Flohardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

ADVERTISEMENTS.

THE HARDY PATENT PICK CO. Ltd.,

MINING TOOL WORKS, SHEFFIELD, England.



Makers of the "Universal" and "Acme" Mining and Herry Picks.

HAND & POWER BORING MACHINES for ROCK & COAL,
PICKS, SHOVELS, SPADES, FORKS, HOES, AXES, HAMMERS, WEDGES, CROWBARS,
AND ALL MINING, QUARRY, CONTRACTORS' AND AGRICULTURAL TOOLS.

MINERS' DRILL STEEL, Saws, Files and Rasps, and Screwing Tackle.

PATENT "HARDY" ROCK DRILLS & COAL-CUTTERS.

Driven by Compressed Air or Steam.

Simplest and most durable machines extant
for Mines and Quarries.

"Hardy Simplex" Hammer Drill.

"Hardy" Special Stopping Drill.

FOR WHITE OR COLOURED LABOUR. HUNDREDS AT WORK.

THE HARDY PATENT PICK CO., LTD.,
SHEFFIELD, ENGLAND.



THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1909.

Issued Quarterly.

LONDON:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

ADVERTISEMENTS.

MANCHESTER.

LONDON.

NEWCASTLE.



MOTOR VANS & LORRIES,

PUBLIC SERVICE VEHICLES, ETC.



Part of Messrs. Shoolbred's Lacs.



Part of Messrs. Harrods' Lacs.



DUTCH EAST INDIES.

SIX FAMOUS FLEETS OF LACRES.

MESSRS. SHOOLBRED & Co.	- 45
MESSRS. HARRODS Ltd.	- 29
MESSRS. Wm. WHITELEY Ltd.	- 22
MESSRS. J. LYONS & Co., Ltd.	- 16
MESSRS. CARTER, PATERSON & Co. Ltd.	- 12
MESSRS. MAPLE & Co. Ltd.	- 10
	<hr/> 134



UGANDA.

PARAFFIN MAY
BE USED FOR
FUEL INSTEAD
OF PETROL



NIGERIA.



MALAY STATES.

MOTOR VEHICLES
FOR ALL PURPOSES
AND SUITABLE FOR
ALL TRADES.

*Lacre Industrial Vehicles
are usually driven by
men who previously drove
Horse Vans for the same
Employers.*



Part of Messrs. Whiteley's Lacs.



NEGRI SEMBILAN.



Part of Messrs. Maple's Lacs.

THE LACRE MOTOR CAR CO. Ltd.,

1-2-3-4 & 5, POLAND STREET, LONDON, W.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

Dewar House,
11/12 Haymarket,
LONDON, S.W.

Billiter Buildings,
Billiter Street,
— E.C. —

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The "Handy-Cosy" Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER**.*

ADVERTISEMENTS.

MANCHESTER.

LONDON.

NEWCASTLE.



MOTOR VANS & LORRIES,
PUBLIC SERVICE VEHICLES, ETC.



Part of Messrs. Shoolbred's Lacs.



Part of Messrs. Harrods' Lacs.



**SIX FAMOUS
FLEETS
OF
LACRES.**

MESSRS. SHOOLBRED & Co.	- 45
MESSRS. HARRODS Ltd.	- 29
MESSRS. Wm. WHITELEY Ltd.	- 22
MESSRS. J. LYONS & Co., Ltd.	- 16
MESSRS. CARTER, PATERSON & Co. Ltd.	- 12
MESSRS. MAPLE & Co. Ltd.	- 10
	134



DUTCH EAST INDIES.



NIGERIA.



UGANDA.



MALAY STATES.

PARAFFIN MAY
BE USED FOR
FUEL INSTEAD
OF PETROL

*Lacre Industrial Vehicles
are usually driven by
men who previously drove
Horse Vans for the same
Employers.*

MOTOR VEHICLES
FOR ALL PURPOSES
AND SUITABLE FOR
ALL TRADES.



Part of Messrs. Whiteley's Lacs.



NEGRI SEMBILAN.



Part of Messrs. Maple's Lacs.

THE LACRE MOTOR CAR CO. Ltd.,
1-2-3-4 & 5, POLAND STREET, LONDON, W.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**Dewar House,
11/12 Haymarket,
LONDON, S.W.**

**Billiter Buildings,
Billiter Street,
— E.C. —**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

Very suitable for Ambulance purposes: can be used as a STRETCHER.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

"EVERLASTING"

"EMPIRE" PLATE

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER AND TEA SETS,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE Excels all others and is the best wearing substitute for solid silver.

As far back as the 1862 Exhibition "EMPIRE" PLATE was awarded Prize Medals for excellence of manufacture, and it still retains that pre-eminence for which it was noted 60 years ago.



PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers,
Westminster.

ADVERTISEMENTS.

CHAS. BAKER & Co.'s



STORES LTD.

High-Class Tailoring and Outfitting

AT STRICTLY MODERATE PRICES.



Special Suits for Tropical Climates.

Made from the Newest Designs
in Fine Cashmeres and Flannels.

49/6, 57/6, 62/6, 69/6.

Patterns, Fashion Book, and
Measurement Forms post free.

*Only the most Experienced Cutters and
Tailors are employed.*

ALSO . .

SHIRTS, PYJAMAS, HOSIERY, HATS,
SUN HELMETS, BOOTS AND SHOES,
BAGS AND TRUNKS, &c., &c.

HEAD DEPÔT AND EXPORT DEPARTMENT:

271, 272, 273, 274, HIGH HOLBORN,
LONDON.

NESTLÉ'S CONDENSED MILK

ABSOLUTELY PURE.

The Richest in Cream.

UNSKIMMED, UNCOLOURED,
UNDRUGGED AND UNADULTERATED.



A comparison will
prove at once the
great superiority of
NESTLÉ'S.



The flavour is
deliciously rich and
creamy.

Free from Disease Germs.

KEEPS GOOD IN ALL CLIMATES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From **BRISTOL** (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

NESTLÉ'S CONDENSED MILK

ABSOLUTELY PURE.

The Richest in Cream.

**UNSKIMMED, UNCOLOURED,
UNDRUGGED AND UNADULTERATED.**



A comparison will
prove at once the
great superiority of
NESTLÉ'S.



The flavour is
deliciously rich and
creamy.

Free from Disease Germs.

KEEPS GOOD IN ALL CLIMATES.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)
ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.
ECONOMICAL FACING POINT LOCKS.
*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

HEAD OFFICES:
53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies
AND
R. V. VERNON, of the Colonial Office.

VOL. III.

JANUARY, 1910.

No. 3.

CONTENTS.

EDITORIAL NOTES	185
Australian Labour Parties.—Northern Territory of South Australia.— Natal Indian Immigration.—Southern Nigeria Liquor Trade, &c.	
THE ADVANCE OF RHODESIA	200
THE DEVELOPMENT OF PAPUA	201
HURRICANES AND HURRICANE RELIEF,	215
By His Honour F. H. WATKINS, I.S.O.	
BANKING IN WEST AFRICA,	228
By ROY WILSON.	
REVIEWS AND NOTICES	234
The Legislation of the Empire.—Union of South Africa.—Agriculture in the Tropics, &c.	
BUSINESS NOTES	245
Motor Transport.—Irrigation.—Small Arms, &c.	
RAILWAY NOTES	252
MEDICAL NOTES	254
COLONIAL STAMPS	260
RECENT APPOINTMENTS	263
COLONIAL OFFICERS ON LEAVE OF ABSENCE	265

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lozenges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and Dinner, from **8/6 to 10/6** per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 3/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

THE TEMPERANCE HOTELS ARE—

Kingsley Hotel,
"BOOKCRAFT, LONDON."

Thackeray Hotel,
"THACKERAY, LONDON."

Esmond Hotel,
"AGROUP, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited.
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lo Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Fireproof Floors, Perfect Sanitation, Telephones, Night Porters.

Bedrooms (including attendance) **from 3/6 to 6/-**

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

Inclusive charge for Bedroom, Attendance, Table d'hôte Breakfast and
Dinner from 8/6 to 10/6 per day.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOMS (including attendance) **FROM 2/- TO 4s. 6d. PER NIGHT.**

Full Tariff and Testimonials on application.

Kingsley Hotel,
"Bloomfield, London."

Thackeray Hotel,
"Thackeray, London."

Esmond Hotel,
"Esmond, London."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

**THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
WORKINGTON, Cumberland, ENGLAND.**

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

**BESSEMER STEEL RAILS
and FISH PLATES.**

9-lbs. to 130-lbs. PER YARD.

**STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.**

**PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.**

TORBAY PAINT.

*THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.*

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

**THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.**

MERRYWEATHERS' PATENT "Greenwich Gem" Steam Fire Engine.

THE LIGHTEST AND BEST STEAM FIRE ENGINE ON THE MARKET.



ADVANTAGES.

Fire Door and Machinery at rear.

—+—
Accessibility of Valves.

—+—
Simplicity of Machinery.

—+—
No Steam Pipes to cause trouble.

A FIRE BRIGADE CHIEF writes:—

"The 'Gem' is so compact and handy that it can easily be stoked and worked by one man—a fact that does not apply to other Fire Engines."

—+—
Adopted by London and other Fire Brigades all over the World.

—+—
MAKERS OF EVERY DESCRIPTION OF MOTOR FIRE APPARATUS.

—+—
MERRYWEATHERS' "London Made" DUB-SUB CANVAS HOSE,
woven on Improved Looms at Greenwich Road Works. It is
capable of standing great pressure, and is therefore suitable for
the most powerful Steam Fire Engines and Pumps.

—+—
WRITE FOR CATALOGUES AND LISTS.

—+—
MERRYWEATHER & SONS Ld.
63, LONG ACRE, W.C.; & WORKS, GREENWICH, S.E.,
LONDON.

ESTABLISHED OVER 200 YEARS.

ADVERTISEMENTS.

CROWN PRESERVED COAL CO., LTD.

Admiralty

Contractors.

Awards :

LONDON 1862
PARIS 1876
LIVERPOOL 1886
JAMAICA 1891



Awards :

ROYAL NAVAL 1891 & 1906
CHICAGO 1893
BORDAUX 1896
MEXICAN 1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address :—"Crown, Cardiff."
Telephone :—Nat. No. 241.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses :—

"COOMASSIE," LIVERPOOL
"APPEASABLE," LONDON.

Codes used—A, B, C, 4th and 5th Editions and Lieber's.

ESTABLISHED 1880.

CROSSLEY & CO. (Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices :—57, COLEMAN STREET, LONDON, E.C.

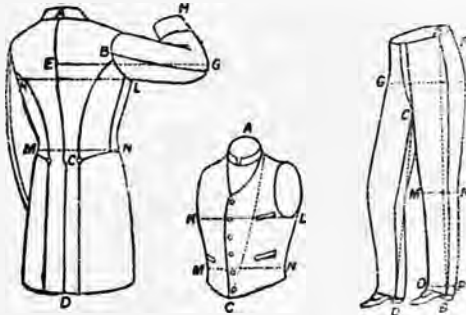
ADVERTISEMENTS.

W. EVANS & CO.,

We keep a varied and select Stock of FIRST-CLASS MATERIALS, employ only FIRST-CLASS CUTTERS and FIRST-CLASS WORKMEN—Hence the Secret of our Success.

INSTRUCTIONS FOR SELF-MEASUREMENT.

By following these instructions we guarantee good fitting and comfortable clothes.



FOR COATS OF ANY DESCRIPTION.

A to C	Inches
C .. D	"
E .. B	"
B .. G	"
G .. H	"
Breast measure, fairly tight over waistcoat	"
Waist measure, over waistcoat	"

FOR WAISTCOATS.

A to C	"
FOR TROUSERS AND BREECHES	
Side from A to N	Inches
" " A .. B	"
Leg seam C .. D	"
Round waist A	"
Round seat G H	"
Round knee M to N	"
Round foot O to P	"

PATTERNS POST FREE.

EXPORT DEPARTMENT.

Customers sending for any of the following clothes, stating colours and the kind of garment required, enclosing a draft or P.O.O. (Crossed London & South-Western Bank, Ltd.), adding cost of carriage enumerated below, will save considerable time, as all orders will be executed and despatched in about a fortnight from the date of receiving same. Customers living in any part of the world can rely on having the same fit and attention as if they visited our establishment.

ADDITIONAL MEASURES FOR ALL KINDS OF BREECHES.

Round small (just below knee) moderately tight	Inches
Round widest part of calf	"
Desirable to know.—Height, approximate weight, whether erect, normal, or inclined to stoop.	"
RIDING AND HUNTING BREECHES, £2 5s., £2 10s., £3 5s.	
EVENING DRESS SUITS, silk lined, £2 5s., £2 6s., £2 7s., £2 8s.	
LOUNGE SUITS (Blue, Tweeds and Flannels), in tropical, medium and heavy weight, £2 10s. to 5 guineas.	

NORFOLK SUITS, £3 10s. to 5 guineas.
OVERCOATS, light, medium and heavyweight, £2 10s. to 6 guineas.
TROUSERS, Tweeds, Cashmeres and Flannels, 10s. 6d. to 3s.
 Approximate cost of carriage (parcel post) per suit of clothes to the Colonies, and other countries, &c. (which must be added to cost of suit):—Canada, 5s.; Cape Colony, 7s.; Transvaal and Orange River Colony, 9s.; Rhodesia, 15s. 9d.; Nigeria, Gold Coast, West Indies, Ceylon, Hong Kong, Cyprus, Egypt, Malta, Falkland Islands, Gambia, Gibraltar, India, 3s.; Australia, 5s.; New Zealand, Brazil, &c.; Chili, 4s.; Mexico, 3s. 6d.; Argentine Republic, 4s. 10d.

Goods value £20 and upwards will be sent carriage free to any port.

OPINIONS OF THE PRESS.

"**Truth**" says:—"Our latest discovery in Tailoring is Evans & Co., who can actually fit."

"**Field**" says:—"It is with some degree of confidence that we can recommend the breeches made by Evans & Co."

"Any and every tailor will attempt breeches making, but the real artists are few and far between. Mr. Evans has made a study of breeches for many years, and takes an extraordinary amount of pains about fitting, and he has certainly solved the problem of how breeches should be made. Tightness at the knee combined with great comfort all over are very strong points with these breeches, and the cut is absolutely correct."

We have received thousands of **TESTIMONIALS** from all parts of the world from which we quote the following:—

"Hartbeestfontein, Transvaal.

"Gentlemen,—Breeches ordered arrived safely, and both as regards cut and fit leave nothing to be desired. It is interesting to note that some breeches I ordered at the same time from a well-known house (giving the same measurements) fitted me like ready-made slops. I did not think it possible for you to give such a good fit from self-measurements, and any other orders which I may require I shall certainly place with your firm.

"Yours truly, C.N.B."

When sending for patterns, state kind & colour preferred.



[Reg. Copyright.]

287, REGENT ST., & 77, GT. PORTLAND ST., LONDON, W.,
 Telegraphic Address:—"EVANOPLIS, LONDON." ENGLAND.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



**PAINT, COLOUR, and
VARNISH
MANUFACTURERS.**

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

**The India Office and Principal Indian Railways.
&c. &c.**

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel. : GERR. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

**CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.**

Many are the difficulties resulting
from the multiplication of parts in
most modern typewriters.

THE
NEW MODEL
**VISIBLE
YÖST**

Without sacrificing a single quality of value to an
operator, is to-day

**THE SIMPLEST, STRONGEST & MOST
EFFICIENT TYPEWRITER EVER BUILT,**

The No. 15 Yöst is the only Typewriter which
can be relied upon to produce good work irrespective
of climate.

Its extreme simplicity and great strength of
construction are features which have never been
equalled.

FULL OF NEW AND VALUABLE FEATURES.

Full Particulars on application.

THE YÖST TYPEWRITER CO., LTD.,

Head Office :

50, Holborn Viaduct, London, E.C.

BRANCHES OR AGENCIES THROUGHOUT THE WORLD.

S.P.5.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**



DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

THE Canadian Annual Review of Public Affairs.

AN HISTORICAL, STATISTICAL, AND DESCRIPTIVE RECORD OF
THE AFFAIRS AND PROGRESS OF CANADA DURING EACH YEAR.

By J. Castell Hopkins, F.S.S.

Issued in 1910.

600 PAGES.

9th Year of Issue.

40 ILLUSTRATIONS.

Cloth 14s. 7d.

Morocco 18s. 9d.

- "The Canadian Annual Review has become a national institution."—*Toronto World*.
- "A potent influence in welding the Provinces of Canada together."—*Toronto Globe*.
- "Judicial, encyclopædic and not too diffuse."—*Canadian Magazine*.
- "An exhaustive account of the Dominion."—*Melbourne Argus*.
- "The amount of detailed information contained in it is simply marvellous."—*Librarian, Royal Colonial Institute*.
- "An always valuable work."—*The Standard, London*.
- "The best résumé of every event of importance connected with Imperial questions."—*Britannia*.
- "Shews a refinement of technical detail, the powerful evidence of a broadminded common sense."—*British Empire Review*.

PUBLISHED BY—

THE ANNUAL REVIEW PUBLISHING CO., LIMITED,
2, College Street, Toronto, CANADA.

EDUCATIONAL ANNOUNCEMENTS.

SCHOOL FOR YOUNG GENTLEWOMEN
of good social position from all parts of the
Empire and from foreign Countries.

GARRATTS HALL, BANSTEAD. SURREY HILLS.

Garratts Hall, a fine mansion, in beautiful
grounds of forty-five acres, is situated on the
crest of a hill 570 feet above sea level, among
the pines of Surrey.

The aim of the School is to fit girls for the
best style of home life.

There are all forms of games, including Golf,
Hunting, Riding, Driving and Cycling. Large
stabling for pupils' own horses.

The education is cultured and on modern
lines. There is a large staff of resident
Specialists and regular visiting Masters.
Sanatorium and Studio.

Music, Art, Languages and Literature are
made a speciality.

Pupils are received in sole charge, and can
travel in the vacations if desired.

Address—THE LADY PRINCIPAL.

HILL BROW, HEMEL HEMPSTEAD, HERTS.

SCHOOL FOR GIRLS.

Principal—Miss WHITE.

A SMALL HOME SCHOOL,
particularly adapted for girls whose
parents are abroad. Small numbers. Highly
efficient Mistresses and Visiting Masters.
Special attention to Health and Physical
Training. Reference kindly permitted to
Percy Christopherson, Esq., M.A., Lockers Park,
Hemel Hempstead; Mrs. H. M. Draper,
53, Chepstow Place, Kensington, W.

LADY (Widow), living in lovely part
of Sussex (Inland), would receive in her
country cottage (well-furnished) one or two
Children, either during Holidays or for longer—
or a Lady home from abroad, as Paying Guest.
Good Garden, Meadow; Cyclist, and fond of
out-door life. Terms according to requirements.
References exchanged.

Mrs. S-well, Nutbourne, Pulborough, Sussex.

RECOGNISED HIGH-CLASS SCHOOL FOR GIRLS.

MISS PENN receives a limited
number of pupils. Large staff of
resident Mistresses and visiting Masters.
Individual Christian influence. Home com-
forts. Large house and garden, Tennis Courts
and field for hockey and cricket. Riding,
cycling, bathing. St. John's South View,
Selwyn Road, Eastbourne. Terms on
application.

BROMSGROVE SCHOOL, WORCESTERSHIRE.

AT LEAST SIX SCHOLARSHIPS
AND EXHIBITIONS are offered
annually in July. Value from £80 to £20.
There are also a certain number of reserved
places at reduced terms, primarily for sons of
Clergymen. Apply, the Head Master,
F. J. R. BENDY, M.A.

PARSONS MEAD, ASHTEAD, SURREY.

GOOD HOME - SCHOOL for the
Daughters of Gentlemen. Beautiful
Grounds of six acres. Excellent Teachers
for all subjects. Training for Home Life with
special attention to Literature, Music and Art.
References kindly permitted to the Countess
of Pembroke, the Lady Robert Cecil,
Mrs. Utterson and others.

SCHOOLS FOR BOYS AND GIRLS.

PROSPECTUSES OF THE LEADING
English and Continental Schools, with
every information and advice, supplied to
Parents and Guardians FREE OF CHARGE.
Please state pupils' ages, locality preferred,
and approximate school fees to be paid.—
UNIVERSITY EDUCATIONAL AGENCY,
122, Regent Street, W. (Est. 1868.)

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent
Staff, including B.A., M.Sc., F.C.V.,
A.R.C.O., etc. Preparation for all examina-
tions. Foreign boys received. Gymnasium
and Swimming Clubs, Cadet Company, Games,
etc. Capt. J. C. UNDERWOOD, A.C.P.,
F.R.G.S., Head Master. (Registered teacher.)

UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.

(A constituent College of the University
of Wales.)

President: Lord RENDEL.

Principal: T. F. ROBERTS, M.A., LL.D.

PREPARES FOR DEGREES IN
Arts, Science, Law, Music, and
Agriculture. Hostel accommodation for over
200 Women Students. Scholarships and
Exhibitions given. Apply to the Registrar,
University College, Aberystrwyth.

**KING'S COLLEGE SCHOOL,
WIMBLEDON COMMON, LONDON, S.W.**
(Conducted by the Council of King's
College, London.)

TERMS in 1909, beginning January
1 20th, April 28th, September 22nd. For
Prospectus (Boarders and Day Boys), apply to
the HEAD-MASTER.

GIRLS.

BOURNEMOUTH.

FONTAINEBLEAU SCHOOL,
MANOR ROAD, offers to Daughters of
Gentlemen liberal Education, with def. Ob-
teaching. Preparation for all exams. Bright
home life. Res. graduates 4; language mis-
tresses 3; gold medalist for Swedish and
medical gymnastics, games, riding, cycling,
fencing. Entire charge at inclusive fees taken
of pupils between the ages of 7-18 whose parents
are abroad. Principal: Miss C. A. ROWLAND.

**NEWTON COLLEGE, NEWTON ABBOT,
SOUTH DEVON.**

SMALL PUBLIC SCHOOL in mild
but bracing climate. Prepares boys from
8 years of age for Army, Navy, Universities
and Professions. Fine buildings in 20 acres
of ground. Preparatory house separate.
Write for Prospectus to Rev. HEAD MASTER.


**OLDEN LODGE SCHOOL,
PURLEY, SURREY.**

**REFINED HOME SCHOOL FOR
GIRLS,** situated among the Surrey Hills.
Every educational advantage. London Pro-
fessors for all branches of Music and Art.
Every home comfort. Terms moderate.

Principal, Miss GOVEY.

HUGO GRIEBERT & CO.,

Dealers in Rare Postage Stamps.



IMPORTERS OF UNUSED AND
USED COLONIAL STAMPS. 

*Buyers of Important collections of Postage Stamps,
Mixed Lots of Used and Unused Stamps purchased.*

A Specialty made of importing large quantities of surcharged stamps that are provisionally issued from time to time in the Colonies and other Countries. A good commission paid for prompt and immediate supplies.

Stocks or Government Remainders of obsolete Unused Stamps

PURCHASED AT HIGHEST POSSIBLE PRICES.

 We have bought by far the largest quantity of such Government Remainders that have been for sale in the various Countries within the last Twenty years. 

Full particulars of quantities, &c., should be communicated to us immediately.

WE ONLY BUY FOR CASH through our Bankers, THE LONDON CITY AND MIDLAND BANK, who settle on our behalf through their Agents in any part of the world.

*A Specimen Number of "Griebert's Philatelic Notes and Offers"
sent gratis to all applicants.*

HUGO GRIEBERT & CO.

Five Gold, &c., Medals at various Philatelic Exhibitions.
Member of the Jury, Rotterdam, 1907

170, STRAND, LONDON, W.C.

Telegrams and Cables: "GRIEBERT, LONDON."

A. B. C. Code, 5th Edition.

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

**Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.**

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. Impervious to sun-
Non-Combustible. heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos-Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath, plaster and matching. Size 8 ft. by 4 ft. — 4 ft. by 4 ft. by ½ in. thick and upwards. Manufactured under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

**Queen Anne's Chambers,
Westminster.**

BANK OF NIGERIA LIMITED.

Directors.

T. STANLEY ROGERSON, Esq., J.P. | SIR JOHN KIRK, G.C.M.G., K.C.B.
CLIFFORD B. EDGAR, Esq., J.P. | ALEXANDER MILLER, Esq.
GEORGE MILLER, Esq.

Manager and Secretary—LICHFIELD H. MOSELEY, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu, Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bara-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Advances made against Shipping Documents. Banking business of every description transacted.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorised Capital	£1,000,000.	Called-Up Capital	£200,000.
Subscribed Capital	£500,000.	Reserve Fund	£75,000.

Head Office: 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address:—"BULLION," LIVERPOOL.

London Office: 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address:—"ARREGLO," LONDON.

Hamburg Office: GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address:—"BULLION," HAMBURG.

Branches:

GAMBIA—Bathurst. **SIERRA LEONE**—Freetown.
GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

Agencies:

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LANOU, OBUASSI, SALTPOND, WINNEBAN, BONNY, ECWANCA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bella, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To Bermuda outwards there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO.,

COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1910.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.



MOTOR VANS & LORRIES,

PUBLIC SERVICE VEHICLES, Etc.

Some of the New 1910 LACRE MODELS.



Offices and Showrooms,
Poland St., London Eng.



Modern Factory, Letchworth, Eng



DUTCH EAST INDIES.

12/15 H.P. ...	10 CWT. VEHICLE.
12/15 H.P. ...	15 CWT. VEHICLE.
12/15 H.P. ...	20 CWT. VEHICLE.
12/15 H.P. ...	TAXI-CAB.*

18 H.P. ...	20 CWT. VEHICLE.
18 H.P. ...	25 CWT. VEHICLE.
18 H.P. ...	30 CWT. VEHICLE.
18 H.P. ...	2 TON VEHICLE.

30 H.P. ...	2 TON VEHICLE.
30 H.P. ...	3 TON VEHICLE.
30 H.P. ...	4 TON VEHICLE.

38 H.P. ...	4 TON VEHICLE.
38 H.P. ...	5 TON VEHICLE.

* The 1910 LACRE Taxi-Cabs, designed on very substantial lines, and is specially suited for ROUGH WORK.

Illustrations of Vehicles used in this Advertisement are reproductions from actual photographs.



NIGERIA.



UGANDA.



MALAY STATES.



Part of Messrs. Shoolbred's 48 Lacs.



Part of Messrs. Harrods' 29 Lacs.



Part of Messrs. Whiteley's 22 Lacs.

Lacre Industrial Vehicles are usually driven by men who previously drove Horse Vans for the same Employers.



Part of Messrs. Maple's Lacs.

THE LACRE MOTOR CAR CO. Ltd.,

Registered Offices, etc.—

1, 2, 3, 4, 5, Poland St., London, England.

Works—

Garden City, Letchworth, England.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11/12, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, Salaries drawn, Family and other remittances made, and
• **general Banking facilities granted.**

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds

Very suitable for Ambulance purposes: can be used as a STRETCHER.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

"EMPIRE" PLATE

SPOONS, FORKS & TABLE CUTLERY,
BREAKFAST, DINNER AND TEA SETS,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver modes, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

At the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

PURE MILK & EGG POWDER

(TRUFOOD PROCESS).

100% soluble in cold water, and will not separate in solution.

Made in Cheshire from Pure Milk from Inspected Dairies.

Double the efficiency of any other Milk Powder.

"The Lancet" says:—"We regard all these preparations with distinct favour; they are an obvious advance on food preparations dried by the agency of heat above coagulating point."

Extract from "Army & Navy Register," Washington, D.C., June 27, '08. Referring to above products, says—"Further reports received from the Atlantic Fleet indicate great satisfaction with the powdered egg which was added to the list of preserved provisions furnished to the Fleet on its departure from Hampton Roads. The article has met a real need, and has established itself as a permanent article of diet."

Ex-President Roosevelt took a large supply of Trumilk and Truegg with him on his hunting expedition to Africa.

We would call special attention of Army and Navy Officers, Yachtsmen, and others, to the above products, which always give the greatest satisfaction.

Free Samples and Lists on application to—

CASEIN LIMITED, Culvert Works, Battersea, S.W.

Telephone: 3031 VICTORIA (2 lines).

Telegraphic Address: LAITPROTO, London.

ADVERTISEMENTS.

Stanley Gibbons Ltd.,

DEALERS IN POSTAGE STAMPS
AND PHILATELIC PUBLISHERS,

391, STRAND, LONDON.

- ¶ Our stock of stamps is unsurpassed in the world.
- ¶ We are desirous of hearing from you if you are either a beginner or an advanced collector. We can supply your wants in every case. Selections sent to all responsible applicants, in the case of collectors who have had no previous business relations with us, references are respectfully desired.
- ¶ If you have anything to sell, single rare stamps, collections, or Government Stocks, kindly communicate with us, we are cash buyers for anything of interest.
- ¶ Our lists of Sets and Packets, Publications and Accessories, will be sent free on application.
- ¶ Priced Catalogue of stamps in two parts, British Empire, and Foreign Countries, post free, 2s. 10d. each.

"GIBBONS STAMP WEEKLY"
SPECIMEN COPY GRATIS.

STANLEY GIBBONS LTD.,
391, STRAND, LONDON, ENGLAND.

**THE LARGEST AND OLDEST FIRM OF STAMP DEALERS
IN THE WORLD. ESTABLISHED 1856.**

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents :—

The Rhodesia Trading Co., Ltd., SALISBURY ; The African Lakes Corporation, Ltd., ZOMBA ; F. T. Heys, PRETORIA ; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG ; Fichardt & Daniels, BLOEMFONTEIN ; Thomson, Watson & Co., CAPE TOWN ; and John T. Rennie & Sons, DURBAN.

THE BRITISH URALITE CO. (1908), LTD.

***Contractors to the Crown Agents and other
Government Departments.***

Supply Bungalows ready for shipment, walled, ceiled, and roofed with their materials proof against fire, heat, cold and vermin.

ASBESTONE TILES
12", 16", and 18" square.

THE ONLY BRITISH MANUFACTURERS OF THESE MATERIALS.

Write for Colonial Catalogue to—

THE BRITISH URALITE CO. (1908), LTD.,
16, ST. HELEN'S PLACE, LONDON, E.C.

ADVERTISEMENTS.

JOHN EYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE **FROM** **Beira, Durban and Cape Town**

OFFERS SPECIALLY REDUCED FARES TO
CIVIL SERVANTS.

Full Particulars from the Agents :-

The Rhodesia Trading Co., Ltd., SALISBURY : The African Lakes Corporation, Ltd., ZOMBA : F. T. Heys, PRETORIA : Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG : Fichardt & Daniels, BLOEMFONTEIN : Thomson, Watson & Co., CAPE TOWN : and John T. Rennie & Sons, DURBAN.

THE **BRITISH URALITE CO. (1908), LTD.**

***Contractors to the Crown Agents and other
Government Departments.***

Supply Bungalows ready for shipment, walled, ceiled, and roofed with their materials proof against fire, heat, cold and vermin.

ASBESTONE TILES
12", 16", and 18" square.

THE ONLY BRITISH MANUFACTURERS OF THESE MATERIALS.

Write for Colonial Catalogue to—

THE BRITISH URALITE CO. (1908), LTD.,
16, ST. HELEN'S PLACE, LONDON, E.C.

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies
AND
R. V. VERNON, of the Colonial Office.

VOL. III.

APRIL, 1910.

No. 4.

CONTENTS.

EDITORIAL NOTES

273

The Georgian Bay Canal Scheme.—Canada and Germany.—Proportional Representation in South Africa.—The Upper House in the Dominions.—Suggestions for Imperial Development.—Canada and the West Indies.—East African Steamship Service.—White Races in the Tropics, &c.

THE EMPIRE'S TIMBER SUPPLY

289

THE RUWENZORI COUNTRY

294

THE FRENCH IN THE SEYCHELLES

302

WITH THE GOVERNOR ON TOUR

306

BUSINESS NOTES

309

Commercial enterprises in the Colonies.—Tin, Oil, Rubber.—Minerals of Southern Nigeria.—The Soda Lake.—Electric Lighting.—W.A. Traction Engine.

RAILWAY NOTES

327

Narrow Gauge Railways.—West Africa.—Uganda.—Renard Trains.

MEDICAL NOTES

339

Anchylostomiasis.—Pellagra.—Sleeping Sickness.

REVIEWS AND NOTICES

347

COLONIAL STAMPS

350

RECENT APPOINTMENTS

352

COLONIAL OFFICERS ON LEAVE OF ABSENCE

354

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Perfect Sanitation, Fireproof Floors, Telephones, Night Porters.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/6 to 8/-.**

TABLE D'HÔTE DINNER, SIX COURSES, 3/-.

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/- to 6/6.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOOKCRAFT, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON." |

Esmond Hotel,
"ASBOUR, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post. on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Perfect Sanitation, Fireproof Floors, Telephones, Night Porters.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/6 to 8/-.**

TABLE D'HÔTE DINNER, SIX COURSES, 3/-.

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

ALSO UNDER THE SAME MANAGEMENT.

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/- to 6/6.**

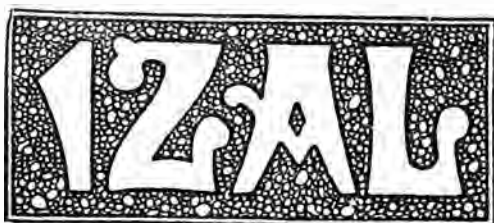
Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
"BOECRAFT, LONDON."

Thackeray Hotel,
"THACKERAY, LONDON."

Esmond Hotel,
"ASBOTT, LONDON."



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS
and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.

PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.

ALBION

UTILITY MOTORS

NOTICE

(Scotstoun, Glasgow, 1st January, 1910).

We beg to intimate that the Lacre Motor Car Coy. Ltd., London, have ceased to be our concessionaires for England and Wales.

Special features for Colonies:

Extra Ground Clearance.

Large Petrol Tanks.

Special Cooling Arrangement.

Faransure Tyres.

Detachable Steel Flanges.

Albion Motor Vehicles still occupy the premier position for Simplicity and Reliability. Our experimental work was all done years ago, and we claim to be the largest manufacturers of Motor Vans, Lorries, Char-a-bancs, etc., with a capacity up to 2 ton load, of any Firm in Europe.

We strongly recommend the fitting of Faransure Tyres where the Vehicles are for use abroad, owing to the ease with which new rubbers can be fixed by the driver without any assistance.

ALBION MOTOR
CAR CO., LTD.,
Scotstoun, GLASGOW.

London Depot:
21-22, Upper Rathbone Place, W.



CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232. Code :—A.B.C. 4th and 5th Editions.
Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

GOODLASS, WALL & CO. LTD.,

LIVERPOOL.



—*—

PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

—*—

CONTRACTORS TO :—

The Lords Commissioners of the Admiralty.

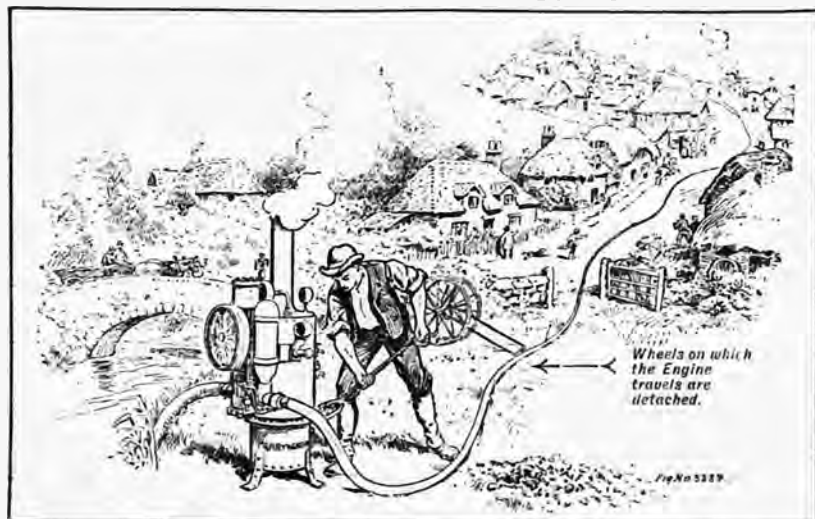
The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.

MERRYWEATHERS' Fire & Pumping Engine

"VALIANT" Pattern.



**"VALIANT" PUMPING THROUGH 1,000 FT. OF HOSE WITH A RISE
IN THE GROUND OF 80 FT.**

INVALUABLE FOR:—

Fire Protection. Water Supply. Irrigation.
One man only required to work it.
Weight, 6½ cwt., 4 men can carry it over rough roads.
Simple. Light. Strong.

AN ENGINEER writes:—

"The 'Valiant' has done excellent service in three large fires recently; and it has also been used as a pumping engine to drain foundations in connection with our works extensions, in which capacity it proved most useful."

WRITE FOR PAMPHLET, No. 738 M.C.O.

**MERRYWEATHER & SONS,
FIRE ENGINE & HOSE WORKS, GREENWICH, S.E.,
LONDON,
ESTABLISHED OVER 200 YEARS.**

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses:—

"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.



DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins. by 4 ins. deep). **THE JOINTS ARE UNAFFECTED BY HEAT.**

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

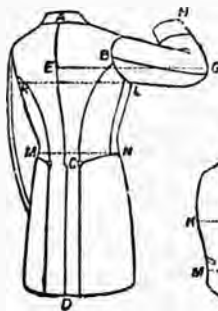
ROYAL DOULTON POTTERIES, LONDON, S.E.

W. EVANS & CO.,

We keep a varied and select Stock of FIRST-CLASS MATERIALS, employ only FIRST-CLASS CUTTERS and FIRST-CLASS WORKMEN—Hence the Secret of our Success.

INSTRUCTIONS FOR SELF-MEASUREMENT.

By following these instructions we guarantee good fitting and comfortable clothes.



FOR COATS OF ANY DESCRIPTION.

A to C	Inches
C " D	"
E " B	"
B " G	"
G " H	"
Breast measure, fairly tight over waistcoat	"
Waist measure, over waistcoat	"

FOR WAISTCOATS.

A to C	"
FOR TROUSERS AND BREECHES	
Side from A to N	Inches
" " A " B	"
Leg seam O " D	"
Round waist A	"
Round seat G H	"
Round knee M to N	"
Round foot O to P	"

PATTERNS POST FREE.

EXPORT DEPARTMENT.

Customers sending for any of the following clothes, stating colours and the kind of garment required, enclosing a draft or P.O.O. (Crossed London & South-Western Bank, Ltd.), adding cost of carriage enumerated below, will save considerable time, as all orders will be executed and despatched in about a fortnight from the date of receiving same. Customers living in any part of the world can rely on having the same fit and attention as if they visited our establishment.

ADDITIONAL MEASURES FOR ALL KINDS OF BREECHES.

Round small (just below knee) moderately tight	Inches
Round widest part of calf	"

Desirable to know.—Height, approximate weight, whether erect, normal, or inclined to stoop.

RIDING AND HUNTING BREECHES, £2 5s., £2 15s., £3 5s.

EVENING DRESS SUITS, silk lined, £6 5s., £6 8s., £7 7s., £8 8s.

LOUNGE SUITS (Blues, Tweeds and Flannels), in tropical, medium and heavy weight, £2 10s. to 6½ guineas.

NORFOLK SUITS, £3 10s. to 5 guineas.

OVERCOATS, light, medium and heavy weight, £2 10s. to 6 guineas.

TROUSERS, Tweeds, Cashmeres and Flannels, 10s. 6d. to 35s.

Approximate cost of carriage (parcel post) per suit of clothes to the Colonies, and other countries, &c. (which must be added to cost of suit):—Canada, 5s.; Cape Colony, 7s.; Transvaal and Orange River Colony, 5s.; Rhodesia, 15s. 9d.; Nigeria, Gold Coast, West Indies, Ceylon, Hong Kong, Cyprus, Egypt, Malta, Falkland Islands, Gambia, Gibraltar, India, 3s.; Australia, 5s.; New Zealand, Brazil, 8s.; Chili, 4s.; Mexico, 3s. 6d.; Argentine Republic, 4s. 10d.

Goods value £20 and upwards will be sent carriage free to any port.

OPINIONS OF THE PRESS.

"**Truth**" says:—"Our latest discovery in Tailoring is Evans & Co., who can actually fit."

"**Field**" says:—"It is with some degree of confidence that we can recommend the breeches made by Evans & Co."

"Any and every tailor will attempt breeches making, but the real artists are few and far between. Mr. Evans has made a study of breeches for many years, and takes an extraordinary amount of pains about fitting, and he has certainly solved the problem of how breeches should be made. Tightness at the knee combined with great comfort all over are very strong points with these breeches, and the cut is absolutely correct."

We have received thousands of **TESTIMONIALS** from all parts of the world from which we quote the following:—

"Hartebeestfontein, Transvaal.

"Gentlemen,—Breeches ordered arrived safely, and both as regards cut and fit leave nothing to be desired. It is interesting to note that some breeches I ordered at the same time from a well-known house (giving the same measurements) fitted me like ready-made slops. I did not think it possible for you to give such a good fit from self-measurements, and any other orders which I may require I shall certainly place with your firm.

"Yours truly, O.N.B."

When sending for patterns, state kind & colour preferred.



[Reg. Copyright.]

287, RECENT ST., & 77, GT. PORTLAND ST., LONDON, W., ENGLAND.

Telegraphic Address:—"EVANOPLIS, LONDON."

ADVERTISEMENTS.

THE
BRITISH URALITE CO. (1908), LTD.

**Contractors to the Crown Agents and other
Government Departments.**

Supply Bungalows ready for shipment, walled,
ceiled, and roofed with their materials proof
against fire, heat, cold and vermin.

ASBESTONE TILES
12", 16", and 18" square.

THE ONLY BRITISH MANUFACTURERS OF THESE MATERIALS.

Write for Colonial Catalogue to—

THE BRITISH URALITE CO. (1908), LTD.,
16, ST. HELEN'S PLACE, LONDON, E.C.

"ETERNIT"
(ASBESTOS-CEMENT)
SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides. 66½ lighter weight per Square than Bangor Slates. 30 per cent. greater mechanical and tensile strength. Non-Conducting. Non-Combustible.	Impervious to sun- heat, frost and rain.
--	---

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos-Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath,
plaster and matching. Size 8 ft. by 4 ft. by ½ in. thick and upwards. Manufactured
under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

YOU CAN SAVE

half the time usually spent in attending to
correspondence, preparing reports, indents, etc.,
by using

- . THE - .

NEW MODEL

YÖST TYPEWRITER

and at the one operation produce several
copies.

The work will be more legible and you will
eliminate the risk of errors.

The Machine is easy to learn, extremely
durable and economical to maintain.

The writing is always in sight.

Any style of type can be supplied to suit
individual requirements.

Full particulars on application.

THE YÖST TYPEWRITER CO., LTD.,
50, Holborn Viaduct, London, E.C.

EDUCATIONAL ANNOUNCEMENTS.

<p>LADY (Widow), living in lovely part of Sussex (Inland), would receive in her country cottage (well-furnished) one or two Children, either during Holidays or for longer—or a Lady home from abroad, as Paying Guest. Good Garden, Meadow; Cyclist, and fond of out-door life. Terms according to requirements. References exchanged. Mrs. Sewell, Nutbourne, Pulborough, Sussex.</p>	<p>PARSONS MEAD, ASHTEAD, SURREY</p> <p>GOOD HOME - SCHOOL for the Daughters of Gentlemen. Beautiful Grounds of six acres. Excellent Teachers for all subjects. Training for Home Life with special attention to Literature, Music and Art. References kindly permitted to the Countess of Pembroke, the Lady Robert Cecil, Mrs. Utterton and others.</p>
<p>UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH. (A constituent College of the University of Wales.) President: LOAN RENDEL. Principal: T. F. ROBERTS, M.A., LL.D.</p> <p>PREPARES FOR DEGREES IN Arts, Science, Law, Music, and Agriculture. Hostel accommodation for over 200 Women Students. Scholarships and Exhibitions given. Apply to the Registrar, University College, Aberystwyth.</p>	<p>SOUTHPORT MODERN SCHOOL.</p> <p>HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.O.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. CAPT. J. C. UNDERWOOD, A.C.F., F.R.G.S., Head Master. (Registered teacher.)</p>
<p>BROMSGROVE SCHOOL, WORCESTERSHIRE.</p> <p>AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £20. There are also a certain number of reserved places at reduced terms, primarily for sons of Clergymen. Apply to the Head Master, F. J. R. HENDY, M.A.</p>	<p>SCHOOLS FOR BOYS AND GIRLS.</p> <p>PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—UNIVERSITY EDUCATIONAL AGENCY, 122, Regent Street, W. (Est. 1858.)</p>
<p>HILL BROW, HEMEL HEMPSTEAD, HERTS. SCHOOL FOR GIRLS. Principal—Miss WHITE.</p> <p>A SMALL HOME SCHOOL, particularly adapted for girls whose parents are abroad. Small numbers. Highly efficient Mistresses and Visiting Masters. Special attention to Health and Physical Training. Reference kindly permitted to Percy Christopherson, Esq., M.A., Lockers Park, Hemel Hempstead; Mrs. H. M. Draper, 53, Chepstow Place, Kensington, W.</p>	<p>KING'S COLLEGE SCHOOL, WIMBLEDON COMMON, LONDON, S.W. (CONNECTED BY THE COUNCIL OF KING'S COLLEGE, LONDON.)</p> <p>TERMS in 1910, beginning January 19th, April 27th, September 21st. For Prospectus (Boarders and Day Boys), apply to the HEAD-MASTER.</p>

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To and from Bermuda there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO.,

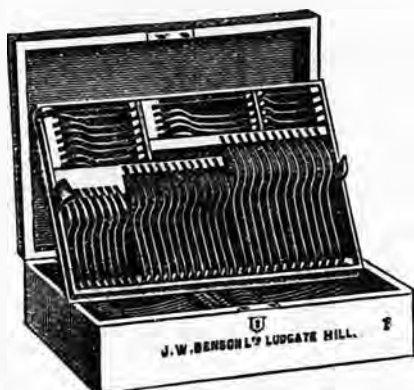
COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Tray, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

"EMPIRE" & STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY, AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver models, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

At the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

CROWN PRESERVED COAL CO., LTD.

Admiralty

Contractors.

Awards:

LONDON 1862
PARIS 1875
LIVERPOOL 1886
JAMAICA 1891



Awards:

ROYAL NAVAL 1891 & 1905
CHICAGO 1893
BORDEAUX 1895
MEXICAN 1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address:—"Crown, Cardiff."
Telephone:—Nat. No. 241.

CROSSLEY & CO. (Established 1845.)
ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE
FROM
Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO
CIVIL SERVANTS.

Full Particulars from the Agents :—

The Rhodesia Trading Co., Ltd., SALISBURY ; The African Lakes Corporation, Ltd., ZOMBA ; F. T. Heys, PRETORIA ; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG ; Fichardt & Daniels, BLOEMFONTEIN ; Thomson, Watson & Co., CAPE TOWN ; and John T. Rennie & Sons, DURBAN.

UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.
LONDON AND SOUTHAMPTON
TO
CAPE COLONY, NATAL, DELAGOA BAY, BEIRA,
EAST AFRICAN PORTS, and MAURITIUS,
calling at Madeira, Las Palmas, Teneriffe, Ascension,
St. Helena, and Lobito Bay.

WEEKLY SAILINGS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.

ADVERTISEMENTS.

DO **YOU WISH**
TO DO **BUSINESS**

WITH

PUBLIC BODIES?

IF SO, ADVERTISE IN THE

Local Government Journal

AND

OFFICIALS' GAZETTE.

Established 38 Years.

The Medium
between Contractors & Public Authorities.

SATURDAY, Price ONE PENNY.

STANLEY E. ROGERS,
27a, FARRINGTON STREET, LONDON, E.C.

**A VALUABLE MEDIUM FOR
DEVELOPING BUSINESS**

between the United Kingdom and India is the

“HOME AND COLONIAL MAIL.”

(WEEKLY)

For INDIA, CHINA, JAPAN, and the COLONIES.

ESTABLISHED over twenty-five years ago, this Journal occupies a unique position as a Commercial Newspaper, representative of the important planting and mercantile interests of India, Ceylon and the Far East.

It is filed in the offices of Tea Garden and Produce Agents in London and Calcutta, and is read by all interested in commerce, planting, and produce everywhere. Complete information is given about Tea, Rubber, and other produce, together with the machinery used.

Lists of Tea and Rubber Companies registered in London, Reports of Meetings and statistical information about produce, etc., appear every week.

Annual Subscription post free to India and the Far East, £1 7s.

Advertisement Rates on application to the Manager,

HOME AND COLONIAL MAIL,
Temple Chambers, Temple Avenue, E.C.

Telegraphic Address: “Brookleigh,” London.

FERRO-CONCRETE

A MONTHLY REVIEW.

CONTAINS ALL THE LATEST
THEORETICAL AND PRACTICAL DATA
ON
REINFORCED CONCRETE CONSTRUCTION

Specimen Copies - - - - **3d. post free.**
Annual Subscription - - - - **2s. 6d. post free.**

LONDON :

St. Bride's House, 24, Bride Lane, Fleet St., E.C.

THE Canadian Annual Review of Public Affairs.

AN HISTORICAL, STATISTICAL, AND DESCRIPTIVE RECORD OF
THE AFFAIRS AND PROGRESS OF CANADA DURING EACH YEAR.

By J. Castell Hopkins, F.S.S.

600 PAGES.
9th Year of Issue.

Issued in 1910.

40 ILLUSTRATIONS.
Cloth 14s. 7d.
Morocco 18s. 6d.

- "The Canadian Annual Review has become a national institution."—*Toronto World*.
"A potent influence in welding the Provinces of Canada together."—*Toronto Globe*.
"Judicial, encyclopædic and not too diffuse."—*Canadian Magazine*.
"An exhaustive account of the Dominion."—*Melbourne Argus*.
"The amount of detailed information contained in it is simply marvellous."—
Librarian, Royal Colonial Institute.
"An always valuable work."—*The Standard*, London.
"The best résumé of every event of importance connected with Imperial questions."
—*Britannia*.
"Shows a refinement of technical detail, the powerful evidence of a broadminded
common sense."—*British Empire Review*.
-

PUBLISHED BY—

THE ANNUAL REVIEW PUBLISHING CO., LIMITED,
2, College Street, Toronto, CANADA.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorised Capital	- £1,000,000.	Called-Up Capital	- £200,000.
Subscribed Capital	- £500,000.	Reserve Fund	- £75,000.

Head Office : 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address:—"BULLION," LIVERPOOL.

London Office : 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address:—"ARREGLO," LONDON.

Hamburg Office : GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address:—"BULLION," HAMBURG.

Branches :

GAMBIA—Bathurst. **SIERRA LEONE**—Freetown.
GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

Agencies :

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LAHOU, OBUASSI, SALTPOND WINNEBAH, BONNY, ECWANCA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody. Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

T. STANLEY ROGERSON, Esq., J.P.

SIR JOHN KIRK, G.C.M.G., K.C.B.

CLIFFORD B. EDGAR, Esq., J.P.

ALEXANDER MILLER, Esq.

GEORGE MILLER, Esq.

Manager and Secretary—O. WILMOT, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bata-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Advances made against Shipping Documents. Banking business of every description transacted.

THE
COLONIAL OFFICE
JOURNAL

APRIL, 1910.

Issued Quarterly.

LONDON :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

ADVERTISEMENTS.

MANCHESTER. LONDON. LETCHWORTH. GLASGOW. NEWCASTLE.

NO TRAINING
OR KNOWLEDGE
OF MECHANISM
REQUIRED TO
DRIVE LACRE
VEHICLES.



MOTOR
VEHICLES FOR
ALL PURPOSES
AND
SUITABLE FOR
ALL TRADES.

MOTOR VANS & LORRIES.

PUBLIC SERVICE VEHICLES, Etc.

1910 TYPE LACRES.

WE MANUFACTURE **18** DISTINCT MODELS
(ALL NEW DESIGNS.)

ALL REQUIREMENTS CATERED FOR.

2-CYLINDER & 4-CYLINDER MOTORS.—12/15 h.p., 18 h.p., 30 h.p., and 38 h.p.

COMMERCIAL VEHICLES TO CARRY LOADS FROM
10 cwts. to 5 tons.

TAXI-CABS. CHAR-A-BANCs. MOTOR BUSES.

*Minimum Number and Variety of Parts. Every Part Standardised, Catalogued and Coded.
Many of the Wearing Parts interchangeable with those contained in earlier Types.*

NO EXPERIMENTS. ALL DESIGNS ON APPROVED LINES.
SIMPLICITY THE KEYNOTE OF DESIGN.



UGANDA.

CONTRACTORS TO—

The War Office. India Office.
The Govts. of New Zealand.
Transvaal.
Federated Malay States,
Ceylon, Uganda, Nigeria, Ibadan,
Perak, Sierra Leone, Negri
Sembilan, etc., etc.



MALAY STATES.

Particulars, Prices
and Illustrations of
1910 Type Lacs
Post free
on application.



THE PIONEERS
OF THE
MOTOR VAN
TRADE.

*Photograph of our Modern Factory at Letchworth built last Autumn
for the production of the new type Lacs.*

THE LACRE MOTOR CAR CO. Ltd.,

Registered Offices, etc.—

1, 2, 3, 4 & 5, POLAND STREET, LONDON, ENGLAND.

Works:
LETCWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED."
LONDON and LETCWORTH, ENGLAND.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11/12, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of Baggage for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER**.*

If you want to get into Business Relationship WITH ARCHITECTS, BUILDERS & CONTRACTORS IN GREAT BRITAIN

Your Best Medium is an Advertisement in

"THE ARCHITECT & CONTRACT REPORTER,"

The Leading Organ of the Architectural Profession.

The charge for a Page is - - £8 8 0
" " Half Page is - £4 10 0

SEND US A TRIAL ORDER.

P. A. GILBERT WOOD,
6-11, Imperial Buildings, Ludgate Circus,
London, England.

"THE ARCHITECT,"
Price 4d. weekly.

"THE ARCHITECT" CARTOONS

Of the Leading Architects of Great Britain published to date are:

Mr. ERNEST GEORGE.
Mr. T. G. JACKSON.
Mr. JOHN BELCHER.
Sir ASTON WEBB.
Sir ALFRED B. THOMAS.
Sir R. ROWAND ANDERSON.
Sir THOMAS DREW.
Mr. T. E. COLLCUTT.
Mr. LEONARD STOKES.
Mr. EDWIN T. HALL.
Mr. J. G. S. GIBSON.
Mr. NORMAN SHAW.
Professor BERESFORD PITE.
Mr. H. T. HARE.
Mr. E. GUY DAWBER.
Mr. T. W. CUTLER.
Mr. REGINALD BLOMFIELD.
Mr. PAUL WATERHOUSE.
Mr. G. H. FELLOWES PRYNNE.
Mr. WILLIAM A. PITE.
Mr. CHAS. H. HEATHCOTE.
Professor F. M. SIMPSON.
Mr. ERNEST NEWTON.
Mr. WALTER CAVE.
Mr. JOHN W. SIMPSON.
Mr. A. N. PRENTICE.
Mr. ARTHUR C. BLOMFIELD.
Mr. PAUL OGDEN.
Mr. A. M. MACKENZIE.
Mr. ALEXANDER ROSS.
Mr. EDWIN L. LUTYENS.

Back Numbers 4d. each, by post 4½d., on application to Publisher, Rooms 6-11, Imperial Buildings, Ludgate Circus, London.

"THE ARCHITECT" COLLEGE SERIES

Appeared on the following dates. Back Numbers can be obtained.

MERTON.

The Mob Quad ... May 8, 1908
Gateway of Inner Quad ... May 8, 1908
Tower from the Ground ... May 16, 1908
The Old Gateway ... May 16, 1908
Exterior from the Fields ... May 22, 1908
Entrance to Front Quad ... May 22, 1908
The Inner Quad ... May 28, 1908
The New Additions ... May 28, 1908
The Dining Hall ... June 12, 1908
The Library ... June 12, 1908
The Chapel ... June 12, 1908
The Warden's House ... June 19, 1908
The Modern Additions ... June 26, 1908

ST. JOHN'S.

Front Quad Gateway ... July 3, 1908
Back Quad Gateway ... July 3, 1908
Front Quad ... July 10, 1908
Back Quad ... July 10, 1908
Dining Hall ... July 24, 1908
Library ... July 24, 1908
Chapel and President's Dwelling ... July 31, 1908
Garden Front ... July 31, 1908

TRINITY.

Front Quad ... August 7, 1908
Chapel ... August 7, 1908
Interior of Chapel ... August 14, 1908
Organ Screen ... August 14, 1908
From the Lawn ... August 21, 1908
Dining Hall ... August 21, 1908
New Buildings ... September 4, 1908
Chapel Quad ... September 4, 1908

WADHAM.

The Quad ... October 23, 1908
Garden Front ... October 30, 1908
Warden's House ... October 30, 1908
The Hall ... November 13, 1908
The Chapel ... November 13, 1908

QUEEN'S.

Front Quad ... April 16, 1909
Back Quad and Library ... April 30, 1909
Back Quad ... April 30, 1909
Interior of Chapel ... May 14, 1909
Interior of Library ... May 14, 1909

HERTFORD.

The Exterior ... June 11, 1909
Interior of Hall ... June 11, 1909
The Quad ... June 25, 1909
A Further View of Quad ... June 25, 1909

KEBLE.

Hall and Entrance ... July 9, 1909
Interior of Hall ... July 9, 1909
Exterior and Interior of Chapel ... July 23, 1909

BRASENORSE.

From High Street ... September 24, 1909
Chapel Quad ... September 24, 1909
Front Quad ... October 8, 1909
Back Quad ... October 8, 1909
Showing Radcliffe Camera and St. Mary's Spire ... October 22, 1909
Library ... October 22, 1909
Back Quad ... November 5, 1909
Hall ... November 5, 1909
Chapel ... November 19, 1909
Organ Screen in Chapel ... November 19, 1909

Back Numbers 4d. each, by post 4½d., on application to Publisher, Rooms 6-11, Imperial Buildings, Ludgate Circus, London.

Stanley Gibbons Ltd.,

DEALERS IN POSTAGE STAMPS
AND PHILATELIC PUBLISHERS,

391, STRAND, LONDON.

- ¶ Our stock of stamps is unsurpassed in the world.
- ¶ We are desirous of hearing from you if you are either a beginner or an advanced collector. We can supply your wants in every case. Selections sent to all responsible applicants, in the case of collectors who have had no previous business relations with us, references are respectfully desired.
- ¶ If you have anything to sell, single rare stamps, collections, or Government Stocks, kindly communicate with us, we are cash buyers for anything of interest.
- ¶ Our lists of Sets and Packets, Publications and Accessories, will be sent free on application.
- ¶ Priced Catalogue of stamps in two parts, British Empire, and Foreign Countries, post free, 2s. 10d. each.

"GIBBONS STAMP WEEKLY"
SPECIMEN COPY GRATIS.

STANLEY GIBBONS LTD.,
391, STRAND, LONDON, ENGLAND.

**THE LARGEST AND OLDEST FIRM OF STAMP DEALERS
IN THE WORLD. ————— ESTABLISHED 1856.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				s.	d.
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

	s.	d.
United Kingdom - - -	6	6
Canada - - -	8	8
Other Colonies and Abroad -	13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY AND FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

HEAD OFFICES:

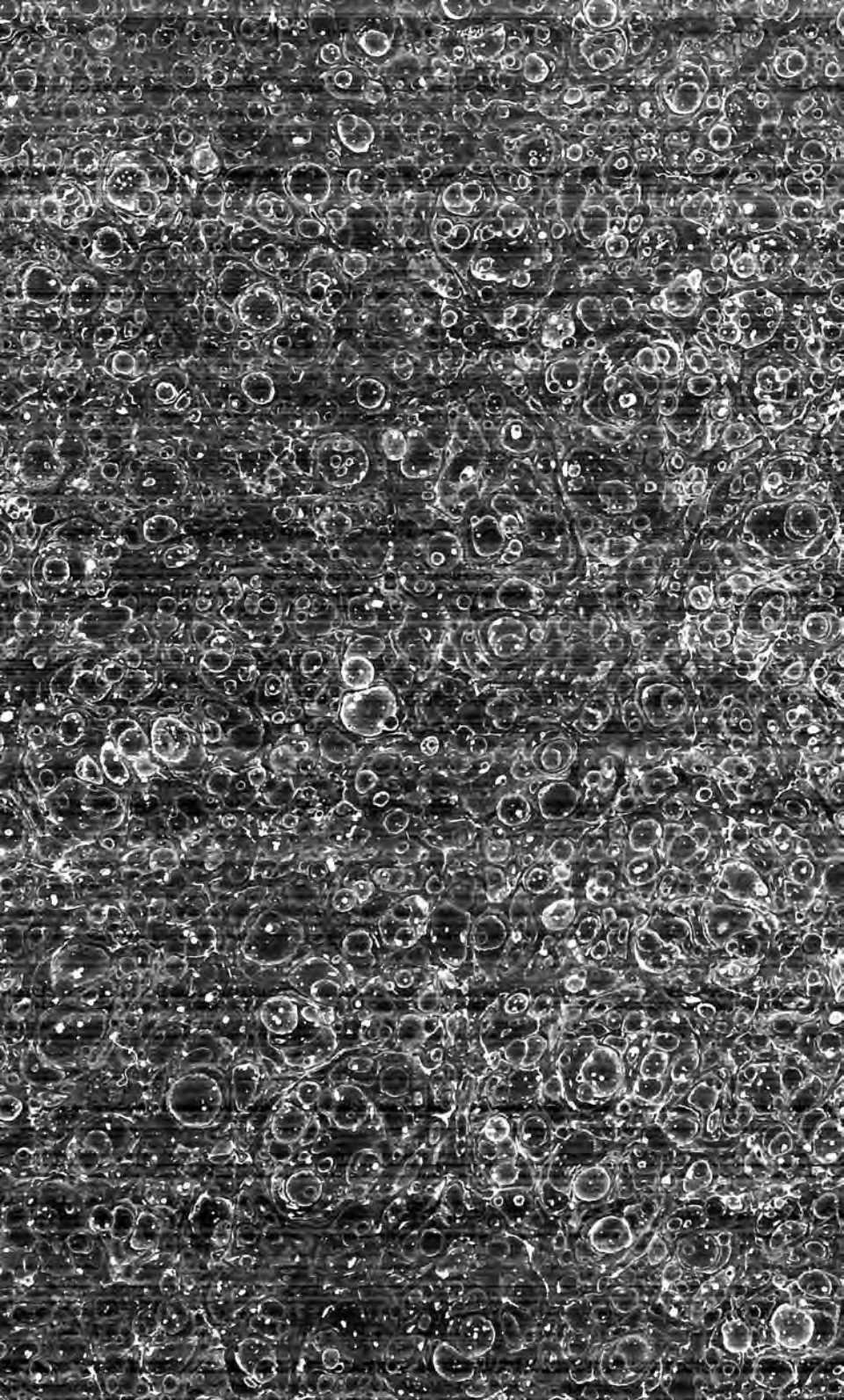
53, Victoria Street, Westminster, London, S.W.

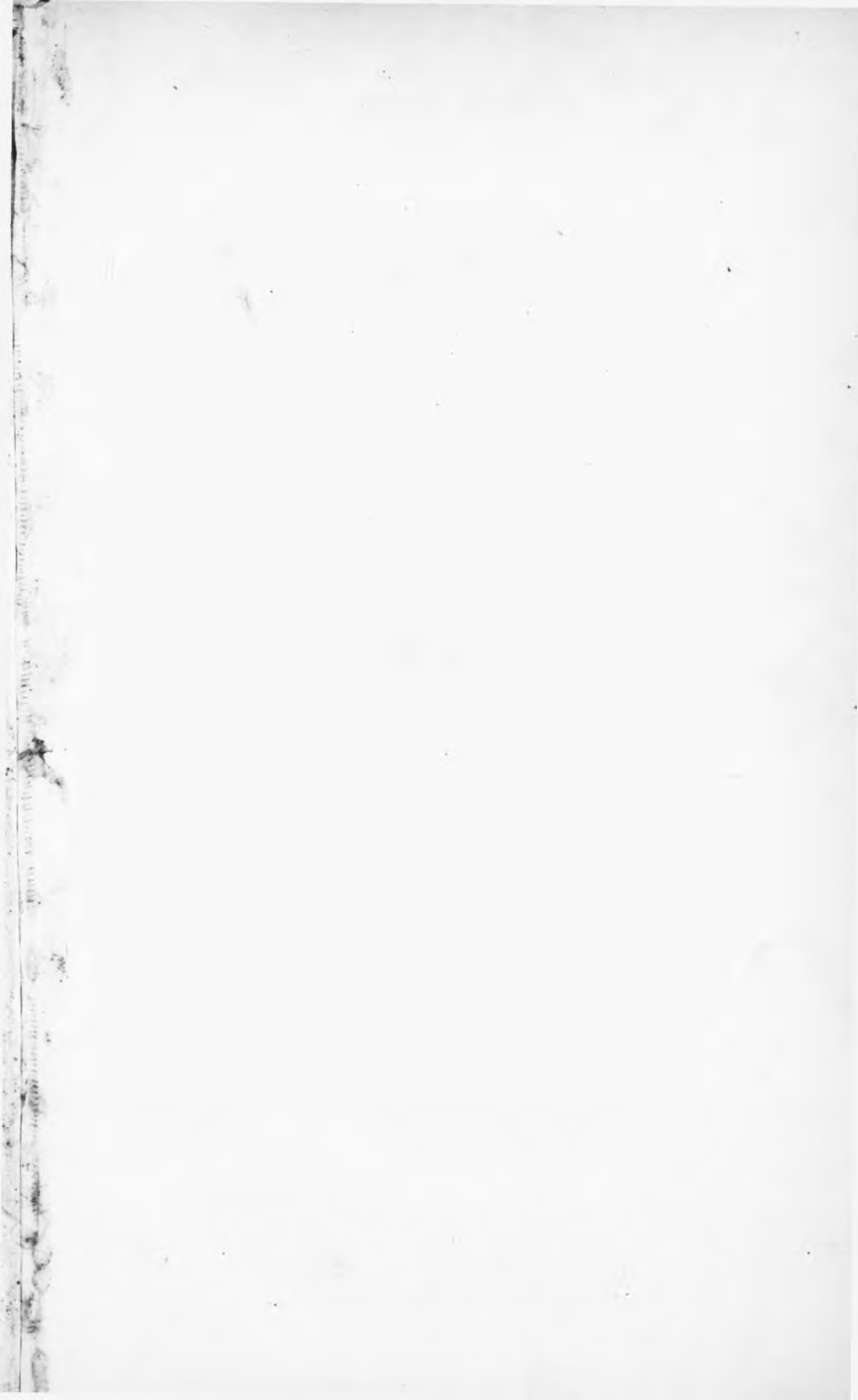
WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.











Braunford 1984

THE COLONIAL OFFICE JOURNAL.

VOL. IV.

JULY, 1910.

No. I.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE result of the General Election in Australia has been to give the Labour Party a majority of ten in the Senate and of thirteen in the House of Assembly, and the change in the political situation thus brought about constitutes an event of first-rate importance. Mr. Deakin's resignation and Mr. Fisher's acceptance of office have followed as a matter of course. This is not the first occasion when a Labour Ministry has held office in the Commonwealth. Mr. Fisher was Prime Minister from November, 1908, to June, 1909, and Mr. J. C. Watson held office as head of a Labour Cabinet for four months in 1904; but on each of these occasions, not only was the Government's tenure of office very brief, but it was dependent on the sufferance of other parties. Neither Mr. Watson nor Mr. Fisher has on any previous occasion been the head of a party constituting an absolute majority of both Houses. Australia, ever since the attainment of federation, has been habituated to the three-party system, and it would hardly be an exaggeration to say that under the working of that system the Labour Party has found itself able to exercise more influence on the course of legislation in opposition than in office. When Mr. Deakin joined forces with Mr. Cook a year ago to form the Fusion party, the Commonwealth obtained its first experience of the two-party system, and of this there is now likely to be a continuance. In his "Notes on a Visit to Australia, New

Zealand and Fiji," recently issued as a White Paper, Sir Charles Lucas expressed the opinion "that the dividing line in politics everywhere tends more and more to be the line between labour and non-labour," and in Australia, at any rate, this division may now be regarded as an accomplished fact.

The political change in Australia is unlikely to lead to any great alteration in the relations between the Commonwealth and the Home Government. Mr. Fisher's policy during his previous brief term of office, and the programme upon which he invited the support of the Australian electors, show him to be a not less ardent Imperialist than Mr. Deakin, and upon such questions as the naval and military schemes of the Commonwealth there will be no serious discontinuity of policy. In the "Notes" to which we have referred above, Sir Charles Lucas remarks that "in these British communities, which are shaping into so many British nations, of the two main parties in the State—labour and non-labour—the latter contains, and under existing conditions is likely to contain, far more citizens with personal knowledge of the Mother Country than the former, for the simple reason that it contains more who have the means and leisure to travel. This I regard as a misfortune. It may mean, in days to come, that one party will be more closely in touch and sympathy with the Mother Country than the other, whereas everyone must wish that all should be a par in these respects." So far as the Commonwealth Labour Party can be said to labour under a disability in this respect—and we are not forgetting that at least one of Mr. Fisher's colleagues, Mr. W. M. Hughes, has been a fairly frequent visitor to this country—it will in all probability have an opportunity of removing it next year, when it may be anticipated that the leaders of the party will represent the Commonwealth at the Imperial Conference.

In the sphere of domestic policy the principal result of the elections appears likely to be an increase of the power of the Commonwealth at the expense of the States. Most observers have long anticipated a development of this nature in Australian politics. Parts of the industrial policy of the Commonwealth to which the Labour Party attached peculiar importance have been rendered ineffective by decisions of the Supreme Court as to the limitations of the constitutional powers of the Federal Government, and until those decisions have been set aside by formal amendments to the constitution, it is hardly possible for the policy of standardising industrial conditions throughout the Commonwealth, and setting up a "national minimum" in the matters of wages, hours and conditions of employment to which all industries must conform, to be carried into effect. Both parties aimed at an extension of the power of the

Commonwealth, but the Labour Party are prepared to seek the attainment of their ends by more summary and decisive means than were their opponents. They should be able to carry out their policy, as they appear to be in a position of greater strength than any previous Commonwealth Government.

Concurrently with the General Election proposals for two amendments of the Commonwealth Constitution were submitted to a referendum of the electors. The first proposal, which has been adopted, was to empower the Commonwealth to take over the whole of the State debts, and not merely such debts as existed at the date of the establishment of the Commonwealth. The second proposal was for a settlement of the vexed question of the financial relations between the Commonwealth and the States upon the lines agreed upon at the Conference held last year between the Commonwealth and States Governments. Each State was to receive from the Commonwealth an annual sum equivalent to twenty-five shillings per head of its population, Western Australia receiving in addition a special payment of £250,000, diminishing annually by £10,000, one half of this special payment being made up by contributions from the other States proportionate to their population. The new arrangement was to date from July 1st, 1910, and for the year 1909-10 the Commonwealth was to be entitled to retain £600,000 in addition to the quarter of the net revenue from Customs and Excise to which it is entitled under the "Braddon Clause." The Labour Party opposed this proposal, objecting to the embodiment in the Constitution of an arrangement which they regarded as unduly generous to the States, and, as was natural in view of the result of the election, it has been rejected by the electors. From the new Government the States are not likely to obtain equally favourable terms.

The Annual Report of the Emigrants' Information Office contains some interesting remarks on the Chairman's visit to Canada last year. He reports that he was able to satisfy himself that the literature which the office issues corresponded very closely to the actual conditions of the Dominion. He found that Canadians are generally convinced of the necessity of maintaining the provisions of the Immigration Law relating to the restrictions imposed on certain classes of immigrants and the power of deportation, and he came to the conclusion that the actual effect of these provisions has been to improve the quality of emigrants from the United Kingdom to Canada. He formed a very favourable view as to the prospects of the policy of child emigration, and found a general desire in Canada for its further extension. An interesting passage in the report deals with the alleged inadaptability of the English emigrant to Canadian contingents.

"From the many conversations which he had with people, both officials and others, in a position to form an opinion, the Chairman could not resist the conclusion that the feeling is prevalent in Canada that many of the emigrants from England are not readily successful in conforming to the requirements of their new country, and that in this respect they fall short of emigrants from the United States, and even of emigrants from some Continental countries. The fault alleged would seem to be mainly one of temperament, and may, so far as it is possible to summarise in one phrase an opinion widely held and variously expressed, be said to consist in a lack of adaptability. No one would be found to assert that this is common to all English immigrants. On the contrary, it was generally admitted that it was the fault of a minority, though no doubt the majority found greater initial difficulties in consequence. The best English immigrant was spoken of in terms of the highest praise. If the sentiment described, which must be a handicap to a great many deserving English emigrants, is to be successfully combated, the Committee are of opinion that the practice of sending to the Dominion those who have been social failures in this country, or who are otherwise undesirable or unfitted to take up hard work in a new country, cannot be too strongly deprecated."

In connection with the warnings which the office from time to time finds it necessary to issue, some remarkable particulars are given of a case in which a number of Scottish working-men were induced to emigrate to South and Central America, and had ultimately to be repatriated at the expense of the Foreign Office. In this connection it may be noticed that, in reply to questions in the House of Commons, Colonel Seely pointed out that the practical result of the work of the office is to direct the stream of emigration from the United Kingdom to British Possessions in preference to foreign countries to whose conditions the British emigrant is less suited.

With the commencement of the season for emigration, Canada has still further increased the severity of its regulations. In the case of a family entering Canada it is now necessary for the head of the family to have in his or her possession, in addition to the means of transport to their ultimate destination, a sum of \$25 for each person of the age of eighteen years or upwards, and a sum of \$12.50 for each person under that age. It is also intimated that in the case of persons assisted to emigrate by charitable societies, or out of public funds, the necessary approval of the Canadian Agency will only be given for persons who can be shown to be proceeding to farm work or to domestic service. This regulation, if strictly enforced, will very seriously limit the operations of emigration societies and distress committees, and attention has already been drawn to it in

Parliament and in the Press. Canada welcomes the genuine agricultural emigrant, but appears determined to exclude the town dweller, and those who look to emigration as a means of dealing with the problem of urban congestion at home would do well to realize the strength of her determination in this respect.

The Union of South Africa came into formal existence on May 31st, and, as had been anticipated, General Botha was invited by Viscount Gladstone to form the first Ministry, and accepted the task. Even those who would have liked to see Mr. Merriman crown his long period of public service in South Africa by attaining the position of first Union Premier, have recognized the peculiar fitness of the selection of General Botha. There could be no more striking evidence of the work of reconciliation which has been carried on since the close of the South African War eight years ago, and General Botha possesses the special and rare qualification of enjoying in an unusual degree the confidence of his opponents. It is understood that Mr. Merriman was invited to join the new Cabinet, but declined. It includes, however, the late Prime Ministers of the Orange Free State and Natal, and is admitted to be a strong combination. The Cape has four representatives in it, the Transvaal three and the other two Colonies each two. One of the first appointments made by the new Ministry was that of Sir Richard Solomon as the first High Commissioner of the Union in London. The cordial congratulations received from Canada and Australia were a pleasant feature of the inaugural celebrations.

The separation of the Crown Colonies and Dominions work of the Colonial Office has been marked by the issue of a new set of Parliamentary Papers bearing the title "Dominions." To the first of these, containing Sir Charles Lucas's notes on his tour of last year, allusion has already been made. The second contains a report on the Work of the Dominions Department for 1909-1910, which is intended to be the first of an annual series. The value of this report in bringing together the various matters of public interest connected with the self governing Dominions has met with general recognition. Various conferences, official and unofficial, are dealt with, and particulars of a number of international agreements affecting the Dominions are given. The progress of events in Canada and Newfoundland, Australia and New Zealand, and South Africa is briefly summarized, and an Appendix contains the most important legislative measures passed in the Dominions during the year under review.

An Australian Committee on the Press Cable Service has recommended the completion of the All Red Cable route by laying

down an Atlantic cable section and a Canadian land line, "the result of which would make possible a substantial reduction in charges for Press cables." The cause of the enquiry into the subject was the peculiar position of the Australian newspapers as regards news from the rest of the world. The leading papers have long formed an association, in conjunction with Reuter's Agency, which practically secures a monopoly of outside news, and naturally the smaller papers which are outside the combination are much dissatisfied. The Committee came to the conclusion that this position is detrimental to the public interest, because it:—

"(a) Makes it extremely difficult, if not absolutely impossible, for new and competing newspapers to obtain a cable service at a reasonable rate.

"(b) Gives an imperfect cable service and does not give sufficient news of the various parts of the Empire.

"(c) Retards, by its costliness, the spread of knowledge and world's news amongst the people.

"(d) Makes it difficult for the provincial press to establish or maintain an effective supply of cables, and thus tends to centralize power and influence in a few metropolitan journals."

It does not appear certain, however, that a reduction in the cost of cabling would break up the monopoly. Quite recently the price for messages was reduced by 3d per word, but the effect of this was merely to put about £367 a month into the pockets of the Association, without widening the range of publication, though some increase of cabled matter took place. It is difficult to see in what sense it is meant that a substantial reduction of charges could be made possible by the state ownership of Atlantic and Canadian lines. No estimate whatever is given of the cost of these undertakings or of the receipts, and presumably, therefore, all that is meant is that the government concerned would have the physical means of cabling Press messages at lower rates. Some much better case than this will have to be shown for a Government Atlantic cable. As regards Canada, the Pacific Cable Board have acquired the use of a line in order to prevent delays and inaccuracies, but they have of course to pay for it.

The report of the Congress of the Chambers of Commerce of the Empire at Sydney has been published, and it is pleasant to see the evidence of the hearty welcome which the delegates received in Australia. The principal subject discussed was, it need hardly be said, that of Imperial reciprocal preference, and a heavy majority declared in favour of the principle. It is impossible to read the proceedings without realising that this view was largely based in a desire, admirable in itself, for closer union, and in the colonies which possess protective tariffs and are continually re-adjusting them, it is a comparatively simple matter to lower some duties in exchange for

similar concessions. In this country it is not a question of such easy manipulation, but of the introduction of a new doctrine. The ideal of a self-contained, self-sufficient Empire is a highly attractive one, but it is clear that this ideal cannot be attained by a series of simple arithmetical adjustments. Thus Great Britain cannot consume more than about one-quarter of the wool produced in Australia, and as the production increases the disproportion must become greater, because other parts of the world must inevitably develop more than this old country. This fact is more or less generally true of Colonial products, which are mainly in the nature of raw materials and marketable everywhere. From India we take some £33,000,000 in value yearly, as against £86,000,000 taken by foreign countries. The commercial future of the colonies rests mainly with the large staple products, and of these Great Britain can only take, under any fiscal system, a comparatively limited and decreasing proportion. But whatever may be the merits of the general controversy—and on this we express no opinion—the strong support given to the movement by merchants is a fact which must be acknowledged. It seems, however, to rest not so much on any exact calculations as on the general principle that the stability of the Empire can only be secured by some economic combination. Whether trade can or should be dealt with by preferential arrangements is a controversial question outside our province, but so far as the feeling of friendship and harmony is concerned it is clearly open to doubt whether it can be made stronger by increased buying and selling. When we hear of the Australian States describing British Commercial agents as parasites on the industries of the dominion, or when we regard the ill-feeling which is constantly being created by visible importations from abroad, it is impossible to resist the conclusion that commercial intercourse is responsible for a good deal of popular ill-feeling. It is only human for workers everywhere to be disposed to resent the coming in from outside of goods which they are prepared to turn out themselves, and whatever increase or division of trade may be effected by commercial arrangements it does not by any means follow that the two parties love one another any the more. The combination of the Empire is a big fact which rests on intellectual and moral sympathies, rather difficult perhaps to analyse and set out exactly, but none the less real and strong. Trade questions have throughout our Colonial history been a source of trouble and quarrels, and it is not there that are to be found the influences which unite the masses of territory.

At the annual meeting of the Association of Chambers of Commerce of the United Kingdom in April, many references were made to Colonial trade, and it is gratifying to find abundant evidence of the general interest taken in the subject. A resolution was carried

for the formation of an Imperial Council of Commerce, the object being to form a body which could collect and disseminate information for the benefit of the whole Empire. Each Government, it was agreed, gave out information about its own affairs, but no one collects facts for the benefit of all parts. No doubt there is a wide field for such an organisation, but the practical difficulty seems to be that, outside a comparatively small number of special subjects which are adequately represented by political or technical organisations, the matters in which the dominions and colonies are keenly interested are more or less local. It will be interesting to see whether the new body can encourage a wider range of interest, and it will be entitled to great credit if it does.

Two questions were raised at the meeting which merit the general consideration which it is desired to develop. A resolution was carried in favour of the recommendations of the Minority Report of the Royal Commission on Shipping Rings that the Board of Trade should be free to recognise any association which in its judgment is of an adequately representative character, and to direct an inquiry with full powers where it appears that important public interests are affected by the action of shipping conferences. The conclusions of the Majority Report have been discussed in a previous issue, and were, we think, fairly based on the evidence; but the circumstances may at any time change in such a way as to render that evidence insufficient or misleading. There are in fact some indications now that the rebate system is used to establish higher rates in the United Kingdom than are allowed in foreign countries, and if such a mischievous discrimination is practised on a serious scale the re-opening of the whole question will be necessary.

Another resolution approved of the reservation of Crown Lands in Protectorates and Crown Colonies in return for any expenditure from the National Exchequer, and Northern Nigeria was particularly referred to. This seems a reasonable business proposition at first sight. Great railways have been built on the principle of adjacent lands being granted to the railway, so that the enterprise can itself reap some of the benefit which its country gives to the neighbouring territory, and contracts and concessions are often now made on this footing. But in such cases the land has been more or less unoccupied and unclaimed, and the Government has had a fair claim to treat it as belonging to the state. In Northern Nigeria, and generally in West Africa, this is not the case; substantially speaking, every piece of land has an owner. It is true that the Government can usually acquire by negotiation with the natives, any land up country for such a purpose without any particular expense; but it would be quite a different matter for it to take advantage of

its influence to obtain large blocks of surrounding land. Even if it did there would be little prospect of its being able to make use of them. In the vicinity, however, of settlements, where land has a residential value, the community of a railway has a considerable effect, and it is good policy for the Government to acquire land before this upward movement takes place.

Last year the United States secured about 60 per cent. of the imports of Canada, and now British firms will have to face not only this formidable competition but also Germany and France, both in better positions than before. The seven years' tariff war between Germany and the Dominion has come to an end, and from the 1st of March German goods, instead of paying a surtax of $33\frac{1}{2}$ per cent., came in under the General Tariff. The French treaty admits a long list of articles under the Intermediate Tariff. Under these circumstances British manufacturers are being strongly urged in the press to make determined efforts to keep and improve their position, and much good advice is being tendered to them, mostly to the effect that they should study Canadian requirements on the spot, and make exactly what is wanted. Probably the most has been made of the exceptional cases where the British manufacturer has insisted on supplying what he thinks is suitable rather than what the customer is used to. He is perfectly justified in not altering his machinery and the methods of his work-people for small and casual orders, and it is unreasonable to expect him to provide everything for everybody. But where a large and growing market is in existence it is well worth while to study its requirements and to hunt up business. In the case of Canada there is now a vast new market every year, and therefore every inducement to compete for custom. It is often good policy to employ a Canadian as an agent, with a liberal authority to advertise. The Boards of Trade of the various towns will help if applied to.

The Australian conference on radio-telegraphy point out in their report that, if high-power stations were erected at Sydney and at Doubtless Bay in New Zealand (1,200 miles east of Sydney), Fiji, 1,750 miles north-east of Sydney and 1,100 miles north of Doubtless Bay, would constitute the third point in a system of stations which, with a high-power station at Ocean Island, would form the bold outline and foundation of a Pacific scheme of wireless telegraphy capable of expansion and development into a more extensive scheme, which would constitute a network of inter-communication well worthy of the important Imperial interests involved.

Fiji is already connected with both Australia and New Zealand by the Pacific cable, and it is not essential that this cable service should be supplemental by radio-telegraphic stations. New Zealand

has, however, decided to erect at or near Doubtless Bay a high-power station, with a range of 1,250 miles, which would reach Sydney and Fiji.

The bulk of the carrying trade of the Pacific Islands is in the hands of companies whose headquarters are in Australia and New Zealand, but it is attended with no little difficulty, and much more business might be done if communication were better. Capitalists naturally hesitate to put money into enterprises in places difficult of access, and where it is necessary to put a great amount of trust in agents whom it is impossible to supervise. Disputes have frequently occurred, sometimes involving diplomatic negotiations, which it was impossible to settle satisfactorily owing to the slow and uncertain communication.

In addition to the above four high-power stations, it is proposed to have medium-power stations at the Solomons and the New Hebrides. The cost of the stations at Sydney and Doubtless Bay will be borne by Australia and New Zealand. The total cost of the other stations—Fiji, Ocean Island, Solomons and New Hebrides—is estimated at £42,000, of which it is proposed that the Imperial Government shall pay £23,344, New Zealand £2,333, Fiji £3,500, and Australia £12,833. It is further estimated that a continuous service would cost £13,820 a year, which it is proposed should be similarly apportioned.

No estimate is given of the revenue, but there can be no doubt that the traffic would be much too small to pay. The claims of the project, so far as the Imperial Government is concerned, rest mainly on its benefits for purposes of defence and administration.

The correspondence relating to the constitution of the Ceylon Legislative Council (Cd. 5,093) may be read with interest in all the Crown Colonies where there is a more or less popular demand for elective institutions. There is, no doubt, a strong movement among the educated natives of Ceylon in favour of the elective principle, and no dissatisfaction need be felt on this account; on the contrary it is a healthy symptom, testifying as it does both to the growth of education and to the increase of interest in public affairs. In such places the Government must have unofficial members in the Legislative Council, and if the community is prepared to express its wishes by elections there are clear advantages in this method over that of nomination. The difficulty in Ceylon is that the population consists of a number of different races, differing largely in customs and ideas, and it is therefore necessary, in order to secure fair representation, that the different communities should have their own members; thus, there are at present nominated members for the Mercantile, Planting, General European, Burgher, Low-country Sinhalese, Kandyan, Tamil, and Mohammedan communities. Now, whatever may be the

intellectual acquirements of the educated classes, the great mass of the rest is inarticulate, illiterate and incompetent to form political opinions. The best representation for these classes is given by the nominations of members to represent the different races. This, however, does not apply to the European and Burgher communities, and in these cases the Secretary of State has decided that the system of elections should be introduced.

The Supreme Court of Natal has settled (to some extent) a curious case which arose out of the shipwreck of the "Newark Castle" on the Zululand coast. This vessel carried several packages of rupee notes which had been made in England for the Mauritius Government, and these notes were complete, *i.e.*, the signatures had been printed. It will be readily realised that no little apprehension was felt when the news came that the ship had gone ashore at an out of the way place, for it is notorious that when negotiable paper miscarries the "innocent" holder for value usually turns up in due course. It is true that the notes had legally no currency value without a warrant for issue made by the Mauritius Government. But as they were complete in the face of them, the honest purchaser might put forward a plausible grievance. Fortunately the bulk of the issues was secured by a Natal Customs officials on the spot. Thereupon they were sued by a plaintiff whose case rested on the fact that he had bought the wrecked steamer with its contents, from the shipowners. But the Court held that this sale was invalid. The owners, under both English and the Colonial law, could made a good sale under such circumstances if there was urgent necessity for it and if communication with the cargo owner was impracticable. In this case no attempt was made to inform the cargo owners, though this might easily have been done, and therefore they could not give the purchaser a good title; nor was there any necessity for the sale, as the articles were no longer in peril. The judgment does not touch the notes which were picked up by other persons, but the publicity which was given to this case should prove an obstacle to any process of presentation by guileless holders. The moral is that such notes should be signed in the Colony. If this is done by hand the labour is considerable, and we have known it to be stated that some signatures have been so unsatisfactory that they look more like forgeries than genuine notes. Other Crown Colonies have therefore adopted the practice of having the signature printed here. But a suitable stamping machine can be bought for about £24.

The prospectus of the new Elder Dempster and Co., Limited, throws a great deal of light on the late Sir A. Jones' varied enterprises. Many doubts were expressed during his lifetime as to their financial success, and certainly very few lights had any approximate

notion of their position. This was no doubt due to the grip which Sir A. Jones retained to the last on the management of his undertakings. There is no question now of their stability, and it is certain that the purchasers have made an excellent bargain. The West African trade is and always has been highly profitable. The Jamaica contract on the whole is believed to have worked out at a loss, but this was not taken up by Sir A. Jones solely from business considerations. The Bank of West Africa will now be clearly separated from the shipping business and this is a distinct gain, as there were considerable objections to the combination of these interests. It was an excellent move to secure the services of Lord Milner as chairman, and the bank is bound to benefit from the energy and ability which will be brought into the management by this step.

The author of the new handbook of Nyasaland remarks of the Marimba natives that their employment consists in doing just sufficient work consistent with obtaining the necessities of life, and avoiding all worry and vexation, which invariably follow if they seek to amass anything beyond the wants of daily life. They live a natural life, and accept death without complaint. Their troubles commence as soon as European ideas enter their environment. This type is a common one among savages. In their original state the one thing which stirred up a feeling of enterprise and pride was predatory warfare, and enforced peacefulness has had, it must be admitted, an enervating influence on tribes whose one virtue was courage. Moreover, the security created by the presence of civilised administration tends to break up the old organisation in every way. The chiefs lose their authority, and the communities are more or less dissolved. This process has gone on in the civilised countries of the world, but it has proceeded gradually and naturally, and other forces have grown up simultaneously. It is, of course, to the good that raids and disturbances have been put down, but this is followed by some weakening of character and responsibility. Wherever the British flag has established personal security for all, there is created an opportunity for individual outbursts of temper—unrest, to use the favourite term—which would not have been possible under the primitive regime. It is the price paid for peace.

The reputation of Antigua for sound administration will be enhanced by a record revenue for the year 1908-9. This result was in spite of the fact that the crop of sugar was short and cotton showed a falling off. In the other Leeward Islands however cotton has prospered; in the Virgin Islands the output has grown from £30 in 1904 to £2,531 in 1909. Prospects are good and capital invested in these islands may expect a fair return. The Colony has been free from serious disease and from any of the disasters to which the tropics

are, from time to time, subject. In his address to the General Legislative Council the Governor, Sir Bickham Sweet-Escott, pointed out an advantage to dwellers in the Colony which may well be envied. "Compared with rates of taxation in other Colonies, the rate of taxation in the Leeward Islands per head of population is moderate, ranging from 19/2 and 19/1 in the case of Antigua and Dominica respectively to 16/9 in the case of St. Christopher and Nevis, 11/11 in the case of Montserrat, and 5/6 in the case of the Virgin Islands. The Virgin Islands has the honourable distinction of being the most lightly taxed part of His Majesty's dominions, whilst the Falkland Islands, with their rate of £3 1. 5. per head, is second highest on the list of British Colonies, the highest of all being New Zealand, with a rate of £4 1. 8. per head of population. In the neighbouring Colonies of St. Lucia and Grenada the rates are £1 2. 10. and £1 0. 2. per head respectively."

The critical position in the cotton market lends special interest to the report for 1909, of the British Cotton Growing Association. Lancashire gave very inadequate aid to the first efforts of the Association, but the spinners and operators have recently responded well to an appeal made to them, and nearly £500,000 has been raised. There is thus a clear prospect that the work can be developed on sound commercial lines.

The experiments with cotton seed as fuel for motive power mentioned in the last report have been successful as far as they have gone, and the results of the plant, which has now been working in Lagos for several months, are quite satisfactory. Another plant is now being erected in East Africa, and it is intended to put up additional gas engines worked from cotton seed in Northern Nigeria and Nyassaland. Experiments are also being carried out with a seed cotton opener. The Association have now four hydraulic pressing establishments in Nigeria. The bales produced have given every satisfaction, and have a density of 28 pounds per cubic foot, or about 80 to 90 cubic feet for the ton weight. An additional instalment is now being erected at Kisumu, on Lake Victoria, and a further plant has been ordered for Nyassaland. It is proposed to erect presses in each colony as soon as there is a sufficient quantity of cotton to justify the expenditure; these presses will be available to all planters and will result in considerable saving in freight charges.

CROWN COLONIES AND INDIAN IMMIGRATION.

The Committee which Lord Crewe appointed last year to consider the question of emigration from India to the Crown Colonies and Protectorates, and over which Lord Sanderson presided, has issued its Report. The Committee have held 71 sittings and examined 83 witnesses, and have made a close study of the large quantity of literature, official and unofficial, dealing with the subject. As was to be expected in view of the strong composition of the committee and the great amount of labour which they have devoted to their task, their Report is a document of great interest and permanent value. The system of emigration on a large scale from India to far distant countries has now been in operation for many years. Experience has taught many lessons to the governments concerned, and there have been repeated enquiries into the working of the system in particular Colonies, and in the districts of India in which recruiting is most constant; but there has been no enquiry quite so comprehensive in its scope as that conducted by Lord Sanderson's committee. A system which is necessarily highly artificial, and which is connected with so many problems the factors in which vary with changing circumstances, stands in need of a careful review from time to time, and it will be of great advantage to the Governments concerned to have experience obtained from many different sources collated and brought into relation.

In a historical retrospect which opens the report, the committee practically date the commencement of Indian emigration with the introduction of coolies into Mauritius after the abolition of slavery in 1834. Three years later the system of indentured emigration was denounced in Parliament, with the result that it was suspended, and a Committee was appointed in Calcutta to enquire into the whole matter. The majority of the Committee, whose report was submitted in 1840, were altogether opposed to further emigration, but one of the members, Sir J. P. Grant, considered that the evils which had been proved to exist were preventible, and in an exhaustive

study of the question he recommended the resumption of emigration to Mauritius and, more gradually, to certain other Colonies, subject to the necessary precautions. These included the appointment of a Protector of Emigrants, with extensive powers of control and supervision at the port of departure, the taking of security for return passages, and insistence on the Colonial laws applicable to Indian emigrants affording proper guarantees for freedom and prompt redress of grievances. In 1842 the Report came up for discussion in Parliament when a motion supporting the views of the majority was lost by 113 votes to 24. Emigration to Mauritius was resumed in the same year, and two years later it was authorised to Jamaica, British Guiana and Trinidad, the proposals put forward by Sir J. P. Grant being taken as the basis of the system. The numbers sent to the Colonies above-mentioned between 1842 and 1870 were as follows :—

Mauritius	...	...	...	351,401
British Guiana	...	...	...	79,691
Trinidad	...	...	...	42,519
Jamaica	...	...	...	15,169

During this period gradual improvements were effected in the method of recruitment in India, and few important questions connected with indentured emigration arose. But on more than one occasion enquiries revealed cases of neglect and mis-management in particular Colonies, and there were periods when emigration both to Mauritius and to the West Indies was suspended.

“Communications with distant colonies were in those days slow, and the Government of India had few sources of information open to it as to the condition of the emigrants while indentured in the colony or residing there after the expiry of their term. Further, while everything possible had been done by the Government of India to secure by legislative measures the welfare of the emigrants while on the voyage and under indenture, sufficient attention had not been paid to the responsibility of the Government for the proper treatment of the emigrants when they had completed their term of indenture and became merged in the general population of the various colonies. On the other hand, the planters and the Colonial Governments, in which the planting interest is generally powerful, did not at first appreciate the fact that Indians made excellent settlers, and that it was to the advantage of the colony to encourage them to settle down as free citizens and so contribute to the general prosperity. The aim of the planters, who had suffered so severely from the entire discontinuance of slave labour, was too often to acquire complete control over the labour market by means of regulations and administrative measures which aimed at compelling the coolie to re-engage himself on the expiry of his indenture, rather than encouraging free

settlers. The consequence of this feeling was that the laws relating to Indian immigrants introduced into several colonies gradually assumed a complexion less and less favourable to freedom, and, as the reports of subsequent Commissions show, they were framed and administered in a spirit of substantial injustice to Indian immigrants."

Commissions of enquiry were appointed in Mauritius, in British Guiana and in Natal, and their reports led to substantial amendment of the system in force. "With the measures taken by the various colonies to give effect to their recommendations, the history of serious abuses in connection with emigration to distant places ends, as far at least as British colonies are concerned." Indentured immigration has continued to all the colonies mentioned, with the addition since 1885 of Fiji, and in 1907 the numbers of persons of Indian nationality in the various colonies were as follows:—

Mauritius	...	...	...	...	...	264,000
British Guiana	...	...	...	...	...	127,000
Trinidad	...	...	...	...	...	103,000
Natal	...	...	...	...	...	115,000
Fiji	...	...	...	...	...	31,000

In approaching the question of the present attitude of the Government of India towards emigration, the report quotes at length from a very interesting correspondence between the late Lord Salisbury, as Secretary of State for India in 1875, and the Indian Government. The latter were invited to consider whether the time had not arrived when an active encouragement of emigration to British Colonies was desirable. "Having regard to the greatness of our Indian population," wrote Lord Salisbury, "and to the probability that, under the protection which the British Government affords from depopulation by war, and, as far as possible, from famine and other evils, that population must continue very greatly to increase, especially in the healthier and more densely peopled parts of the country where the numbers already press on the means of subsistence and the lower classes are at all times little removed from want, it appears to me that, from an Indian point of view, it is desirable to afford an outlet from these redundant regions into the tropical and sub-tropical dominions of Her Majesty, where people who hardly earn a decent subsistence in their own country may obtain more lucrative employment and better houses. While, then, from an Indian point of view, emigration properly regulated and accompanied by sufficient assurance of profitable employment and fair treatment seems a thing to be encouraged on grounds of humanity, with a view to promote the well being of the poorer classes, we may also consider from an Imperial point of view, the great advantage which must result from peopling the warmer British possessions which are rich in natural resources, and only want population, by an intelligent and

industrious race to whom the climate of these countries is well suited, and to whom the culture of the staples suited to the soil, and the modes of labour and settlement, are adapted. In this view, also, it seems proper to encourage emigration from India to Colonies well fitted for an Indian population." Accordingly a scheme was suggested under which the Indian Government were to give active encouragement to emigration, and by means of agents stationed in the Colonies concerned, to make themselves directly responsible for the accuracy of information supplied to would-be emigrants and the due performance of the terms of the contract of service. The Indian Government, however, in a lengthy reply expressed themselves as "clearly of opinion that any material departure from the permissive attitude which has hitherto been observed would be extremely impolitic." Objections had been taken to Lord Salisbury's proposals in some quarters on the ground that India, regarded as a whole, was under, rather than over, populated. But the Indian Government did not endorse these objections, pointing out that the effect of emigration could never be more than infinitesimal.

"The highest figure ever reached by emigration from Calcutta was 27,779 in 1858, and it has only in one other year been above 25,000: even if this number was multiplied by ten, which is far beyond the extent to which any countenance that Government could give can be expected to increase it, it would be but a trifling percentage upon the vast population of the North-Western Provinces, Oudh and Behar, which are the fields from which the emigrants are chiefly drawn."

Nor did they feel alarm at the effect of expanded emigration to the Colonies on the labour market of Burma and Assam. Their objections were based upon "the effect which the direct and active interposition of the Government in this matter would be likely to have on the minds of a people prone to regard with the utmost suspicion the acts and motives of their foreign rulers, and especially on the minds of the uneducated classes from which the emigrants are drawn; and to the difficulty and embarrassment in which the Government would become involved by undertaking responsibilities towards the Colonies on the one hand, and towards the emigrants on the other, which it would be practically impossible for it to discharge in a satisfactory manner."

Their objections were so serious that they felt it impossible to carry into effect the change in policy which Lord Salisbury had suggested, and the action of the Indian Government continued to be limited to the provision of facilities to the emigration agents employed by the Colonies.

The appointment of Lord Sanderson's committee led to a further expression of the views of the Indian Government, who proved to be even less disposed than their predecessors to give any active

encouragement to emigration from India. Their opinion was expressed in the following terms:—

“The purely neutral attitude adopted by Lord Lytton’s Government has been consistently maintained by the Government of India during the past thirty years, and nothing has occurred during that period to suggest that any modification of that attitude would now be justified. On the contrary, two serious factors in the situation have arisen, both of which must, in our opinion, tend rather to the restriction than to the encouragement of emigration. In the first place, although the proposal now before us only relates to emigration to the Crown Colonies of the Empire, we are unable to overlook the fact that any one of the more important Crown Colonies may eventually become a self-governing Colony. Of late years, the difficulties which have arisen from the emigration of Indians to Colonies that are now self-governing have increased enormously, and it is needless to draw your Lordship’s attention to the serious crisis with which we are now faced in, at any rate, one portion of the Empire, owing to the methods of self-governing Colonies in dealing with the status and rights of British Indians whom they had allowed, if not actively encouraged, to settle within their borders. It is impossible for us to disregard the fact that the history of the anti-Asiatic legislation in Natal and the Transvaal may at any time be repeated in others of the Crown Colonies, and we should therefore view with the greatest misgiving the adoption of any course of action which might tend to create racial problems of a similar nature in these Colonies. As an illustration of the fact that the apprehensions which we entertain in this respect are not without substantial foundation we may draw your Lordship’s attention to the situation which we understand at present exists in the British East Africa Protectorate. Indian settlers lived and traded in British East Africa long before the days of British rule, and their status in the country and their claims to political recognition are such that they cannot be overlooked. We believe, however, that these claims are not regarded with favour by the white colonists, that the Indians as a whole are disliked by them, and that certain areas are being reserved entirely for white colonisation; and it is within our knowledge that fears have already been expressed lest, when the country is eventually given self-government, the antagonism of the white colonists and the Indian traders and settlers may result in similar problems to those which have had such deplorable results in South Africa.

“The second factor to which we have alluded above is the shortage of labour in India, of which complaints are being made by nearly all sections of the industrial community.

“From the inquiries which we have instituted, we are led to believe that there is no irremediable shortage in the supply of labour in India, and that complaints on this subject are due rather to the

difficulty of tapping the available sources of supply than to any real shortage in the supply itself ; and we do not believe that any amount of emigration which could conceivably take place, even if Government were to abandon its policy of non-interference, would have a very appreciable effect on the labour market. It will, however, be readily understood that, so long as complaints continue actually to be made by Indian industrial concerns as to the difficulty of obtaining labour, any abandonment by Government of its existing policy in the direction of actively encouraging emigration would at once afford matter for adverse comment on the part of the commercial community, and would lay our Government open to the charge—however little foundation there might be for it—of subordinating the acknowledged needs of the community to the problematical requirements of the Colonies in response to pressure from the Imperial Government.

“ There is one further consideration which we are unable to overlook, namely, the impression which would be created in the minds of the people by any active encouragement of emigration on the part of Government. We regret that we see no grounds for believing that such a policy would be looked upon with less suspicion now than was anticipated in 1877. On the contrary, the readiness which, at any rate in one instance, certain sections of the native press have recently shown to accept and publish, without any attempt at verification, the highly coloured story of the harsh treatment to which Indian emigrants to British Colonies are subjected gives us no reason to hope that the motives of Government would be less exposed than formerly to misinterpretation and misconstruction. It is a significant fact that, although numbers of emigrants return annually from the Colonies, bringing with them in many instances large accumulated savings, no perceptible stimulus to emigration appears to result ; and it is difficult to explain the general reluctance to emigrate, of which the Emigration Agents complain, except on the assumption that there exists in the minds of the people an ingrained suspicion of the methods and motives of any person who makes the promotion of emigration his business.”

Lord Sanderson's committee accept the view expressed that emigration cannot be expected to exercise any perceptible effect on the prosperity of India, but they point out that it is admitted that such effect as it does exercise is beneficial, and that the advantages to the individual emigrant are “ unquestionably great.” But in recommending the continuance, on this and other grounds of indentured emigration, they lay down certain very important limitations. They regard it as “ an indispensable condition of indentured emigration that Indians who have completed their term of indentures should be in all respects free men, subject to no labour Ordinances and with personal privileges no whit inferior to those of any other class of His Majesty's subjects resident in the Colony.” They consider that

they should have the option of returning to India or settling as free citizens in the colony ; the only exception which they would permit would be in the case of labourers engaged in India by the Government of a colony for railway construction or similar work. And they decline to recommend indentured emigration to any colony or protectorate where there is no agricultural land available for new settlers. They regard it as the natural ambition of Indian labourers to rise to the status of peasant proprietors, and consider that the gratifying of this desire is as beneficial to the colony as to the Indians themselves. "The evidence before us leaves no room for doubt but that the large majority of the immigrants who stay on in the colonies succeed in life. Many of them acquire land. Others engage in retail trading and in miscellaneous occupations. The contrast between their position in the colonies and that which would have been within their reach if they had remained at home is generally striking." At the same time they find that there is some ground for complaint as to the frequency with which recourse is had to the criminal law to enforce the terms of the labourers' contracts, and in the case of three colonies, British Guiana, Trinidad and Fiji, they have suggested a local inquiry into the matter. They also consider that it would be of advantage for the Colonies who receive emigrants from India to be visited from time to time by an Indian officer, in accordance with a suggestion made by the Indian Government, but never put into operation "because the whole system of indentured immigration has of late years worked so smoothly, and because, so far as India is concerned, its beneficial results have generally appeared so patent."

The Committee find a good deal to criticise in the methods of recruitment in India. To the enlistment of persons unsuited for agricultural labourers, "priests, barbers, jewellers and men of that kind," they ascribe the frequency of convictions for breaches of the labour laws, which is "the only serious blot on the system of indentured emigration."

"It is clear that a certain proportion of the emigrants are casual persons picked up in the vicinity of towns and markets by recruiters who are not altogether scrupulous as to their methods, and that they agree to emigrate without knowing much of the conditions which lie before them ; that many even of the emigrants who are agricultural labourers of the congested districts leave their homes without any very clear conception of their prospects ; that the recruiters do not penetrate into the villages where they are likely to meet with such persons and endeavour to induce them to emigrate with their families ; that the field in which the recruiters work is extensive and far distant from Calcutta, the headquarters of the Emigration Agent, so that proper control by him is in the nature of the case impossible, while the supervision exercised by the

inspectors and the sub-agents is not effective. The result is that emigration to the colonies is generally unpopular and is regarded with much prejudice by the influential and respectable classes. Another result of casual recruitment is that the recruiter has no means of acquainting himself with the occupation, character, or antecedents of the recruit, and for this reason unsuitable persons are chosen, who afterwards prove the bad bargains of the colony and are returned to discredit the system. And a third result is the mysterious disappearance of persons who are recruited at a distance and do not communicate with their own homes before they leave the country."

They consider that these results could be avoided if recruitment were more concentrated and limited to certain districts, and a responsible agent were stationed at Benares, who would tour the recruiting area and supervise the operations of the recruits. "The advantages to the ordinary labourer of a term of indenture in the colonies have only to be better known to be fully appreciated," and it is with the object of preventing misconceptions and misunderstandings that these recommendations are made.

Dealing with the effect of Indian immigration on the Colonies concerned, the Committee find it to be "an undeniable fact that in tropical climates, where the needs of the indigenous population are few and simple, and where there is an abundance of fertile land open to the use of that population for the satisfaction of those needs, it is impossible to obtain from local sources, except by compulsion, a sufficient supply of labour for the development of industries dependent on steady and continuous work. Wherever these climatic and economical conditions prevail, recourse must be had for the prosecution of such industries to the introduction of some alien race whose previous traditions and methods of life have inculcated habits of steady and regular work." But the system ought not to be continued beyond the period when it is really necessary to secure a regular and trustworthy supply of labour, or where its effect is merely to reduce the remuneration of the free labour supply available. The committee have not learned of any instance where indentured immigration has been proved to have had the result of reducing the wages of the older colonists or native population, and they find that the immigrants "are the means of providing for those classes opportunities of congenial employment which these would not have otherwise enjoyed." In concluding this section of the report the Committee take occasion to deal with the imputation that indentured immigration partakes of the nature of slavery.

"Our unhesitating opinion, after examining the best and most authoritative evidence that we could obtain on the subject, is that, whatever abuses may have existed in the more remote past, no such charge can be substantiated against the system as it at present exists and has been in practice during the last 20 or 30 years.

"The restrictions placed on the immigrants are not in their practical operation excessive. The regulations in some colonies as to passes, etc., seem to us in their wording to go somewhat beyond the necessities of the case, but they are not in fact strictly enforced, and it must be remembered that they have been designed, in part at least, for the protection of the labourer as well as for the convenience of the employer. They do not alter the fact that outside the terms of a contract, the principal conditions of which have been twice explained to him before he enters into it, he is for all real purposes a free man, whose rights are carefully watched over and guarded by a special staff of Government officials. It is no doubt on the efficiency and rectitude of those officials, and upon the pursuance of an enlightened policy by the employers, that the welfare and comfort of the labourer must depend. But this is equally true of many other kinds of employment in all parts of the British Empire, not excepting the United Kingdom. The system must, like others, be judged by its results, and there is a general concurrence of opinion that, so far from exercising any depressing or debasing influence on the immigrant it does in fact encourage in him the growth of independence of character."

The Committee summarize their conclusions on the general question as follows :—

That subject to certain recommendations which we shall have to make in regard to individual colonies, the system of indentured immigration as actually worked is not open to serious objection in the interests of the immigrant labourer.

That Indian immigration is of the greatest assistance in developing the resources of some of our tropical colonies, and in increasing their prosperity.

That in the present condition of India, indentured emigration is the only practicable form of emigration to distant colonies on any considerable scale.

That emigration under indenture for private employers should be permitted only to such colonies as offer an opportunity to the time-expired immigrant to settle in an independent capacity on the land.

It follows that emigration of this nature should only be permitted to such colonies as have spare land capable of development.

That it being obviously to the advantage of a colony to develop its spare land, there is no objection to the Government of such colony assisting the employers of labour in bringing in immigrants who are at first at the disposal of the employers but subsequently contribute independently to the development of the resources of the Colony.

The report proceeds to consider in detail the circumstance of each Colony or Protectorate to which Indian immigrants are at present

sent, or to which it has been suggested that they might be sent. In the space at our disposal it is impossible to do more than refer to a few of the salient features of this part of the report.

The extensive Indian immigration to Ceylon proceeds without any system of indenture, the proximity of the Colony to India rendering it easy for recruitment to be carried out through private agencies. The Committee refer with approval to the recommendations of the Ceylon Labour Commission, and they find the system of immigration in existence to be "both natural and beneficial."

In the case of the Straits Settlements and the Federated Malay States indentured and unindentured immigration exist side by side; but of late years the latter has increased far more rapidly than the former, and the ordinary period of indenture is for no more than 600 days. In the case of the Federated Malay States there has been a disquietingly high death rate on certain estates, and the Committee recommend the early discontinuance of indentured immigration. The announcement that indentured immigration to the Federated Malay States is to be brought to an end has already been made in Parliament.

The Committee find that Mauritius has been mainly dependent on Indian immigration for its economic development, and they enforce this conclusion by an interesting comparison with the French island of Réunion. But the population, of which the Indians form 72 per cent., has now attained a density of nearly 559 to the square mile. The demand for fresh immigrants is small and intermittent, and there has been an admitted growth of poverty in recent years, coupled with "a marked increase of pauperism in the Indian population" during 1908. In these circumstances the Committee find themselves unable to recommend a continuation of the system of importing labour.

In treating of British Guiana, the report quotes the opinion of Dr. Comins, who visited the West Indies in 1891 on behalf of the Government of India, that this Colony "in consequence of the long-continued efforts of legislators and planters has brought its system for the beneficial control of indentured labour to a higher pitch of perfection than any other Colony." The law, somewhat drastic in the wording of its restrictions, is administered with little resulting hardship, and among such persons in the recruiting districts of India as are able to discriminate, British Guiana is a popular Colony. But the number of prosecutions for offences against the Immigration Ordinance is excessive, and a local inquiry into the subject is recommended. The arguments against Indian immigration put forward by the People's Association of British Guiana are discussed at length and finally dismissed as unsound. On the other hand a large increase in the number of emigrants, advocated by some of the planters, is not recommended in view of the possibility of a set-

back to the sugar industry and the absence, in the present undeveloped state of the Colony's natural resources, of other suitable fields of industry.

The Immigration Ordinance of Trinidad is closely similar to that of British Guiana, and the sections of the report dealing with the two Colonies have much in common. The high degree of prosperity attained by a large section of the Indian population is emphasized, and the committee are clearly in favour of the continuance of indentured immigration. On the other hand the frequency of prosecutions for "labour offences" calls for enquiry, and it is suggested that the time has come when the Indian community might be represented in the Legislative Council.

In the case of Jamaica Indian immigration has been on a comparatively small scale, and its justification lies not in the absence of a local labour supply but in the disinclination of the Creole labourer to supply the regular and systematic work required by the economic conditions of a large estate. The Committee endorse the view of Sir Sydney Olivier that immigration does not operate to the disadvantage of the Creole labourer, and they recommend its continuance. They find that "the general condition of the Indian immigrants in Jamaica is satisfactory, both during their term of industrial service" and after its expiry. It is suggested that a definite scheme of land settlement to promote the acquisition of land by term-expired immigrants would be advantageous.

The Committee find themselves unable to recommend the resumption of Indian immigration to any of the Windward Islands, where the conditions as regards the existing labour supply do not appear to them to justify the proposal.

In the case of British Honduras the Committee consider that the introduction of indentured Indian labour is distinctly desirable, provided that the conditions laid down in the first part of their report are satisfied. They lay stress on the large undeveloped area of land, the promising agricultural potentialities of the Colony, and its very sparse population. They consider that it may be confidently anticipated that the condition of Indian immigrants would be satisfactory, and they foresee no likelihood of friction between them and the Creole population.

The view taken as to Indian immigration into Fiji is generally favourable. Attention is drawn to the excessive number of prosecutions for offences under the Immigration Ordinance, and it is stated that "a section of the white population, imbued with the prejudice of the young nations of the Empire against the coloured man, while recognising the utility of the Indian for the purpose of sugar cultivation, does not welcome his competition in trade, and is inclined to resent his settling down as a free citizen." But a large influx of white settlers is improbable, the general condition of the

Indian population is one of prosperity, and their contribution to the general progress of the Colony is undoubted.

In the Seychelles there is some demand for Indian labour, the satisfaction of which must depend on the practicability of providing transport from India. In West Africa the Committee can see no field for the employment of Indian agricultural labour.

In East Africa the Committee find that there are considerable tracts of land along the coast which could be more rapidly developed if imported labour were obtainable; but they are unable to recommend Indian immigration under indenture, except for public works service directly under Government, "unless the immigrants are offered the option of remaining in the country after the expiration of their contract on an equal footing with the rest of the population, and with opportunities for settling on the land in any part of the Protectorate which may be suited to them." In view of the strong objections taken by the white population of the upland districts to any measures tending to increase the resident Indian population, this condition is not likely to be satisfied.

"In the Uganda Protectorate, where a population greatly diminished in former times by war and slave raids has been still further reduced by famine and disease in recent years, there are large tracts of country where apparently Indian colonies might with advantage be planted. It would, of course, be necessary that experiments of this kind should be tried at first on a small scale, and with every precaution to avoid interference with the native races. But a primary, and to all appearances insuperable, difficulty presents itself in the absence of funds for the initial expenses of the venture." There is no opening for the employment of indentured labourers.

THE NATIONALISATION OF RAILWAYS.

In this country the railway system has been entirely the outcome of private enterprise, partly because the industries concerned have been well organised from the first, and partly because capital has been readily supplied. In many other countries the Government has had to step in because these conditions were absent. In some, both systems exist side by side, popular preference in favour of one or the other varying greatly from time to time. There is, however, always present on the continent of Europe a consideration which is not felt in Great Britain. This is the international competition for traffic. Thus the rivalry of France, Belgium, Holland, and Germany, on the northern side has had a powerful influence on the character of the railways. In such a case there is a national reason for low competitive rates, and this leads to the policy of nationalising the railways which lie at the great gates of commerce and of instituting special tariffs in the interests of the industries of the country. This movement does not by any means imply that it has been found by experience that railways are better constructed or managed by the State than by private means. There is a considerable body of opinion that this is not the case. The determining consideration has been simply that a sacrifice of railway revenue would be more than made up by the benefits that resulted to trade, and that the international competition made such a policy practically necessary.

In this connection the history of the railways in Belgium is particularly instructive. This country, like France, began construction about 1833, and the first lines were constructed and opened by the State. After a few years the financial results were found so unsatisfactory that concessions were granted to companies, but from the year 1871 the policy has been constantly followed of State ownership, and many private lines have been bought up. At present the State railways cover some 4,100 kilometres, and the private railways only 530. It is easy to see that the reasons for this process grow stronger as it proceeds. While there are two systems there are inevitably complications and disputes, and as, on the whole, the State railways are more generously financed the trend of popular opinion and pressure is in their favour. The financial details are contained in a recent Board of Trade report (Cd. 5,106). The re-purchase of the railways by the State was followed by a general reduction of

rates, both on the State lines and, as a matter of course, on those belonging to private companies. Thanks, however, to the development of the commerce and industry of the country the total receipts are sufficient to cover the interest and redemption of the capital.

For instance in the year 1907, the "capital utile," which represents the actual cost of the railway system open to traffic and its equipment, amounted to 2,395,664,033·44 francs, and the net profit was 81,214,030·70 francs; deducting the share of receipts payable to the companies and the rent of the line from Spa to the frontier, which amounted to 5,742,625·65 francs, the actual net profit amounted to 75,471,405·05 francs, which gives a dividend of 3·29 per cent., a strikingly small rate of interest for a line whose receipts per kilometre amount to about 64,849·98 francs.

It should be added, as the case of English railways is very different, that the State railways are not subject to taxation, and no taxes are levied on either passenger or goods traffic.

Special import and export tariffs form a large proportion of the whole body of rates. There are numerous special tariffs for international traffic, and combined sea and rail rates with certain shipping lines. Thus there is a combined rate with the "Red Star Line" to Antwerp, but such rates are not extensively used, as they are in Germany, as the low export rates by rail leave often little, if any, advantage to them.

The extent of State ownership in Belgium prevents any serious competition between the full gauge railways, and goods go by the shortest route. The State supervises the rates on light railways privately owned, and prevents any competition with State lines. Thus the rates are uniform and there is an absence of waste.

There has been since 1881 a remarkable development of light or secondary railways known as the "*chemins de fer vicinaux*." About 3,216 miles are now being worked, and considerable extension is in prospect. This work is done by a company called the National Society, but the State contributes a large proportion of the capital, and the provinces and the communes can also take up shares. This arrangement no doubt stimulates construction; the capital subscribed privately is very small, and this is not surprising, as the average dividend is only 3 per cent. The canals are State owned, and the railways are not allowed to crush them; they do not pay directly, but it is considered that there is an economical advantage in such a country in retaining this cheap form of transport, and enlargements at the public expense are contemplated.

It will thus be seen that the policy of the Belgian Government is eminently paternal. Its chief aim is to secure the welfare and commercial prosperity of the country. Neither courage nor enterprise has been lacking to carry out any scheme which promises to benefit the community. It is this spirit which inspires the relations of the

Government not only with the main railways but also with the waterways and the light railways, and in pursuance of this policy the State has acquired a large proportion of the main railways since 1870.

It is a moot question whether these light railways yield a profit or not, but if there be such a profit it is certainly a comparatively insignificant one. With regard to the waterways, it is evident that they are run at a considerable annual loss, whilst the State takes up 50 per cent. of the shares of light lines and guarantees the interest to private shareholders. These light railways are admirably adapted for fostering the interests of agriculture and small industries.

The commercial section of the community at the large centres and ports appears to be very favourably served by the Government railways both as regards the transport of goods and the prompt settlement of reasonable claims, this being no doubt partly due to the desire of the State to foster the import and export trade and assist local industries. The general opinion amongst the traders concerned seems to be that the railways are administered on commercial principles, which point of view can be well understood, seeing that the railway rates are reduced to an extent which permits of very little profit or none at all, and that the transport regulations such as the packing of goods and demurrage are not enforced with any degree of rigidity.

If it is a fact that a loss is sustained on the working of the main railways for the benefit of the general community, the State does not permit private or public bodies to profit at the expense of the taxpayers. For example, the State keeps control of the rates on the light railways, and by raising them when necessary prevents any threatened competition with the main lines. Further, there is no competition in rates between the State and privately-owned railways, as a proposed rate which interests any of the systems is submitted for their approval before being put into force. Again, little or no competition for the carriage of goods can exist owing to the principle of the "shortest route." As regards the passenger traffic every encouragement is given to the population and to visitors to travel extensively.

Season tickets are issued which are available over all the railways. The price of a third class yearly season available over all lines is about £15, but if paid for by quarterly instalments it amounts to about £16 10s. In addition to these, 15 and 5 day tickets are issued available everywhere in Belgium, the cost of the former being under £3 10s. for the first class and £1 for the third class, no limit being placed on the extent of the travelling so long as this is within Belgium.

In France concessions were at first granted to private companies, but in 1842 the State undertook to carry out an extensive policy of railway construction. The State was to construct the earthworks and build the bridges, stations, viaducts, &c., while the companies to whom the concessions to operate the lines were granted had to lay

the rails and to provide their own rolling stock, the agreement being that the railways should ultimately revert to the State, the rails and rolling stock being purchased at a valuation.

In the interim between the years 1842 and 1852 a considerable number of small independent lines were constructed, but in 1852 and in the following years the majority of these became incorporated into six big systems, forming in 1857 what are now the Northern, Eastern, Paris-Orleans, Paris-Lyons and Mediterranean, Southern and the recently State-purchased Western. After 1857 public confidence was shaken owing to the large expenditure on branch lines, and the necessary capital for fresh lines was not forthcoming. The State thereupon stepped into the breach and by six laws of 1857 and 1859 ratified the Conventions which had been passed with the six great Companies.

The principles followed with regard to the guarantee of interest were the following :—

The lines of each company were divided into two classes, first the new lines, and secondly the old lines. The State guaranteed interest at the rate of 4·65 per cent. on all capital expended on the construction of new lines, whereas the old lines did not enjoy this advantage. The net receipts of the old lines were to be employed in the following manner :—In the first place to secure the payment of interest and writing off of the debentures issued for their construction ; secondly, to complete the interest on debentures issued for the construction of the new lines, as the State guarantee would not be sufficient to enable the necessary interest to be paid ; thirdly, to pay a dividend to the shareholders which would not be inferior to those of preceding years ; and any surplus then remaining would be employed in decreasing the deficit on the new lines. When the net profits of both the old and the new lines exceeded the total amount of the guarantee of interest and of what may be termed the reserved revenue of the old lines, such surplus would be handed over to the State for the repayment of any sums paid by way of guarantee of interest, which sums were only considered as loans bearing interest at the rate of 4 per cent. per annum.

The Western Railway was bought up in 1909, and the results are still to be seen.

Concessions which are now granted are all temporary and are for a period of 99 years, at the end of which the State enters into possession ; it has also the option of purchase at any time on its average revenue for the last five years out of the past seven.

The State control of all railways is very extensive, as a necessary condition of the intimate financial relation between the State and the companies. Special export rates are granted.

In Italy the working of the railways was in 1885 ceded to private enterprise subject to 20 years' notice, and in 1905 it was resumed

after this notice by the State. The common form of concession now is for construction and working with power to the State to take over working after construction. The arrangement by which the railway companies were subject to 20 years' notice was undoubtedly a bad one. No company could work with vigour and enterprise on so uncertain a tenure.

Expenditure on railways requires long years to fructify, and although there has been private management lasting for a period of 20 years, it must not be forgotten that there was always a State control on railways, *i.e.*, a control over expenditure in the shape of provision of rolling stock, &c. It may be that the many complaints relating to the working of the private railways were probably responsible for the termination of their leases, but the conditions under which the private lines were operated, and against which they had no voice, must have been in a great measure responsible for the shortcomings for which they were held to blame. The purchase of the lines is said to have been conceived and carried into effect at very short notice, and the resultant chaos was very serious: insufficiency of stock, accommodation, &c., produced complete disorganisation. To make good these deficiencies, heavy expenditure has been necessary.

There is a special export tariff, numerous inducements in the shape of various forms of tickets are given to encourage passenger traffic, but owing to the insufficiency of accommodation delays are frequent.

It is too early yet to express any opinion on the result of nationalisation in Italy. Some step was clearly necessary in view of the condition with which things had degenerated, but it must be recognised that the private companies had not had a fair chance. The chief objection urged against State management came from traders who had obtained special concessions to encourage some industry, but the Italian Government appears to recognise the importance of some elasticity in this matter, and on the other hand considerable abuse may be made of such a power by private owners. The freight charges, especially the through rates, are on the whole low.

The above cases give typical examples of the struggle between State and private ownership. It is clear that there is a strong tendency in favour of the former. The foremost reason for this is, as has been remarked above, that cheap and quick transport is a public necessity, but there are other grounds. The State can always raise capital on better terms than the individual, and capital expenditure, it must be borne in mind, is continually going on over existing lines in extensions and improvements. Then not only are Government rates low, but they cannot be manipulated, as has been done in the United States, to take an excessive share out of an industry when it has been established. There seems

to be no evidence of waste or mismanagement on the continental State railways as compared with private railways. Certainly in America great feats of economy have been performed on occasions, but it may fairly be argued that they were rendered possible by rivalries or preference which could not have grown up under a State system. There are some apprehensions that a Government will be less able to deal fairly with the workman than a company would. There is at any rate on the Continent no indication of this. In both cases public opinion on the merits of the dispute exercise a great influence, and if a Government believes that this power is on its side it can be at least as firm as a company and much more drastic in its methods. Thus on the 12th October, 1907, there was a general strike at Milan as a protest against the ill-treatment of workmen in a conflict with the public forces. The vast majority of the staff of the railway joined the strikers, and their example was followed by other centres, such as Turin, &c. The strike lasted for two days in Milan, and one or two days in other localities, the total number of railway employees on strike being 6,700. As a result 16 employees were dismissed the service, 114 were reduced in rank, 640 had their increase of pay deferred for two years, and 5,706 for one year, whilst 242 were suspended for a period varying from 6 to 12 days with loss of pay. The 16 dismissed employees and six of the others appealed to the Council of State, but only in one case was the appeal granted.

There is, however, one characteristic of State ownership which is often detrimental, and this is the practice of making promotions in order of seniority over the whole system. This entails numerous removals, and traders have many occasions to regret the loss of officials who have acquired an intimate knowledge of the local circumstances. Many complaints have arisen on the Continent on this score, and no doubt it is politic to temper the principle of seniority in favour of local experience.

The British Dominions and the Colonies have not had the difficulties with which the Continent has had to struggle. They started, with few exceptions, with the principle of State ownership, and the results on the whole have been amply satisfactory. The system leaves room for private work in construction. The best opportunities for this are when the work to be done can be specified with something like precision, so that tenders can be invited and considered on a definite footing. This is made easier by letting the work out in sections if local contractors are available and suitable. A contractor has also often an advantage in the supply of labour, as experience has taught him where to go for it and how to manage it; in this matter he is a more or less permanent employer, which the State is not. The disadvantage of the contractor as compared with the State in finance may be met by the State supplying the materials, and leaving to the contractor only the actual construction.

AGRICULTURAL BANKS.

Every country with a large agricultural population is interested in the question of agricultural banks. For one reason and another the rate of interest paid by the cultivators of land is on the whole extraordinarily high. The primitive conditions prevailing in a rustic land are the main cause. The worker does not understand the price he pays for a loan, and so long as he can borrow he does not reckon the cost. Accordingly the interest may be as much as 100 per cent., and in fact is only limited by the peasant's absolute necessities. The misfortune is that the habit of borrowing is increasing. Civilization of the modern type spreads, and forthwith things which the native never thought of possessing become necessities. He might pay for them by doing more work, but why do this so long as the money-lender is complaisant? If the loan was spent on the land there would be some good result, but this is the exceptional case. The end in some places is that every village capitalist becomes a professional money-lender, and eventually the rest of the population is at his mercy. No improvements in cultivation or rise in prices can avail against the system. In Ceylon "the great increase in the price of cocoanuts of late years should have benefited the vast mass of the poor villagers largely, and have enabled them to get more or less out of the clutches of the Chetties and the village money-lenders; but that it has not done so is explained by the fact that while the Chetties lend on mortgage of the lands, charging interest in money the village lenders lend or advance on agreement to be repaid in produce in a number of years, the cocoanuts being priced at such a low rate that the money equivalent of the interest works out at 60 per cent. to 75 per cent., and even more. To give a typical example: a sum of Rs. 500 may be advanced to a villager who has an average crop of 2,000 nuts a picking, or 12,000 a year. Repayment of the advance will be taken by delivery of the nuts at Rs. 18 or Rs. 25 a thousand. It will thus take him $2\frac{1}{2}$ years or $1\frac{3}{4}$ years to work off the advance, while the nuts are worth at least Rs. 480 a year; besides, there is the fact that the principal is being substantially reduced every two months. With such a

ruinous system prevailing, it is little wonder that the villagers are always in a chronic state of want." (Ceylon, VIII., 1910.)

So far as borrowing proceeds from personal extravagance and not from developing the land the mischief is beyond the remedy of a State-aided bank, and this fact is sometimes urged against any proposal of the kind. It may be easy to show that villagers do not in fact devote the money now borrowed to the lands. The only way of dealing with professional lending of this description is to provide for the registration and control of usurers. But there remains the question of borrowing for good reasons, and of the educational value of a sound system. Where agricultural methods are of the primitive order borrowing is justifiable, and in fact should be encouraged in order that modern appliances may be bought and new products cultivated, but no good can be effected unless the rate of interest can be brought down to a reasonable commercial figure, based on safe investment. The difficulty is to make a start in this direction. Natives as a rule do not understand what combination is, or what it does. The Government therefore has to step in and point the way. It is clear that the help given should be carefully limited. If it is once believed that the bank is a sort of Government department the members would never try to control its proceedings and the movement would not spread. The institution must be of the nature of a local co-operative society, and the first active steps must be taken by the people of the locality. But a small Government advance vastly facilitates matters at the start. Sir Frederick Nicholson, in his Report on Land and Agricultural Banks in the Madras Presidency, writes: "It is found by experience that small State advances for initial expenses go very far in promoting the establishment of village banks; many inchoate banks have been stopped in the initial stage by the cost of preliminary expenses, which necessarily fall on the promoters; such assistance should be moderate and temporary, not exceeding one or two thousand rupees for each bank, and repayable by annuities within, say, ten years."

In India such co-operative societies are given the following special privileges:—

(1) Exemption from income tax, stamp duty on documents, and registration fees.

(2) Exemption from attachment in court of the amount subscribed to a society by a member.

(3) A first claim on crops raised from seed purchased with money lent by the society and on cattle and implements similarly purchased.

(4) Permission to open a public account in the nearest Post Office Savings Bank.

(5) The services of a Government officer to help and advise the societies and to audit their accounts yearly, so that the public may have full confidence in them.

The last privilege is a most important one—all societies established should be audited by a Government officer. In the United Provinces Government has sanctioned a sum of Rs. 50,000 in each province as a loan to rural societies, *the amount lent in each case not to exceed the amount actually deposited by the members*. This provision is of importance, and should be the invariable rule wherever Government assistance is granted.

In Eastern Bengal and Assam the Government has offered to lend to co-operative credit societies a sum equal to what the members raise by their deposits, free from interest for three years, and thereafter bearing interest at 4 per cent. per annum.

The object to be aimed at is not merely to provide a means of borrowing but also to teach the people the habit of saving and the reward of economy. Most peasants have at some times if not always some money hidden away, but it is not enough for any serious improvement and so lies idle. But if several men can be induced by the offer of interest and the Government protection to put in their money as deposits, there will be money available for some of them, and as a body they can borrow money on much better terms than any one could individually, both because the security is better and because the process is more convenient to the lender. The local character of each society should be jealously guarded, for in this way only can the people be educated to thrift and providence, but in a large country there is no reason why a central board should not be established which would lend money to the small and scattered societies. In many cases the planters will lend money and help generally; the enemy is not the landlord or the employer but the usurer.

The following is the procedure in India. If the cultivators in any village wish to start a village bank, the first thing for them to do is to meet and discuss the matter among themselves. If the persons who meet think that it is a good thing, they should proceed to make out a list of the names of those who wish to join. They must remember that all the members will be jointly and severally responsible for all the debts due by the bank, and should, therefore, refuse to enter on the list the name of any man of whose honesty they have any doubt, or who is known to be careless in money matters, and dilatory about paying his debts when they fall due. Only the names of such men should be entered who are known to be strictly honest and who will pay their debts if they can. When this list has been prepared, the persons whose names are included in it should proceed to choose three of the members to serve as a panchayat. The panchayat will have to manage the business of the bank on behalf of all the members, and so they should be the most intelligent and most respectable of the members. When the panchayat has been chosen it should choose one of its members to be sarpanch.

The next step is to ascertain how much money the members themselves are prepared to deposit. The Government has promised to advance free of interest for three years as much money as the members themselves deposit, so every effort should be made by the members to deposit as much as they can themselves.

Having ascertained how much the members are prepared to deposit, it is necessary next to find out about how much money they will need in loans for the first year. Suppose there are 20 members, and together their deposits amount to Rs. 100, Government will lend Rs. 100 more free of interest. Total Rs. 200. Perhaps these 20 members will require Rs. 400 for the first year's working. They have consequently to raise Rs. 200 more in order to have sufficient for the first year's working. They should go to the local money-lender and ask him whether he will lend them that amount on their joint security at a moderate rate of interest, say, Rs. 6 or 7 per cent. per annum, and also whether he will agree to accept repayment of the principal by instalments of Rs. 20 annually from the beginning of the 6th year after the loan is given, interest being, of course, payable yearly as it falls due. Perhaps the local money-lender will agree. If he does agree, the next step is to apply to the District Officer of the district that the society may be registered as a Co-operative Village Bank. This will cost nothing, and the District Officer will provide the society, free of charge, with copies of the rules and the by-laws. If the money-lender refuses to lend the money, the society should apply to the organization society at the headquarters of the district, or to the District Officer, or to the Registrar of Co-operative Credit Societies, Lucknow, giving particulars of what has been done, and what money is required, and probably the money can be found. The members should at the same time give information as to the amount they are prepared to deposit, whether in grain at each harvest, or calculated at Re. 1 or Rs. 2 per plough annually.

The District Officer or Registrar will not only give the bank help in raising money, if that be necessary, but will also give instructions as to how the accounts should be kept, how the business should be managed, and on any other points in which help may be required. Model by-laws and a model set of accounts with notes as to how they should be kept have been prepared. If in any village ten or more persons wish to join to form a bank they can obtain copies of these free of charge by making application to the District Officer or Registrar.

The system was only introduced in India in 1904 and the result has been extremely satisfactory. Within four years 1,357 societies were established, with a membership of 150,000 members. No doubt the system will be introduced in many other places where the circumstances are similar.

COTTON-GROWING IN JUBALAND.

Jubaland is bounded on the north-east by the River Juba, which divides it from Italian Somaliland. It possesses a good harbour in Kisenayu, which will form the key to the trade of a large territory. The Juba has been called the Nile of East Africa, and indeed in many respects it closely resembles the great river which has given Egypt her wealth. It is navigable for steamers of light-draught for about 450 miles for six months of the year. It is subject to periodical inundations which cover the land for some miles on either bank and leave a fertilizing deposit in which the natives plant maize, millet and various other crops. The remarkable resemblance between the soils and climatic conditions of the valley of the Juba and those of the Nile has attracted the attention of many Italians. Signor Carpenetti has taken up about sixteen thousand acres of cotton-growing land, has imported a large amount of machinery, including steam pumps, ploughs, &c., and is vigorously engaged in establishing a big industry. Signor Tittoni, a nephew of the Italian Colonial Minister, in conjunction with the Marquis Afan de Rivira and Dr. Fanelli, has also acquired some large tracts of land, and is actively engaged in cotton planting. In all, upwards of 300,000 acres of land on the Italian side have been applied for and about 70,000 acres on the English side. The cotton is equal to the best Egyptian, long in staple, and of excellent quality. One or two cotton planters, who have had a successful experience in Lower Egypt, have taken up land and planted. One writes: "We have on the land lying along the Juba river a Nile silt with a young Nile feeding it, and our cotton showing eight inches out of the ground is equal to the best Egyptian plants of the same age."

The mouth of the Juba river is at Gobwen, and the bar can be crossed at high tide by ships drawing 8 feet of water, indeed careful soundings show about 14 feet in the shallowest part of the channel. The river is wide and deep enough for boats drawing 2 feet 6 inches. It was originally explored by Vanderdecken in 1865, who took up a side wheel steamer 480 miles to the commencement of the rapids. In

addition to the inundations which fertilize the ground there is a moderate rainfall during the months of April, May, June and July. The winter months are practically rainless. A six years' record of rainfall has been kept at the coast, and averages about 12 inches per annum. Thirty miles inland there is double the rainfall and further north still more.

The banks of the Juba are thickly populated by a mixed race of escaped slaves from the Somalis. These people are docile and inoffensive, and are agriculturists, whilst the Somalis are pastoralists with large herds of cattle and goats which they move from place to place. Numerous villages are dotted up and down both banks of the river, some of them quite important little places. Indeed, over the whole six hundred miles a large population must be settled. Bardera is the main trade centre through which pass the caravans for the South, laden with ivory, hides, coffee, wax and cereals, and a scheme is now in hand to establish a trading station opposite Bardera at Serenli. By this means most of the goods would be caught before they enter Italian territory, transhipped into lighters, taken down the river and loaded into ocean steamers at Kismayu. At present the caravan route takes six to eight weeks and costs £8 a ton. The steamer route would not take as many days and the saving to the Arab merchants would be great, even if the steamer charged as much as the caravan. The Italian Ports of Barawa, Merka and Mogadisho are open roadsteads, useless in bad weather, and the expenses and delays consequent upon such a route no doubt have a tendency to limit the trade. It is reasonable to assume that given quick transport and low rates double the business could be passed through Kismayu that now passes through the Italian ports, and yet these support two large steamers during the greater portion of the year.

The Boran country lies on the southern slope of the Abyssinian mountains and extends far into the plains. The country is extremely rich and the land fertile. The people are peaceable and industrious, and produce large quantities of grain of different kinds, cotton, ivory, rubber, coffee, nuts, wax, frankincense, myrrh and gum. They possess large flocks, and the trade in hides and skins should be very valuable. There is no doubt that if they had a market for their produce they could send down immense quantities of grain and hides, both of which hardly pay to export by the present expensive and tedious system of caravan. Thus the Juba river is not only in itself an asset of immense value, but it is equally valuable as a cheap and quick means of communication with the only good harbour on the coast. The Somalis themselves will soon grow accustomed to the presence of Europeans, especially when they find that their own prosperity as pastoralists is increased. They seldom now raid the more peaceable inhabitants of the Boran or the Juba valley, but confine themselves to roaming the vast sand stretches which form a

large proportion of Jubaland proper. This inland territory is practically unknown. That it supports a large population of handsome savages who are wealthy in herds of camels, goats, sheep and cattle, is known. All the rest is surmise. It is more than possible that it is in many places well watered, and it must contain large areas which are fertile enough to feed the flocks. One most important fact about Jubaland and its river is the climate, which is both dry and bracing. It is perhaps the most healthy spot in the whole of Central Africa. Mosquitos even on the river are not so troublesome as in other places, and even the dreaded Ts'ee fly is only found in the heavy bush and is not spread over the whole district. Snakes are not numerous, and the larger carnivora uncommon. Herds of antelope and buck are frequently seen. The Juba has more than its fair share of crocodile. As a sporting centre there are many places that will give a bigger bag than Jubaland. It is essentially a land for the colonist who understands agriculture, and especially cotton.

The cotton plant prospers in warm, damp climates such as those of Georgia and Louisiana, but thanks to irrigation it is now grown to a great extent in Egypt, where it has proved highly profitable.

In order to mature its pods, the cotton plant needs from 800-1,200 mm. of water. It requires mellow, fertile soil, which is thoroughly tilled and fresh.

Up to the present cotton has been cultivated, not without success, in the Colony of British East Africa, by relying on the rainfall. Many planters, however, on the coast have more than once been disappointed through the irregularity of the rains.

It does not do to be dependant upon the rainfall. Therefore the cotton plant can only be cultivated in a rational manner by laying down a suitable system of canalisation to permit of irrigation. But for this purpose it is necessary to be near a river, and no river in British East Africa could supply the water necessary for irrigation better than the Juba. Generally speaking, the water of the Juba River is very similar in composition to that of the Nile. This is readily understood, as the two rivers both take their source in the neighbourhood of the Lake Victoria Nyanza and on the plateaux of Abyssinia. During the flood season the Juba also carries down a large quantity of mud of an exceedingly fertilising nature, which would be deposited on the land by means of the system of irrigation.

Unfortunately, few of our planters in British East Africa are in a position to thoroughly learn the requirements of the cotton plant, which needs very special care and a vigilant eye.

In Jubaland the first experiments were made on Italian territory, by Mr. Gustave Carpanetti at Torda. The experiment succeeded very well, Mr. Carpanetti having obtained exceptionally fine plants. Shortly after he founded a company at Milan, called the "*Società per il Cotone in Somalia*." Mr. Carpanetti relied upon the rains,

which in 1907, did not fall, or scarcely at all, and therefore the results which he obtained were mediocre and contradictory to those of his experiments at Torda. This however did not discourage him, and he saw that it was only by means of irrigation that he could arrive at a sure result. On British territory, the only person who has attempted the cultivation of cotton is Mr. G. Argyropoule, Agricultural Engineer, of the University of Gembloux. He also worked in hopes of the great rains, which, although they are very rare, are nevertheless sufficient to bring the plants to maturity. On 10 hectares (about 20 acres) he obtained a crop of 22,050 lbs. of raw cotton, which makes 2,205 lbs. per hectare, or about 1,100 lbs. per acre. It must be taken into consideration that the work of preparing the soil was done by manual labour, and therefore very incompletely.

After having obtained this result, he decided to acquire a set of tilling machines from Aveling and Porter, Rochester, including two locomotive-ploughs, harrows, ploughs, cultivateurs, &c., and a centrifugal pump of 10 cubic metres capacity per minute. These machines arrived in the Colony a short while since, and are the first of their kind imported up to the present. It would seem that with this plant he is certain to obtain good results, and no doubt in the province of Jubaland we shall soon see lands producing from 1,500 to 2,000 lbs. of raw cotton per acre.

As regards the soil in Jubaland, this may be considered very fertile. The arable soil is exceedingly deep, and as a result of the clearing of the forests the soil is virgin, has undergone no cultivation except at one or two points by the natives, and has a great advantage as compared to the Egyptian soil: *i.e.*, the lack of chloride of sodium, which in Egypt necessitates irrigation known as "washing" before planting is commenced.

Thus, the Province of Jubaland seems to offer very advantageous conditions for cotton cultivation, and moreover the region permits of the establishment of scientific crop rotation between cotton, maize and sesame or beans, all plants which grow very well, and of which the maize and sesame find an immediate market in the country itself. The example of the Italians is stimulating, and it is to be hoped will act as an incentive to British enterprise.

BUSINESS NOTES.

There has been of late a general advance in the prices of tropical and semi-tropical products, and in all probability this is more or less permanent and bound to go further. Demands are constantly growing, but the producing population remains comparatively stationary in numbers, and therefore the cultivated area responds slowly. Everywhere the cry is for labour, and the pinch is being severely felt in many places. The improvement of the future lies with the increase of labour-saving appliances, and the consolidation or co-operation of enterprises.

One of the very few articles which have not gone up in price is the banana—a curious fact considering that the taste for it in this country has been acquired quite recently, and that the demand has increased enormously here and is now doing so in Germany. Probably the explanation is the facility and quickness with which bananas are produced and collected. The business is just the thing for the average native, and his attentions to it are likely to prevent the price from going up much. Whether it pays the planter is another matter. It must be remembered that places like Costa Rica produce bananas in enormous quantities and are likely to go on doing so. Good profits, in fact, can only be made as a rule out of articles which call for work and care.

Cocoa has been brought down in price, after a great rise in 1907–8, by rich yields in Ecuador, Brazil and San Thomé. It will probably go up again. Profits will also be increased in the case of this product by improved methods. The yield differs enormously accordingly to the selection of types and the system of cultivation, and propagation of the best types by budding or grafting will lead to a great increase in this production.

It is not advisable to devote much attention to any article which has not a large market and is in the hands of brokers who do not consider it to their interest to encourage development. Arrowroot is an instance of this kind.

The rise in sugar is no doubt largely attributable to the comparative failure of the beet crop on the continent, a result of an unusually sunless and wet summer. The price excites the hopes of the enthusiast, who see a prospect of a new agricultural industry for the United Kingdom in the shape of beet sugar; but it would go down with a good European season, to say nothing of the by no means remote chance of bad weather here. On the whole the tropical growers have little reason to fear the effects of any such competition.

Rubber.

The unique success which has attended the planting of rubber in Malaya, Ceylon, and other countries, has naturally turned the attention of all interested in tropical agriculture to this cultivation, and no country where the climatic conditions are favourable to the growth of the plants whose rubber is already valued high in the market, would be wise to neglect consideration of rubber planting as an industry which may prove, as it has done in the East, far more profitable than any other agricultural venture.

There is little need to tempt the natural desire of the Tropical agriculturalist by mentioning the profits which have accrued from rubber planting in Malaya and Ceylon. The wonderful results in Malaya are now well known; during the last eight years some fifty million trees, or over 300,000 acres of land, have been planted; many of the estates which are in bearing are paying 100 per cent. per annum on the capital expenditure on the fields which have already come into bearing.

The high cost of agricultural labour necessarily means in some countries the adoption of different methods of cultivation from those of the countries with more favourable labour conditions. The practice which has produced such excellent results in the East of keeping the fields absolutely free from weeds by regular going round every ten days or a fortnight cannot, owing to the prohibitive cost of labour, be carried out here. The methods of tapping *Hevea* which obtain in Malaya and Ceylon require the careful shaving of the cuts on each tapped tree 120-180 times in the year.

Both these methods of rubber cultivation in the East are less suitable in the West Indies and elsewhere, and other methods must be adopted to achieve if possible, equal results. The system of cover plants instead of clean weeding may be adopted as being a method of saving a large proportion of the cost of bringing rubber into production without retarding the growth of the plants cultivated. (*Trinidad Bulletin*).

The decision for intending rubber planters as to which plant may be expected to prove more profitable, depends largely on locality and the seeds available. The chief arguments in favour of *Hevea* are that

it grows vigorously on comparatively poor soils which are well drained. That the yields of rubber from the trees already tapped, as far as they have gone, compare favourably with those of similar age in other countries. That the method of extracting the latex from the Para rubber trees has been brought to a degree of perfection, which, though still capable of improvement is eminently satisfactory and practical. Against this, however is the argument that these methods of extracting the latex from Para involve a large amount of regular daily labour which we cannot hope to reduce by mechanical means.

The rubber of cultivated Para trees has secured a high place on the markets of the world as a valuable rubber, and is in continual demand by the manufacturer. The coagulation is easy and the preparation of dry rubber a well understood and easy process.

The arguments against Para as compared with Castilloa are, that the supply of seed locally is limited, and importing them from the far East is by no means an easy or certain way of getting plants, and that the plant when young is greedily eaten by almost all animals.

A system of communal rubber plantation has been inaugurated in the Central Province, Southern Nigeria, and it is proposed that the Government should collect the produce and ship it to England for sale. The plan is capable of great development, and it will be interesting to see how it progresses.

In some tests that have been applied lately in the Straits Settlements the latex ran best from the *Hevea Brasiliensis*, and the dry rubber had the following composition:—

				per cent.
Rubber	...	...	...	98.14
Resin	...	...	...	1.86

In the case of the *Landolphia Heudelotii* the figures were:—

Rubber	...	...	...	89.50
Resin	...	...	...	10.50

Other examinations have given a percentage of 86.6 of dry rubber from the *Funturia Elastica* from Sierra Leone, and of 90.5 in another case of *Funturia Landolphia* rubber from West Africa showed results rather inferior to those attained in the East.

A great number of native rubbers are under examination, but many suffer from improper preparation. Mouldiness is a sign of this. A considerable amount of resin greatly diminishes the elasticity, and can generally be detected by a moist appearance.

Some investigations as to the yield of latex are described in Bulletin 19 of the Hawaii Agricultural Experiment Station, entitled *Experiments in Tapping Ceara Rubber Trees*. The first trial was

made with eighty trees, which averaged $13\frac{1}{2}$ inches in circumference at 3 feet from the ground, and were 23 feet in height; the first branches were at 10 feet from the ground. The trees were tapped by means of one vertical cut each day, and nearly 37 hours of labour were required for tapping them, collecting the latex, and obtaining, by coagulation, $1\frac{1}{2}$ lbs. of dry rubber. It was found that four ordinary Japanese labourers, who had had no previous experience of the work, could tap eighty trees in a period which varied between seventeen and forty minutes.

In a second lot of trees, which numbered 160 in this case, two vertical cuts were made instead of one, and it only required forty hours of labour to tap the trees, collect the latex, and obtain $7\frac{1}{2}$ lbs. of rubber, of which $2\frac{1}{2}$ lbs. was scrap. The experiment showed that with the prices which obtained for rubber at the end of 1909, when two vertical cuts were made daily, profitable returns were obtained from two-year-old trees. It has to be considered that the labour of tapping small trees is greater than that of dealing in the same way with large ones, and that the yield of latex is much lower, so that, with the same amount of labour, more rubber would have been obtained from older trees.

It was found, during the experiments, that one labourer can tap about fifty trees in an hour, while the latex produced by the work of two such labourers can be collected by one. Subsequent experiments with mature Ceara rubber trees have shown that about $\frac{1}{3}$ -oz. of dry rubber may be obtained as a daily yield from each tree. This leads to the conclusion that three men should be able to obtain rubber from mature trees at the rate of about 1 lb. per hour.

In the matter of the relation between the size of the tree and the amount of tapping that can be effected, it was found that the area of bark on plants 4 inches in diameter will permit of tapping, with one vertical cut daily, for two successful weeks, or with two vertical cuts every day for one week. Larger trees would, of course, permit of the collection of latex for a much longer period.

The *Journal d'Agriculture Tropicale* contains, in a recent number, an account of a method known as the Purub process for coagulating the latex of *Hevea brasiliensis*. Purub is a contraction of the words "pure rubber," and is an invention brought out by Dr. Sandmann.

The process consists in the addition of water to the fresh latex, to which, after a fine cloth has been passed through it, there is added a solution of Purub of 1 per cent. strength, the mixture being stirred. After this has been allowed to stand for several hours, the rubber, which has collected on the surface, is skimmed off, and as much of the water pressed out of it as possible. Prepared in this way, it is soon ready for despatch from the estate

The active agent in the coagulation is hydrofluoric acid. This may be replaced by a 10-per cent. solution of hydrofluosilicic acid at the rate of 5 c.c. of the solution to each litre of the raw latex. The acid salts of these acids, such as potassium and sodium fluoride, potassium, sodium or zinc silicofluorides, either in the solid state or in solution, may be employed for the purpose.

The chief advantage of this process is to reduce considerably the amount of impurities in the rubber; these are retained to a great extent by the settlement of the heavier among them during the process of coagulation. In addition to this, hydrofluoric acid, being an antiseptic body, kills all putrefactive germs; rubber prepared by its aid never becomes viscous. Smoked rubber possesses this characteristic as well, but the smoking process adds impurities to it, and makes it black in colour. In the Purub process, this is all avoided, and there are the additional advantages that it is more speedy and requires less labour. There are other advantages, too, in that all injurious organisms are destroyed, even in the interior of the coagulated mass, and there is no need to dry the rubber—a fact that is in accordance with Bamber's opinion, that rubber is better for a water content of 9 to 10 per cent. (*West Indian Agricultural News.*)

Cotton.

The American crop will probably be short this year, but it must be remembered that the price is affected much more by increasing demand than by such shortage. In 1895 the world's spindles numbered 94 millions and last year there were 129. It is clear that a great extension of cotton cultivation will be required to keep pace with the demand, and it is not likely to take place in the United States when the high price of food-stuffs will tend to reduce the cotton acreage. It seems likely that South Africa will be a supplier. The British South Africa Company have taken 5,000 shares of the British Cotton Growing Association, and the low veld farmers of the Transvaal may take up the enterprise. Cotton in such places has considerable advantages. It is not eaten by locusts. They only damage it if they settle on it in immense numbers, when they may break the branches. Once established, it takes less harm from hail or drought than other crops, and when full grown revels in tropical heat, provided it is kept well mulched. It can be stored after ginning without the fear of damage by Angoumois moth, weevil or mice, and be kept for a rise in the market if necessary.

Best of all, it can be sent to a market where one is sure of a ready sale at a price proportionate to the quality. It thus encourages the grower to produce good staple and quality, in the knowledge and certainty that such will bring its own reward by fetching a good price.

On the other hand there is a peculiar treachery in cotton which makes it necessary to experiment carefully in order to ascertain what varieties are suitable for the soil. It should be remembered that the attempts to grow American, Egyptian and Bourbon cotton in British India have generally failed. Selection must, therefore, be practised and results watched before anything is done on a large scale.

Oilfields.

The only wonder about the oil boom is that it has not come before. The western plains of the United States produce every year a value in oil equal to that of the Transvaal output of gold, and the luck of a finder has long been a byword; now that new uses are being found for the product the demand is greater and the search keener. The difficulty is that geological characteristics are in themselves of little practical use to the explorer. Oil and gas are widespread in the earth, but they only become concentrated when strata have been crushed and folded into "anticlines" and "synclines"; in such places, having a light density, they tend to rise, while water descends, but it is not every anticline that yields oil. The explorer looks out for some actual manifestation of the presence of oil, such as a natural issue of gas or bituminous rocks. There must be beds of sand which can store the oil and of clay to prevent its escape. Such conditions are plentiful in Trinidad, where there is reason to believe that there are 500 square miles of oil-bearing land, if not more. It is to be hoped that the labours of Mr. R. Rust in this colony and of the Hon. A. Ponsonby in Barbados will be rewarded, especially as this is conceivably a case where the gain of the individual will be shared by the Empire. This consideration will no doubt be borne in mind when questions of royalty or rent are under review.

The growing importance of oil lends special interest at present to any well-reasoned account of operations, and a report on the Taranaki Oilfield, New Zealand, by Mr. J. M. Bell, Director of the Geological Survey, is well worth study. Mr. Bell states that, up to the present, success can hardly be said to have been attained in the Taranaki Oilfield, and the question arises, what are the chances for the future? So many attempts have been made to obtain a payable well at Moturoa that one would naturally feel discouraged for the future were it not that in the writer's opinion a fairly definite reason can be given for the failures. Away from Moturoa drilling can scarcely be said to have yet been prosecuted sufficiently to properly test the field.

There can be no doubt that there are abundant surface indications. Petroleum-seepages have been actually seen by Mr. Bell only at Moturoa, though they have been reported from the Waitara River

and elsewhere. Natural gas is widespread. Wherever this occurs in quantity there is a strong probability that it has ascended vertically from porous strata below, which very likely—but not certainly—contain the other product of distillation of carbonaceous material—namely, petroleum.

As mineral waters nearly always accompany petroleum, mineral springs and the evidence of former mineral springs are to a limited extent favourable indications. Travertine, a deposit of a former mineral spring, occurs at several places in the area, notably at German Hill.

A loose porous stratum, such as a sandstone, a conglomerate, or a limestone, is ordinarily considered the most favourable situation for the occurrence of a large reservoir of petroleum, when this is capped by an impervious stratum such as a shale or a claystone. Interstratified claystones and sandstones have been pierced by the various drill-holes so far sunk ; but it may be said that the sandstones, being generally fine-grained and argillaceous, are usually not sufficiently porous to contain much oil. It is thought that most of the small pools so far encountered are either in fissures in both sandstones and claystones, or are very minor impregnations in the more porous of the sandstone beds, and that the oil has arisen through fault-planes (which are widespread in this locality) from reservoirs more deep-seated than those so far pierced by the various bores.

A complete examination of the Tertiary strata so well exposed eastward and northward from Moturoa to the Mokau gives the observer a very fair idea of what may be expected in the drill-holes. Overlying the extensive Mokau coal-beds, the south-westerly extension of which, by coming in contact with volcanic heat or mere increase of heat towards the earth's interior, have been the source of the petroleum, are thick beds of porous green sandstones. It is thought that until these are cut by drilling no very extensive pool of oil will be struck, unless perchance a large fissure rising from great depths is reached above. Consequently it follows that the drill-holes so far put down at Moturoa are not sufficiently deep, and Mr. Bell suggests that one hole be chosen, preferably No. 3 (as being the most westerly and consequently apparently the nearest to the source of oil), and pushed down until the porous stratum seen on the Mokau is encountered. It would be quite hypothetical in the present state of the Geological Survey of the oilfield to say at what depth this stratum will be reached, but it is hoped to obtain more definite knowledge on this point before our work in the locality is complete. Meanwhile the exploratory bore should be proceeding.

In the present state of our knowledge it seems that hopeful petroliferous country, in which boring might later be carried out with success, lies between the present No. 3 bore and the foot of the break-water. Any bores, however, sunk in this locality should await the

results of the deep trial bore—the continuation of No. 3—and when put down should be located at a sufficient distance from the foreshore to be uninfluenced by the sea.

Away from Moturoa all indications must be closely examined and carefully studied before sites for boreholes are chosen. Ordinarily the crest or near the crest of a faulted anticlinal fold is considered the most hopeful site for boring. To such a natural apex the oil would readily ascend through the faults till a porous stratum was reached, from which stratum further migration upward was prevented by an impervious roof.

It is thought that the Geological Survey will be able to reveal, especially towards the east of the field, these anticlinal crests, near which gas now issuing—evidently through fissures—suggests petroleum-pools beneath. However, the work has not yet advanced sufficiently to speak definitely on this point. In the eastern part of the area drilling would probably not necessarily have to be prosecuted to such depths as near Moturoa, since there is a general rise of the strata towards the eastward and northward.

It may be remarked that, even with the greatest attention given to all geological details before selecting a borehole-site, there is danger that the lower part of the petroliferous strata encountered “may contain water instead of gas and oil; or may be calcified or silicified instead of being bitumenized; or that water has entered the outcrop of the strata at higher altitudes [than the borehole-site] and ascended through the formation, floating the oil to the surface and carrying the same to the other dip of the antioline”^{*} than that on which the drill-hole is proceeding.

It is unfortunately true that theory and observations cannot be perfect, but they are immeasurably better than the mere guessing which alone can be said to have accounted for the choice of the sites of many of the Taranaki boreholes.

In Mr. Bell's opinion the chances for oil in Taranaki may in general be said to be as good as in any imperfectly tried field, and it is hoped that after the observations of the Survey are complete the industry will be pushed as vigorously as surface indications certainly seem to warrant.

It has been suggested that oil, tar and gas can be obtained by treating kauri-swamp peats, such as are found in New Zealand.

By “kauri-peat” is meant swamp composed mainly of decayed and decaying kauri vegetable matter, leaves, bark, limbs, roots, &c., and decayed or sugary gum. There are thousands of acres of these swamps north of Auckland, and they are well known to contain large quantities of saleable kauri-gum and kauri-timber lying buried.

^{*} See “The Genesis of Petroleum and Asphaltum in California,” by A. S. Cooper Bulletin No. 16, Calif. State Mining Bureau.

It is also a well-known fact to gum-diggers that the best of the kauri-gum lies beneath the kauri-trees buried in these swamps, and, as these swamps run from 4 ft. to 14 ft., more or less, in depth, it is impossible to get out either this valuable timber or the gum by the present system of digging.

It is claimed that the products obtained by heating the material in a cast-iron chamber (oil, tar and gas) would cost not more than 2d. per gallon.

Valuable Timber.

Much of the West African timber is disappointing, but there is one country—Southern and Western Ashanti—which produces excellent cedar and mahogany and the indigenous rubber tree, *Funtumia Elastica*. The potential supply is enormous. Already the exports from West Africa to Europe and America exceed those from Central America and Cuba, and the trade is sure to grow. At present the Sekondi railway is the only practicable means of export, and the felling must therefore be limited to its neighbourhood, but it would not be very expensive to clean the Tano and other rivers sufficiently to permit logs to float down; these operations need not be so great as in the case of making channels navigable for boats. If this were done the present export could be quadrupled. The following estimate is given by Mr. H. N. Thompson, Conservator of Forests, Southern Nigeria.

“As timber can, under existing conditions, be extracted profitably only if the length of drag from the forest to the nearest stream capable of floating logs does not exceed three miles, that distance may be taken as the extreme width on either side of the floating streams and railways to which exploitation can extend. Again, the proportion of one mahogany and one cedar tree to every five acres may be accepted as a safe figure to go on. It is in all probability rather less than the actual proportion found in the forests. Taking the railways first, the area available for exploitation with human labour as the hauling power is as follows:—

Distance from Sekondi to Kumasi = 168 miles.

„ „ Tarkwa to Preetea = 25 „

Total = 193 miles.

Consequently exploitable area = 193×6 square miles
= 1,158 square miles.

Deduct 25 % for clearings, farms, &c. = -289 „ „

Total = 869 „ „

"This area at the rate of one mahogany tree for every five acres, or 128 trees to the square mile, will contain $128 \times 869 = 111,232$ mahogany trees. And as the same number of cedar trees per square mile may also be assumed to exist, the total number of mahoganies and cedars available for felling will be twice the number given for mahogany, or 222,464 trees. Deduct from this 25 per cent. of the trees to provide for unsound, crooked, or otherwise defective trees, and we are left with a balance of 222,464 — 55,616, or 166,848 trees.

"Now assuming that it takes thirty years for all the trees now between 10 and 12 feet in girth to reach the latter size, then the number of trees (12 feet and over in girth) that should be felled each year amounts to $\frac{166,848}{30}$ trees, or 5,561 trees, which, on the assumption that one tree yields three logs, amounts to an annual output of 16,683 logs.

"Similarly the timber from the basins of the Tano, Ankobra, and Pra Rivers may be estimated as follows:—

Exploitable area on Tano and its larger feeders

	= 900 square miles.
That on the Ankobra	= 300 " "
That on the Offin River	= 500 " "
That on the main Pra River	= 600 " "
Total	= 2,300 " "

And the number of mahogany and cedar trees on this area may be computed at $2,300 \times 128 \times 2$ trees = 588,800 trees. Deducting 25 per cent. for defective trees, the number left for felling amounts to 441,600 trees. Hence, the annual output will equal $\frac{441,600}{30}$ trees = 14,720 trees or 44,160 logs.

"Therefore, the total output from both railways and streams should amount to $(16,683 + 44,160)$ logs = 60,843 logs. The calculation of the output from the streams, however, is based on the assumption that the channels of the Tano and Pra Rivers are opened out to timber exploitation by the removal of the obstructions in them. Unless this is done, the annual output in logs cannot be expected to reach much more than 25,000.

"Every effort, however, should be made to clear the above-mentioned obstructions and at the same time to introduce mechanical appliances, such as traction engines, light tramways, &c., for the haulage and transport of the timber. When this has been accomplished, the Gold Coast, with Ashanti, should be able, and that without any fear of encroaching on the wood-producing capital, to give an annual yield of something like 250,000 logs a year.

Such an out-turn, even at a very mild rate of taxation, should be capable of bringing in an annual revenue of about £60,000.

"These estimates do not include other first-class timbers such as are yielded by the *Odoum* (*Chlorophora excelsa*), the *Baku* (*Mimusops Djave*), &c., and are based on the most unfavourable assumptions. To my mind the Colony, with Ashanti, has a great future before it, so far as the timber industry is concerned."

The position is well worth the attention of capital.

Mahogany.

The price of this timber has risen substantially lately. The demand seems to come mostly from America and is likely to continue. The increased value should stimulate the industry in British Honduras and other places which can conveniently supply the United States. The hardwood trade from Australasia will probably share in the improvement.

Forest Concessions.

A concession of about 5,126 acres of forest land in the Nabugulo district, Uganda, has been granted to a company for a term of 21 years at the nominal rent of 10 cents per acre, and a royalty of 5 per cent. on the produce. The company is to plant not less than 10,000 rubber trees yearly. The forestry operations will be under the supervision of the Government. A vast amount of forest awaits exploitation and will no doubt be largely dealt with by such arrangements.

West African Mines.

In the vicinity of some of the mines whole hillsides have been denuded of trees to provide fuel, and whenever an area has been cleared for this purpose, it may be suggested that use should be made of it for rubber and cocoa. The initial expense of clearing, which is the greatest item, has been incurred for another purpose, and the planting would begin with every prospect of economical success and probably yield large profits to the companies. Such planting operation should, however, Mr. Thompson observes in a report on Gold Coast Forests, if they are expected to help towards the protection of the soil against exposure, be undertaken with species with the evergreen habit and not alone with those that drop their leaves in the hottest and driest season of the year, as is unfortunately the case with the Para rubber plant (*Hevea brasiliensis*), one of the quickest growing, hardiest, and best rubber producers known. This species has the deciduous habit most pronounced when growing in localities having a well-marked and prolonged dry season. Nevertheless if grown in mixtures with cocoa (cocoa as the "underwood" and Para as the "overwood") a sufficient protection should be afforded the soil by the dense shade cast by the latter.

The Para rubber trees are only bare of leaves for a short period each year.

The land at the disposal of the mines is, generally speaking, sufficiently extensive to permit of a long felling rotation, and in consequence the secondary growth has time to reach good dimensions before it is again removed. This is not the case with the farming rotations usually adopted by the natives, who return to the same area in periods varying from three to nine years, and the secondary growth has therefore insufficient time for attaining a large size. Hence, looked at from the worst point of view, the dangers following the cutting of the forests near the mines for firewood are nothing like as great as in the case of the much more extensive areas utilised by the native farmers. Their operations, for the reason indicated above, are much more likely to, and actually do, adversely affect the climate and the soil. If by the discovery of new goldfields the mines become so numerous as to involve extensive and continuous tracts of country, then the consequences of felling in a haphazard manner every year such large blocks of forests would be more serious, and the fellings would have to be regulated by the Government.

Motor Transport.

On the Ibadan-Oyo service, Southern Nigeria, the average takings in 1908 were £156 a month, two vans being employed, one a 2-ton Lacre and the other a 3-ton Thornycroft. The advantage in cost and time over hand transport is considerable, to say nothing of the fact that natives, not being required for carrying, can follow agricultural occupations to the benefit of the country, and that goods arrive in good condition.

The use of paraffin effected considerable saving, and it has been well worth the trouble experienced by all concerned. Many different types of paraffin carburettors were tried on the Albion engine before success was attained by the use of the Cottrell vapouriser, but as this fitting proved to be too flimsy and gave considerable trouble, a simple air heating box was designed and cast in one piece to take its place, and this answers the purpose equally well with no possible chance of trouble.

It must be borne in mind that the Albion motors fitted to the Lacre vans are purely petrol engines, but it is recommended that for paraffin the engine should be specially designed—alterations to engines are not desirable and were only made to engines already in use and on order.

A large amount of time and expense has been caused by the wooden artillery pattern wheels continually giving way; every effort has been made to get the makers to supply cast steel ones, but it was not until the latter part of 1908 that they were able to fit them.

The first two vans were fitted with grooved De Nevers solid rubber tyres, and the next two were fitted with Sirdar tyres to the rear wheels, and soft Clinchers to the front; none of these tyres were satisfactory, especially the Sirdar tyres, which after a few hundred miles running started to "creep" and then became detached.

The type of tyre now being used for the vans is the Shrewsbury and Challiner World tyre for the rear wheels, and the Giant type for the front wheels. These tyres are vulcanized to a strong perforated iron band, and they are attached to the wheels by means of strips of wooden lagging driven tightly in. It is not anticipated that there will be any further trouble with such tyres, as the makers are willing to guarantee them for 10,000 miles run, at a price which works out at 1·7 pence per mile for the 2-ton vans.

Gold in Fiji.

A rush is taking place to Fiji, and some 68,000 acres have been applied for for prospecting. Some districts hold out great promise, but no payable alluvial ground had been found by February, and capital would be required for development. Blocks of true andesite are found, and this is one of the most favourable rocks for containing auriferous lodes throughout the world, and at Nasevou several hot springs rise through a fissure in the solid rock, altering it and depositing lime or sinter, thus showing the process by which mineral veins are formed still in operation. The zone of rock in which the hot water rises is leached and altered, and from the silica carried in solution and deposited therein it becomes more and more silicified. Then, if auriferous solutions come into existence at greater depths, particularly after the deposition of iron pyrites in such channels, gold, in its turn, is deposited and becomes a constituent of the *vein* which is truly an *artery* for the hydrothermal circulation in the rocks, and a repository for the dissemination of the precious metals therein.

Mr. N. D. Cochrane, F.G.S., has been engaged by the Government to examine and report on the indications, and has formed a very favourable opinion on the Wainatu-Waivake line of mineral country, where he considers, with adequate prospecting, payable mines should be developed. The gold, more likely than not, will be contained in the iron pyrites and invisible to the eye and lens—much after the manner of the gold-silver ore-bodies at Waihi, in New Zealand, and, probably, like them, richer as greater depth is attained. It is no poor man's field, but will require ample capital for prospecting and development. Much of the success of the field will depend on that condition, together with its efficient and capable expenditure.

At Namosi the dominant rock is volcanic agglomerate on each side of the river, strongly jointed, and rising in nearly vertical cliffs

to great heights, with rugged serrated outlines, forming a magnificent gorge, or pass, unequalled of its kind. This expands until a low saddle is crossed and the watershed of the Navua River is entered, where "soapstones" or tuffaceous mudstones form the flat country at the Waikoroiluva and Navua rivers.

Namosi itself, with its double amphitheatre of rock-bound heights, presents the appearance of a vast crater. Mr. Cochrane considers the rock-cleft Namosi Pass is primarily a great volcanic rent, and that no other agency could account for it.

It seems probable that payable mines will be found, and there are also indications of petroleum—as to this Mr. Cochrane observes:—

"In regard to petroleum: This is a matter which is very speculative, and as to which the most experienced can only give an opinion. The *indications* are usually petroleum "scum" and gas-bubbles. The former occurs at one place only—Namenā—but extended search might, and probably would, disclose others. No gas-bubbles were seen.

"The *conditions* favourable for the occurrence of petroleum and its retention in the strata are (1) an open porous rock-bed as a reservoir; and (2) a more impervious overlying-bed to prevent its escape. Together with a formation of such (3) age and (4) structure as occurs in this district, and (5) one of very considerable thickness.

"Both (1) and (2) may very well, and probably do, occur near the lower part of this formation; but (5) is uncertain, though there are indications which point to its existence. Taking all into consideration, while due allowance must be made for its uncertainty, and comparing with the oil occurrences in Taranaki, New Zealand, I am not unfavourably impressed with the prospects of finding petroleum in this district."

Southern Nigeria.

A new map of the Eastern and Central Provinces has been prepared by Captain Woodroffe and published by Messrs. Stanford. It is on sale at from £1 to £2 according to mounting, and will no doubt be found very useful by the numerous companies and prospectors who are interested in the territory.

Australian Imported Goods.

A return has been published showing the articles which have been imported for the use of Government offices during 1908-9, with the prices paid and in most cases the names of the suppliers. The list represents almost all the articles which are imported into Australia, and the particulars given deserve the commendation of manufacturers and merchants in this country, who will gather from them a clear idea of what is wanted and what competition there is to meet.

RAILWAY NOTES.

Ceylon.

It was proposed to adopt the Renard road train, but this idea has been put aside in favour of spending money on the improvement of roads. There are various private associations in the colony who are considering schemes for road motor traction, and a charge on produce carried over roads which have been specially improved for the purpose would be reasonable. The position and the considerations which have led to it are clearly set out in the following extract from Sir H. McCallum's address to the Legislative Council on the subject:—

“Favourable accounts having been received as to the efficiency and the economy of that novel form of mechanical traction which is known as the Renard road train (consisting of a motor and three trailers), the Government sent expert officers to India to be present at the trial of an experimental train at Calcutta on the plains, and at Shillong in the hills. Making allowance for all the difficulties which attended these experiments, the reports received were fairly satisfactory. Two complete trains were therefore ordered from England, on the understanding that the Secretary of State's expert advisers (who are the Mechanical Transport Committee at the War Office) were first to assure him that the system is as efficient and economical as has been represented. On my arrival home I found that the Committee held a contrary opinion, and considered that both the working expenses and depreciation had been under-estimated. After some correspondence it was arranged that the Directors of the Company and the Committee should meet at the War Office, and that I should be present. After some discussion I invited the Company to supply and themselves work the two trains for two years, Government undertaking to carry out all the improvements necessary to the roads, including the strengthening of the bridges. If the trains proved to be satisfactory, and if the anticipations as to working expenses and depreciation were fulfilled, I undertook, subject to the approval of the Secretary of State, that the Government would take

over the trains at the end of the two years. This offer the Company declined.

"I then proposed that if we purchased the trains, the Company should guarantee the Government that with normal traffic and due care these particular charges would not be exceeded during the five years of anticipated life. This they said they were prepared to do, but a letter from them on the subject laid down the impossible condition that we should give the Company a heavy annual premium in consideration of such guarantee. I agreed with the Mechanical Transport Committee that such a condition was absurd, and that we must look for the necessary mechanical traction in other directions. The principle of the Renard road train in making use of the load carried in the trailers is recognized as sound, and the attention of inventors is being given to the use of electricity for the purpose, instead of the present complicated power-absorbing mechanical contrivances. There is nothing, however, yet upon the market.

"Special designs will probably have to be supplied, as I impressed on the Committee that the weight of an axle must in no case exceed four tons, and that three tons would be preferable. Also that the extreme width over all must not exceed 5 feet 6 inches.

"The general policy of the Government will be to encourage private enterprise in this matter of supplying and working motor traction, always provided that the rates per ton mile are moderate and prove satisfactory to those concerned; also that the service is regular and frequent, and conforms to all local requirements. Any system of mechanical traction will entail considerable expenditure in the matter of improving roads and strengthening bridges. This must either be carried out to the satisfaction of the Director of Public Works by the individuals or companies who desire to embark on the enterprise, or, if the Secretary of State approves, will be undertaken by the Government from the loan vote, a small charge being levied on every ton of goods carried to cover interest and sinking fund on the expenditure incurred.

"Where private enterprise is not forthcoming, satisfactory alike to the Government and the public, the Government will be prepared to consider the advisability of running a service as a business proposition. A capital account will be kept covering cost of rolling stock, improvements to roads and strengthening of bridges, garage, quarters, &c. Under working expenses due provision would be made for repairs and depreciation, interest and sinking fund. Assurances of traffic must be forthcoming from those concerned.

"The lines to which attention is proposed to be given are—

- (a) Kandy (Wattegama) to Teldeniya.
- (b) Talawakele to Agrapatanas.
- (c) Hatton to Bogawantalawa and Maskeliya."

These proposals have been approved by the Secretary of State.

West Africa.

In two years Lagos will be the terminus of a railway stretching 800 miles into the interior, and in a few years more it will possess a spacious harbour into which the largest ships of the West African trade will enter. A considerable increase of population may therefore be looked for, and in making provision for the first requisite—water—this fact has to be taken into account. In a scheme which has been prepared for the supply of water from Iju Valley allowance is made for an increase from the present population (Lagos and Ebute Metta) of 80,872 to 150,000. The estimated cost is £260,000, and the annual charge, including interest and sinking fund, would be about £18,922. It is to be hoped that finances will admit of the early execution of the scheme and of quicker progress with the harbour. The dredging for the latter works is going on well; 6,000 feet of shore delivery pipes are now on the spot, and probably very successful reclamation work will be accomplished shortly. There has been some delay at the quarry, but the rock-drilling plant is now fully installed and good results should follow soon.

Baro-Kano.

By the end of 1909 the rails reached the 135th mile. With the approach to the Kaduna the construction of the road to the Bauchi tin mining area claimed attention, and a survey for this purpose North of the Kaduna to Liruci has been recommended. All bridges and culverts as far as Minna were completed, and all preparations made for the heavy bridge work between Minna and the Kaduna. The programme of work for the dry season comprised an ascent of 1,500 feet to the Kaduna water shed from the Bako Valley, crossing a number of lateral valleys. The freight rates are at present from 8d. and 3½d. per ton mile, according to classification. Passenger fares are 3d. per mile first class, and 1d. second; 3rd class booking was held over pending suitable coaching stock. In December, 4,049 passengers were carried. An average of 9,411 labourers have been employed. The survey of the Zungeru link was completed in December.

Baro unfortunately has the reputation of being the most pestilent fly station in the Protectorate, the number of mosquitos and tsetse flies being enormous, but the bush has been cleared for a large area and the pools treated with oil.

The revised estimate of expenditure (not including the Zungeru link) was £1,230,000.

Jebba-Zungeru.

It was originally decided, in order to keep the cost of construction as low as possible, that this line should be of the "pioneer" type, which involves the acceptance of heavy gradients

and the substitution of steel trestles for bridges of concrete and steel girders, and of corrugated iron pipes for earthenware or concrete pipes or culverts. The cheap work of this description saves some £10,000, but it involves speed restrictions, constant watching, liability to interruption and some early replacements. The question has therefore been raised whether the saving is justified, and it has been decided to maintain the standard grades of one in a hundred outwards and one in eighty inwards on the Jebba-Zungeru line. With steeper grades the cost could be reduced by about £20,000, but at a time when £175,000 is being spent to improve the 125 miles of the Iddo-Ibadan section up to the above standard, it would hardly be justified to adopt a lower standard for the extension.

Gold Coast.

With a view to the construction of a railway from Accra to Coomassie an exploration has been made of the country between Komfrodon and Coomassie, and it seems thereby that a practicable route can be found. The line might be shortened by diverting it to join the Sekondi railway at Bekwai, instead of going straight on to Coomassie, but it is doubtful whether this route is feasible. The extension of the Akwapim line has, however, been given up for the present.

At Accra considerable progress has been made with the block-setting in connection with the extension of the breakwater, and with the iron jetty, the piles of which have been driven into solid rock.

At Seccondee the root wall was completed in February, the foundations being on solid rock. The two temporary slipways are completed and in use.

The completion of the railway to Prestea, which it was hoped would be achieved by the beginning of May, has been delayed by foundation difficulties.

Ceylon.

The Mannar railway work has proceeded satisfactorily ; in March four miles of earthwork were finished at Mannar, and at Madawachchi the jungle had been entirely cleared over the first eight miles. It is proposed to negotiate with some of the contractors on the Assam Bengal railway for cutting earth work contracts.

Concrete blocks have been found the most economical material for the station buildings ; a number have been made and seem most satisfactory. With a turnout of 50 per day, by machine, they can be made (10 ins. wide) for 12s. 7d. per cubic yard.

Shiré Highland Railway.

The track has been well maintained and is in very good running order. It is interesting to find that the gangers in charge of each

maintenance gang are natives, and these men are doing very well indeed ; they have been promoted from time to time to replace the Indian gangers, who have been thus gradually dispensed with. Trains are running well and the conduct of the traffic appears to be quite satisfactory. 2,000 tons of maize were carried last year, and it is expected that a much greater quantity will be exported this year. The bridges have been recently inspected and probably some further work will be done to improve them.

Uganda.

It has been decided to construct a railway from Jinja to Kakindu at an outside cost of £160,000. Some reasons for this enterprise were referred to in our last number. An estimate of £3,200 a mile allows a metre gauge as on the Uganda railway, and 41 lb. rails. It is to be hoped that eventually a further line will be laid from Mruli to Butiaba on Lake Albert, so as to complete the communication by rail and steamer between Lake Victoria and Lake Albert ; the distance is about 25 per cent. more than that of the line now sanctioned. There is little doubt that the development of East African trade lies in this direction. A great amount of dissatisfaction has been very naturally expressed in Parliament and elsewhere at the poor show made by British shipping on the East African coast, but the root of the difficulty is obviously the paucity of freight, and the proper remedy is to develop the trade by opening up a promising country. A steamship subsidy is by comparison a throwing away of money, and probably little would have been heard of such a suggestion but for the example of Germany. The opening up of the interior will be a real and permanent improvement, and British shipowners will not be slow to compete for the business when there is a substantial amount of it.

It is proposed that the £160,000 should be voted by Parliament and advanced to the Uganda Government as a loan.

Johore State Railway.

Very heavy rains fell in February and the damage done was very considerable. There were numerous slips in embankments and slopes of cuttings, at one part 46 in ten miles ; and the amount of earthwork required to be done in repairs is estimated at 300,000 cubic yards. None of the bridges, however, of which there are 377, were washed away, and there is nothing in the nature of the damage that indicates faulty construction. Such interruptions are likely to occur for some years after construction, but will yearly be less frequent.

Hong-Kong.

In January the lining of the Beacon Hill Tunnel was completed, the last brick being laid by the Governor. The work has been an

exceptionally trying one and it is satisfactory to see the end of it. All tunnels are now completed, but the earthwork south of Beacon Hill has been retarded by the rebuilding of bridges. A contract for the body work and erection of the passenger stock has been placed with the Hong-kong and Whampoa Dock Company.

The British section of the Line will be ready before the Chinese section, and it is proposed to open it, probably in July, to work up local traffic and transport material to the Chinese section.

Speed down Gradients.

The regulations for German branch lines prescribe the speed at which trains may descend gradients, the speed on steep gradients (1 in 25) being limited to the figure at which the number of the axles would exceed 56 per cent. of the total number of the braked axles in the train. It is assumed that the engine and tender use their own brakes.

Beyond certain speeds the friction between brake blocks and wheels rapidly decreases, and this accounts for some accidents. Moreover the friction decreases when the brakes have been on some time; and the friction between block and wheel is greater than between wheel and rail, so that the retarding effect is less when the wheels are skidding than when they are rotating. These considerations indicate the danger of relying on the brakes to check excessive speed. If an accident takes place the wheels should be examined to see whether they have been worn by skidding.

The Stoats Nest Railway Accident.

This accident between Brighton and Victoria has been the principal subject of recent railway discussion, and the report makes the cause clear. A wheel of the coach had shifted 1 inch outwardly on the axle. It is the practice to force the wheels on to the axle with a pressure of 60 tons, and it appears that this had been done to the satisfaction of the Railway Company's Inspector, but his report of the test could not be found. The moral for all railways is that the inspector should himself see that the wheels are driven home with the required pressure. There is an automatic apparatus which marks on a tape the pressure required during the whole operation, and this should always be used and watched.

Ticket Printing Machines.

The Central South African Railways have purchased three "Regina" machines for experimental purposes.

This machine is in use at Cologne Station, on the German State Railways, where it has earned an enviable reputation for the manner in which it has lightened the work of booking clerks, and enabled a heavy passenger traffic to be handled with greater expedition

than under the old system of printed tickets. The average number of tickets issued per machine at Cologne is 250 per hour, whilst at pressure a far greater number can be dealt with. The advantages of the appliance do not end here. In addition to printing the tickets, the issues are simultaneously automatically recorded, and the fare paid noted on a duplicate register, so that all a booking clerk has to do before going off duty is to total the register slip and count his cash, when, if the day's transactions have been accurately made, the two should at once balance. Should, however, the results differ, the clerk can instantly ascertain if an error has been made, since there can be no question of the accuracy of the mechanical record.

Compactness is a feature of the machine, which is unpretentious in appearance, and of the following dimensions, *i.e.*: 4 ft. in height, 3 ft. 6 in. in length, and 1 ft. 11 in. in breadth. It will carry sufficient plates for printing 2,000 different tickets. The advantage of such a large number of tickets being available in such compact form, and always at hand, need not be enlarged upon.

The working parts of the machine comprise a series of troughs, in which are contained small printing plates, corresponding to the tickets to be issued. The plates are locked in the machine, and can only be printed from by means of a mechanical printing carriage, hereafter described.

At the back of the machine, upon an octagonal drum, is carried an indicator, on which is printed in alphabetical order the name of every station for which printed plates are provided. By means of a movable carriage, somewhat similar in principle to the carriage of a typewriter, the machine is set for a particular ticket required, which is indicated by a pointer attached to the carriage. An entirely blank and valueless piece of cardboard, of the usual ticket size, is then inserted in a slot in the carriage, when by the depression of a small lever a completely-printed and dated ticket drops into a tray provided for its reception. By this one movement the ticket has been printed, numbered, dated, and recorded upon two separate registers—one of which constitutes the clerk's record for remittance purposes, whilst the other is available to the audit office only. In addition to the record, the issue has also been classified in such a manner as will enable statistics to be taken out if required. The responsibility for issues is fixed by means of a "control ticket." This ticket is printed and recorded on the machine by each clerk upon assuming or going off duty, endorsed with the time of taking charge of and handing over the machine, signed, and retained for future reference.

The experiment will doubtless be watched with interest, as in the event of its success the character of the work in booking offices will undergo a change, the result of which will be to lighten the duties by the almost entire elimination of bookkeeping in connection with passenger traffic. (*South Africa Railway Magazine.*)

MEDICAL NOTES.

Pellagra.

It appears from an announcement published in *The Times* of May 14th that the Field Commission studying Pellagra in Italy has come to the conclusion that the theory ascribing the disease to the consumption of diseased maize must be abandoned. The investigations of the commission are said to support Dr. Sambon's contention, advanced some years ago, that Pellagra is due to a parasitic infection having probably a definitive or intermediate host. This host is now stated to be the *Simulium reptans*, a species of "sandfly," which is widely prevalent in Italy. It is hoped that the announcement will be borne out by well-considered proofs.

That maize is not the cause of Pellagra is a belief that is gaining several important adherents, among others Professor Alessandrini, of Rome, who has urged upon his students that the disease might be of parasitic origin. Dr. Sambon is at present engaged in the study of Pellagra from the epidemiological point of view, a step rendered imperative owing to the difficulty of obtaining exact records of the presence and prevalence of Pellagra in its reputed haunts. It is therefore necessary for the commission to visit many centres where the disease, especially at this season of the year, prevails in Italy and elsewhere. To accomplish this task a considerable amount of money must be expended, and it would be regrettable if it became necessary to recall the commission prematurely. Moreover, it is not in Italy alone that this important study should be prosecuted, but in other countries where the scourge of Pellagra has appeared. Several letters from other countries adjacent to Italy have been received requesting that the Field Commission should pay them a visit. The Committee would gladly assent were the means forthcoming. Generous donations from several well-known firms and private individuals have enabled the committee to keep the commission in the field up to the present time, but further sums are necessary if the work is to be carried on.

Yellow Fever in West Africa.

The appearance of yellow fever on the west coast of Africa has naturally occasioned much anxiety, but the occurrence is fortunately not so serious to-day as it would once have been. The disease has lost none of its deadliness, but the method of infection through the bite of the *Stegomyia fasciata* is now accurately known, and, by the prompt isolation of infected persons, it is possible to reduce the danger of a spread of the disease to a minimum. West Africa possesses a highly skilled medical service, thoroughly competent to deal with an emergency, and they will enjoy the advantage of the advice and assistance of Sir Rubert Boyce, the greatest living authority on yellow fever, who has previously rendered invaluable service in connection with outbreaks at New Orleans and in British Honduras. The latest advices indicate that the outbreak has been confined within narrow limits.

Sleeping Sickness.

The Sleeping Sickness Bureau has issued Nos. 16 and 17 of its Bulletin, a Subject Index to the Bibliography of Trypanosomiasis, and a revised edition of the valuable little pamphlet containing instructions for the avoidance of infection for the use of travellers and residents in tropical Africa.

REVIEWS AND NOTICES.

The Report of the Committee on Distressed Colonial and Indian subjects, over which Sir Owen Philipps presided, has been presented to Parliament. The Committee make a number of detailed recommendations, of which the following are perhaps the most important :—

That masters of vessels (British or foreign) when engaging Eurasians and East Indians on European articles at ports in India should be required to give an undertaking to repatriate them, if the voyage terminates elsewhere than in British India.

That an undertaking to repatriate should also be given when native seamen belonging to the Crown Colonies and Protectorates are signed on at the ports of these Colonies and Protectorates (except in the case of West Indian seamen engaged for voyages terminating elsewhere in the West Indies).

That native seamen signing on in the West Indies should be given a special certificate, showing the place to which they belong, so that, should occasion arise, repatriation to the proper Colony may be effected without difficulty.

That it should be made unlawful in the Crown Colonies and Protectorates for natives to leave for the purpose of spectacular performances unless provision is made for repatriating them.

That a special home should be established to deal with distressed West Indians, and that the Strangers' Home for Asiatics should undertake the supervision of it.

That steps should be taken where possible to make known in the Dominions, Colonies, and Protectorates the risk involved in coming to the United Kingdom in search of work unless those who come have means available to take them home if they are not successful.

The Handbook of Nyasaland : 2nd edition. (*Wyman & Sons*: 3s.)

This gives a very full description of the Protectorate, and practical advice is given as to the cultivation of the principal products. Land is cheap and labour plentiful, and planters have the choice of a large variety of products. A beginning has been made with Para rubber (*Hevea brasiliensis*). Early in 1906 a Wardian case was received from Ceylon by the African Lakes Corporation containing 2,000 Para seedlings. Of this consignment 266 plants survived and are doing very well, some of the trees being as much as 12 feet in height in July, 1908. In January, 1907, the same trees were only five feet high, and the further growth is regarded as very satisfactory. None of the plants up to the present have shown any signs of disease. In January, 1907, a further consignment of six Wardian cases was received. When despatched from Ceylon these cases contained 6,000 seeds, but only some 2,500 survived the journey, and were planted out at 20 ft. by 20 ft. Of these about 1,600 are alive and doing well, the large percentage of deaths being due principally to white ants and the grub of the cockchafer. To get rid of the latter pest a mixture consisting of one pound of Paris green and three pounds of salt to 40 pounds of donkey manure was used and proved effectual, when dibbled in some little distance from the roots at time of planting. With Para the best results have been obtained on good *dambo* land, well drained; the danger of the plants being killed by the two pests mentioned is very much less on such ground than on the drier and lighter red soil. If the present rate of growth be maintained, tapping operations ought to commence by 1911, and the trees may be expected to flower this year.

Nyasaland cotton has established a first class reputation, but for a great extension of the industry the extension of the railway from Blantyre to Lake Nyasa, so as to take the district with the largest population, is necessary. There are no ginneries north of Zomba, and the expense of transporting seed cotton by native carriers from the Lake districts to the ginneries and thence by rail and river to the coast makes it impossible to export profitably the crop from outlying districts, even when paying only $\frac{3}{4}$ d. per lb. for seed cotton. This gives the native little encouragement or compensation for his work, and therefore he only produces sufficient to pay his Hut Tax. If the Baro-Kano railway in Northern Nigeria succeed in developing a great cotton production, this would no doubt prove a strong argument in favour of similar enterprise in Nyasaland.

It is stated (p. 225) that recruitment of labour for service outside the Protectorate is forbidden. But numbers of Nyasaland natives have succeeded in finding their way to the Witwatersrand mines, and the Government has found it necessary to recognise this emigration in order to limit it and bring it under control.

British Honduras and its Resources. By WILFRED COLLET, C.M.G. (*West Indian Committee Rooms, price 6d.*)

This is a print of a lecture delivered under the auspices of the West India Committee by the Colonial Secretary of British Honduras, and issued to call attention to the immense though undeveloped resources of the Colony. The first question which capitalists put about such places is, What is the supply of labour? and unfortunately in this case the answer is unsatisfactory. The country abounds with possibilities, but it suffers from want of population. All the available labour is absorbed by existing industries, and some means of importation must be devised before any great development is possible; land is cheap and plentiful, and companies growing bananas, cocoa-nuts or rubber on a substantial scale could offer inducements to the natives of better populated places in the West Indies.

Bulletin of the Imperial Institute.

The last issue contains analyses of Sierra Leone rubber samples, which give very satisfactory results. These indigenous plants should in these days of rubber exploitation receive attention, but of course some care must be shown in the selection of areas, and it is much to be regretted that in the hurry to form companies this has not been done in certain West African cases. The great resources of the Colony in palm oil might well be studied as well by investors; it cannot surely be long before the services of the railway in opening up palm districts are taken advantage of on a substantial scale. A simple machine (the Creltin) for cracking the nuts has recently been brought out and should stimulate the industry.

Articles are given on the preparation of beeswax, varnishes and the soy bean.

Travel and Exploration.

The notes on outfit and health preservation are continued in the May number and are very readable, though opinions differ about many details. A great nuisance and danger is removable if it is correct that "Muscatol is a popular preventive of mosquito bites, and now generally replaces the time-honoured treatment of mustard oil or eucalyptus oil. It has the great advantage of being fully as efficacious as these well-known remedies without being 'messy' and unpleasant in its application. By adding a little Izal solution in the bath a traveller is, however, practically rendered immune from the bites of these troublesome insects." Another article, however, on Eastern Travel is not so sanguine about this.

"Insecticides are no doubt considered a prime necessity in Far Eastern travel, but without denying that there may be preparations fatal to insects which consume them in sufficient quantity, my experience of immediate effect of several specifics is that they give the preying insect a greater appetite for human blood and increase his activity! If you coat the parts of your skin exposed to mosquitoes with a compound of Stockholm tar and petroleum, or naphtha, it will take the insects some time to reach through the viscous mess to you. Better wear a veil; but in a fly country, bitten you will be. Treat the bite or sting with ammonia, or lanoline. Eucalyptus oil may be tried as a preventive and palliative."

We have received from Mauritius the first four numbers of *Le Bulletin Agricole*, which is published "sous le patronage de la Chambre d'Agriculture, sans en être l'organe officiel, et a le même caractère vis-à-vis d'elle que le *Colonial Office Journal* vis-à-vis du Ministère des Colonies." The Bulletin is published monthly, and the subscription is 6 rupees a year; it gives promise of being a useful and practical periodical.

COLONIAL STAMPS.

BRITISH HONDURAS.—The stock of Victorian stamps remaining in the hands of the Crown Agents for the Colonies on the 30th November last has been destroyed.

CEYLON.—Of the values mentioned in our last issue, the following have been despatched, viz., 10, 25 and 50 cents, and 1, 2, 5 and 10 rupees. The plates for the 2, 3 and 5 cent. stamps have been countermanded owing to the King's death.

DOMINICA.—1/- stamps have been supplied for the first time in the new colour.

Fiji.—½d. stamps have been supplied for the first time in singly fugitive ink, and the 5/- and £1 stamps in the new colours.

JAMAICA.—3d. and 6d. stamps have been supplied on surfaced paper and in doubly fugitive ink, and a supply of 2½d., 4d., 1s. and 2s. stamps in the new colours. The 3d., 4d., 6d., 1s. and 2s. stamps are still of the Queen's head design.

MALTA.—2d., 4½d, 5d., 1s. and 5s. stamps in the new colours have been ordered, this being the first supply of 5s. stamps printed from the plate showing the portrait of the late King.

The 4½d. and 5d. stamps, being printed in one colour by the steel plate process, will be in the colours given in the scheme for this process in our number for January last.

NORTHERN NIGERIA.—2d., 2½d., 5d., 6d., 1s., 2s. 6d., and 10s. stamps have been supplied in the new colours.

ST. KITTS.—1s. stamps have been supplied for the first time on surfaced paper.

TURKS ISLANDS.—A new ¼d. stamp has been supplied. The design is a representation of the *Melocactus Communis*, or Turk's Head, printed in one colour—crimson lake—by the steel plate process.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Major A. ESSEX CAPELL, D.S.O. (late Inspector, South African Constabulary), Chief of Police, Grenada.
- Mr. P. N. H. JONES, A.M.I.C.E. (Assistant Director of Public Works, Hong Kong), Director of Public Works, Gold Coast.
- Lieutenant F. W. BELL, V.C. (Assistant Political Officer, Somaliland), Assistant Resident, Northern Nigeria.
- Mr. H. A. DANIELL (District Officer, Somaliland), Assistant District Commissioner, Uganda.
- Dr. P. J. KELLY (Medical Officer, West African Medical Staff), Medical Officer, Hong Kong.
- Mr. J. C. D. FENN (late Senior Assistant Treasurer, Gold Coast), Accountant in Treasury, Cyprus.
- Mr. R. W. TAYLOR (Head Accountant in Treasury, Somaliland), Treasury Assistant, Uganda.
- Mr. T. B. BRACKEN (Assistant Superintendent of Police, Gambia), Assistant Commissioner of Police, Southern Nigeria.
- Mr. A. H. HODGES (late of the Department of Posts and Telegraphs, Orange River Colony), Assistant Postmaster-General, Northern Nigeria.
- Mr. M. L. SKINNER (late of South African Constabulary), Assistant Inspector of Police, Uganda.
- Mr. M. ST. C. THOM (Assistant to Finger Print Expert, Orange River Colony), Assistant Inspector of Police, Uganda.
- Mr. W. P. HARRAGIN (late of Transvaal Civil Service), Assistant Inspector of Police, Uganda.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ABBOTT, E. G.	1 July, '10	FRANCE, H. D.	31 Aug., '10
ARCHER, Capt. F. J. E.	28 July, '10	FESTING, Maj. A. H.	16 July '10
Junior Naval and Military Club, 96, Pic- cadilly, W.		D.S.O., c/o Messrs. Barclay & Co., Caven- dish Square, W.	
ARSCOTT, F. W.... ..	17 July, '10	FAIRWEATHER, C. ...	28 Aug., '10
ARMITAGE, Capt. C. H....	31 Aug., '10	GETHING, W. B. ...	14 Aug., '10
BURNS, P.	28 Sept., '10	GREEN, Miss E. F. ...	3 Aug., '10
BROWN, E. P.	7 Oct., '10	HOLLOWAY, J. H. ...	11 July, '10
BALSTONE, A.	28 Aug., '10	HARRY, H. P.	7 July, '10
BARKER, W. H.... ..	10 Aug., '10	HOUGHTON, W. J. ...	4 July, '10
BURNS, R. E.	4 Sept., '10	HORN, Dr. A. E.	14 Aug., '10
BURBRIDGE, K. G.	14 Aug., '10	HELLIS, C. O. H. ...	24 Aug., '10
BENNETT, R.	14 Aug., '10	HOBBS, G.	17 July, '10
BURNETT, W.	8 Aug., '10	HARPER, Dr. F. S. ...	
BRANTINGHAM, W.	4 Aug., '10	HIND, C. E.	28 Sept., '10
BROWNE, W. T., c/o	18 July, '10	INGLIS, M. F.	10 Sept., '10
Messrs. Holt & Co., 3, Whitehall Place, S.W.		JUPE, Dr. F. I. M. ...	14 Aug., '10
CHILD, E. A.	10 July, '10	KEYWORTH, Capt. R. D.	23 July, '10
CRAVEN, C. S.	12 Sept., '10		Steamer leaving
DUNNE, Miss E. F.	13 Sept., '10	KITSON, Maj. A. W. ...	10 Aug., '10
DAVIS, S. S.	18 July, '10	LEES, Maj. W. E. ...	29 July, '10
Royal Colonial Insti- tute, Northumberland Avenue, W.C.		LUNN, Dr. J., Royal Societies Club, St. James's St., S.W. ...	7 Aug., '10

GOLD COAST—continued.

LOWE, E. D. M....	... 31 July, '10	PAULL, E. D. R.	... 24 Dec., '10
LEAT, F. W.	... 25 July, '10	POPE, A.,	... 7 Sept., '10
LETT, R. E.	... 22 Aug., '10	POOLE, Capt. G. A. E.	17 Sept., '10
c/o Royal Colonial Institute, Northumberland Avenue, W.C.		c/o Sports Club, St. James's Square, S.W.	
LEFANU, Dr. G. E. H.	17 Sept., '10	PHILBRICK, A. J.	... 28 Aug., '10
LANGLEY, Dr. W. H.	...	ROBINSON, F. A. .C. C.,	28 July, '10
LLOYD, A. G.	...	c/o Messrs. Way & Co.	
MICHELIN, W. P.	... 7 Oct., '10	11, Haymarket, W. ...	
c/o Royal Colonial Institute, Northumberland Avenue, W.C.		READ, Capt. H.	... 11 Oct., '10
MAUDE, R. A.	...	REEVE, Lt.-Col. W. T. M.	17 Sept. '10
MILES, A. C.	... 10 Aug., '10	RICHTER, A. H. L.	... 7 Oct., '10
MCLEOD, Miss A.	... 28 Aug., '10	SAICH, H. C.	... 15 Aug., '10
MURRAY, D.	... 28 July, '10	SOPER, F. L.	... 7 Sept., '10
MILES, T.	... 10 July, '10	STREET, S. W.	... 22 Aug., '10
MCDONALL, Dr. J. C. S.	24 Aug., '10	SHARPE, Dr. F. G.	... 11 Aug., '10
c/o The National Bank of New Zealand, 17 Moorgate Street, E.C.		SWANBOROUGH, T. W.	... 14 Aug., '10
MAIN, F. G.	... 20 July, '10	STOREY, Capt. H. I.	... 7 Aug., '10
O'HARA-MAY, Dr. H.	... 16 Oct., '10	SMITH, J. C.	... 17 July, '10
ORAM, Miss J.	... 28 Aug., '10	STEWART - RICHARDSON,	
O'BRIEN, Dr. J. M.	... 10 Sept. '10	N. G.	... 2 July, '10
c/o Royal Societies Club, St. James's Square, S.W.		TRIMMER, J.	... 8 Aug., '10
		THRELFALL, J.	... 8 Aug., '10
		WHITTOW, A.	... 7 Aug., '10
		WITHINGTON, J.	... 8 Aug., '10
		WOODS, P. S. C.	...
		WILKINSON, S. J.	...

SIERRA LEONE.

BOWDEN, W. D....	... 4 Sept., '10	HEARN, W. A.	... 22 Aug., '10
BOULTON, C. M....	... 28 Aug., '10	MORISON, R. J....	... 20 Oct., '10
BALDWIN, R. de C.	... 28 Aug., '10	MOORE, Dr. J. J.	... 8 Sept., '10
BARLAY, H.E., c/o Messrs.		PROUDFOOT, J.	... 22 July, '10
Cox & Co., 16, Charing		RENSHAW, E.	... 20 July, '10
Cross, S.W.	... 19 Sept., '10	SWAINSON, J.	... 20 Sept., '10
COMBER, J. R. W.	... 31 July, '10	SALT, A. H.	... 13 Sept., '10
CLIFFORD, J. W.	... 15 July, '10	THORNE, F. N.	... 10 July, '10
EVELYN, E. E.	... 7 Sept., '10	VAUDREY, Capt. C. H. S.	13 Sept., '10
FORDE, Dr. R. M.	... 28 Aug., '10	VAN DER MEULEN, F. A.	25 July, '10
GORDON, R.E., c/o Messrs.	22 Aug., '10	WATSON, R. H....	... 22 Aug., '10
Cox & Co., 16, Charing		WILLANS, R. H. K.	... 22 Aug., '10
Cross, S.W.		WILSON, C. F.	... 7 Sept., '10
HEARN, R. W.	... 28 Sept., '10		

GAMBIA.

ALIX, Sister M....	...	OLDMAN, Capt. R. D. F.,	9 Oct., '10
DOIG, J. G.	... 7 Aug., '10	United Service Club,	
HOOD, Dr. T.	... 7 Aug., '10	116, Pall Mall, S.W.	
		WOODS, T.	... 10 Sept., '10

SOUTHERN NIGERIA.

BLACKWELL, Maj. L. N.	28 July, '10	GRAHAM, Miss M. M.	7 Nov., '10
BEST, W. H. G. H., c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.	13 Sept., '10	GRAY, E. A. S.	21 Sept., '10
BINGESS, Dr. H. L.	28 Aug., '10	GRAY, G. S. B.	13 Oct., '10
BIDDELL, A. W.	4 Aug., '10	GRAY, H. W.	8 Aug., '10
BIRCH, E. W. P.	13 Sept., '10	GRAY, St. G.	7 Sept., '10
BROOKE, C. W.	3 July, '10	GARDEN, C.	5 Aug., '10
BEALE-BROWN, Dr. T. R.	31 July, '10	GALLOWAY, Capt. L., D.S.O.	10 Sept., '10
BOSANQUET, G. A. I.	31 July, '10	GUERITZ, E. L.	13 Sept., '10
BENNETT, H. W.	10 July, '10	HALLIWELL, W. S.	28 Aug., '10
BROWNING, F. S.	8 Aug., '10	HEPWORTH, L. F.	4 July, '10
BEST, H.	25 July, '10	HISCOCK, R. C.	10 July, '10
BENNETT, A. J.	27 July, '10	HUGHES, Lt., R. H. W., R.N.R.	6 Aug., '10
BUTTERWORTH, Capt. A. W.	14 Aug., '10	HAMPT, W. F.	6 Aug., '10
CHRIST, T.	14 Aug., '10	HAZELL, J. T.	28 Aug., '10
c/o The Bank of British West Africa Ltd., 17, Leadenhall St., E.C.		HURFORD, J.	4 July, '10
CLEMMISON, A.	17 Aug., '10	HILL, W. R.	25 July, '10
CATHEY, C. H.	20 Sept., '10	HENDERSON, J.	24 Aug., '10
COMSAL, Dr. A.	25 Aug., '10	HAWTAYNE, W. H.	25 July, '10
CROFT, T.	10 July, '10	HUBBARD, A. G.	17 July, '10
CHEESEMAN, E. W.	25 July, '10	HANSON, S. C.	10 July, '10
CROSTHWAIT, C. H. E.	18 July, '10	HEPBURN, F. C.	18 July, '10
CROSSE, Commander, A.B., R.N.R.	24 Aug., '10	HARCOURT, A. G. B.	18 July, '10
CORSELLIS, Capt. M. H.	18 July, '10	HUNGERFORD, Dr. G.	4 Aug., '10
DEKANTZOW, A. H.	18 Aug., '10	ISHERWOOD, J.	28 Aug., '10
DOUGLAS, K. J.	23 Sept., '10	JOHNSTONE, C. E.	28 Aug., '10
DAY, Lieut. T. E., R.N.R.	8 Sept., '10	JENNINGS, C. A.	16 Aug., '10
DUNCAN, N. C.	20 Sept., '10	JACKSON, J. V. R.	8 Sept., '10
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		JAMES, H. P.	14 Aug., '10
DAVIDSON, C. E.	1 Aug., '10	Cocoa Tree Club, St. James' Street, S.W.	
DRURY, G. F.	25 July, '10	KELLY, W. A.	25 July, '10
DUGGAN, R. W.	22 July, '10	KING, G. M.	22 Aug., '10
DANN, T. W.	28 Aug., '10	KENT, Dr. H. B.	7 July, '10
Junior Conservative Club, 43, Albemarle St., W.		LUKER, Dr. O. G. F.	14 Aug., '10
EDWARD, Lieut. H. A., R.N.R.	1 Oct., '10	c/o London & South Western Bank, Great Dover Street, S.E.	
ELLINGHAM, C.	10 July, '10	LOCKYER, P.	3 Aug., '10
EVANS, A.	4 July, '10	MANSFIELD, H. B.	28 July, '10
FOSTER, T. F. V.	12 Sept., '10	MCLEAN, J.	7 Sept., '10
c/o Messrs. Cox & Co., 16, Charing Cross S.W.		MACDONALD, A.	14 July, '10
FAIRWEATHER, J. H.	8 Sept., '10	MASON, J. M.	14 Aug., '10
FOSBERT, W. F. W.	24 Aug., '10	MACFARLANE, Dr. W. F.	14 Aug., '10
c/o Sir C. R. McGrigor, Bart., & Co., 25, Charles Street, S.W.		Royal Colonial Institute, Northumberland Avenue, W.C.	
		MACKINNON, Dr. D.	24 Aug., '10
		MORRIS, P. H. T.	2 Sept., '10
		MUIR, A.	13 Sept., '10
		MAPLES, Dr. E. E.	14 Aug., '10
		MELDRUM, D. R.	14 Aug., '10
		NEALE, Dr. A. E.	20 July, '10

SOUTHERN NIGERIA—continued.

NEWMAN, D. A....	... 14 Aug., '10	SUFFERN, Dr. T. H. ...	10 Aug., '10
O'DEA, Dr. M. E. ...	20 Sept., '10	SMITH, F. B. ...	7 Sept., '10
O'CALLAGHAN, C. J. ...	18 Aug., '10	SHEPPARD, J. G. ...	25 July, '10
FLOWRIGHT, J. T. ...	<i>Due back</i>	SWEEPER, H. ...	25 July, '10
	17 Aug., '10	SAYERS, G. W. ...	7 Sept., '10
PRICE, D. E. ...	10 July, '10	STORY, W. ...	30 July, '10
POOL, A. W. ...	7 Sept., '10	TALBOT, P. A. ...	7 July, '10
PHILLIPS, P. H. ...	8 Sept., '10	THOMAS, C. W. ...	25 July, '10
PINDER, J. H. ...	31 July, '10	TAYLOR, C. ...	17 July, '10
c/o Metropolitan Bank, Ltd., Oxford		THORBURN, D. H. ...	14 Aug., '10
PARNTHER, A. S. ...	10 July, '10	Caledonian Club, 30, Charles Street, S.W.	
PARKIN, Miss F. A. ...	18 July, '10	THOMPSON, J. H. L. ...	20 Aug., '10
PURCELL, Capt. H. G. ...	9 Aug., '10	WORSLEY, R. H. W. ...	20 Sept., '10
PETRIE, W. V. ...	30 July, '10	WILSON, Dr. G. ...	
POLLEN, J. M. ...	10 July, '10	WOOD, B. G. ...	31 July, '10
ROWE, R. H. ...	22 Sept., '10	WESTON, E. A. ...	8 Aug., '10
ROOTS, A. E. ...	<i>Due back</i>	WALLER, F. H. ...	26 July, '10
	14 Aug., '10	c/o Messrs. T. Cook & Sons, Ludgate Cir- cus, E.C.	
RIDSDALE, D. W. ...	22 Aug., '10	WATEN, F. C. ...	14 Aug., '10
RAMSBOTTOM, J. H. ...	8 Aug., '10	WILLOUGHBY-OSBORNE, A. ...	4 Sept., '10
RUE, J. H. ...	18 July, '10	WALLISS, E. ...	14 Aug., '10
RICHARDSON, J. D. ...	4 July, '10	WOODWARD, Lt. A. S., R.N.R. ...	4 July, '10
RIISING, F. S. ...	14 July, '10	YOUNG, P. V. ...	<i>Due back</i>
Army and Navy Club, 94, Picadilly, W.		Sports Club, St. James' Square, S.W.	30 Oct., '10
ROWDEN, E. G. ...	18 Aug., '10		
SMITH, H. H. ...	7 Sept., '10		
STOKER, W. H., K.C. ...	18 July, '10		
SWENEY, C. H. ...	18 July, '10		

NORTHERN NIGERIA.

ALEXANDER, Dr. D. ...	31 July, '10	CAMPBELL, J. A. L. ...	22 Oct., '10
ANDERSON, E. ...	9 Oct., '10	COSTELLO, Dr. C. T. ...	24 Aug., '10
ADAMS, J. G. ...	8 Sept., '10	c/o Messrs. Grindlay and Co., 54, Parliament Street, S.W.	
BERKELEY, H. S. ...	14 Aug., '10	CHURCH, R. J. ...	13 July, '10
c/o Messrs. Richardson and Co., 25, Suffolk Street, Pall Mall, S.W.		CLAYTON, W. A. ...	28 July, '10
BARKER, B. A. ...	7 Sept., '10	CAMPBELL, D. ...	13 Aug., '10
BREALEY, H. H. ...	23 Sept., '10	COOMBE, A. E. ...	13 Oct., '10
BROOKS, H. C. ...	22 Sept., '10	CHANNELL, C. W. ...	18 July, '10
BRYANT, E. C. ...	14 Aug., '10	CAMERON, J. ...	9 Oct., '10
BERESFORD, M. J. de la P.	6 July, '10	COVEY, A. ...	18 Sept., '10
BAILEY, C. ...	8 Sept., '10	COLLINS, A. T. ...	4 Aug., '10
BLAKE, Capt. L. H. E. ...	4 July, '10	CHARTRES, E. A. ...	1 Oct., '10
BOYLE, L. ...		DARWELL, G. ...	14 Aug., '10
BYNG-HALL, Capt. F. F. W. ...	7 Sept., '10	ELDER, J. H. C. ...	27 Oct., '10
		FINDLAY, E. G. ...	24 Aug., '10

NORTHERN NIGERIA—*continued.*

FITZPATRICK, Capt. J. F. J. L. 24 Aug., '10 Royal Society Club, St. James' Street, S.W.	MOORE, J. 31 Aug., '10 MOORE, T. 7 Sept., '10 NEWTON, T. C. 28 Sept., '10 ORMSBY, G. 21 Oct., '10 POLLARD, DR. J. Mc. F. W. 4 Sept., '10 PORCH, M. P. 30 June, '10 PRAGNELL, T. W. 4 July, '10 Cavalry Club, Piccadilly, W.
FUERAN, E. C. 13 July, '10 Junior Naval and Military Club, 96, Picadilly, W.	ROBINSON, Capt. P. M. RADCLIFFE, J. 11 Aug., '10 ROBERSON, E. L. 31 July, '10 ROBINSON, Capt. A. T. 25 July, '10 SHORTELL, E. 21 July, '10 SEYMOUR, Capt. Lord H. C. 8 Sept., '10 Guards Club, Pall Mall, S.W.
FOULKES, CAPT., H. D. 13 Aug., '10 FOWLER, C. 23 Sept., '10 GILLATT, J. M. 8 Sept., '10 Caledonian Club, Charles Street, S.W.	SPEED, E. A. 29 July, '10 SINCLAIR, F. 2 Oct., '10 SECCOMBE, Capt. G. 1 Dec., '10 Junior Naval and Military Club, 96, Piccadilly, W.
GOLDING, Capt., G. J. L. 30 Sept., '10 Royal Societies Club, St. James's Street, S.W.	TWOOMEY, Dr. G. R. 17 Oct., '10 c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.
GEORGE, C. H. 2 Sept., '10 GRAHAM, A. 12 Oct., '10 GEDGE, H. J. 7 Sept., '10 HORAN, J. 17 Sept., '10 HUGHES, W. C. 31 July, '10 HODGSON, A. C. W. 8 Sept., '10 HENDERSON, D. 2 Sept., '10 HEWBY, W. P., C.M.G. 27 July, '10 JOHNSON, H. W. 8 Aug., '10 JOHNSON W. 27 Oct., '10 KEMPTHORNE, Capt., H. N. 27 Sept., '10 KEIGHLEY, G. C. 28 July, '10 KING, W. A. 7 Sept., '10 KELLY, Capt. G. C. 21 July, '10 LEWIS, H. F. 8 Sept., '10 LOUGHLAND, C. V. 28 July, '10 LAWSON, H. W. 6 Oct., '10 LEY GREAVES, J. A. 14 Sept., '10 MALCOLM, G. 14 Aug., '10 c/o Messrs. Way & Co., 11, Haymarket, S.W.	TEMPLE, C. L., C.M.G. 19 Aug. '10 Royal Societies' Club, St. James' St., S.W.
McGRATH, Capt. A. T. 18 Sept., '10 MACDONNELL, Capt. D. H., D.S.O. 13 Oct., '10 MACLEOD, W. 8 Sept., '10 MATTHEWS, H. 16 Oct., '10 MCLEAY, Dr. C. W. 4 Sept., '10 Royal Societies Club, St. James's Street, W.	TRAILL, Capt., H. L. N. 11 July, '10 VERUNEELLEN, A. 30 Sept., '10 WEATHERHEAD, Major G. E. 17 Oct., '10 WEST, Capt., C. C. 17 Oct., '10 WELLS, W. 8 Aug. '10 WALTON, Capt. W. I. 31 July, '10 WALLACE, Sir W., K.C.M.G. 31 July, '10 WYLLIE, Capt. H. T. W. 24 Aug., '10 WILSON, E. W. 4 July, '10 WICKHAM, T. 31 July, '10

NYASALAND.

CASE, Capt. H. A. 18 Sept., '10 CHETTLER, H. S. 22 Sept., '10 HAYNES, Lieut. F. G., R.N.R. 26 Sept., '10 MILLS, D. 16 Oct., '10	PIERS, P. D. H. 18 Oct., '10 Royal Colonial In- stitute, Northumber- land avenue, W.C. PYRON, Capt. R. H. 18 July, '10
---	--

NYASALAND—*continued.*

SLADEN, Capt. G. C. ...	19 Sept., '10	TATE, Comm. H. N.,	
SHARPE, Sir A.,		R.N.R. ...	18 Oct., '10
K.C.M.G., C.B. ...	19 Oct., '10	WHEELER, W., C.M.G....	18 Oct., '10

EAST AFRICA.

AYRE, A. D. ...	26 Oct., '10	GORDON, Capt. J. F. S.	14 July, '10
AINSWORTH, J. B. ...	27 Oct., '10	United Services Club,	
BENNITT, Capt. H. P. ...	13 Sept., '10	Pall Mall, S.W.	
c/o The Naval Bank,		HEMSTED, C. S. ...	30 July, '10
Totnes, South Devon		JOLLEY, T. H. ...	10 Nov., '10
BRUCE, Lt. G. W., R.N.R.	4 Nov., '10	McCLURE, H. R. ...	24 Sept., '10
BATTISCOMBE, E. ...	27 Sept., '10	Windham Club, St.	
BODEKER, Dr. H. A. ...	24 Oct., '10	James' Square, S.W.	
c/o The National Bank		NORTHCOTE, G. A. S. ...	27 Oct., '10
of India, Ltd., 17,		NEAVE, Capt., C. A. ...	25 Oct., '10
Bishopsgate St. With-		PHILLIPS, Capt. C. F.	<i>Steamer leaving</i>
in, E.C.			29 July, '10
CRISFORD, G. N....	27 Oct., '10	ROBERTSON, Dr. A. ...	30 July, '10
CRAMPTON, D. R. ...	27 Oct., '10	ROSS, Maj. C. J., D.S.O.	27 Oct., '10
Sports' Club, St. James'		RIGBY, Capt. W. ...	2 Nov., '10
Square, S.W.		SANDERSON, S. ...	27 Oct., '10
CROFTS, D. G. ...	25 Oct., '10	STONE, R. G. ...	24 Aug., '10
DEEK, S. F. ...	27 Oct., '10	THORNTON, H. ...	27 July, '10
EVANS, E. P. ...	27 Sept., '10	WILSON, H. S. ...	27 Oct., '10

UGANDA.

ANDERSON, R. D. ...	27 Oct., '10	JACKSON, W. E....	12 Sept., '10
BOAZMAN, H. ...	27 July, '10	Sports' Club, St.	
CLIFFORD, S. ...	27 Nov., '10	James' Square, S.W.	
HALDANE, J. O....	25 Oct., '10	KNOWLES, F. A. ...	27 Sept., '10
		MACKENZIE, H. A. ...	27 Oct., '10
		MURRAY, Capt. B. E. ...	4 July, '10

SOMALILAND.

CORFIELD, R. C.,...	7 Sept., '10	THOMSON, J. H....	
Sports' Club, St.		WALKER, J. C. ...	
James's Square, S.W.			

SWAZILAND.

PERKINS, Capt. R. C., D.S.O.	30 Sept., '10
------------------------------	-----	-----	-----	-----	-----	---------------

BASUTOLAND.

CLEMENTI, L. ...	11 Sept., '10	PITCHER, A. H. ...	31 July, '10
LONG, Dr. E. C....	30 Sept., '10	ROBBINS, Miss T. ...	31 Aug., '10

BECHUANALAND.

HANNAY, H. D.	17 Oct., '10
-------------------	-----	-----	-----	-----	-----	--------------

BRITISH HONDURAS.

MAXWELL, F. M., K.G. ... 29 July, '10
c/o Royal Colonial Institute, Northumberland Avenue, W.C.

FALKLAND ISLANDS.

ALLARDYCE, W. L., C.M.G. ... 27 Sept. '10

FIJI.

ALEXANDER, G. J.	...	5 Aug., '10	RANKINE, R. S. D.	...	26 Oct., '10
HAYWARD, A. G.	...	29 Aug., '10			

CYPRUS.

PAVLIDES, DR. O. ... 14 Sept., '10 | WILLIAMSON, DR. G. A. 18 Oct., '10

LEEWARD ISLANDS.

PARKER, F. H. ... 10 Nov., '10

ST. LUCIA.

RYAN, T.... ... 1 Nov., '10

ST. VINCENT.

HUTCHINSON, W. C. ... 9 Aug., '10

ST. KITT'S.

BURNS, A. C. ... 15 July, '10

MONTSERRAT.

DAVIDSON-HOUSTON, COL., W. B. ... 13 Oct., '10

BAHAMAS.

HUNT, W. R. ... 27 Oct., '10

JAMAICA.

ALEXANDER, T....	...	20 July, '10	KERSHAW, LT.-COL. A. E.	...	19 Aug., '10
ANDREWS, E. J.	...	6 Sept., '10	LUCIE-SMITH, J. D.	...	4 Nov., '10
BOWEN, F. B.	...	4 Aug., '10	MUSSON, J. T.	...	31 July, '10
CUNDALL, F.	...	31 July, '10	ROSS, DR. G. H. K.	...	4 Sept., '10
FARQUHARSON, C. S.	...	31 Aug., '10	REED, F. E.	...	16 Nov., '10
HAZLETT, T. J....	...	3 Nov., '10	SMITH, J. A. G.	...	22 July, '10

TRINIDAD.

ELLIOT, E.	...	24 Oct., '10	SALOMAN, F. A....	...	2 Aug., '10
FARFAN, J. M.	...	17 Aug., '10	SCHEULT, DR. R.	...	17 Sept., '10
HANCOCK, H. H.	...	18 Sept., '10	THOMSON, DR. A. D.	...	22 July, '10
MONCKTON, C. C. F.	...		WHITEHEAD, L. H.	...	1 Aug., '10

BRITISH GUIANA.

BIRCH, H. W. ...	31 Dec., '10	GODFREY, DR. J. E. ...	29 Jan., '11
BRASSINGTON, H. D. ...	31 Jan., '11	HAREL, P. C. ...	29 July, '10
BORELL, SIR H. A. ...	29 Sept., '10	c/o Royal Colonial In-	
BELLAMY, W. E. ...	30 Sept., '10	stitute, Northumber-	
COX, C. T., C.M.G. ...	7 Aug., '10	land Avenue, W.C.	
c/o Royal Colonial In-		McFARLANE, P. C. T. ...	24 Dec., '10
stitute, Northumber-		O'DOWD EGAN, DR. J. ...	31 July, '10
land Avenue, W.C.		SHAW, Capt. B. V. ...	25 Aug., '10
COWIE, Miss I. M. ...	31 July, '10	St. James' Club, Picca-	
DUNCAN, C. W. ...	6 Aug., '10	dilly, W.	
EARLE, Dr. P. M. ...	1 Jan., '11	SANDERS, W. T. ...	13 Nov., '10

MAURITIUS.

CHASTEAUNEUF, A ...	1 Sept., '10	LEBERRE, Rev. C. ...	25 Oct., '10
DAVSON, C. S. ...	24 Oct., '10	NAYLOR, A. S. ...	29 Mar., '11
EYRE, T. W. ...	28 Nov., '10	NAZ, L. ...	26 July, '10
HARWOOD, S. D. F. ...	22 Jan., '11	PITOT, L. E. ...	14 Dec., '10
LESEUR-GREENE, J. ...	24 Oct., '10	SEGRAIS, P. Le J. de ...	7 Mar., '11

SEYCHELLES.

ADDISON, DR. J. B.	9 Sept., '10
------------------------	-----	-----	-----	-----	-----	-----	--------------

STRAITS SETTLEMENTS.

BLAND, R. N. ...	26 July, '10	MAY, C. G. ...	6 Dec., '10
BROCKWELL, M. B. ...	17 April, '11	MASTERTON, W. N. ...	24 Nov., '10
BUCKELL, C. P. ...	9 April, '11	MORRIS, T. ...	24 July, '10
BICKWELL, W. A. ...	25 Mar., '11	PESTANA, J. V. ...	10 Aug., '10
BROWN, A. V. ...	3 Mar., '11	PHILLIPS, C. M. ...	21 Sept., '10
BEATTY, D. ...	1 Feb., '11	RYAN, W. ...	2 May, '11
BOWER, Capt. W. M. L. ...	15 Feb., '11	REDRUP, T. M. ...	26 Feb., '11
COLMAN, E. E. ...	10 June, '11	RADCLIFFE, Commander, ...	18 Jan., '11
de MELLO, A. ...	13 June, '11	C. A., R.N.	
ELLIS, F. T. ...	10 June, '11	c/o Messrs. Stilwell	
FRAYNE, J. ...	22 Aug., '10	& Co., 42, Pall Mall,	
GALISTAN, E. ...	4 Sept., '10	S.W.	
HOWELL, J. ...	12 Sept., '10	SMITH, S. ...	13 Nov., '10
HOWELL, J. G. ...	16 Feb., '11	SHERWOOD, M. E. ...	24 Sept., '10
HANITSCH, K. R. ...	8 Mar., '11	SELLS, H. C. ...	21 Nov., '10
HAMEL, Maj., H. B. de... ..	8 June, '11	SPROULE, P. J. ...	20 Feb., '11
JOHNSON, E. E. ...	1 Nov., '10	SADLER, W. ...	13 Aug., '10
KNOX, A. ...	1 Sept., '10	SYMONDS, J. D'ARCY ...	31 July, '10
LEONARD, T. A. ...	20 Jan., '11	TAYLOR, W. H. ...	29 Mar., '11
LEASK, DR. J. ...	20 Dec., '10	THUNDER, M. ...	21 Feb., '11
c/o Messrs. Cox & Co.,		WILLIAMS, J. H. ...	17 April, '11
16, Charing Cross, S.W.		YOUNG, Sir A., K.C.M.G.	25 Jan., '11
LOGAN, J. H. ...	30 Sept., '10		

TANJONG PAGAR DOCK.

BINNIE, J. ...	31 Oct., '10	SELLAR, A. M. ...	30 Dec., 10
GARTSHORE, J. ...	22 July, '10		

HONG KONG.

BURNETT, G. G....	... 10 Nov., '10	LENAGHAN, J. ...	... 18 Dec., '10
BOOLE, G. A. W.	... 18 Dec., '10	LANE, A....	... 22 Dec., '11
BROWNE, E. ...	... 18 Dec., '10	MARTIN, G. P. ...	... 22 April, '11
BIDEN, F. A. ...	... 17 Mar., '11	MILLINGTON, Miss Alice	
BOULTON, J. F. ...	... 12 April, '11	T. ...	... 5 Oct., '10
BRAZIL, P. ...	... 22 Dec., '10	MELBOURNE, C. A. D. ...	... 5 Oct., '10
CROOK, A. H. ...	... 1 Sept., '10	MAKER, Miss E. ...	... 3 Feb., '11
CROFTON, R. H. ...	... 12 Oct., '10	PHILIPS, H. R. ...	... 24 Oct., '10
CASHMAN, T. ...	... 18 Dec., '10	RUSSELL, W. ...	... 14 April, '11
EDWARDS, W. T. ...	... 22 Mar., '11	REES, L. C. ...	... 6 Jan., '11
EARNER, M. ...	... 18 Dec., '10	SMITH, J. ...	... 18 Dec., '10
GOMPERTZ, H. H. J. ...	... 28 April, '11	SIMSON, N. C. S. ...	... 17 Oct., '10
GALE, C. H. ...	... 26 Feb., '11	THOMPSON, Capt. A. J. ...	... 12 Oct., '10
GREY, B. W. ...	... 31 July, '10	THOMAS, G. E. ...	... 22 Nov., '10
HOLLINGSWORTH, A. H. ...	... 19 Oct., '10	WALTERS, M. ...	... 18 Dec., '10
KOCH, DR. W. V. M. ...	... 16 Nov., '10	WOOD, D. ...	... 12 Nov., '10

KEDAH.

JOYCE, P. F.
------------------	-----	-----	-----	-----	-----	-----	-----

PERAK.

ANDERSON, R. O. N. ...	Steamer due	LLOYD, H. ...	... 12 Feb., '11
	31 Aug., '10	LOVERIDGE, J. C. ...	... 23 Oct., '10
COCK, E. A. L. ...	... 30 Apr., '11	MONDY, A. G. ...	... 10 Aug., '10
DICKSON, E. A. ...	... 3 May, '11	NEUBRONNER, E. W. ...	... 3 Apr., '11
FRY, DR. W. H. ...	... 30 Sept., '10	OWEN, J. F. ...	... 23 Aug., '10
FORD, DR. D. MC. N. ...	... 8 Oct., '10	PHAROAH, R. S. ...	... 21 Mar., '11
FOSTER, R. ...	... 13 July, '11	SYKES, Miss F. ...	... 10 May, '11
HATCH, E. C. ...	... 15 Sept., '10	SLATER, A. J. ...	... 12 May, '11
KNAGGS, A. L. ...	... 2 Sept., '10		

PAHANG.

BENNETT, E. L. ...	... 25 July, '10	SUGARS, J. C. ...	... Steamer due
BLATHERWICK, T. C. ...	... 31 Oct., '10		20 Dec., '10

SELANGOR.

DINSMORE, W. H. ...	... 30 Nov., '10	SCROBY, C. ...	... 28 Dec., '10
GERRARD, DR. P. N. ...	... 24 Aug., '10	VAURENEN, F. A. ...	... 16 Oct., '10
LUCAS, G. D. ...	... 3 Aug., '10	VAN LANGENBERG, T. C. ...	... 15 Dec., '10
MATTHEWS, J. C. M. ...	... 29 Apr., '11		

NEGRI SEMBILAN.

BROCKMAN, E. L., C.M.G.	24 Nov., '10	DOWDEN, R. ...	... 21 Jan., '11
c/o Messrs. H. S. KING		SWIFT, J. A. ...	... 25 July, '11
& Co., 9, Pall Mall,		Sports' Club, St. James's	
S.W.		Square, S.W.	

FEDERATED MALAY STRAITS.

BRESLAND, C. W. ...	... 21 June, '11	GREGORY, S. M. c/o	
CLAYTON, L. H. ...	... 10 Oct., '10	Messrs. H. King & Co.	
CONLAY, W. L. ...	... 20 April, '11	65, Cornhill, E.C. ...	... 4 Jan., '11
FLETCHER, DR. W. ...	... 3 Aug., '10	HUME, W. J. P. ...	... 14 Dec., '10

FEDERATED MALAY STATES—continued.

HATCHELL, H. M. ...	20 Dec., '10	STONE, B. O. ...	27 May, '11
IRMES, J. R. ...	6 Sept., '10	SPOONER, J. C. G. ...	24 July, '10
LOGAN, J. H. ...	6 Mar., '11	SIMPSON, G. ...	25 July, '11
LEGGE, R. H. ...	11 Sept., '10	TAYLOR, Sir. W. T.	
MOSCROP, J. ...	25 Dec., '10	K.C.M.G. ...	
MAUNDRELL, E. B. ...	5 Mar., '11	VANE, H. G. B....	29 May, '11
PRYDE, W. ...	9 June, '11	VODDEN, F. R. ...	24 July, '11
PINKNEY, R. ...	26 Oct., '10	WOODWARD, L. M. ...	25 Mar., '11
PHILLIPS, G. H. ...	10 Oct., '10	WALLACE, W. A. J. ...	4 July, '11
ROBINSON, H. C. ...	8 Feb., '11	WALKER, Lt.-Col. R. S. F.	30 Oct., '10

CEYLON.

ATKINS, M. R. ...	10 Nov., '10	INGRAM, M. M. ...	3 Dec., '10
BOWTELL, F. ...	2 Aug., '10	JOSEPH, H. P. ...	30 Mar., '11
BROOKSBANK, W. ...	18 Oct., '10	JONES, W. J. ...	4 Nov., '10
BANDARANAYAKA, Sir S.		LAURENCE, H. B. ...	2 Aug., '10
C., C.M.G. ...	15 Oct., '10	LEWIS, A. ...	2 Aug., '10
BROWNING, R. C. ...	15 Nov., '10	c/o Messrs. T. Cook & Sons, Ludgate Circus	
BAWA, Dr. H. ...	7 Dec., '10	E.C.	
BOOTH, L. W. ...	Steamer due 3 Oct., '10	LUNDIE, C. R. ...	19 Dec., '10
BANKS, A. ...	8 Aug., '10	LOCK, R. H. ...	8 Sept., '10
BOWES, F. ...	Steamer leaving 16 Sept., '10	LEWIS, J. P. ...	25 July, '10
CROWE, J. ...	6 Sept., '10	LOOS, H. A. ...	1 Dec., '10
CLIFFORD, Sir H.		LUNGLEY, H. A. ...	1 Nov., '10
K.C.M.G. ...	26 April, '11	LOURENSZ, Dr. C. B. ...	28 April, '11
c/o The Athenæum, Pall Mall, S.W.		McLAUCHLAN, A. ...	4 Oct., '10
COOPER, F. A., C.M.G.	4 May, '11	NAYLOR, W. ...	18 Oct., '10
CODRINGTON, H. W. ...	3 May, '11	O'DELL, H. C. ...	3 Nov., '10
de SILVA, Dr. C. E. ...	31 Oct., '10	PHILIP, Dr. W. M. ...	2 Sept., '10
de SILVA, H. ...	2 April, '11	PRICE, F. H. ...	29 Mar., '11
FLETCHER, W. W. POLE	27 Oct., '10	RUSSELL, T. B. ...	2 Jan., '11
FRASER, J. G. ...	Steamer due 9 Oct., '10	SENIOR, B., I.S.O. ...	Steamer due 1 Jan., '11
FYERS, H. C. ...	11 Sept., '10	SAUNDERS, R. G. ...	6 Sept., '10
GODFREY, A. C....	4 Feb., '11	SPENCE, Dr. J. B. ...	12 Nov., '10
GREENE, G. P. ...	25 Oct., '10	SMITH, R. W. ...	16 Nov., '10
GARVIN, T. F. ...	22 July, '10	c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.	
GALBRAITH, A. N. ...	Steamer due 30 July, '10	SIM, A. ...	4 Sept., '10
GREEN, C. ...	25 July, '10	STONE, C. H. ...	2 Nov., '10
HAYNES, E. C. ...	21 Nov., '10	WOODHOUSE, G. W. ...	22 July, '10
HEAD, E. W. ...	5 Mar., '11	Royal Colonial Institute, Northumberland Avenue, W.C.	
HUNAN, E. ...	18 Mar., '11	WALKER, J. ...	9 Sept., '10
HANN, H. ...	27 Aug., '10	WAIT, W. E. ...	1 Dec., '10
HARWARD, J. ...	8 Jan., '11	WALTER, L. ...	Steamer due 22 Sept., '10
c/o Messrs. Richardson & Co., 25, Suffolk St. Pall Mall, S.W.		WOODSON, A. ...	27 Nov., '10
		WADHAM, G. R. ...	20 Aug., '10

THE COLONIAL OFFICE JOURNAL.

VOL. IV.

OCTOBER, 1910.

No. 2.

[*This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.*]

EDITORIAL NOTES.

THE British General Election of this year and the subsequent Parliamentary proceedings have attracted an unusual degree of interest in the Dominions. The main issues were not merely domestic, but appealed strongly to commercial and constitutional feelings overseas. Especially in Canada the struggle produced a ferment of controversy to which there has been no parallel on the like occasions. The *Canadian Annual Review* gives a lively picture of the situation:—

“The preliminary struggle was watched through the clouded glasses of a partisan cable service and of American news agencies, with their naturally Radical tendencies, catering to feelings which had no experience of hereditary legislators and land-owning classes, or of the traditions and social sympathies, obligations and peculiar conditions of the British system. Upon the Tariff Reform issue there had been no distinct party cleavage in Canada, and such tendency as there was had been held in check by the obvious benefits of a British Preference to its people. The issues raised, however, upon the Liberal side in England by the rejection of the Budget produced in Canada an immediate response from the Liberal Press of the country. There was no doubt where it stood in the matter. Papers such as the *Toronto Globe* and *Star*, the *Montreal Herald* and the *Winnipeg Free*

Press ranged themselves immediately upon the side of the British Government, and what was termed 'the people' as against the aristocracy and the classes. All the Liberal and Radical catchwords of Britain were used, and their arguments, whether strong or weak, were pressed home; Mr. Lloyd-George and Mr. Winston Churchill were pictured as the popular heroes in a struggle against monopoly and selfish landlordism; Tariff Reform was waived aside as no longer a great and vital issue. The Conservative press was divided. What might be termed a Radical Conservatism evolved—in many quarters—a sort of mixed policy of protection and preference for Great Britain, and of clipping, also, the powers of the House of Lords. Papers such as the *Toronto Mail and Empire* and the *Montreal Star*, which, editorially, defended the Unionist position, gave in their news columns both sides of the question, and other Conservative papers followed suit.

"The Liberal press was, however, aggressive and united in its advocacy. The *Toronto Globe* sent Mr. Stewart Lyon, a Radical of deep-rooted personal conviction, as its special correspondent to London, and Dr. J. A. Macdonald, its Editor-in-Chief, wrote a series of pen pictures of British leaders which, while clever and of great interest, were obviously and clearly coloured by party convictions. Editorially this paper's attitude may be understood from two quotations. On Oct. 9 the *Globe* expressed surprise at the Conservative press for supporting the cause espoused by Mr. Balfour, Lord Rosebery and the Marquess of Lansdowne: 'The point of view of the gentlemen named is not difficult to understand. They have breathed the atmosphere of privilege from the cradle up, but why a newspaper published in this land, whose basic principle is social equality, should be throwing up its cap for the Lords and getting red in the face in defence of their exemptions from the burdens that other men have to bear, defies explanation.' As to Tariff Reform, it would mean a duty upon Canadian agricultural products and the accompanying preference would not be of much advantage. Once established the British tariff would grow in height, and then a new issue would develop: 'The manufacturer will ask for a larger preference for his goods in the Canadian markets than he now gets. The Canadian farmer will join the British manufacturer in this agitation, for he will be drawn by two prospective benefits—easier access for his products to the English market and cheaper goods at home.' The announcement (Dec. 6th) regarding Mr. Lyon's mission stated that the struggle to be described by him was 'a fight to the death between Ancient Privilege and Modern Ideas.'

"The *Edmonton Bulletin*, the organ of Mr. Oliver, Minister of the Interior, declared on Nov. 22nd that a cash subsidy from

Canada to the Imperial Navy would simply be 'a donation for the relief of distressed dukes.' Let the 10,000 people who really owned England be properly taxed, and Canada would not need to give a defence contribution! Late in December Sir Wilfrid Laurier was described by the *Manchester Guardian* (Radical) as having expressed himself in favour of the Liberal cause, and, though the interview was promptly repudiated, the paper followed it up with another alleged interview with an unnamed Canadian Minister, who abused Lord Lansdowne, and ridiculed the Tariff Reform movement. This was resented by the *Standard*, which on Dec. 22nd, said: 'British statesmen on both sides of politics always observe the most careful abstinence from participation in Canadian internal politics. It is incredible that Sir Wilfrid or any of his colleagues would desire to depart from this wholesome principle. Each country must consume its own political smoke.' The Canadian Premier's response was a cable to Lord Strathcona in the following terms: 'I find by Press reports that my name is used in reference to the present political contest. It is well known in this country that I am never interviewed. I have not in this instance departed from this rule, and have had no interview with anyone. If I had any opinion to express on the present contest I would claim the privilege of doing it in my own words, but I would consider it absolutely out of place for me to say or do anything which might be considered, ever so remotely, as an interference in any party contest now before the electors of Great Britain and Ireland.' As to one element in the contest, Mr. Rudolphe Lemieux, Postmaster-General, expressed himself strongly on his return from England. He had been present at the debate on the Lansdowne amendment, and declared to the *Toronto Star* correspondent on Dec 18 that the House of Lords, 'instead of being a decrepit lot of men, represented the greatest aggregation of intellect, wealth and oratory the world has ever seen.'"

The elections for the first South African Parliament have resulted in a surprise. The Government obtains a majority, but it is smaller than had been expected. The Unionists have achieved striking successes in the Cape peninsula, on the Rand, and elsewhere. All their leading men have been returned, with the exception of Mr. Abe Bailey, who was found, after a recount, to have been defeated by Mr. J. W. S. Langermann; while three of the Ministers—Mr. Moor, the late Prime Minister of Natal, Mr. Hull, the Treasurer, and General Botha himself—have suffered defeat. The attitude of some of the Independent members, notably those from Natal, remains uncertain, but the Government's normal majority can hardly be less than twelve,

and will probably prove to be larger. In a comparatively small legislature such a majority is large enough for most practical purposes, but certain special considerations affecting the Government's position have to be borne in mind. Mr. Merriman, who is expected to carry with him the votes of some eight other members, and whose ability and experience render him one of the greatest living forces in South African politics, has taken up the attitude of a candid friend, and it remains to be seen whether his candour or his friendliness will prove to be the stronger. In any case, the Government will need to walk warily. Mr. Hull is credited with a desire to retire from politics, and the provision of a seat for Mr. Moor will present serious difficulties. It was at first rumoured that General Botha himself had decided to retire, but he has resolved to retain office, and a seat will readily be found for him, though he will presumably not be a member of the legislature when it is formally opened by the Duke of Connaught. His rejection by the electors of Pretoria is a serious blow, but it cannot be regarded as altogether surprising. He had chosen to oppose one of the ablest and most popular of the Progressive leaders in a seat where the latter had gained a remarkable triumph over Sir Richard Solomon at the first Transvaal elections. No one except General Botha could have had the smallest chance of displacing Sir Percy Fitzpatrick, and the task has proved to be beyond even his capacity. General Botha's retirement from politics at this juncture would have been, as his opponents have been among the first to recognize, a disaster to South Africa, and we congratulate him on a courageous and public-spirited decision.

From the telegraphed reports of the Budget speech delivered by Mr. Fisher, the Commonwealth Prime Minister and Treasurer, it appears that he made certain announcements of considerable importance with regard to the general policy of his ministry. There is to be a referendum with a view to an alteration of the Constitution, which will give to the Commonwealth legislative powers equal to those of the States, for the settlement and prevention of trade disputes; and a Bill has since been introduced, giving the widest possible extension to the general powers of the Commonwealth Parliament with regard to industrial legislation, which decisions of the Federal Supreme Court have tended to restrict within limits which are by no means to the taste of the Australian Labour Party. There is every probability that the electorate will show itself willing to confer upon the Commonwealth the increased powers which Mr. Fisher seeks to obtain for it. The Government also proposes to take over and develop the Northern Territory, and is

prepared to face a large expenditure on this account. This is a task which admittedly exceeds the present resources of South Australia, and it has frequently been pointed out that the interests involved in it are Commonwealth rather than State interests. The whole of the "White Australia" policy is in fact at stake in the question of the Northern Territory. It is proposed to establish penny postage throughout Australia on May 1st next, and the State debts are to be taken over at an early date. It will be seen that in all these matters effect is to be given to the policy of increasing the powers and responsibilities of the Commonwealth Government, which was the principal feature in the programme upon which the Labour Party won the last election. Mr. Fisher also announced that newcomers of European descent would be heartily welcomed to Australia, and though it would be rash to base great expectations on a telegraphed report of a statement so general in its terms, this may perhaps indicate an intention to embark on an active immigration policy. Labour organizations in Australia have generally been disposed to view such a policy with suspicion, but there is now a general recognition of the urgent need of increased population if the great resources of the Commonwealth are to be properly developed.

The Commonwealth Government has published a return of much interest relating to the cane sugar industry in Australia. From this it appears that the policy of substituting white for black labour in the cultivation of this product has been very effectually carried out. In Queensland white labour has to its credit 93½ per cent. of the cane farmers, 92·9 per cent. of the area under cultivation, and 91·7 per cent. of the sugar produced. New South Wales, with smaller figures, shows almost exactly the same proportion, the respective percentages being 93, 93·6 and 94·5. The significance of the Queensland figures will be better appreciated when it is added that in 1902 white labour was responsible for only 15·7 per cent. of the sugar produced in that State. During the same period the quantity of sugar produced has increased from 77,835 to 186,176 tons. The number of persons employed in the industry has also increased, but not so largely, a circumstance presumably attributable either to the greater efficiency of white labour, or to improvements in the methods of cultivation. These figures show that the "White Australia" policy has proved itself practicable in the sphere which seemed to present the gravest difficulties; but the result has not been achieved without substantial cost. The amount of bounty paid in Queensland has increased from £24,493 in 1902 to £531,963 in 1910, and, as this is paid from Federal funds, the greater part of the cost actually falls on New South Wales and Victoria.

Another table, however, shows that the excise duty collected still exceeds the bounty paid, and the expenses connected with its payment by £97,425, though the margin is steadily decreasing. But Australia has generally shown herself ready enough to pay for a policy which she conceives to be vital to her national interests.

Sir Newton Moore has found it necessary on medical grounds to retire from the Premiership of Western Australia. His decision has been received with very general regret. Attaining to the position of Prime Minister at an unusually early age he succeeded in winning the respect of all parties by his ability and high sense of duty, and evidences of the regard of his fellow-citizens have been showered upon him. During his recent visit to this country he made many friends, who will unite with us in wishing him a speedy return to health and to active political life.

Considering the intricacy of the issues involved, and the long and complicated history attaching to them, The Hague Tribunal has given its decision in the North Atlantic Fisheries dispute with remarkable promptitude. Neither side can claim a complete victory, but, with regard to the more important interests at stake, we believe that the decision will be regarded as generally satisfactory to Great Britain, Canada and Newfoundland. The British Government—which means in practice the Governments of Canada and Newfoundland—establishes its claim to make regulations for the government of the fisheries without the consent of the United States, but such regulations must be *bonâ fide*, and must not violate the privileges enjoyed by the United States in virtue of the Treaty of 1818. Questions as to the reasonableness of specific regulations are to be determined by an expert Commission, on which Dr. Hoek, scientific adviser on fisheries to the Netherlands Government, will have a casting vote. The decision in effect declares that the treaty rights of the United States cannot be whittled away by municipal legislation, but that they do not derogate from the full rights of sovereignty exercised by Great Britain. In the case of bays the three mile limit is to be measured from a straight line drawn from headland to headland, across the body of water at the place where it ceases to have the configuration and characteristics of a bay, special rules for determining the points of measurement being suggested. This part of the Tribunal's award will have an important bearing on other international controversies elsewhere. But it cannot be said that any principle of universal application for determining the limits of territorial waters has yet been laid down, and the fact that Doctor Drago was not in full agreement with his

colleagues upon this question will detract from the importance of the award as a precedent. Refuge must be sought in a famous dictum of Lord Halsbury's, that "a decision is only authority for what it decides." On the questions of customs entry and clearance, payment of light and harbour dues, and the employment of foreigners—which means in practice Newfoundlanders—as members of the crews of fishing vessels, the decision of the Tribunal is, on the whole, favourable to the United States' claims. But in considering the reception with which the award has met, it is interesting to notice that comparatively little attention has been paid to a nice calculation of the comparative gains and losses of each party. The fact that a settlement has been reached is rightly recognized as of more importance than the actual terms of the award. Substantial interests were at stake on both sides, but more important than those interests was the risk of a rupture in international relations arising out of them. This risk is now happily averted, and the cause of international arbitration has received a valuable impetus from the able and dignified manner in which the proceedings at The Hague were conducted. The award has become final and irrevocable, the time allowed for a protest against its terms having been permitted by both sides to elapse.

The question as to the three miles zone is one of long standing. International jurists long ago propounded a theory of territorial waters, and obviously some such conception was necessary, but did not agree as to the limit. Gradually the idea worked its way into treaties, not as a recognition of existing rights, but by way of mutual concessions; thus England and France agreed that when at war with another nation they would not carry on hostilities within cannon shot of each other's territory. Various fishery treaties extended the idea, and the three or four mile limit, the conventional distance of a cannon shot, was adopted in the legislation passed to prevent foreign vessels from smuggling. These provisions encouraged the inference that the penal law generally applied within the limit to a foreign ship, but in the "Franconia" case this was held to be wrong, and in the result the Territorial Waters Jurisdiction Act was passed. Over and above this case, there is the conception of an arm of the sea which, though more than six miles broad, lies within the *fauces terræ*. Here the country in question may reasonably assert jurisdiction, and in the Middle Ages the prevalence of piracy made it necessary to recognize this, and to correct the Roman doctrine of "*mare liberum*" with that of "*mare clausum*" in certain circumstances: the Adriatic, Gulf of Genoa, the North Sea and the Baltic have been closed on this principle or its extension. A

remarkable modern case is that of the Bay of Delaware, which, though sixty miles from cape to cape, has been held to be American territory. The general tendency is to take a liberal view of a country's rights in adjoining or partly enclosed waters, and The Hague settlement of the headland question is in harmony with this; but the cases where a rule has been made or proposed that only bays of ten miles width should be considered as reserved for fishing to nationals are mentioned with some indication of approval.

The "Further Correspondence relating to the Imperial Conference," published in July, discloses a considerable amount of correspondence on particular subjects, such as the appointment of trade commissioners in the colonies, uniformity in trade marks and patents, trade statistics and company law, the radio-telegraphic convention, and marriage facilities. It sufficiently indicates that there has been a far greater activity, both in carrying out the Resolutions of the last Conference, and in preparing the business for the next, than the critics of the Government and the Colonial Office have been disposed to recognize. The questions dealt with are mostly business matters, but it cannot be said that they are particularly inspiring, or that they demand any special machinery. The big controversial questions, such as preferential trade relations and the development of communications within the Empire, are left as they were. These things lie on the knees of the gods, beyond the industrious activities of the Government department. It remains to be seen whether the Dominions, in response to the invitation sent to them, will provide any more stimulating programme. There is no lack of possibilities. One great ideal, perhaps the greatest, is to preserve and increase the community of ideas and sympathies, which is given us by the common history, language and literature, by settling the social questions which are continually rising up in different shapes on a similar basis throughout the Empire. Some increase of uniformity as to the bases of our social life may appear so valuable as a means of moral and intellectual union that conferences of the future may discuss and formulate schemes, founded on the general experience, for such subjects as alien immigration, women's suffrage and the relations of capital and labour. Views on such subjects undergo constant change and development, and countries which keep more or less in step with one another will have many common causes to help the spirit of harmony and co-operation. There is, as a matter of fact, a keen interest all round in anything that is done in any part of the Empire in such matters, and a considerable exchange of legislative ideas. In illustration of this the following remark,

contained in a minute of the Newfoundland Ministry, may be quoted:—"In connection with the Imperial Secretariat, it has occurred to your Ministers that it would serve a useful purpose, and tend to the unification of the laws throughout the Empire, so far as compatible with the different conditions prevalent in each Dominion, if the new Secretariat were made the means of keeping each Dominion informed of the laws from time to time enacted in every other Dominion as well as in the United Kingdom. This might be done by distributing amongst the various Dominions copies of such laws as are from time to time enacted in the others."

Labour questions at home have assumed an unusual and somewhat ominous importance during the latter part of the summer. Trouble between masters and men has broken out, or is threatened, in a number of the most important industries in the country—shipbuilding, mining, the railways, and the cotton trade—while in the discussions at the Trades Union Congress interest has been concentrated on the question of the judgment of the House of Lords in the Osborne case, which threatens to cripple the political activities of Trades Unions. One result has been to draw further attention to the experience of the self-governing Dominions in dealing with similar problems. We have on more than one occasion described the methods of dealing with trade disputes adopted in Australia, New Zealand and Canada, and there has never been a time when they more deserved the careful consideration of politicians at home. The Osborne judgment has drawn attention to the general question of the payment of Members of Parliament, and the different scales and systems of payment in force in the British Empire have been freely discussed in the press of all parties. The wide field of experience supplied by the existence within the Empire of so many self-governing communities living under similar but not identical institutions is of enormous advantage to British statesmen. It is far easier and safer to draw conclusions from the experience of Canada or Australia than from that of Germany or the United States, where the relations of the public to the Government are so unlike those which exist among ourselves.

The Report of the Royal Commission on Trade Relations between Canada and the West Indies contains some original features. We believe this is the first occasion on which members of a Dominion Cabinet have been associated in an Imperial enquiry of this kind. It is, also, the first instance in which a Royal Commission has recommended the inauguration of a system of differential tariffs in a group of Crown Colonies. This

recommendation is particularly noteworthy in view of the well-known opinions of two of the Commissioners.

But before any political partisan in this country takes heart of grace from this latter fact, he would do well to study the reasons by which the Commissioners justify their recommendation. The fact is that the West Indian Colonies stand in a very peculiar position. Sugar, which remains their principal product, has always been the plaything of tariff systems. The amount which the British West Indies produce, though considerable in itself, is trifling in comparison with the output of the Continental countries, or of Cuba and Porto Rico. The geographical position of the West Indian Colonies makes them very susceptible to the effects of tariff changes in the United States; and many pilgrimages have been made to Washington on their behalf. The recent policy of the States in relation to their tropical dependencies has rendered these pilgrimages as hopeless as they have in the past proved useless. In these circumstances it is not surprising that most of the West Indian Colonies should have welcomed the hand extended to them by their northern neighbour, Canada.

Canada, in pursuance of her established policy, has for twelve years granted a preferential reduction of duty on British West Indian sugar, without asking or expecting any return in kind. Two or three years ago there was a very general agitation in the West Indies, based on a fear that the preference would be withdrawn, and proposals were made for securing its continuance by the grant of some reciprocal advantages. Whether that fear was well-founded or not we are unable to say; we find no evidence of an intention in this direction on the part of the Dominion Government. But while the discussion was still in progress that Government, moved by the representations of the Canadian refiners, who alleged the existence of a combination amongst the West Indian growers, extended the preferential rate of duty to a limited quantity of foreign sugar. This measure, the growers complained, deprived them of the bulk of the advantage which they had previously enjoyed, and they would be willing to go to some lengths to secure its withdrawal.

The constitution of the Commission made it likely that its work would partake to some extent of the nature of a negotiation between contracting parties, rather than of an enquiry in the ordinary sense. This is exemplified in the part of the Report containing the recommendations as to a reciprocal arrangement. These recommendations are worked out in much detail, even going to the length of submitting a draft agreement for conclusion between the Canadian and West Indian Governments;

but there is little or no explanation or discussion of the terms of this agreement, although they are of some complexity.

The Report lays stress on the desirability of granting preference, if at all, by the reduction of existing duties. As the Commissioners justly observe, a scheme of preference which actually involved an increase in the cost of necessities would not be favourably received by the general public in the West Indies. Those interested in questions concerning the course of prices under a preferential system will do well to read the evidence of the Canadian refiners, which is summarised in the Report.

The Imperial Copyright Conference has resulted in a set of very clear recommendations. The first attempt to form an international union for the protection of authors was made at Berne in 1887, but the convention then arrived at left much to be desired. Not till 1908, however, was the matter taken up again, and the draft convention agreed to at Berlin in that year represents an all-round advance. It is now probable that an Imperial Act will be passed, ratifying the Berlin Convention, and that this Act will apply to the Colonies, subject to the assent of each of the Dominions. The most striking feature of the new scheme is that "formalities" are to be dispensed with; that is, an author need not register his work abroad, though ignorance of a copyright due to an omission to register would bar an action for damages. The continental rule as to the duration of an author's rights is usually for fifty years after death, and, for uniformity, this period is recommended in place of our forty years. The tendency to increase the protection which is given to an author's works is based primarily on a consideration of ordinary justice, but internationally it has been greatly aided by the fact that reprints or translations of foreign works for which nothing is paid to the author compete on very unfair terms with the domestic production, and therefore greatly cripple the development of a national literature. This was notoriously the result in the United States, where for a long period an unexampled sterility reigned. This consideration does not apply to small communities which are not able to evolve any characteristic literature of their own, but now that published prices have been so largely reduced there can hardly be any grievance.

Everyone is agreed that one of the first requisites for the closer union of the Empire is a greater exchange of news and current literature, and the extensive reductions which have been made in recent years in the cost of press cables are all to the good for this object. But the matter which is sent out from this country for publication overseas is to a large extent curiously

poor stuff. It might be expected Canada would get good matter, but the Canadian Associated Press, a London agency, has contrived to make some remarkable selections. Last year it cabled part of a trivial and anonymous letter in the *London Mail* regarding Lord Milner and Canada; it sent out a summary of a *London Times* editorial on Canadian Treaty-powers which entirely misconstrued its meaning and caused comments in Canada which were quite unfair, but, under the circumstances, quite excusable; a despatch in October quoted the *Freeman's Journal* as saying something offensive about Canada which later on was found to have come from a letter-writer to that paper in Alberta; on Nov. 30th the following impossible comment was put into the Duke of Connaught's mouth as to the Governor-Generalship of Canada: "I would be tickled to death to get the job!" A new company, however, has now been formed in Montreal and Toronto, with \$100,000 capital, and styled the Imperial Press Service, Ltd., and it is to be hoped that they will give a more plentiful and judicious supply. The tendency of such agencies is to collect paragraphs which appear in the London newspapers about affairs in the possession to which they are sent, rather than to epitomise the affairs of this country. Unfortunately, no newspaper here publishes for export such a summary of facts as that for which the Melbourne *Argus* was distinguished. The Governor of the Colony used to find this summary so convenient that it became an established custom to enclose it in the monthly report to the Secretary of State, in which he discoursed on the affairs of the Colony. In due course the printed summary was found so sufficient that the confidential despatch usually dwindled to nothing, and only the newspaper was enclosed, but the envelope continued to be religiously marked "Confidential."

The reports of the Cape Native Affairs Commission throw a good deal of light on the present position of the natives. There are in this province native ministers of religion, newspaper editors, law agents, farmers, shopkeepers, labour agents, teachers, clerks and interpreters in the public service and in lawyers' offices, police-constables, masons, bricklayers, carpenters, cobblers, store-boys and shop assistants, stevedores, checkers, packers, shunters, compositors, postmen, coachmen, grooms, gardeners, farm labourers, domestic servants, labourers on the mines, on railway and road construction, irrigation works, De Beers Explosives Works, and indeed upon every conceivable undertaking in which a demand for unskilled or half-skilled labour makes itself felt. 108,798 labourers left their districts in search of work last year, of whom nearly half were absorbed by the Transvaal mines. The native population of the Colony at

the last census was 1,424,787. The proportion of able-bodied males is about one-seventh, arrived at by dividing the whole population into families of one husband, one wife, one dependent relative and four children; and upon this basis there are 203,541 able-bodied men. Remembering the settled occupations of a large number of the people, and bearing in mind that, even in the reserves, pastoral and agricultural pursuits are the chief means of livelihood, the fact that more than half the able-bodied men leave their homes for work every year is a complete answer to the now happily less frequent charge that the native is not a worker. Indeed, if it were not that the average duration of absence is less than nine months the necessary cultivation of land in the reserves would undoubtedly suffer.

The mere mention of some of the fields of employment in which natives are engaged implies that there has been rapid educational progress in response to the assistance voted by Parliament to native schools. The native press, perhaps the most prominent landmark of educational advance, is not an unmixed blessing, but it is a valuable channel of information, not only to the native, but also to the student of native affairs, and it affords a free outlet for the discussion of many matters that are the better for ventilation.

The combined influence, in varying shares, of religious teaching, the location school, the example of the trader, the farmer, the Government official, and even of the townsman, produces in the evolution of native character results sometimes satisfactory and sometimes disappointing. Whenever they are disappointing, there is a popular tendency to lament the changed state of the Kaffir, and to ascribe all that is undesirable to the work of the missionary and of the teacher. A fuller appreciation of fact would distribute far more widely both the credit for that which is good and the blame for that which is hurtful in the influences which are brought to bear on an imitative subject race.

These combined influences have worked a great change during the last twenty-five or thirty years in the wants of the native and in his habits of life. The location shop, which formerly contained little more than blankets, heads, hoes, and red ochre, is now in a position to supply ready-made clothing, boots, saddles, ploughs, spades, tea, coffee, sugar, soap, and tinned foodstuffs. Few locations have not at the least a few residents whose household equipment includes a bedstead, table, chairs, cupboard, knives and forks, plates, cups and saucers. There are locations in which the national dress is now never seen, or is seen so seldom as to call forth remark. This change has very greatly added to the consumption by the native of dutiable merchandise, a fact that is often forgotten in computing his

contribution to the public revenue. It is commonly asserted that he contributes nothing but hut tax; as a matter of fact he contributes in direct taxation on exactly the same basis as an European of equally humble means (the average income from all sources of a native in the reserves has been computed at between £25 and £35 per annum), and in addition he is subject to direct taxation, whether in the shape of hut tax or in some other form, which an European would entirely escape.

From every quarter have been received most satisfactory reports of the general state and conduct of the native people. That they are remarkably law-abiding is illustrated by the small number of police required for the administration of justice; in the Transkeian Territories, besides their own headmen there is on an average but one policeman to every four thousand of population. There has been little crime of a serious nature, and the percentage of convictions for drunkenness is extremely low. To their credit also be it said that they invariably respect the persons of European women and children left unprotected in their midst. Generally, the native people are rising in the scale of civilisation; they are advancing intellectually, and by their loyalty, their obedience to the law, their large share in the industrial life of the country, and their direct and indirect contributions to the public revenue, they are responding worthily to the generous policy of this Colony in the administration of native affairs.

A remarkable agricultural development has lately taken place in the Cape Karroo, and it is no secret now that this is due to Mr. Abe Bailey. The success has been due to the scientific conservation of water, and already some eighty thousand sheep have been stocked. There can be no doubt that this enterprise is on sound lines. Wool and mutton are and always will be prime necessities, and there are signs that they will increase substantially in value. The consumers are constantly increasing, while the sheepwalks are not. It is not generally realised that, as Australia and Argentina fill up, the lands devoted to wool are gradually being brought under cultivation. If this goes on the next decade may see a great change in the market. It is more difficult to export mutton than wool, but now that lucerne is proving very successful in South Africa, there is no reason why that country should not compete with the other supplies which are eagerly accepted by the European markets.

The latest thing in irrigation comes from Canada, in the semi-arid region of Alberta, where the Pacific Railway is carrying out a three million acre scheme on a stretch of country 150 miles

long by 40 wide, comprising 4,000 miles of canals and waterways. This gigantic undertaking, at once providing for population and produce to feed their railways, may be contrasted with the Cape lines running practically empty through a large section of the desert Karroo, which require five acres to feed one sheep, half of which are swept off by every recurring drought. The distinguished engineer who is now engaged in a great scheme for revitalising the Mesopotamian Desert propounded a scheme for canalising the Orange River, whereby some of these non-producing regions would have been rendered equally productive with that of the American deserts, but it never got beyond the paper stage, whereas Victoria, about one-third of the size of the Cape Colony, has spent £12,000,000 in reclaiming her waste lands, and at the present moment is advertising for 40,000 families for settlement purposes. The improvement of the Cape in this matter is, it may be hoped, only a question of time, and will be of enormous social as well as economical importance, as it will afford employment on a great scale to the white race. It is not pleasant to hear that in some districts the natives have clubbed together to buy out the whites, and are increasing at a rate that threatens the crowding out of the latter. The improvement of the agricultural conditions is the only means that can turn the tide.

The Hong Kong Government has published an extremely interesting account of the history and prospects of Hong Kong University, written by Sir Frederic Lugard, whose enthusiasm and perseverance have done so much to convert the scheme into a reality. In some "Notes for readers in England," appended to the memorandum, it is pointed out that the scheme has important bearings on the general question of the position of British interests in the Far East:—"Already in the Far East, France and especially Germany are taking steps to promote the study of their own languages, and to supply the demand for Western Education. If British interests, both commercial and political, are to be maintained in the face of the friendly rivalry of other nations it is essential that the predominance of the English language should be unchallenged, and that it should be the medium of acquiring Western knowledge. Simultaneously with the new demand in China, the political aspect of affairs in the Far East has undergone a radical change. With the acquisition by Japan of Western civilization and learning, and the advent of European and American competition, Great Britain no longer holds the unique position she did in old days, and new efforts are needed. The establishment of a University in which English is the medium of instruction cannot but give a great impetus in this direction, and as the Director of the Khartoum College remarks

of that institution, 'It is unthinkable that a life of the kind which the students lead for five years can fail to produce a profound effect on their character and general point of view.''' Hong Kong has recognized that in this matter a special duty devolves upon the Colony. "The large majority of its population are Chinese, and, with the exception of Macao, it is the oldest Western settlement in China. Its geographical position—in close proximity to the great centre of population at Canton—and its predominance as a port and mart of exchange, all combine to indicate that it is the natural centre for Western education in the East. The advantage taken of our existing educational agencies by the Chinese from the mainland—the confidence they have inspired, and the success they have achieved—together with the traditional friendly relations between the Colony and China, combine to offer every prospect of success."

The realisation of the scheme was in the first instance rendered possible by the munificence of Mr. (now Sir) H. N. Mody, a Parsi gentleman 50 years resident in Hong Kong, who offered to erect the necessary buildings, at a cost of \$150,000, and to provide \$30,000 towards an endowment fund. When it subsequently appeared that the proposed buildings could not be erected for \$150,000, Mr. Mody agreed to bear the cost of their erection, whatever it might be, but intimated that if the cost exceeded \$180,000 he could not be responsible for any contribution towards the endowment fund. The appeal for subscriptions met with generous support. Messrs. Butterfield and Swire and allied firms, on the initiative of Mr. J. H. Scott, contributed no less than £40,000; the Viceroy of Canton gave \$200,000; and His Majesty's Government promised to provide £300 per annum for scholarships, to be held by British subjects, the holders being entitled "King Edward VII. Scholars." The Hong Kong Government undertook to provide a site free of cost, and the Hong Kong College of Medicine, which was on the point of initiating a new scheme for its expansion, agreed to incorporation in the new University.

Thanks to the remarkable energy shown in so many quarters, it was found possible to lay the foundation stone of the new buildings on March 16th last, and it is hoped that the University may be opened early in 1912. Sir Frederic Lugard offers some interesting remarks on the curriculum of the new University:—"There is a class of critics who hold the view that higher education conferred upon Orientals, especially in speculative and theoretical subjects, tends to produce a discontented and even a revolutionary class of men for whom there are no adequate

openings and careers in life, and that the neglect of a more practical education is responsible for the 'unrest' in India. As applied to the British Empire, I myself strongly hold this view. The two first Chairs established in our University, viz., Medicine and Applied Science (or Engineering) are therefore eminently practical ones, and the demand for qualified men in these subjects is limitless. We have added a third faculty—that of Arts—to enable undergraduates to qualify for official appointments, and this degree in the case of Chinese will include the Chinese language, history and literature, which it is above all important for them to know, and should be the basis of their education, so that it may not be said of Hong Kong graduates, as was said by Mr. Fraser of Indian students, that 90 per cent. of those who take English degrees cannot write the language of their parents. In whatever branch a student graduates it is our aim to turn out practical men well qualified for the careers which they intend to adopt."

No matter is more important in the long run to the Crown Colonies than the education of the native, but it cannot be said that the subject has been thought out in a thorough and systematic manner. Government authorities are apt to restrict their energies to questions which call for prompt settlement, and the whole machinery of offices is adapted for the daily disposal of current points rather than for constructive work for which time and the consideration of general principles are required. Exceptional interest therefore attaches to a memorandum by the Governor of Ceylon, published in the Colony, which discusses the suitability of the ordinary English literary course for Ceylonese, and the claims of education of a more practical and elastic character. Sir Henry McCallum contends strongly for the utilisation of vernacular languages and manual instruction. At present the colonial system follows the home system, and if, as many critics say, the latter is wasteful of time and energy, it must be much more so when transplanted to another country where the language and associations are different. Sir Henry McCallum is, we gather, of opinion that even at home the classical education of the old sort is doomed. "The dead languages are slowly but surely being ousted from the fetish groves where for so long they have been superstitiously worshipped. Already is to be heard the swan song of Greek." We do not know whether the horrid shades of the fetish groves would accept this pronouncement. As a matter of fact, the amount of Greek required there is not less than it used to be; it is distinctly more; nor is there any particular reason for its elimination

so long as the great majority of students find in classics the most convenient training for their intended professions—the Church, the Bar, the Civil Service, public or literary life. The subject is simplified by allowing Oxford and Cambridge to go their own ways; at any rate they have a high ideal, and there are other universities for other purposes. But where the student starts with a mother-tongue which is not English the difficulties of such a course are, except in special cases, prohibitive. “The great majority of our youth start their school days by working in English as a foreign tongue. Slowly they learn to speak it, and ultimately perhaps even to think in it. But meantime much of this work has been quite unintelligent and purely by memory. The departmental reports prove that much of the teaching in our schools is painfully stupid. The reason is largely that the masters have been educated through the medium of at best a half-known tongue, and are now using it in order to teach others. But in spite of this, our better boys learn English well enough to speak it fluently, and to pass the Cambridge Senior. They then are beginning to feel free to study in the tongue they have acquired, and commence to consider their choice of a university. At once the Department steps in and recommends of all B.A. degrees that of London. In other words, the unfortunate lads are to read for their Intermediate in Latin, French, Greek or German, and Mathematics. No sooner have they got beyond the memory and rote stage in English, no sooner is the path opening out before them to an appreciation of literature, a study of the sciences and philosophies, than the vision is shut out and they are thrust back to another deadly struggle with grammar, prose, and idiom. English boys study the classics primarily for the sake of culture and for the advantage which facility in the idioms of and translation from a foreign tongue gives them in the use of their own. But they have from their earliest years been familiarised with much of the history and culture of Rome, by allusion, interesting books of adventure, and countless illustrations. They have a background into which to fit all they learn at once, and Julius Cæsar, Brutus, and Hannibal, and the great Cunctator, are as near to them as Marlborough, Watt Tyler, or Oliver Cromwell. In Ceylon it cannot be so: the background neither is, nor should be, there. If it were, it would not be culture, but a slavish imitation of an alien culture—a very different thing. So then Latin and Greek cannot here play the important part in culture-training which they occupy in England, nor can they with any seriousness be advocated as a means of teaching fluent English. On the contrary, English may do here almost all Latin and Greek do in England. The rest can be supplied from the classics of the East.”

The crux of the matter lies in the last remark. The classics of the East is a broad expression. They are for practical purposes contained in languages which are not vernacular in Ceylon. Cinhalese itself does not provide the materials for literary culture. It should undoubtedly be taught elementarily, but the higher education should on every ground be carried on in English. This is generally true of the Colonies, outside India. But the type of English education should, as contended by Sir Henry McCallum, be moulded to suit local character and surroundings. The difficulty is that any variations from the English curriculum would stand in the way of preparation for the Cambridge Local Examinations and the London courses. This might be met by special examinations and diplomas. In any case, some manual training could be given, as is now done at most public schools in this country. In this connection, attention may be called to the fact that the London B.Sc. can be obtained in Agriculture and in Veterinary Science, and it would be a good thing if some colonial students took up these courses. At present nearly all the Ceylon Government scholars are reading for the Civil Service Examination—hardly a desirable result, and in marked contrast with the Straits and Mauritius scholars, who hardly ever think of this lamentable resource.

The formation of a great number of rubber-growing companies has brought considerable new capital into the Malay States, but the majority of them took over old estates and the vendors of the planter-proprietor class have only in a few instances started new estates. A vast amount of country awaits development. No one can say that the expenditure to encourage progress has been of the penurious order. New roads and the repair of existing roads account for about \$4,000,000 a year, and this year over \$5,000,000 will be devoted to the West Coast Line and \$4,000,000 to new constructions. Roughly, nearly two-thirds of the annual revenue is being expended for the purpose of facilitating transport and preparing the way for people who wish to exploit the undoubted agricultural or mining resources. Hitherto this large expenditure has been rendered possible by a heavy tax on the tin mining industry, by the recognition of public gambling houses, and by the opium revenue. It is to be feared (from the strictly financial point of view) that the establishment of a higher moral standard in the latter matter will cut off a good deal of revenue. The export of tin was less in 1908 than in 1904, and only in Perak, the one State where there are many European mining companies working on more or less scientific lines, is there any indication of a material increase in

the output, and competition from Bolivia and elsewhere may prove severe. The large sums which have been spent on eastern development, and the £4,000,000 to be lent to Siam for railway construction, fall on the Western States, and at present it cannot be said that much tangible result has followed. It cannot be expected that the East Coast will be taken in hand by cultivators until the West Coast is filled up, and this is far from being the case. But considering the opportunities and sacrifices which have been made to encourage industry, the time has come to make an effort to advertise Malaya in this country and to attract capital. Steps are being taken with this object, and the organisation of the business is in good hands, as it is being attended to by Sir William Taylor, K.C.M.G.

The action of the Union Castle Company in deciding to establish a service via the Suez Canal to East Africa is highly welcome. Even with a minimum of sentiment in such matters, it can hardly be considered satisfactory that British Governors and officials and troops should have to journey to our possessions by foreign ships, and the absence of a British first-class through service, for passengers and freight, means that much trade which might come to this country is taken elsewhere. The case has long been recognised as one which would justify, if ever a case does, exceptional treatment. More than one suggestion was put forward, but for a long time it appeared that it would be impossible to secure a British service of a satisfactory character without a heavy subsidy. The object has now been attained without a subsidy. The Government undertakes to give the service as much support as it can, under reasonable conditions, in respect of its own shipments and official passengers. This is substantially what would happen in the ordinary course without any agreement at all. Government officials will be required to sail by the Union Castle Line, but it is a good bargain for them to secure such a service. No monopoly, however, is given to the line, as in the event of any other company putting on a service of similar quality it is, under the agreement, open to the Government to avail itself of the lowest rates. From all points of view the negotiations conducted by Colonel Seely have had an exceedingly satisfactory result, which no one would have anticipated a year ago.

The *Statist*, in an examination of the possibilities of East Africa, urges the further construction of railways, and pronounces strongly on general grounds in favour of Government ownership.

"It seems to us plain that the wisest policy is construction by the Government. In new countries like British East Africa and Uganda it is certain that a railway company will not be able to

raise capital sufficient for the purpose of opening up these territories except, in one form or another, it gets assistance from the Government. This is proved conclusively by experience in both as well as in the United States and Canada. But why should the British Government, whose credit stands so high, sacrifice a future asset of great value to the future inhabitants of the country by calling in a company or companies to its assistance? If it gives simply a guarantee to a company, the company really is working with a capital which is the produce of the credit of the British Government. It is, therefore, if the enterprise turns out well, receiving reward for a capital it did not itself provide. If, on the other hand, the assistance is given in the shape of large land grants a very considerable part of the soil of the country is alienated, and goes to swell the profits of an unnecessary assistant. In the United States at the present day it is recognised that the resources of the country have been wasted in the past, amongst other ways, by the manner in which assistance was given to limited liability companies engaged in railway construction. Our Government should realise all this, and in opening up British East Africa and Uganda should take great care that it does not in any way waste the resources of those territories. It has the experience of other countries to guide it, and it ought to be warned by that experience.

"But it is objected that companies work more efficiently and cheaply than a Government. We are by no means sure that that is so. The Post Office and the Admiralty are generally believed to be efficient and economic; while it would be easy to point out companies which are neither. As a matter of fact, there is no reason why a Government should not be as efficient in every sense as a company. Whatever care might be taken in forming railway companies for the two territories we are treating of, it may be taken for granted that the directors would have little personal knowledge either of British East Africa or of Uganda. One or two might have spent a time in either; but the strong probability is that the directors would be chosen for reasons in no way affected by their ignorance of the countries in which the companies are to work. Moreover, if such companies were formed the directors would, we may take it for granted, reside in London and would manage their business from London. They would have to choose here in London those who were to lay out and construct the several lines, and they would be very much at the mercy of the persons chosen for these purposes.

"It is obvious that if land grants of magnitude are given to railways the whole land policy of the future communities is prejudged. They will have no means of altering it. On the other hand, if no such grants are made, it will be at the option of the

people to decide what is to be their land system. Again, if such land grants are made, and the railway or railways construct towns on those grants, the building sites will belong to individuals, and the future policy of the community will again be prejudged. On the other hand, if the Government retains the whole land in its own possession, it will be at the option of the future inhabitants to adopt a policy of unearned increment without violating any established right or doing injustice of any kind to any individual."

The weight of these arguments is undeniable. An exception may be recognised in favour of railways which are required in connection with some private enterprise, such as a line to give access to a mine. Here the finances of the railway are merged in those of the business, and an undertaking which would be unremunerative in itself may be thoroughly justified by the economies which it effects in the management of the affair. There are also speculative cases where capitalists are ready to take a risk which a Government could not properly do. These, however, are very few. The chance of success in the Colonies, assuming equal management, are clearly greater when the Government is the owner than when the line is private property.

The year 1909-10 was the most successful agriculturally that Nyasaland has yet experienced and large areas of land have been taken up. Cotton appears to be the most suitable product and is rapidly increasing, thanks largely to the judicious expenditure of the Government funds granted. The Director of Agriculture, Mr. J. S. J. McCall, states that since the introduction of native cotton cultivation in Nyasaland by Government it has steadily progressed, and the crop for the year under review amounted to 220 tons, an increase of 130 tons on the previous year. The crop now approaching maturity is favourable, and as the distribution of seed is practically double that of last year it is anticipated there will be as large an additional increase as in the past season. The quality of the native grown Nyasaland Upland has always been as good if not better than European grown, but the Egyptian crop was very disappointing in the past, being largely composed of mixed staple. Last season a marked improvement has been brought about by teaching the natives how to grade, and a large quantity of the Port Herald native crop obtained 1s. 1d. per lb., one of the highest prices obtained for Egyptian grown in the Protectorate. One of the great drawbacks to the native cotton industry is the distance between some of the cotton fields and the ginneries, but the British Cotton Growing Association are establishing a ginnery at Port Herald in the largest native cotton centre of the Protectorate, and they

may be encouraged to erect another near Lake Nyasa to gin the cotton produced on the Lake.

The future of a large part of Africa depends on the question whether the resources of civilisation can fight the ticks. Until this is done, immense tracts will remain practically uninhabited and many territories will be terribly crippled. There are two effective ways of fighting the evil, but the difficulty is to apply them. The first is the dipping of the "hosts." The best dips contain arsenic, and if applied to the animals every five days or so are found to destroy all species of ticks; in some cases an interval of fourteen days can be allowed. This method is practicable where there is little game and the cattle can easily be collected. The other remedy is to clear a space of animals so that all ticks in it must die through the absence of hosts. A period of nearly two years is required for the process. Burning the grass helps the destruction and the driving out of game, but, of course, it would be impossible to exclude all game from any large area, and total eradication is therefore under present conditions beyond attainment by this method. The dipping process is effective on farms, and as its use expands the trouble will diminish. The wild animals will still be left, and in the future no doubt they will be cleared from areas which will then become fit for occupation by cattle. This means eventually the same extermination of wild beasts in Africa as has taken place in long settled countries, though for a different reason; they are terrible now, not from their own strength, but as carriers of deadly insects, and in the interests of domestic animals must be destroyed, just as mosquitoes are in the interests of mankind. The process will be nothing new in Africa, as the practice is growing of running sheep and ostriches in netted camps, partly to keep off the carnivora and partly to save labour. It may be found that certain animals are more liable to act as carriers than others, and it is by no means always the case that big game are the chief offenders, as in some districts when they are absent the tsetse flourishes.

There are still many pagan tribes in Northern Nigeria who remain blissfully unconscious that the commissioners and missionaries are on their track, and that the days of head-hunting and other like recreations are numbered. The native in such parts has not entered into the seriousness of life and amuses himself sufficiently with the primitive sport of fighting, usually without carrying the fun to excess. Capt. A. J. N. Tremearne gives a typical case in a paper which has appeared in the *Journal* of the

Royal Society of Arts. "Some of these peoples are a wonderfully sporting lot: if they cannot win they give in smilingly. A couple of years ago Fada Wate (Ninzam tribe) had been inciting other towns to resist us, and, on being summoned to surrender, sent the reply that they would like a little fight first, and, if they found that they were not strong enough, they would give in. Of course, the rifles were too much for the arrows, and after about half-an-hour the people had had enough. The Resident, entering into the spirit of the joke, chaffed them about their resistance, and they informed him that they wished to see if we really were stronger, because if we were, they could depend on our protection against their neighbours later. All were apparently quite pleased with the experiment! Life is of little account, bows and arrows are always handy, and if a town is not fighting another it will divide against itself. Even the women in Ninzam love a fight, and they once turned out against me for arresting their chief—hanged later for several cases of murder. Fighting seems to be *the* amusement. The great cause of this is guinea-corn beer. It enters into all their religious rites (with some tribes ghosts were laid with it), and by its amount is measured a man's popularity. Consequently all the foodstuff is drunk, and from about June to November (when the new harvest comes) the people are in a state of destitution and loot each other's stores for food, and even steal the children for sale as slaves."

Perhaps the practice of using up the food to make intoxicating drink is carrying the game too far even for a sportive race, and justifies the policy of peaceful expeditions which carry the olive branch but are nevertheless ready to enter into the spirit of the thing by an occasional brush.

It is rather curious that the first occasion for many years on which a contract has been given out for the construction of a Crown Colony railway should have been followed by a law suit. In the action of Mr. C. F. Bamford against Mr. W. W. Murphy (the Accra Railway case) the short facts were that the plaintiff, who had been engaged on railway work in Lagos, brought the Accra matter to the notice of Mr. Murphy and prepared materials for a tender; the tender put in by Mr. Murphy was accepted, but Mr. Murphy did not employ Mr. Bamford to carry out the work. The latter, in the action, contended that there was a partnership, and successfully in the Lower Court, but the Court of Appeal held strongly that there was no evidence of this. Mr. Bamford, as we understand, received payment for his services, but his claim went much beyond this, being in fact for half-profits. The moral is the fairly obvious one that a man who

relies on what he regards as an agreement should have written evidence of it. Verbal arrangements are difficult to prove and often appear in different lights to the respective parties. Elementary as this proposition is, it is notorious that unwritten or slipshod agreements are by no means infrequent in engineering matters.

UNCONSTITUTIONAL GOVERNMENT ACTS.

Wherever there are two legislative chambers there is the possibility of conflict, and colonial history is rich in examples of such entanglements. The embarrassment caused by a block of the legislative process is naturally most acute when it is the authority for taxation that is stopped. There is a general understanding that the Upper Chamber is within its rights in rejecting a measure dealing with policy or principle, but that it should not attempt to amend any Bill providing for revenue. But on many occasions it is impossible to keep the two things apart. Great administrative changes may be quietly embodied in a formal appropriation. If in such a case the Upper House fails to pass the Bill, the double result follows that the change is not carried out and the monetary necessities of the administration are not provided for. The Government, it is clear, cannot enforce the collection of the taxes in question after such a rejection. Taxes, it is true, are levied in this country on a vote of the House of Commons before they are imposed by law. The justification for this is solely the presumption that the Bill to be founded on the resolution will become law. If this presumption is defeated by the action of the Upper House, the taxes cannot be legally collected and no Government would attempt to impose them. The only courses open to the Government are to resign, which may be futile if the other party has no chance at the polls, or to borrow money and to use it for the usual purposes. In this country, on the recent occasion, the latter course was taken by the issue of Treasury Bills under express statutory authority. But in a colonial case, where the Governor, on the advice of his Ministers, did exactly the same thing, though not under the same statutory authority, he was condemned in the most emphatic manner by the Imperial authorities. And a matter

of such constitutional importance justifies a retrospect of the circumstances. The parallelism of the occasion is the greater in that it arose out of a Free Trade and Protection controversy, but there the similarity ends, as it was the Government that was the author of a "tariff reform" measure and the Upper House was upholding free trade.

A general election took place in Victoria in 1864. The opinion of the constituencies was considered by the Ministry to be expressed strongly in favour of revising the Tariff of Customs Duties upon the principle of reducing the import duties on tea and sugars and the export duty on gold, and substituting for these reductions other duties, principally upon made-up goods of all descriptions, popularly called soft goods, but admitting the manufactured material, cloth, cotton, linen, leather, etc., duty free. The object of this was stated to be to encourage "native industry," or in other words to induce the employment in trades of the youth of the country. Soon after the tariff was introduced into the Assembly, where it was supported by a large majority, although much opposed by the merchants out of doors, it became evident that it was very likely to be rejected in the Legislative Council. In hopes of preventing this, the Assembly, on the proposal of the Ministry, who were in fact the expositors of the views of the majority, determined to unite the tariff with the usual Appropriation Bill, and it therefore did not go up to the Council until the close of the session was supposed to be approaching. This proceeding was justified in the Assembly by the case of the repeal of "the Paper Duties Bill" in 1861 and the course pursued by Mr. Gladstone and the British Ministry on that occasion. The Council determined to resist this pressure, but instead of rejecting the Bill sent up from the Assembly, passed a resolution laying it "aside," but declaring that they were ready to consider both the measures, viz., the usual Appropriation Bill and the tariff, when sent up as separate measures. The Council did not, therefore, on this occasion finally reject the tariff. The Assembly then passed a resolution, declaring that they would send up no other Appropriation Bill until the Council recognised their claim to regulate the taxation of the Colony by passing the tariff. These proceedings took place in July. The resolutions on which the new tariff is founded had been adopted in February; and, pursuant to the usual practice at home and in many Colonies, in conformity, too, with three distinct precedents within the last eight years in Victoria (the most recent being in 1862, when new and higher duties were thus collected for five months), the new scale of duties was put into operation, subject to the duties being returned in the event of the tariff not becoming law.

Communications were then interchanged between the two Houses without any good result, until in November the Council declared that they intended the "laying aside" of the Bill as a final disposal of it. The Assembly immediately sent up the tariff in a separate Bill and the Council rejected it. The duties ceased to be collected the next day, and were ordered to be refunded in most cases.

The only cases in which the refund was delayed were those in which an appeal was made to law. When the Council laid aside the Bill in July, certain merchants were advised to bring actions for the recovery of the duties they had already paid in deposit. A judgment which, *as to the facts*, affirmed that the duties were not leviable under the sanction of law, was given by the Supreme Court. It involved points of law, and these were not decided on by the Court and final judgment entered up until December, a month after the duties had altogether ceased to be collected.

Up to the time that the Council laid aside the Tariff-cum-Appropriation Bill, the public expenditure had been provided for by Acts concurred in by the three branches of the Legislature, passed from time to time, and sanctioning the issue from the consolidated revenue of the necessary sums; the expenditure, that is to say, the several *services, recipients, and amounts*, being fixed by the *estimates* which had passed the Assembly in the early part of the year.

The Appropriation Bill, which was conjoined with the tariff, and included the amount required for the public service for the rest of the year, having been only laid aside, and the Assembly not recognising this proceeding as a rejection, that body would not send up another Bill.

In the absence of the Appropriation or another Bill sanctioning the application of money, the Auditors would not certify that money was "legally available" for the public service, and it therefore could not be drawn from the banks, where, according to law, it was deposited as collected.

With the exception of the Governor's and Judges' salaries, and a few other items, the whole service of Government, including police, gaols, troops, asylums, contracts for provisions, and of every other description, which had been entered into *as usual* at the beginning of the year, upon the faith of the Estimates, was thus left unprovided for, to the annual amount of little under two millions, which had been regularly distributed at the beginning of every month, in a country where advances could only be obtained at an enormous charge, by way of premium.

For one month these payments were stopped. The Governor tried in vain by message to reconcile the Houses. The prospect

of being unable to pay for a second month approached. The Assembly addressed the Governor, requesting him to take measures for maintaining the public credit and the efficiency of the Civil Service, and assured him they would support the Government, affirming that the Council had laid aside the Bill without message or communication to them.

After considering and discussing more than one expedient which was rendered impossible by the refusal of most of the banks, who were under the influence of the leading merchants and Legislative Councillors opposed to the tariff, to co-operate, one bank agreed to make such advances as the Government required, upon condition that they should be promptly repaid.

This repayment was effected under a local law for facilitating the recovery of debts against the Crown, by the Attorney-General confessing judgment for the amount of the successive loans. Upon the certificate of the proper officer of the Court being presented, the Auditors certified that money was "*legally available*" for payment of the amount. The payments were strictly limited to *liabilities* of the Government, and did not include any new grants provided for by the Appropriation Bill.

Immediately after this plan was adopted the Assembly passed another Address, which the whole House presented to the Governor, thanking him for the steps he had taken and approving of the scheme.

The Council had twice publicly, by resolution and address, declared their readiness to pass the Appropriation Bill as it had come from the Assembly; and the Crown Law Officers advised the Governor in writing that it was within the legal competency of Government to contract for the loan of money to meet the liabilities of Government, in the same way that it had always been considered competent to them to make contracts for supplies or other purposes of Government upon the strength of the *Estimates alone*, which passed the Assembly at an early period of the session, while the Appropriation Bill rarely becomes *law* until nearly the close of the year. Such contracts had, in fact, been recognised by the Supreme Court.

The view, which from various causes the Governor was led to take of the opinions held by the constituencies, convinced him that the difficulty would not be solved by a dismissal of the Ministry and an appeal to the country. But when the Council finally rejected the tariff, and the Assembly, adhering to their resolution, would not, as the Governor was informed, send up another Appropriation Bill, a dissolution was resolved on, and the result was that the new Assembly contained a majority of fifty-eight in support of the Ministry and their past policy and proceedings, in a House consisting of seventy-eight members.

No doubt money had been issued to pay the public debts without the sanction of the Legislative Council, formally given by passing the Appropriation Act. This step, taken with the concurrence of the Ministry and the Assembly, was the head and front of the Governor's offending.

The Secretary of State (Mr. Cardwell) lost no time in condemning the action taken by the Governor (Sir C. Darling). He condemned both the levying of the taxes and the borrowing of money. The following extract gives the substance of his views:—

“First, I have no hesitation in saying that independently of the Judgment of the Supreme Court, no consideration, at least none that is discernible in your despatches, should have induced you to give your concurrence to the levying of these duties.

“The plea that taxes are levied in this country on a vote of the House of Commons before they are imposed by law is manifestly irrelevant. Such taxes are so levied because it is not doubted that the Bill imposing them as from the date of the resolution of the House of Commons on which the Bill is founded (and after which only they are levied) will become law, by the concurrence of the two other branches of the Legislature. If such concurrence were withheld, the sums so levied by anticipation would be repaid, and they would of course be no longer levied.

“But in the present case you and your Government were perfectly aware that the Bill would not receive the sanction of the whole Legislature, and the exaction of these duties was not in anticipation, but in defiance of the judgment of the Legislative Council. It was, therefore, not only in its origin unlawful, but there even was every reason to presume that it would remain so. I look with extreme apprehension on a state of things in which the Government of a British Colony is engaged in collecting money by mere force from persons from whom the Supreme Court has declared that it is not due. It is an example of violence which may do incalculable mischief beyond the limits of the Colony in which it has been allowed to occur.

“Next, I do not understand on what ground it can have been imagined that you were legally authorised to borrow from a private bank large sums of money on behalf of the public. No authority is alleged, and I am unable to conjecture any. The only excuse for such a proceeding would have been an overwhelming public emergency of such a nature as to justify what was not justified by the letter of the law. But, as I have observed, you had already declared that no such emergency existed. And you were right; no such emergency did exist. If payments were legally due from the Crown to public officers for salaries, or to any other persons on any account, it was open to such persons to recover what was so due to them in the ordinary course of law.

It was for one or other branch of the Legislature to yield, or for both to compromise their difference. It was not for you to give a victory to one or the other party by a proceeding unwarranted either by your Commission or by the laws of the Colony. I must point out that by such a proceeding the Governor and his Government, with the co-operation of a local bank, might at any moment withdraw any amount of public funds from the "Public Account" to which it is consigned by law, and place it at their own command, relieved from all the checks with which the Legislature has carefully surrounded it.

"Thirdly, as to the expenditure of the moneys thus obtained, I find it difficult to suppose that by the Crown Remedies and Liabilities Act the Legislature intended to enable the Government to discharge, without its concurrence, those ordinary expenses of Government which it reserves to itself the right to re-consider annually. It may, perhaps, be doubted whether office-holders who are under a standing notice that their salaries are dependent on laws, annually passed by the Colonial Parliament, would be treated by the Supreme Court as having a claim upon the Government independently of any such law. But it is not alleged that the Supreme Court was ever called upon to give judgment on the question, and you do not inform me of any law which would warrant you in paying away any public money except under the authority either of such a judgment or of the Auditors' certificate.

"As at present advised, therefore, I am of opinion that in these three respects—in collecting duties without sanction of law; in contracting a loan without sanction of law; and in paying salaries without sanction of law—you have departed from the principle of conduct announced by yourself and approved by me—the principle of rigid adherence to the law. I deeply regret this. The Queen's Representative is justified in deferring very largely to his Constitutional advisers in matters of policy and even of equity. But he is imperatively bound to withhold the Queen's authority from all or any of those manifestly unlawful proceedings by which one political party, or one member of the body politic, is occasionally tempted to endeavour to establish its preponderance over another. I am quite sure that all honest and intelligent colonists will concur with me in thinking that the powers of the Crown ought never to be used to authorise or facilitate any act which is required for an immediate political purpose, but is forbidden by law."

In considering this pronouncement it is necessary to bear in mind that the duties were only levied during the period while the Bill was "laid aside" by the Council. They were discontinued when it was rejected. It was common ground that during the interval the collection was not authorised by law,

but it was defended by the Law Officers of the Colony on the ground of constitutional practice.

“The practice is not, indeed, authorized by an express law, either in England or in Victoria, but it is a convenient, and in some cases a necessary means of preventing unhealthy speculation and disturbance of prices, and it is justified by the presumption that as the Legislative body, which has the sole right to grant aids and supplies to the Crown, has sanctioned by resolution the imposition of the duties, the other branch of the Legislature will not interfere to prevent the resolution being clothed with the form of law.

“The lapse of seven months from the date of the resolutions does not appear to be a circumstance that affects in any degree the legal aspect of the question. The collection of the duties was equally unwarranted by law on the first day they were so collected as at the present time: it is warranted in a like degree by necessity, by usage, and by the authority of the Legislative body, that has the control of taxation at this day, as at the time when the duties were first enforced.

“The Supply and Appropriation Bill has not been lost. It has only been laid ‘aside’ by the Legislative Council; and although it is not very clear what is the precise effect, according to Parliamentary practice of the ‘laying aside’ of a Bill, it is believed that there is no express rule of Parliament that would prevent the Legislative Council resuming the consideration of a measure ordered to be laid aside; even if the Bill in question had been lost, however, that circumstance would only impose on the Government the necessity of bringing in a new Bill, as was done by the Government in England in the case of the Malt Duty Bill in 1807, and would not destroy the presumption above mentioned upon which the Government deemed that it was justified in commencing to collect the duties.”

Thus the collection of the duties was not, as the Secretary of State put it, “in defiance of the judgment of the Legislative Council.” No “judgment” had been given. Apparently, however, Mr. Cardwell’s view was that the action of the Council in “laying aside” the Bill should have rebutted the ordinary presumption that the supplies would be sanctioned by that House. The logical result of this principle would be that the levying of duties in such cases is indefensible if there is any reason to apprehend that the Upper House will reject the Bill, and it is unreasonable to expect that any Government will suspend the action which it thinks necessary in deference to a future decision which may or not be carried out.

With regard to the borrowing, the argument that persons to whom the Crown owed money had a remedy at law was singularly poor. The success of multitudinous actions against the Government in the Courts cannot, from any point of view, compensate for national bankruptcy. Mr. Cardwell stated that no emergency existed. News at that time was not transmitted as it is now, but one of the despatches acknowledged stated that "I believe that the emergency (upon the critical nature of which, in a community wherein it has been for years the custom to make all the disbursements of Government, amounting to a considerable sum, every month, it must be unnecessary to comment) was such as to render it my duty to avail myself of any law rather than run the risk of being obliged, however reluctantly, to act in direct contravention of more laws than one; or to allow a state of confusion to arise which might eventually have necessitated, in parts of the Colony, the suspension of all law except that of a military nature." It is obvious that it could not have been otherwise.

The controversy ended in the dismissal of Sir C. Darling. It illustrates the fact that, while it is generally admitted that necessity knows no law, the people who are on the spot are more likely to feel the necessity than people who are not. The despatches of the Secretary of State were written from a high platform and with some superiority over the facts. His own Government had not been in the same case. It is agreed that under such circumstances the levying of taxes is illegal and that the borrowing of money is unauthorised, but when the regulation machinery breaks down the work of administration must be carried on by other methods. The working of the British form of Constitution entails the existence of certain conventions, and in some extreme cases Ministers have to act without any statutory power, and to put themselves right in point of form afterwards.

In a recent Transvaal case, which was discussed in the House of Commons in July, the Government advised the Deputy Governor to sign a warrant for certain payments which had not been authorised by law, but which he had power as Governor in Council to provide for if they appeared to him, as such, necessary in the public interest. It would seem, therefore, that the warrants so issued were legal if this condition was fulfilled, and as to this he was bound to act on the advice of his Ministers. Whatever fault there is in the case lies in the legislation, and undoubtedly such provisions furnish a procedure which tends to do away with the control of the Upper House in financial matters. The difficulty is that it is desirable that there should be a statutory means of making payments in times of emergency or necessity, but under self-governing Constitutions it must be for Ministers to

decide whether any such state of things exists. The Legislature must be the eventual judge of the merits of the matter. The discussions of this incident have turned a good deal on the judgment in an action brought by the dissenting members of the Executive Council. In this case it was held that the payments were illegal, but this was before the warrants were signed, and at that stage the payments were clearly unauthorised in any way; the technical position was altered by the issue of the warrants, and the Court held clearly that the real remedy of the complainants was to go to Parliament.

The question has occasionally been discussed as to how far a Governor is liable to be sued for acts done by him in that capacity. At one time it was believed that he could not be sued in Colonial Courts, but the decision in the case of *Musgrave v. Pulido* by the Judicial Committee rudely disturbed this view. It led to the raising of the point whether greater protection should be given to Governors against suits in Colonial Courts, but nothing came of this. To justify an illegal act a Governor must rely on a subsequent validating or indemnity statute. This would cover such cases as the above, but in those where a criminal action would lie in this country it would seem that, as in the *Eyre* case, a Colonial Act of Indemnity is only efficacious if the proceedings in question are held to have been necessary.

SOME FIJIAN CRICKET.

The appearance in *The Sketch* of the 20th July last of a group of Fijian cricketers, makes me think of how the game is sometimes played in the remoter villages of our dear Cannibal Isles. These remarks do not apply to the team portrayed in the picture, whose members live in the immediate vicinity of Suva, the capital of the group, and who, trained under strict European supervision under the leadership of Mr. Marsden, in 1907 played a series of matches in Sydney, Melbourne, Brisbane, Adelaide, and in many other of the principal Australian towns. Its career was not inglorious, though scarcely in the first flights of the great Southern Continent. But now they consider themselves past-masters of the sport, and discuss and criticise our leading players, though to the uninitiated it would be difficult to understand what they were talking about, the soft Fijian language causing a considerable distortion of English names. Thus Woods, the eminent Notts player, is spoken about as "Utu," and the Australian Trumper as "Tiramba." The best Fijian bowler, "Ratu Pope," has been heard to say that he would die happy could he but scatter the wickets of the last named hero. Rumour says that he did not. The last Australian Eleven voyaged home by the All Red Route, which touches at Suva. Whilst there it had a scratch match with the local team, and gave it an afternoon's leather hunting.

Next door to the Fijian Islands is the Tongan Group, a somewhat conceited native State, which boasts of a King and Parliament of its own, modelled on the English style. The idea they have of their own importance may be judged by the announcement made at the commencement of the Franco-Prussian War, "that Tonga would remain strictly neutral." To understand the vagaries of that delightful spot, one should read "The Diversions

of a Prime Minister," Basil Thomson's charming book. Amongst other British institutions, cricket was adopted *con amor*, but not quite as we play it. Matches were made up, village against village, not confined to eleven a side. All the men were entitled to play and the fact that some villages were numerically stronger than others did not matter, beyond that it was so much the worse for the weaker. There was no gate money, but the games were made profitable to the local churches by a player being granted a fresh innings for a shilling, and as many as he could pay for, and the sums so derived were applied to pious uses. Kipling says that the Governor of Cabul did justice in the city gate, and that he who held the longer purse held the longer life; so in Tonga the richer the man the more his inningses. So great at one time became the fever for the game, that the villages, mostly dependent on agriculture for their existence, neglected their crops. There was no regulation as to the time of drawing the stumps and play went on as long as there was food enough, till at last many places were threatened by famine, and the High Court of Parliament had to pass an Act regulating the noble sport.

In the remoter parts of inland Fiji, too, away from the influence of white opinion, the game became very fantastic. There secret societies permeate native life. Though in many ways very childish, they are yet inimical to settled government and even before the advent of British rule disturbed the ancient authorities. They form a distinct subject, too long to be dealt with here, but strange to say they have become mixed up in an extraordinary manner with cricket. It was thought by some that they were the outcome of the work provided by the Devil for idle hands. When therefore many of the village youths took to cricket in some of the districts, their Commissioner hoped that they were finding an outlet for their superfluous energy, and, when requested, gladly consented to become president of the clubs and to subscribe to them. They blossomed forth with gorgeous uniforms, generally scarlet, and it was observed that nearly all the members had some sort of a badge on their right arm, corresponding somewhat to the stripes and chevrons of non-commissioned officers, though no two were alike. Inquiry elicited that the clubs had become sorts of guilds, with books, registers, codes of signals, etc., and that the badges were for the captain, or elder of the guild, as he was called, for the secretary, for the treasurer, for the chief of the outer circle and for the chief of the inner circle. The two latter were for the arrangement of the internal economy and external policy, in fact a Home Secretary and Secretary for Foreign Affairs. There was another office, too, which to the bewildered outsider could only be translated as "Lord

High Admiral." One could only at first think that the lines of Artemus Ward's celebrated volunteer corps were being followed, where to prevent jealousy all the members were Major-Generals.

Suspicion soon arose that the clubs were being used as a cloak for the secret societies, and in a district adjacent to that of the writer the members of one of them decided to emancipate themselves from the thrall of British rule. With a sincere imitation of it they elected a Governor, Chief Justice, Chief Secretary, and a host of other officials. But a kingdom divided against itself cannot stand and the weaker has to go to the wall, and the new régime retired awhile for meditation in the quiet and calm of the Provincial Gaol. Such are the ethics of Fijian life that imprisonment is not considered a disgrace. Gentlemen commit mistakes occasionally and expiate them by just punishment, emerging again into ordinary life whitewashed. Complainants and defendants then sit down together and partake of the "Burua," or mutual feast of atonement, after which it is considered mean to throw a gentleman's misfortunes into his face and taunt him as to his sojourn in gaol. Our present Governor, Sir Everard im Thurn, has stigmatised the Fijian prison system as savouring of comic opera, but it has its good points. Like the secret societies it is too long an affair to go into here.

The play of these clubs was as strange as their general administration and policy. At Nadarivatu, the Fijian Hill Station, and seat of the Commissioner responsible for the government of the inland mountain tribes, there has always been a small force of native constabulary under English officers, whose principal amusement is cricket. There, of course, the game is played *en règle*, and everything goes smoothly till the village clubs come up for matches. One of the set ideas of the latter is that the crack bowler is the bowler, and by prescriptive right. In fact, he is regarded as the Lord High Bowler, and as soon as the over is finished, he goes on again at the other end. He not infrequently shies and it was considered grossly unfair to score such efforts as no balls, and defeats were generally ascribed to the partial decisions of an adverse umpire. At a match not long ago a recent settler in the district, an English public school man, was put on to umpire, and proceeded according to established rules. His conduct very gravely disturbed the equanimity of the visiting team, and it was requested that one of their side, who really did understand the game, might replace him.

It would take too long to recount the many whimsicalities of pure native cricket, but the Fijian, taking him all round, is a good sportsman and only wants direction. He travels miles to attend our little race meeting and backs his choice for all he is worth. He is an excellent runner, swimmer and wrestler, and

fancies himself considerably with the gloves. The little cricket club generally have a set. But here again their form requires education. The public school boy mentioned above, in a journey across Viti Levu, found himself one night at a remote inland village with sporting proclivities. He was asked to put on the gloves with a local champion, and did so, and knocked him out almost at once. Then was asked if he would take on a couple at once, and again was victorious. A modest request to take on three was then suggested, but my friend thought he had done enough for the honour of the race. This was just after Johnson had had his turn up with Burns in Sydney. He passed through Suva on his return to America and was mobbed by admiring Fijians, elated by the victory of one of their own colour, many of whom are diligent readers of the papers and *au fait* with current events. The Jefferies fight has happened since I left Fiji, but doubtless the result is known to the native sportsmen.

A. BREWSTER-JOSKE.

REVIEWS AND NOTICES.

The Governance of Empire. By P. A. SILBURN, D.S.O., Member of the Legislative Assembly of Natal. (*Longmans & Co. : 9s. net.*)

In this volume Mr. Silburn ranges over a wide field, which embraces the Achæan League, the Ætolian and Lycian Confederacies, the Roman Republic and Empire, the Venetian Republic, Switzerland, Russia, the German Empire and various other matters in addition to the subject which primarily interests him—that of the British Empire. We may as well confess that we have not kept company with the author through the whole of this journey, but have turned for enlightenment to Chapters XVI. and XVII. which, we learn from the Preface, are “confined to constructive policy.” The contents of these two chapters are unquestionably remarkable. Mr. Silburn starts with the now familiar lament about the indifference of the British Parliament and the British electorate to Imperial considerations. He is quite sure that all but “a very small number” of the House of Commons “are apt to think of the Colonies as these were in their beginning, as plantations or convict settlements,” and that this misconception is even more overwhelmingly prevalent among the electors. But though the British politician knows nothing about the Colonies—we are compelled to use the distasteful word, for the Crown Colonies as well as the Dominions are in question—Mr. Silburn, as a Colonial, of course knows all about British politicians. “The Liberal Ministers” (at the Conference of 1907) “had unfortunately misunderstood the outburst of loyalty on the part of the Colonies during the South African War as loyalty to the Conservatives and not to the Empire, and therefore

resented Colonial suggestions as undue interference." "Under the present political party-system in Great Britain, whichever party is in power, some portion of the Empire must suffer. When the Conservatives are called to office matters of official detail and office routine are left to the permanent officials, and Ministers concern themselves with questions of State. With a change of Ministry, and the Liberals taking office, there is naturally a change of policy. Imperial questions are handed over to the permanent heads of departments, and Ministers take into their own care questions of detail and of office routine." "A Liberal Government legislates for England and legislates well. The Empire it knows nothing of, nor does it care to know anything of it. Its leaders openly admit that territory outside of the United Kingdom is an unnecessary luxury." In view of all which we are pleasantly surprised to learn later on that "in Imperial questions there is no room for party differences and in their consideration Liberal and Conservative can, with honour to themselves, profit to the Empire, and confusion to the nation's enemies, unite on the common platform of Empire." Unfortunately, there are almost as many different ways of reconstituting the British Empire as there are of constructing tribal lays. There are, it seems, "eleven different opinions as to the best means of consolidating the Empire," emanating from "such statesmen or publicists as Mr. Chamberlain, Sir F. Pollock, Messrs. Deaken (? Deakin), B. Holland, Jehu Matthew, and R. Jebb," but "none of these suggested schemes have been seriously advocated." Mr. Silburn proceeds in all seriousness to advocate a twelfth, including an Imperial Legislature consisting of a single chamber of 216 persons, representing almost every part of the British Empire in the very widest acceptation of that term. (For example, Cyprus is to have three representatives—one less than Newfoundland—and it comes upon one almost as a shock to find that Egypt is left out.) But "the House of Lords and the oversea Legislatures corresponding to that Upper Chamber would still have the power of veto in Imperial legislation, as in National, Colonial, State or Provincial legislation." What would happen if a measure passed by the Imperial Senate was vetoed by the Federal Legislative Council of the Leeward Islands we are not quite clear. But it is, of course, conceivable that some other method of consolidating the Empire than that advocated by Mr. Silburn may be adopted. For the task of constitution-making is to be entrusted to a British Imperial Convention at which "the voting shall be by States and not be *per capita*." Every possession with not less than 100,000 inhabitants is to be separately represented at the convention, and smaller possessions are to be grouped for purposes of representation. "For instance, the tiny but strategically

important islands of St. Helena and Ascension would share a representative with their opposite neighbour British Gambia." (We wonder which would choose him, and why the Gambia, with a population of upwards of 150,000 is not allowed to stand on its own legs.) It will readily be realized that the United Kingdom and the self-governing Dominions will have a very small say in the matter under this scheme, and that the form of the constitution will practically be determined by the Crown Colonies and Protectorates. We find it impossible to forecast their probable conclusions, but we are indebted to Mr. Silburn for much entertainment.

The Canadian Annual Review, 1909. By J. CASTELL HOPKINS, F.S.S. (*Annual Review Publishing Co., Ltd., Toronto.*)

The *Review* relates with its usual vigour and completeness the political and social events which took place in or concerned Canada during 1909. The connection of the Dominion's politics with the affairs of the Empire is fully shown, and the question of Imperial and local defence looms large in these pages, reflecting the interest taken in it throughout Canada. The business connection with Great Britain is strikingly shown by the increase of British investments. It is frequently alleged in Canada that it is American capital that is developing the country, and that British investors are to blame for neglecting the opportunities. But the figures tell a very different story. "The increasing volume of British money finding its way into Canadian securities was one of the most marked developments of the year in an Imperial as well as purely Canadian sense. According to Mr. E. R. Wood, Vice-President of the Dominion Securities Corporation, Ltd., the chief personal factor in the amalgamation of the Dominion Steel & Coal Companies and a Toronto capitalist who had made a continuous study of this question, the total Canadian bond issues of 1909 were \$265,158,252 as compared with \$214,007,411 in 1908—itself a record year. Of the total figures in 1909 Great Britain took \$194,356,788 or over 74 per cent. as against \$165,455,081 or 84½ per cent. in 1908; the Dominion absorbed \$60,433,963 or 22½ per cent. as compared with \$24,585,140 in 1908 or 12½ per cent.; the United States took \$10,367,500 or 3.90 per cent. as compared with \$6,316,250 or 3½ per cent. in 1908. These totals clearly illustrated the fact of Canada's dependence in a financial connection upon Great Britain, showed the means by which permanent capital was being obtained for Government, municipal and industrial undertakings, indicated the power at the base of Canadian exploitation of

resources, water-powers and transportation, and proved how greatly public services and private interests in Canada were at this time indebted to British financial backing."

The explanation of a prevalent misconception is that American capital is brought in more openly. There is considerable publicity and advertisement when an American factory or mine or office is started in the Dominion, while the English capital is put into municipal loans and large companies where its origin is lost so far as the public eye is concerned.

Internally Canada's course ran smoothly during the year: no racial and religious issues arose, the Provinces had no particular friction with the Dominion, and the tariff was not much discussed. This state of things indicates that work and trade were in a healthy condition, and the particulars of this prosperity are set out with remarkable clearness and a skilful combination of statistics and comment.

Folk Stories from Southern Nigeria. By ELPHINSTONE DAYRELL.

With an Introduction by Andrew Lang. (*Longmans, Green & Co. : 4s. 6d. net.*)

Mr. Dayrell deserves the gratitude both of the anthropologist and of the unlearned public for this collection of stories. Apart from their value as throwing light on the modes of thought of primitive man, folk tales are, upon the whole, the best tales in the world. One may call in witness the world-wide popularity of Grimm's stories, the scientific value of which has been wholly overshadowed by their abiding fascination over the minds of children of all races and all ages. In a learned introduction Mr. Andrew Lang points out many curious points of similarity between Mr. Dayrell's stories and the folk tales current elsewhere, and even without Mr. Lang's guidance the lay reader will find his recollections of tales from many sources re-awakened. In particular, he will recognise in this volume something like the raw material of the highly developed and much metamorphosed "Uncle Remus" cycle. The part played by animals in the stories is very large and they are made members of the general community of which human beings are a part in a curiously matter of fact way. The tortoise generally plays the part of Brer Rabbit, and his resourcefulness does credit to the imaginative powers of Southern Nigerian man. Many of the stories have a "moral," and most of them profess to give a historical explanation of some natural phenomenon or human custom—why bats only come out at night, why the sun and moon

live in the sky, why dead people are buried, etc., etc. As is to be expected from their origin, many of the tales are marked by an extreme of cold-blooded ferocity, and there are many odd superstitions about Ju Ju trees and the like. Mr. Dayrell shows good judgment in presenting the stories in the simplest possible narrative form, and economizing his explanations.

Cotton Growing in German Colonies.

We have received from the Kolonial Wirthschaftliches Komitee in Berlin a copy of a second enlarged and improved edition of Professor Zimmermann's *Anleitung für die Baumwollkultur in den Deutschen Kolonien*. A smaller popular handbook specially adapted to the requirements of German East Africa is also published.

Sierra Leone Forests. (*Printed by Waterlow & Sons Limited.*)

A report by Mr. A. H. Unwin contains detailed information on the valuable resources of the Colony in timber. The industry is at present carried on in a wasteful and costly manner by hand-sawing in pits, and there seems to be an opening for private enterprise which would provide large saw-mills with planing machines, using water power where possible.

BUSINESS NOTES.

Prosperous conditions continue to prevail through the Empire, and there is a marked freedom from those political troubles which tend to disturb credit and unsettle enterprise. The immediate future will be characterised by a considerable amount of railway work. Canada has a large programme in hand, and a big development is coming on in Australia. The purchases on these accounts will be of great benefit to British manufacturers, but this is not all to the good from the point of view of the Colonies, as large demands tend of course to raise prices and delay deliveries.

The Crown Colonies, on the whole, are doing well. The rubber boom has subsided so far as inflated prices for shares are concerned, but the formation of companies goes on apace. The new Straits Settlements agency for supplying information to intending cultivators will be now available, and investors or planters will have the great advantage of reliable advice as to the estates in this headquarters of the planting industry. Such developments make it important to push on survey work, and in the past year considerable progress has been made in the Cape, Orange River, East Africa, Uganda and Northern Nigeria. Many other Colonies are backward in this matter. The Colonial Office have made new arrangements for the selection of candidates for junior survey appointments. (Cd. 4,964-18.)

A number of applications for oil-fields concessions have been dealt with by the Trinidad Government, and there is strong financial support for these undertakings.

The favourable price of sugar has stimulated production, and in Jamaica a revival of the industry is beginning in real earnest. The banana industry is also progressing steadily in this Colony

and it is anticipated that in no long time the exports will exceed twenty million stems per annum. Fortunately the island is free from the banana disease which is said to be making alarming progress in Costa Rica.

Among the loud claims of fashionable products the merits of the cocoanut are in danger of being overlooked. This is not being boomed, but it is one of the most satisfactory in results of all tropical products. It combines well with bananas, as it relieves the subsoil of moisture. The dessicated kernel is in great demand in confectionery, and the rope and matting is profitable. It is not generally realised that the value of the cocoanut exports from Ceylon is nearly a quarter of the whole export, and capitalists may do much worse than turn their attention to this safe product.

Wheat.

Wheat of fine quality has been produced in East Africa and, it is expected, will command a ready sale and the highest prices in this country. Very promising wheat has also been grown about Kano and Zaria in Northern Nigeria. Considerable exports from both sides may be expected before long, and if care is taken at this early stage to select and adhere to the most suitable varieties there will be a great future for this crop.

The breeding of wheat to suit South African conditions has but just begun. In Australia it was taken in hand years ago, and the story of one particular variety, which has come very prominently to the front lately—the Federation Wheat—is so encouraging that it should be widely known. Federation wheat, which has proved so successful during the present year throughout the Australian States—South Australia and Victoria especially—is a variety that was artificially bred by Mr. Farrer, the late wheat experimentalist to the New South Wales Department of Agriculture, about twelve years ago. It was first widely tested in 1903-4, when the plots on the Government Farm at Wagga yielded 35½ bushels to the acre. In the following year these results were published by the Victorian Department, and the wheat was introduced into the experimental plots of the State. So rapid has been the advance of the new variety in the estimation of farmers that probably one-fourth of all the wheat in Victoria this year is Federation. As the yield is at least three or four bushels to the acre above that of all other varieties, the benefit in that State alone during the year from the work of the late Mr. Farrer may be estimated at 1,500,000 bushels of wheat,

representing a cash value to the farmer of £250,000—a remarkable result for a scientific man to accomplish in one season. That is the epitome given by the Victorian Director of Agriculture (Dr. Cherry), who says:—"The question of whether the present wheat harvest will realise the official forecast of 28,500,000 bushels depends to a large extent on the way that Federation may have stood the test of an unfavourable winter's growth. The variety has proved its ability to withstand drought, but the present year is the first which has offered the conditions for testing whether it can successfully pass through the test of an abnormally wet winter. Up to the present the returns received are all in its favour. Returns of 20 bushels to the acre in the Mallee and 35 bushels in the best parts of the Wimmera are being recorded."

Cape Wines.

During the last three years attempts have been made to export these light white and red wines in wood to Europe. It is generally stated that light wines could not be sent in wood to Europe, as they turn bad and get unfit for consumption. This belief is so general that many who heard of the intention of the Government of testing the European market and sending light wines to London and Hamburg strongly disapproved of this plan, the result of which, they held, must be disastrous. But there is no reason whatever why sound light wines put in sound seasoned casks should not arrive in perfect condition in Europe. The experiment has been made. The wines sent were one year old, Hermitage and Sauvignon Blanc, from Constantia and Klassenbosch, Cape Peninsula. The wines were perfectly sound, and were put in sound, well-seasoned casks. They arrived at Southampton and Hamburg in perfect condition, and were pronounced by experts to be superior to Australian wines. The European market is, however, flooded with light red and white wines from Algeria and other wine-producing countries to such an enormous extent that the price offered for the Cape wines was only two shillings to two shillings and threepence per gallon in wood. A small amount of this wine was sold, but the remainder was returned to the Cape. Here they arrived in excellent condition, and very much improved in bouquet as well as in taste by the journey of twelve thousand miles by sea, in addition to some rough handling in Europe. There is no opening for light Cape wines in the European market, which is overstocked with light wines sent from all wine-producing countries. The best chance is for a sweet wine and this the Cape could no doubt produce.

Fruit.

The large interests of many Colonies in this industry make it important to study the causes of decay in transit, and some recent investigations in America are valuable. Decay was usually attributed by growers to weather and the railroads and steamships, in other words to conditions which affected the fruit after it has been packed. But the truth is that the trouble originates at home. It is rough picking, careless handling and antiquated packing that are to blame. The fruit should, as soon as picked, be cooled to the lowest temperature that it can stand without injury.

Efforts are being made to introduce Cape fruit into America, and in the period January-April it would be in a favourable position. It would, however, have to be shipped via the United Kingdom as the ships from America to the Cape do not return direct, and much depends on the quickness of transshipment and the steamship rates. The Americans are acquiring a good deal of land in South America for the purpose of fruit growing, and these companies will probably have a good deal of influence with the market. It may be suggested that the best way of increasing the Cape trade would be to get one of the collecting companies to take an interest in it.

Oil.

From Canada to Brunei reports come in of the discovery of oil and the production is sure to increase materially. Not much is yet heard of South Africa in this connection, but there are clear indications in Cape Colony and Orange River Colony that oil can be obtained, and at any time a large production may spring up. There is no particular advance to chronicle in West Africa, and the many people who are in the field might do well to join hands and see what they can do with the best concerted counsel.

Tea.

Planters will be well advised to consider the possibilities of Nyasaland for this product, though the area suitable for it is limited. It is questionable if the yield will be so heavy as on the best Ceylon plantations, but experiments so far indicate from 350 to 400 lbs. per acre; the quality is certainly superior to low country Ceylon judging by past season's prices, which varied between 5d. and 7d. per lb. in London. Even with a smaller yield than Ceylon it points to be a most profitable crop for Nyasaland as

labour is at least 50 per cent. cheaper; the natives like the work and many of the children exhibit considerable activity in picking. The tea area is within 20 miles of the Shire Highlands Railway, and tea is carried to London for 123s. per ton.

Cotton.

In a country with a short growing season, like Nyasaland, the branching character of the plants has a great influence on the ripening of the crop, and therefore the yield per acre depends in no small degree on the type of plant grown. Under those conditions it is necessary to take advantage of every character that leads to early maturity, as heaviest yields are obtained from plants which carry many fruiting laterals arranged around the main stem in such a manner as to allow the maximum amount of sunlight to reach the entire plant without shading its neighbours or obstructing tillage operations necessary for the best growth of the crop. Plants with extra long horizontal or prostrate lower branches should be avoided as they interfere with cultivation; if they are fruiting branches the lower bolls open late and the cotton is liable to soil stain; if they are purely vegetative branches they receive insufficient light for maximum carbon assimilation (*i.e.*, starch making). Plants with dense upper foliage should also be avoided as they generally shed a large percentage of their lower bolls.

Wireless Telegraphy.

A contract has been given to Marconi's Wireless Telegraph Co., Ltd., for the erection of one 5 K.W. Station at Suva, Fiji, and two 1½ K.W. Stations at Savu Savu and Vuna Point. The contract price is £6,410, the Government providing the buildings and the foundations for the masts and stay anchors.

The tenders on this occasion were nearer in price to one another than on previous occasions, indicating that the industry is becoming more precise.

Motor Transport.

Two Wolseley-Siddeley cars, bought in 1908, have given great satisfaction in Northern Nigeria, running very well on rough roads during the dry season. The circulating water pipes, however, were of too small diameter; they cannot be too large in a hot country. The petrol tank is in the rear, and the joints of the

long air pressure and petrol pipes were frequently giving way under the severe bumping on rough roads; for such purposes the tank should be near the carburetter.

There is no doubt that the increasing use of motors is developing traffic in West Africa, and encouraging the natives to improve the roads.

An American company is maintaining a regular daily service, carrying passengers and mails between Kingston and Port Antonio. They have fifteen cars, three being for twelve passengers, and charge 3d. per mile. The business done has been good, and where, as in Jamaica, the roads are good, such enterprises are sure to increase.

Motor Transport Service, Ibadan-Oyo.

Paraffin is still used to run the motors on but the advantage of this fuel is not so great now as formerly. Petrol can be landed at Ibadan at 15·3 pence per gallon.

Continual trouble was experienced with all tyres used until the Shrewsbury & Challiner Band type were obtained. These tyres and the method of fitting are mentioned in the 1908 report. The first one fitted (July, 1909) to a wooden artillery rear wheel ran over 7,000 miles without trouble, and it was only after several weeks of the dry harmattan season that it was necessary to fit in new lagging of increased thickness to take up shrinkage. This tyre should complete its guaranteed mileage.

For consignments of over 10 cwt. the present rate is 33s. from Ibadan to Oyo, and the return is 25s. per ton; it is therefore possible, if the vans are fully loaded each way, to earn:—

No. 1 van	...	(20 cwt.)	58s. 0d. or 10·5	pence per mile.
Nos. 2, 3, 4 van		(30 cwt.)	87s. 0d., 15·81	„ „ „
No. 5 van	...	(45 cwt.)	130s. 6d., 23·71	„ „ „

The year's working showed a loss, but this was largely due to the condition of the roads. The transport is likely to encourage European firms to start business in the places served.

Motor Fire Engines.

The increase in the adoption of motor fire apparatus by the leading fire brigades in Great Britain and abroad has been quite remarkable during the last two or three years. One maker alone

(the firm of Merryweather & Sons, at Greenwich) have built nearly 150 machines. The latest engines completed by Messrs. Merryweather, which have just been supplied to the Salford Corporation, are two patent "Hatfield" petrol motor fire engines, each of a pumping capacity of 450 gallons per minute, and with arrangements for carrying a 60 ft. escape. At the tests of these engines at Salford, when lifting water from a total depth of 24 ft., pressures of 140 lbs. to the square inch were maintained on jets 1 in. in diameter. With a single jet $1\frac{3}{8}$ in. in diameter a pump pressure of 120 lbs. to the square inch was maintained through 25 yards of 4 in. diameter hose. The motors had an R.A.C. rating of 52 h.p., and the results obtained, we believe, constitute a record for efficiency for this pump. The machines ran without a hitch from start to finish and with an absence of vibration that was remarkable considering the power of the engine. The machines are of specially strong construction to meet the exigencies of fire brigade work, and can travel at a speed of 30 miles an hour on the level. Two similar machines, fitted with front wheel brakes and latest improvements, have just been delivered to the London Fire Brigade.

Storage Batteries in Hot Climates.

Mr. E. P. Harrison, of the Physical Laboratory, Presidency College, Calcutta, refers to the difficulty experienced in hot countries in keeping small accumulators in working order, and points out that this is probably due to the cells being filled with dilute acid of density 1.190 at a temperature of 30 degrees or 35 degrees Centigrade. While this is a proper density to use in a climate where the temperature is 15 degrees to 20 degrees Centigrade, corresponding to a 20 per cent. mixture, it is too high for a hot climate, where it really represents a 23 per cent. mixture; a density of 1.170 or even 1.150 is more suitable in hot climates.

The Purification of Muddy Waters.

Much of the water available in the Colonies is rain water stored in open tanks with puddled clay embankments and floors. Such water is practically never clean, but generally discoloured, with a fine suspension of mud.

This mud is so finely divided that it does not sink under the force of gravity nor can it be separated under the greater force exerted by the centrifugal machine. In the language of physical

chemists, it is in a condition of "colloidal suspension," and its separation from the water requires either an effective filter, or the use of a chemical reagent.

An effective filter is, however, generally speaking, a slow filter, and will not allow large volumes of water to pass in short intervals of time. Further, they are costly to buy, and unless treated with care, and regularly cleaned, they may signally fail to purify water which contains harmful bacteria.

In fact, a badly cared for filter may be a source of actual danger, for bacteria may thrive in countless numbers amongst the material collected in the filter, and may later be washed through into the filtered water.

By the second process of purification, namely, chemical precipitation, no expensive initial plant is required, large volumes of water may be satisfactorily handled, and any one with good commonsense can control the process, whereas the management of a filter requires a skilled and intelligent man.

If arrangements can be made for a cheap supply, it appears from experiments conducted in Victoria that treatment by chloride of iron is the best. A tank of 850 gallons was practically completely purified by the addition of $\frac{1}{2}$ lb. and $\frac{1}{16}$ lb. of iron chloride in solution.

The ideal substance would be a *cheap* salt of aluminium, iron, or chromium. From the practical point of view, the cheapness is almost as important as the chemical-efficiency, and consequently for actual use only the following need be named, viz., alum, chloride of iron, lime. The last of these is able to compete only on account of its cheapness. It is especially to be noted that it is not nearly so "brilliant" in its action as either alum or chloride of iron. It is, however, a practical substance to use.

In choosing between alum and chloride of iron, the price is at first sight in favour of the former. Weight for weight, however, 1 lb. of chloride of iron is worth 2 lbs. of alum, and this fact, together with its easy solubility, turns the scale in its favour.

The "brilliancy" of the action of iron chloride, that is, the efficiency with which it acts, the rapidity with which it causes the mud to settle, and the ease with which it can be handled owing to its solubility, make it excellent. It is not merely harmless. It is more, it is a most valuable mineral constituent for all animals. There is consequently a distinct gain, even if too much is added to the water.

The added chemical (if not in larger quantity than required) is thrown out with the mud. The precipitated mud will settle down through seven feet of water in a single night by the ordinary force of gravity.

Clean waters so obtained are valuable in butter factories and dairies, or for use in steam engines. Also, stock are the better for a supply of clean, rather than dirty water, and a liberal supply of clean water is acceptable for domestic purposes.

The process is perfectly simple. Thus in Victoria a small water hold, containing an estimated 1,000 gallons of a thick and dirty muddy water was treated on the evening of 2nd May with 1 lb. of iron chloride. The concentrated iron chloride solution was diluted, and just thrown out over the surface of the pond, keeping the distribution as uniform as possible. The water was not stirred at all, though it would have been more advisable to have stirred the surface layers, so as to insure a regular distribution of the chemical.

Next morning, 3rd May, the water was clean, and every leaf and twig could be seen on the bottom of the tank.

Reinforced Concrete.

A Supplement to the *Jamaica Gazette* (28th July) contains a valuable report by Mr. A. E. H. Herschel on earthquake-resisting construction. The case of an earth fall just under a building could only be met by building on a small scale and on the steel box plan. But this very rarely happens. The common case is that of vibrations, the effect of which is to bend some parts of a structure, and this can be largely provided against. Mr. Herschel sets out the mechanical requirements and sums up in favour of reinforced concrete.

“This is the only building material which really satisfies all the ‘requirements’ mentioned above. Its strength *begins* where the strength of ordinary unreinforced brick work *ends* for in reinforced concrete no allowance is made for the strength of cement in tension. The steel takes all of the tensional stresses, so this material combines the durability and fire resisting qualities of masonry with the tensional strength and ductility of steel, and above this it possesses certain qualities which are peculiarly its own. It has greater resilience—or power to resume its original shape quickly—than any other building material and it can be bent without failing to an extent which would surprise anyone who has not seen it.

“It is truly monolithic, that is to say it has no joints, and it forms a light building for the loads it can carry. As regards its durability, all that can be said is that it appears to get stronger the older it is, and this process appears to go on for an indefinite period.

" I am not clear that it makes such an healthy building as one with hollow walls, but there is not much evidence either way.

" The greatest objection to it is that after the concrete has been cast it is impossible to say whether the steel is in the right place, or even whether there is any steel in it at all.

" As regards the best material to be used for concrete walls, I am of opinion that a 1-3-6 mixture with say 3 (of the six parts of aggregate) of brick and 3 of fine gravel gives the toughest and most satisfactory mixture for this climate.

" There are a few points in connection with reinforced concrete construction to which attention may well be called here.

" In order to get the most out of the advantages offered by reinforced concrete, the greatest care should be taken to strengthen those points which are subjected to concentrated loads. This may be done in a hundred different ways as, for instance, by the use of extra rods or links or stirrups hooked across the main reinforcing rods to tie them more firmly together where there is any chance of a shock tearing the wall or pier asunder. But the main point is to see that whatever extra reinforcement is designed to be used is actually put in.

" These small additions may seem trivial, but they are just those little details which may make the whole difference in the day of trial, and they can only be secured by the closest supervision before *and while* the concrete is being placed in position. I cannot speak too strongly on the need for special supervision where reinforced concrete is concerned. Without supervision it may be the most dangerous material, and owners are particularly warned that failure on their part to provide efficient supervision may render all the trouble and money they have spent on their buildings useless. Reinforced concrete must either be done well or not done at all. It is not a material which it is safe to entrust to careless or inexperienced hands."

Ferro-concrete in Mauritius.

The construction in ferro-concrete of the Bacteriological Laboratory and of the new Lighthouse has been successfully carried out and has resulted in appreciable economy. The cost of construction has been reduced and, owing to the solid nature of the structures, the cost of repairs will be reduced to a minimum. The designs were made by Mr. de Segrais, who has the rare reputation of keeping within his estimates.

Roofing Tiles.

The special articles which are now being extensively used in the Colonies afford a striking illustration of the effects of Mr. Lloyd George's Patents Act of 1907. The Eternit tiles were made by an Austrian firm, and a patent for them was taken out in this country by their exclusive licensees, a Belgian company, but the process of manufacture was carried out entirely abroad. In an action brought for the revocation of the patent it was held that the patentee could not show cause for his "inaction." The only reason for it seems to have been that cheaper labour could be obtained abroad. "From the evidence it appears that there is little, if any, difference in the prices at home and abroad of the materials used or in the facilities for obtaining them, and the only other reason which has been alleged why the process can be more profitably carried on in Belgium, Germany, and France, than in the United Kingdom, is that the wages of the work-people in those countries, who in the carrying out of the patented process now under consideration for the most part are unskilled labourers, are lower than in England. If this reason is an insuperable bar to the introduction of the industry to this country, it is very difficult to understand how many industries which are carried on successfully in the United Kingdom continue to be so carried on."

That the manufacture can be carried out here is shown by the enterprise of Bell's United Asbestos Co., Ltd.

Alcohol from Fibre Plants.

There are a number of plants which yield both fibres and juices, and these juices contain a large amount of sugar, which renders them very suitable for the distillation of alcohol.

The denaturing material mainly used is Methyl Alcohol; there are many other materials (about thirty) which are equally effective. It is customary to add to 100 parts, by volume, of alcohol (not less than 90 per cent. strength), ten parts of approved methyl (wood alcohol) and one-half of one part of approved benzine. This blend or mixture is classed by leading Governments as completely denatured alcohol.

Industrial alcohol is now being increasingly used with great efficiency and economy in many parts. The leaves and stems grow in country districts, the industrial alcohol is produced there, and is consequently very cheap. All kinds of engines, stationary, portable, for motors, for road and water transport, etc., can be

driven by it. It is used for many industrial purposes; also for agriculture, such as for ploughing, harvesting, mowing, pumping water, sawing timber, grinding grain, etc.

Industrial alcohol is also being increasingly used for heating purposes; it burns with a blue flame, intensely hot and without smoke. Its odour is not disagreeable, rather the contrary; and consequently it is well adapted for heating houses and premises of all kinds, for cooking, coffee roasting, etc. Many important improvements have, as a consequence, been recently made in the construction of heating apparatus, cooking and other stoves, by adapting them for burning alcohol in a thoroughly practical and economical manner.

To produce alcohol the leaves and stems are first passed through a special crushing and juice-extracting machine, which performs three operations. It slits the leaves into longitudinal strips, the smaller ones being slit up in the centre, while the larger ones are slit into four strips. In passing through its three pairs of large brass rollers the leaves and stems are not only crushed with great pressure, but the upper and lower skins are simultaneously scraped by a special arrangement, so as to facilitate the flow of juice and the subsequent extraction of the fibres. The juice, after being prepared, is then distilled. Special continuous-working steam stills are used for distilling the alcohol in one operation in a simple and economical manner with a minimum of fuel and water. These stills are simple in construction, easy to erect, and capable of being worked by an ordinary intelligent mechanic. They exhaust entirely all the spirit from the wash, and produce alcohol of the highest commercial strength. The cost of production is small.

Condensed Milk.

There is so large a demand for this article from many Colonies that an analysis published by the Cape Agricultural Department is interesting. Most of the brands are remarkable for a large proportion of sugar and a small proportion of milk. Thus one of the best milks of its kind contains 81.22 total solids, of which 70.22 represent non-fat and 11.00 fat; the rest is water. The remark is added that "It will be seen that such condensed milks, diluted according to the directions on the label, compare very unfavourably with the average milk sold about the Cape Town streets (adulterated milks included), and when we remember that three-fourths of the total solids in the condensed milk consist of cane sugar, we begin to

understand why infants should starve if continually fed on what is little better than a mixture of sugar and water."

A lactometer test of milk is of no value by itself. The most rapid test is that of separating the fat by means of a Gerbher or Liffman-Beam apparatus and taking the specific gravity by a Westphal balance. A full scientific analysis includes an examination for the presence of chemical preservatives such as boric acid.

Manufacture of Steel from Scrap Iron.

To commercially produce iron and steel on a large scale the essentials are:—

- (1) Cheap supplies of suitable raw materials, such as iron ore, coke, and limestone;
- (2) Good and cheap labour;
- (3) Markets which can readily absorb a large output.

The cost is usually prohibitive unless the production is on a large scale. But in many places scrap iron accumulates in considerable quantity, and might advantageously be converted into steel by an electric plant. The cost of such a plant would be comparatively small, and the finished products would largely consist of high priced materials offering a fair margin of profit. Railways and mines require considerable quantities of steel castings, drill steel, shoes and dies, small forgings, etc., all of which could be produced from scrap quite equal in quality to the articles at present imported. To economically work up the scrap it is essential that a process should be adopted which can be worked independent of any imported material, either pig iron or scrap; and an electric steel furnace is, under all the circumstances, by far the most suitable and the one which will give the best results in actual practice.

The electric furnace for the manufacture of steel from scrap has long passed out of the experimental stage, and the Heroult furnace has been commercially producing high-class steel from very miscellaneous scrap for the past eight years; various other electric furnaces are also giving excellent commercial results.

Gaseous fuel is not employed in the electric furnace, so there is no danger of sulphur being absorbed by the steel, and the process therefore especially lends itself to the manufacture of high-class steel.

With all gas-fired open hearth furnaces there is always more or less trouble caused by the steel absorbing sulphur from the

gases, and this would be especially troublesome when using comparatively inferior coals such as are generally available in the Colonies.

A Simple Test for Tin Ore.

The *Queensland Mining Journal* describes an excellent test for tin ore in "Mineral Resources for 1908," which method, on account of its simplicity, deserves to be widely known.

A piece of the suspected mineral is treated with zinc and dilute hydrochloric or sulphuric acid, preferably the former, when, if tin oxide, a coating of metallic tin soon appears on the fragment. Some of the hydrogen gas, given off by the action of the acid on the zinc, unites with the oxygen of the tin ore, to form water, leaving metallic tin on the surface of the specimen. The mineral and the zinc should be in close contact, consequently granulated zinc is recommended, though the present writer finds that zinc shavings also work well.

No heat being required, the test can be made in an ordinary china cup, and, after putting some zinc under and round the fragment, a little water may be added and then enough hydrochloric acid to cause a vigorous action. In a few minutes the liquid can be poured off and the mineral washed in water, when, if cassiterite or tin oxide, a grayish metallic coating will be seen, which, by rubbing on the hand or with a soft cloth, soon becomes bright. Care must be taken to have an excess of zinc present, or to pour off the liquid before all the zinc is dissolved, otherwise, the acid, if in excess after the zinc is all in solution, will in course of time dissolve the coating of tin. Supposed tin minerals are often tested on charcoal with a blowpipe, but the above method is simpler, and further, there is no necessity to reduce a specimen to powder, as, in some of the writer's experiments, good results were obtained with pieces of cassiterite three-quarters of an inch in diameter. Tin ore alone is infusible before the blowpipe, and is proof against all acids, hydrogen being the active agent in the test just described.

Corrosion of Metals.

Cases of corrosion are continually occurring which cannot be accounted for on the grounds of the wrong alloy, deleterious impurity, or unsound structure. The following observations by a well-known firm, which has given much attention to the subject,

throw light on the causes of these phenomena and the possible remedies:—

“All ordinary metals are corrodible, and tubes made of such metals will, under adverse conditions, fail rapidly. Our investigations have been convincing that rapid corrosion of condenser tubes is not due to faults either in composition or structure of the tubes, but entirely to the severe corrosive influences, chemical and electric, to which surface condensers are subjected. Acids, whether mineral or organic, alkalis, and other constituents of polluted water are corrodents; but we find chlorine, in its free or other active state, liberated from saline water by chemical and electrolytic action to be one of the principal causes of the trouble. The corrosive action attacks both the copper and the zinc of brass tubes. Sometimes the action on the brass appears to be mainly operative on the zinc, which form of corrosion is described as “dezincification,” and is of common occurrence in ships’ brass underwater fittings generally.

“In vessels frequenting docks, harbours, estuaries, and canals, where the water contains impurities, both in suspension and solution, the corrosion and pitting of the condenser tubes is severe; in some cases especially so. In ships which avoid these foul waters and sail mostly in the ocean the corrosion is comparatively slight, and takes place fairly evenly over the whole surface of the tubes, the life of which is thus greatly prolonged, as the destructive pitting is largely avoided. Ships leaving saline water and entering brackish water, and the reverse, have been known to set up a galvanic action in the condenser tubes, provoking corrosion. If the condensers were working in the best possible condition, and in pure water, the life of the tubes would be prolonged indefinitely.

“Means for minimising the corrosion of tubes are sometimes employed, such as suspending slabs of zinc or other suitable metal in the water spaces of the condenser. The corrodent attacks the metal slabs, and this diminishes the severity of its action on the tubes, ferrules, and other parts of the condenser.

“To give favourable results condenser tubes must be worked under good management, and be kept clean and free from deposits of mud, seaweed, and other matter found in neglected condensers. They must not be subject to stray currents of electricity, and no deposited particles of metal, metallic oxides, or carbonaceous matter entering with the cooling water should be allowed to remain on the surface of the tube. The galvanic action caused by these particles resting on the tubes decomposes the saline water surrounding the particles, liberates the active element chlorine, which speedily attacks the tube with the too familiar results. In practically all cases of pitting and per-

foration which we have examined it was found that the metal had mainly been converted into oxy- or basic chlorides of the metal composing the tube, thus giving conclusive evidence that chlorine is the most active corrosive agent.

“ When new tubes are fitted in a condenser, special vigilance should be observed as owing to their clean bright metallic surfaces they are then naturally in a most susceptible condition for the attack of any corrosive substance which comes into contact with them. During use, at an early stage in their life, some tubes become covered internally with a thin scale of lime or other salts deposited from ordinary sea water, and such an internal covering is said to protect the tubes against corrosion, even in the event of the condenser afterwards using impure river or harbour water. Therefore, if means are taken to ensure that the tubes receive and retain a slight deposit of lime salts they should give a longer life. This internal deposit or lining need only be slight, so that it does not appreciably affect the heat conductivity of the tubes, and such a protective deposit could be induced on the tubes by the occasional addition of lime or other suitable scale forming salts to the cooling water as it passes into the condenser.

“ In the condenser tubes are often found quantities of oxide of iron proceeding from the corrosion of the cast iron fittings. This oxide always contains graphitic carbon, and sometimes forms a complete lining to the tube. Minute particles of metallic scale or carbonaceous matter are sometimes found in the centre of the base of the oxy-chloride pustules formed on the condenser tubes by corrosion, and which have ultimately resulted in the formation of pit holes in the tube.

“ Particles of foreign matter naturally accumulate on the lower interior surface of the tube about the middle of its length, which, when the engines are at rest, and especially if the tubes sag at all, is often covered with stagnant saline or other foul water, thus accounting for the corrosion and pitting of the tubes being most severe on their lower interior surfaces. This may be minimized by fixing the condenser in an inclined position. In cases where this pitting was severe a remedy was found by passing the tubes through holes in a diaphragm plate which supported the middle portion of the tubes, thus preventing the tubes from sagging and the water stagnating in them, and also reducing injurious vibration of the tubes. It has been found beneficial to flush out the tubes frequently with clean water, and so remove any obnoxious matter remaining. Condensers should be fitted with discharge cocks, so as to give a ready means for draining the tubes.

“The chemical and galvanic action to which tubes are subject in a condenser is greatly accelerated by heat. In a condenser with a feeble circulation of cooling water, or one giving a defective vacuum, the corrosion is rapid owing to the increased temperature. The supply of cooling water should be abundant and forced rapidly through the tubes. This helps materially to keep the tubes cool and free from the lodgment of noxious deposited particles. Owing mainly to defective circulation of the cooling water and unequal distribution of the steam, the corrosion in the same set of tubes may differ greatly, some being hardly affected whilst others are destroyed by pitting. If all had received a full and rapid supply of cooling water, and the steam entering the condenser had been equally distributed amongst the tubes, then a good vacuum would have been obtained and rapid corrosion would have been greatly reduced.

“In some condensers means have been taken to separate air from the incoming circulation cooling water with beneficial results. No pockets or cavities should exist where air can collect in the water spaces of the condenser.

“If a condenser becomes connected to or influenced by any electrical current, as sometimes happens, the corrosion becomes rapid. We ourselves have experienced this active corrosion when tanks and tubes have been accidentally connected with some source of electricity. This acceleration of corrosion by electricity can be demonstrated experimentally by immersing wholly or partially a small piece of tube in salt water and passing a current of electricity through the tube and solution to the metal vessel containing the tube, when a rapid corrosion will be set up.

“It occurs sometimes, owing to imperfect packing of the stuffing boxes or glands of the tube plates, that the tubes are loose in their end bearings; this wears the ends of the tubes, which is accelerated if impure or rancid grease is used in the packing.

“We always find that in cases of rapid failure of the whole or part of a set of tubes in a condenser, other similar tubes, amounting to many thousands, give excellent results in other condensers; yet all these tubes, both those that failed and those that gave a long life, were manufactured concurrently from the same castings, made from the same alloys, and of precisely the same process of manufacture. Hence no guarantee, implied or expressed, can be given as to the durability of condenser tubes or as to their suitability for special conditions, even if such conditions are known to us.

“Brass tubes of 70 per cent. copper and 30 per cent. zinc, the alloy now usually supplied, yield, under good management and conditions, a long life, sometimes twenty years or more. The substitution of one per cent. of tin for one of the 30 parts of zinc,

as used by the British Navy, is thought by many to give better results. Tubes composed of various alloys of copper have been tried. Amongst these are copper-nickel tubes, the cost of which is, however, much greater than that of brass. Their durability under adverse conditions, and their galvanic action with the other metals of the condenser are yet unproved.

“To compare the life of sets of tubes of the same alloy as a means of ascertaining their quality is entirely misleading, on the other hand it is of value as showing the working conditions and arrangement of different condensers.

“An experienced authority writes that to secure good results in a condenser ‘eternal vigilance and a good supply of spare tubes are necessary.’”

Beacon Lights.

If a light of small intensity satisfies the requirements, a beacon with acetylene illuminant is suitable: it is self-contained and one holding a charge of 1,500 lbs. of carbide will maintain an occulting light of 140 candles intensity for about six months without recharging. Such a beacon is made by the International Marine Signal Company and has been recommended by Trinity House: price about £425. But the lamp should be cleaned every week.

Jetties.

The General Manager of the Gold Coast Government Railways, while on a visit to Togoland, was much struck with the jetty, which he describes as a striking example of engineering skill and daring. He refers to the light character of the structure, offering the least possible resistance to the wave-stroke, and the boldness of the conception in reaching through a heavy broken surf into deep water within a few cable lengths of the ships' anchorage. There is ordinarily a depth of 24 feet under the head of the jetty. The cost was $1\frac{1}{2}$ million marks, or £70,000, a very low figure for such an achievement.

Light Draught Steamers.

Turbine machinery is lighter than reciprocating engines, and the advantage increases in proportion to power developed; it also requires much less height. These considerations make it suitable on a light draught.

Water tube boilers also are advantageous in the same circumstances, as less weight is required in proportion to the horse power. It is true that they require careful and skilled management, but on comparatively short passages they should give satisfactory results. Furthermore, a great control of steam production is possible and economy of fuel is secured.

Decorticating Machine.

Messrs. John Downham & Co. have produced a machine which is practically two of the old beater type machines, combined with crushing rolls and feeding apparatus. This arrangement dispenses with handling the leaves after crushing, and this, besides saving labour, avoids the painful effects which the acrid juices have on the operators' skins and which make it necessary for them to work in relays. The firm claim to pass through the machine from 120,000 to 150,000 leaves per ten hours, and to extract as much as 97 per cent. to 98 per cent. of the available fibre; and from an examination which has been made, it appears likely that this claim is justifiable. The machine is of good solid construction and free from vibration. The price is £600, the same as of the "World's Decorticator," of the World's Fibres Machinery Corporation, Ltd. This is a much lighter machine and of much smaller capacity, but it is claimed for it that the fibre being produced by combing is in no way injured.

Canvas Tents.

The Willesden proofing process is a very favourite one, but it seems probable that it shortens the life of canvas. We have seen a report by an expert to the effect that it extracts the natural oil in the canvas, and that the proofing agent, which is applied only to the surface and is very friable, rapidly wears off and leaves the canvas unprotected. There is another process which, we understand, has been adopted by the War Office, but it is more expensive.

Waterways.

In addition to dredging, it is desirable to increase the depth of water by reducing excessive breadth, and a cheap but effective way of doing this is by lining the banks with low walls of wicker-work. These can easily be constructed by natives from bamboos. Banks of sand are then formed and if necessary the walls can be shifted further in.

Gas Engines and Fuel.

Mr. Kenneth Crossley, chairman of directors of Messrs. Crossley Bros., Ltd., in the course of a speech at the thirteenth annual general meeting of that concern, held in Manchester, remarked that, after many years of experiments, they had lately brought out various types of suction gas plants to work on all sorts of different fuels, such as common bituminous coal, tan refuse, sawdust, and peat, several of which were now at work and giving wonderfully economic results. By no means the least interesting of these special plants were two sent out last year to West Africa to the order of the British Cotton Growing Association for driving their ginning factories, using waste cotton seed refuse as fuel. The importance of these gas plant developments lay in the fact that till now all the smaller sizes of suction plants had to work on more or less expensive non-bituminous fuel, such as anthracite, coke, or charcoal, whereas now almost any kind of fuel can be used.

Oil Wells: Danger of Fire.

The danger is considerable, and the best way of reducing the damage is to have undrilled zones separating the blocks. There is not much risk from lightning, as there is usually a heavy rain. But the gas creeps a good distance and naked lights should not be used anywhere near wells. The oil itself is not readily inflammable.

Map of the Central and Eastern Provinces of Southern Nigeria.

This map was erroneously attributed in our last number to Capt. Woodroffe. The original map was the work of that officer, but the new map was prepared by Capt. W. H. Beverley, Staff Officer for Intelligence, S.N. Capt. Beverley's work, we observe, has been highly praised in the *Geographical Journal*.

British Standards Committee.

Specifications have now been issued for

Portland Cement (revised Aug., 1910) (No. 12).

Wrought iron for use in railway rolling stock (No. 51).

Flags.

It is a curious thing that Union Jacks and Royal Standards are constantly being ordered by Colonial Governments in wrong proportions. There is only one right proportion, and that is 2 by 1—the length double the breadth. There is no reason why the practice should not be uniform throughout the Empire.

Calico Prints.

In good time a sober, artistic spirit may be developed in East and Central Africa and similar parts, but that day is not yet. In the meantime the most popular designs are made up of railway-engines, motor-cars, aeroplanes, balloons, bursting shells, whisky bottles, and other attractive subjects drawn in heavy lines and startling colours. The natives like this style and the more exuberance the better.

Cotton-growing.

Enquiries about the best publications on the subject are sometimes received, and the following can be selected :—

“*The Cotton Plant*” (Bulletin No. 33 of the U.S.A. Department of Agriculture; Officer of Experiment Stations).

“*The A.B.C. of Cotton Planting*” (Pamphlet No. 45, issued by the Commissioner of Agriculture for the West Indies).

“*Cotton Cultivation in the British Empire and Egypt*” and “*British Cotton Cultivation*,” by Professor W. Dunstan; Cd. 2,020 (1904) and 3,997 (1908).

RAILWAY NOTES.

Central South African Railways.

The report for 1909 brings out (a) the remarkable revival in trade and increased traffics during the second half of the year; (b) resulting benefits to coast Colonies; (c) increase in oversea traffic; (d) the continuously large proportion of the oversea traffic to the Transvaal competitive area via the Eastern route (Delagon Bay), notwithstanding reductions made in rates from other ports; (e) the continued growth of oversea export traffic in grain and coal. The revenue was £5,064,421, the ordinary (*i.e.*, exclusive of renewals) expenditure £1,778,818, leaving a surplus of £2,831,754 after a contribution of £453,849 to the renewals fund. This means a profit of 11 per cent. on the capital, and probably in good time there will be reductions in the charges, which will greatly help to bring about cheaper living in the Transvaal and Orange Free State. But the C.S.A.R. are now combined with the Cape and Natal Railways, and it need hardly be said that the difficulties of these lines tend to retard progress in this direction. The proportion of expenditure has fallen to 35 per cent., a strikingly low figure which can only have been reached by much care and study in amalgamating and organising the departments.

The report states that the average cost of construction, excluding rolling stock, per mile since the war is £4,875. In the case of only 66 miles of line has the cost exceeded £8,000 per mile, but the low average is mainly due to the inclusion of lines built inexpensively for development purposes, to ruling gradients of 1 in 40 with light rails of 45 lbs. to the yard, temporary structures for offices and inexpensive quarters for the staff. The Krugersdorp-Zeerust and Pretoria-Rustenberg lines are typical

of this class, and cost only £2,480 and £2,494 per mile respectively. There can be no question that the policy of constructing lines required for developing purposes to a light standard has been justified by results, and has enabled the construction of more railways than could possibly have been undertaken if the superior standards of the earlier days had been maintained.

The principal agricultural export is maize, and it is to be hoped, in the interests of South Africa and other British possessions which are developing production of this crop, that a market for its sale on a big scale will be established at Southampton.

The employment of white labour on the railways is an important matter on which some interesting remarks are made. There was difficulty in encouraging the increase of white labour, but it was not insurmountable, and there is now every possibility of improving the position of the unskilled labourers at present existing. It may be practical for the Government to force the Central South African Railways Administration and other Government Departments to recruit labour from white sources, existing at present in the country, for to-day thousands of white people are doing work on which a few years ago they would have turned their backs. This evidence of willingness may be looked upon as encouraging and may induce the Government to say that white labour is desirable. But the present conditions are bound sooner or later to lead to unpleasantness. White men have to support a family on wages earned in competition with the natives. As the manner and habit of living of these two races entirely differ, it is urged that the Government should provide suitable dwellings and raise the wages from 3s. 4d. per day (£5 per month) to 4s. per day (£6 per month) of any labourer who for twelve months in succession has completed his duties to the best of his abilities, and if so continued during a further twelve months to a maximum wage of 5s. per day (£7 10s. per month).

The experiments which are being made with various types of motor cars may be watched with advantage by other railways which have occasion for such means of locomotion. The following particulars are given :—

De Dion Bouton Automotrice.—The 70 horse-power motor car of the type in use on the Arad Csandi Railways of Hungary, fitted with De Dion Bouton electrogene plant, has arrived, and will be in running order during March, 1910. It has accommodation for thirty-six passengers and a small quantity of luggage, and is capable of hauling a trailer. The current is generated by a dynamo coupled direct to a 6-cylinder petrol engine.

Stover Rock Island Pattern Car.—This vehicle, now on order, will have accommodation for twenty-five passengers, and will be

driven direct by a 6-cylinder petrol engine, developing about 60 horse-power.

Leyland Motor Car.—This car will have accommodation for forty-two passengers, and can be controlled and driven from either end, thus permitting its use on a section where there is no turn-table or triangle. The transmission system is on entirely new lines. The power is furnished by a petrol engine, six cylinders developing 100 b.h.p., and by an ingenious electrical adaptation a variable speed gear is obtained, which adapts itself automatically to suit the speed of the car in relation to the speed of the engine until the speed of the engine and the track wheels approximate one another, when the drive becomes direct and the electrical portion inoperative until automatically brought into use again. The electrical apparatus is used for starting the motor and also assists the motor when starting the car. This variable drive, without loss of power, appears to be particularly well adapted to railway work.

Uganda, 1909-10.

The total capital expenditure now amounts to £5,414,345. The revenue for the last year was £246,146, an increase of 5·80 per cent. on the previous year, and the net profit was £65,867. This and the preceding results show that the line is progressing very slowly, and the tonnage carried is very small having regard to the area served. The new development of the Union Castle Company should, however, stimulate the export trade, and when sleeping sickness round the lakes is eradicated, as it is hoped will be the case, a substantial improvement may be looked for. The Jinja-Kakindu line will no doubt bring down a good deal of traffic.

Maize is being largely grown and the potentialities are immense.

A large number of distinguished visitors have recently travelled over the line, and vigorous efforts are being made to advertise it. A specimen of our new style of booming official undertakings may be of interest. It is the beginning of the official guide.

“UGANDA RAILWAY.—Never was there such a railway since the world began. In the nature of things it is impossible that there can ever be its like again, for the Uganda Railway is in many respects unsurpassed—wonderful in all. The number of those who have travelled by it is not large—no larger, perhaps, than the number carried by a busy suburban line in a day. But those who have done so never forget. It starts on a windswept island in the blue Indian Ocean, and it ends by the wooded shore

of the largest lake in Africa. In between, it passes through jungle, swamp, and desert; zig-zags across plains where elephants play by day and lions roar by night; corkscrews up the sides of outlandish snow-capped mountains; circles round the base of volcanic, cone-shaped hills; meanders by the "shambas" and cultivated patches of rude inland tribes; strides long-legged athwart treacherous swamps, and ploughs through the darkness of primeval forests, until it emerges, calm but triumphant, from under the flat-topped mimosas by the shelving shore of the shimmering inland sea.

"Anyway, there is it. But it was not built as it is. Originally a large proportion of the line was laid temporarily. That was while profane engineers waited, without patience, for slow-moving manufacturers of steel girders and stays and things. Tired of waiting, they built, whenever practicable, a way round. To-day, traces of the first road abound by the side of the existing track. 'We have not yet built one line to the lake,' the Germans say jestingly, 'but the British have built two.' But the man who paid the piper, not knowing, does not mourn. The Foreign Office did it, and the self-respecting British taxpayer has long since ceased to follow the doings of that Department of State. But Africa has ever favoured the enterprise of the F.O. In spite of itself, the latter was saved from a foolish extravagance by the fertility of resource possessed by this Land of Surprises."

After this the F.O. may breathe again. The sample, "anyway," shows that a Government production need not lack animation or the spirit of optimism. The attractions of the territory are set out with vigour. We observe that a somewhat new (in recent ages) form of sport is recommended:—"Spearing lions in East Africa has for years been a favourite sport of the Masai tribe of natives, and has served a purpose in the development of warriors of the first class. Only in the past year or two has the white man taken to this sensational sport, and, as an American tourist remarked, 'Bull fighting and aeroplaning are nothing compared to it as a "blood ruffler."' The fact that you are unarmed, barring your spear, and depending in a great degree on the nimble feet of a Somali pony is what serves to make ones blood tingle. The excitement of this thrilling sport is destined to attract all travellers in search of a new sensation.'" Perhaps, after all, the average tourist had better stick to a gun.

Lagos Railway.

The Northern Extension of the Lagos Government Railway commences at a point 293 miles from Lagos, and terminates upon

the East bank of the Kaduna River, near Zungeru, at mile 429 $\frac{3}{4}$, its total length thus being 136 $\frac{3}{4}$ miles.

From Zungeru the line has been extended by the executive staff of the Northern Nigerian Government to Minna, in the Gwarri country, where a juncture with the main line of the Baro-Kano Railway is effected. This latter portion, from Zungeru to Minna, has been termed the Link Line.

About the middle of February, 1909, rail laying from the South reached mile 293, the zero point of the Northern Extension, but owing to the extremely heavy nature of the work, involving formidable rock cuttings, plate-laying up to Jebba, 13 miles further on, was not completed until the following April. The line to Jebba, situated upon the South bank of the River Niger, was opened for public traffic in August, 1909, through communication with the coast at Lagos thus being established for a distance of 306 miles.

In the meantime, earthworks were being pushed on, on the North bank of the Niger, as fast as the limited number of men available would permit, and the banks and cuttings, involving comparatively heavy work, were completed to mile 40 by the end of the year. A considerable amount of earthwork was also completed at the Zungeru end.

The question of the most suitable point for the construction of a railway bridge to cross the River Niger is one which has occupied the attention of the Government and their Consulting Engineers for a considerable number of years.

As far back as 1900, at a time when the Lagos Railway had reached Ibadan, only 123 $\frac{1}{2}$ miles from Lagos, it was recognised that the route of a future possible extension might, and probably would, within reasonable limits of divergence from the general direction, depend largely upon the selection of the site for a bridge, which would present the least difficulties of construction from an engineering point of view, and at the same time involve a minimum capital expenditure in carrying out the work.

With this object in view an expedition was sent out from England about that year under the charge of the late Mr. W. Gee, M.I.C.E., in order to examine the river from Lokoja upwards, and to report upon the possibilities of obtaining a site which would fulfil the necessary conditions. Mr. Gee, after exhaustive investigations, arrived at the conclusion that in Jebba he had found the desired spot, owing to the fact that not only was the river constructed between rocky banks which would afford good foundations, but also that between them an island, some 2,000 feet in width, existed, which would shorten the actual waterway to be spanned by that distance.

The Jebba crossing having been, for these reasons, decided upon as the best possible one to be obtained, it became necessary to establish the possibility or otherwise of connecting Jebba with Ibadan, the intervening 185 miles being, at that time, *terra incognita*, as far as the feasibility of the construction of a line of railway was concerned. A rough reconnaissance survey was therefore carried out with the result that a line with heavy grades and sharp curves was obtained which, however, subsequent investigation has proved to be capable of considerable improvement.

Matters remained *in statu quo* for some years until, in 1906, a reconnaissance survey was sanctioned by Government from Jebba onwards to Zungeru and, the feasibility of this line being also established, sanction was in due course given for the whole scheme of extension, including the construction of the Niger Bridge—that portion over the North Channel having been authorized in 1908, and that over the South Channel in 1909.

Designs for the former having been completed, material for its construction began to arrive in 1908, but, owing to the fact that the whole of this had to be brought a distance of 400 miles up the Niger by S.W. steamers, during the high water months of September, October and November, the delivery was necessarily slow. Moreover, owing to the swiftness with which the river flows through the gorge at the point of crossing, it was necessary to wait until April, 1909, until diving operations could be commenced, and even then work had to be done in a depth of 25 feet of water.

The North Channel Bridge consists of two spans of 100 feet, two spans of 150 feet and three approach arches of 30 feet span each, making a total opening of 590 feet. During 1909 the abutments and piers, with the exception of the middle pier, were got in and completed, the steelwork of the 100 feet spans was erected in position, and the steelwork of the 150 feet spans erected upon the 100 feet spans, ready for launching. The bridge, therefore, was practically completed with the exception of the central pier.

In order to work traffic across the river whilst the South Channel Bridge is being built, a steam ferry has been provided, with a carrying capacity for six loaded wagons. This vessel, named the "Fabius," arrived at Jebba in 1909, having come out from England under her own steam. The necessary slipway approaches are well in hand, and should be ready for work by the time of the North Channel Bridge is completed.

The line across the island between the two bridges involves very heavy rock cuttings, the bulk of which has been completed, and when it is considered that the South Channel Bridge will be

1,300 feet long, and that half its piers will be sunk to a depth, through sand, of 60 feet below the level of the bed of the river, it will be realised that the crossing of the River Niger, albeit 400 miles from its mouth, is a gigantic engineering undertaking, fraught from its inception with the greatest difficulties, not least among which is the deadly climate of Jebba, which has already taken its toll in deaths and invalidings of a large percentage of the European staff engaged upon carrying out the work.

It has been lately most difficult to get labour for the Niger Bridge Division, owing to the rock work and long leads. The Yoruba gangs prefer the work on soft earth and go on ahead to find it, and many dismissals have been necessary. During July the foundations of No. 2 pier were successfully got in, a result which has meant much very hard work.

A considerable amount of work was done in other directions. The deviation works, which meant the reconstruction of the first 130 miles of the railway to bring it up to the standard of the extension, were actively pushed on. The Iddo wharf was extended, and a beginning was made with the Apapa branch railway. Investigations and borings were carried out with the view of carrying the terminus of the railway into Lagos, connecting up with deep-water wharves proposed to be built near Wilmot Point: this extension involves a new bridge across the lagoon between Iddo Island and Lagos, running the railway along the Marina, bridging Five Cowrie Creek, and on to the site of the new wharves. The new foundry was found very serviceable.

The gross revenue for 1909 was £203,558 and the working expenses £131,820: the net revenue therefore was £71,738 or an increase of profit over the previous year of no less than 67 per cent.—a highly satisfactory result when it is remembered that the revenue of the Western Province showed a falling off.

The permanent value of the line seems therefore to be demonstrated. The natives use it in largely increasing numbers, but it is hopeless to expect that the 1st and 2nd class traffic will ever pay commercially, and it may be advisable to abolish the 2nd class, as has been done extensively in this country.

Baro-Kano.

By the end of May the survey was completed, the track had reached mile 212, and shortly afterwards the earthwork was finished to Kano. The work was then stopped during the period of heavy rain, except the bridging in the Kugo Valley, which had to be pushed on in view of next year's track-laying. The total length from Baro to Kano will be 370 miles, including

14½ miles of sidings. The work has been carried on under the greatest difficulties in obtaining food and labour, and heavy expenditure was incurred in filling openings at culverts so as not to stop track-laying and building deviations where it had been intended to carry culverts ahead, and the original estimate will probably be exceeded by at least 5 per cent.

The Baro-Minna section is in very fair running order, but is chiefly ballasted with sand. On the link to Zungeru 18 miles were completed in March, or nearly half the distance.

Lagos Harbour.

It is anticipated that the full completion of the mole works, in association with the dredging operations, will result in the formation of a depth in the entrance to the harbour of not less than 27 feet at high water over a width of channel which will be sufficient for the requirements of the traffic, and that subsequently this depth will be maintained with but little aid from dredging. There is a probability that, before the full completion of the mole works, the progressive effects of the works and the dredging will, in the comparatively near future, create such a depth of water over the bar as will render possible the entrance of the mail steamers. It is proposed to purchase a tug, and the requirements of the future will no doubt be taken into account in fixing its size. By the end of this year the Customs Wharf will have been extended to a length of 648 feet. No doubt, if financial considerations allow, the mole works will be pushed on continuously.

Gold Coast.

The year 1909 was a favourable one. There was a marked activity in the mining industry, with the result that the small agriculturists did well and the spending power of the natives was increased. The revenue was the largest hitherto earned. Rather curiously the output of gold fell, but this is attributed to development work and the erection of new machinery. The net revenue is equal to 6·03 per cent. on the capital account, but it can hardly be expected that this can be kept up as there will be demands for increased facilities, improvements and renewals. Mr. W. E. Smith and the staff are to be congratulated on the success which has attended their work.

The Tarquah-Prestea Railway was extended by July to near the site of Broomassie Station, but the length between the Ankobra Bridge and Prestea awaited the completion of the bridge which was being erected. Rock ballast from the mines is

making ballast of the first class, a great desideratum in West Africa.

The branch platform at Tarquah has been commenced.

The Secretary of State has sanctioned a survey with a view to the construction of a branch line to the Bibiani Gold Fields.

Accra Harbour works—considerable progress has been made with the breakwater extension, a length of 25 feet at low water having been completed by August. On the jetty a length of 110 feet was completed.

Secondee Harbour works—the railway quay extension, the West reclamation wall, and the root wall parapet have been steadily extended, and considerable progress made with the reclamation.

Heavy rains have interfered with the Accra waterworks, but the railway will be pressed on and the transport of materials facilitated.

It has been decided to instal a sand pumping plant with a view to the removal of the sand in the sheltered area in the harbour at Accra. The local difficulties are great, and the extreme fineness of the sand prohibits the use of a small pump hopper dredger, even if there were a sufficient area of shelter available for such a craft. The plant, which is to be made by Messrs. Fleming & Ferguson, Ltd., will consist of two separate pumping engines working in series, the smallest set being portable and carried on trolleys running on rails along the jetty.

In all these public works improvements Sir John Rodger had throughout shown keen interest and unflagging industry, and the progress effected was largely due to him.

Accra-Akwapim.

The abnormal rains of June (over 18 inches) did considerable damage. On the first section the water rose on both sides of the line to within a few inches of rail level—a vast sheet from a quarter to half a mile wide moving slowly down to the lagoon, while at five miles a vast quantity of water, rising above rail level, flowed over the line and washed out earthwork and ballast. At some places a flood of water breached the bank. The damage is materially delaying the completion of the line, and the contractor will have to be allowed an extension of time.

Trinidad.

The proposed works consist of

- (1) The extension of the railway from Tabaquite to Rio Claro, about 15 miles;

- (2) The extension of the railway from San Fernando to Siparia, 16 miles;
- (3) Additional rolling stock for these extensions;
- (4) A connecting link at Princetown, called the Guaracara-Cipero Junction Line;
- (5) The rebuilding and enlargement of Port of Spain Station.

The total cost, including the expenses of raising the loan, has been put at £371,979, but the surveys which have been made are only preliminary, and further examination of the ground is necessary before detailed estimates can be prepared. Arrangements are contemplated for sending out an additional staff for the survey and construction. The work would probably occupy about two years from the date of the acquisition of the land.

Cyprus.

The returns for 1909-10 confirm the view previously expressed in these pages that the railway is in the wrong place. The proper line of trade is not with Syria, but with Egypt, and for one steamer that calls at Famagusta there are fifty at Larnaca. The receipts show a falling off of 15·3 per cent. on those of the previous year.

The A.B.C. Coupler.

Enquiries have been made as to this coupler, which is being used on some Indian railways. It has considerable advantages, the coupling being automatic and reducing the distance between vehicles, but it is rather complicated and requires careful men in charge of the shunting. The draw and buffing springs are of steel and the release and engagement of the locking bar is controlled by two more steel springs of a smaller size; this part of the apparatus would have to be kept scrupulously clean from dust and dirt.

The cost of converting a broad gauge wagon into one with A.B.C. couplers is about £20.

Hard Water in Boilers.

Report No. 9 on the question of Improvements in Locomotive Boilers, presented to the International Railway Congress, indicates the methods adopted by the railways which have only hard water available in order to prevent damage to their boilers. They have tried the frequent washing out of boilers, and the purification of the water. The chemical processes of purification have

proved that it is necessary to avoid the presence of an excess of soda in the purified water; and consequently many of the railways only effect a partial purification of the water by means of soda. At three of the stations on the Central Asia line, the very hard water is purified by distillation. Purification of the water by means of zinc, barium salts, Campeachy wood, petroleum residues, etc., has only been tried in a few exceptional cases. Boilers are washed out, either with hot or with cold water, after running 330 to 530 miles on some lines where only hard water is available. Blowing off the boilers under pressure is not a general practice. Hard water has a great influence on the corrosion of the boilers and on the regularity of the train service. The residues left on evaporating hard water which are in the form of scale, attack the iron walls of the boilers immediately, probably by a chemical action; and on the other hand the walls made of copper, which are subjected to the immediate action of the fuel, have a greater tendency to burn away in consequence of the reduced conductivity produced by the adherent scale. These two cases result in damage of different kinds, namely, in the case of iron walls—corrosion, cracks and grooving, rarely fissures; in the case of copper, on the other hand, in fissures, cracks and in burning away, according to the thickness. The places where damage occurs are those which are subjected to repeated bending from the periodical heating and cooling of points where scale can collect without difficulty; for instance, the lower part of the barrel, that of the fire-box and the crown of the latter. As protection against such damage, the following methods are mentioned: stiffening the walls of the boiler so as to reduce the amplitude of the flexure when heating up; the use of mud pockets for the residues obtained by the evaporation; as well as a design of boiler which makes it easier to scrape and wash out the scale, and prevents the deposit of the latter.

When lime and caustic soda are used to soften water the proportions used vary according to the quality of the water. A tank should be filled with water and lime added and the contents well stirred; the resulting lime water is then run into the softening tank. Another small tank is filled with water and caustic soda, and this solution is also run into the softening tank, which should be well stirred and allowed to settle for about 20 hours.

MEDICAL NOTES.

In discussing the functions of the Press at the official luncheon given by the Government to the Institute of Journalists on September 10th, Colonel Seely emphasized the importance of research in the sphere of tropical medicine and commended it to the press of all countries as a cause pre-eminently deserving their support and encouragement. There is no sphere of scientific work in which the benefit accruing to mankind from research is more immediately obvious, and the advance which has been made in the past ten or fifteen years is as great a triumph of man over the forces of nature as any which has been recorded in our time, not excepting the more sensational, but probably less beneficial, "conquest of the air."

Even putting aside humanitarian considerations, the economic importance of medical research to a tropical or sub-tropical country cannot be over-estimated. It is well illustrated by the following extract from the report of the Egyptian Department of Public Health for 1909 :—

"There are now probably few countries in the world that offer so attractive and untouched a field of scientific investigation as does Egypt. In many parts of the country the population is not sufficient to work to the best advantage the resources of the soil, and yet the most valuable economic asset of labour is decimated by infectious diseases the prevention of which has yet to be a matter of study; the initial causative factors of trachoma (the origin of the greater part of the eye disease of the country) are still unidentified; the investigation of pellagra, which causes 20 per cent. of the lunacy and much more of the physical disability of the country, is only being begun; the penetration of the mysteries connected with the methods of infection of a large proportion of the people with anchylostomiasis and bilharziosis, and parts of the life-histories of the parasites concerned, has still to be completed; the methods of communication of typhus and relapsing fever have by no means yielded up their

secret; the distribution of malaria has not yet been defined, and the factors which are still wanting to determine its actual presence under apparent conditions of potential existence are as yet undiscovered; the diseases of cattle and domestic animals, of camels and horses, afford a gigantic field for investigation which would readily repay the Government for such financial sacrifice as is necessary to place a work of this kind on a sound footing; finally, the rôle of insects and the lower scale of animal life in the propagation of disease among men, animals and crops is still another field that offers promising results. (In connection with this point it is satisfactory to be able to state that relations have been established with the Entomological Committee of the Colonial Office—presided over by Lord Cromer—and it is hoped that mutual advantage may accrue.)

It is clear, therefore, that there is no lack of useful experimental and investigational work to be done, but the work awaits a suitable series of laboratories and an adequate staff to undertake it. For this purpose money must be spent, and spent freely; but it is certain that it will, in the future, be returned to the Government many times over, for as nothing is more wasteful than the false economy of unscientific methods, so no expenditure is more surely and safely remunerative than that which follows where honest enquiry and the quest of exact knowledge direct."

Tuberculosis.

This disease is directly responsible for one-seventh of the mortality of the civilised world and indirectly for an incalculable amount of waste. The old idea was that it was chiefly a disease of cold climates, but there has been in recent years a great increase of it in hot countries, and it is now clear that the greater prevalence of it in the former was due, not to the cold, but to greater overcrowding. At present, on the whole, it is being greatly reduced in European countries, but greatly on the increase in other places where the population is going up at a rate in advance of sanitary precautions. Thus in Colombo the deaths from phthisis have gone up from 25·66 in 1899 to 44·05 in 1909 per 10,000 inhabitants, and acute cases commonly called "galloping consumption" are more common there than in England; in fact the disease is more rapid and hopeless than it is here. With both man and beast the problem is one of fresh air. Jersey cattle in their native island, staked out at pastures all the year round, are exempt, whereas the housed Jerseys of England and America suffer severely. The root of the evil can only be attacked by improving the social conditions and educating the public. As regards treatment of cases, a Ceylon Commission advocates compul-

sory notification, the establishment of sanatoria, and the following prophylactic measures :—

(a) The prohibition of expectoration in public places, such as offices, and public conveyances, &c.

(b) The inspection of schools and children in schools.

(c) The inspection of factories.

(d) Roads and streets should not be swept without being first watered, as otherwise disease may be disseminated by the dust from the roads being carried into the air in large quantities.

(e) The prohibition of persons obviously suffering from phthisis from working in factories and offices without proper precautions being taken to prevent the spread of the disease.

(f) The discontinuance of the use of coir rugs as spittoons.

(g) The provision of special places in parks where poor people suffering from the disease can receive open air treatment during the day.

Sleeping Sickness Bureau. BULLETINS NOS. 19 AND 20, VOL. 2.
(*Royal Society*).

Experiments made prove that cattle and antelope living in the fly-area may act as a reservoir, and so keep up the infectivity for an indefinite period. These observations, however, do not go far, and many smaller animals, including birds, will have to be tried before it can be concluded that they do not harbour the pest.

The bulletin records the news of the sickness in various parts of Africa. There is no better prospect of a medicinal cure.

Volume IV., No. 1, of *Annals of Tropical Medicine and Parasitology* issued by the Liverpool School of Tropical Medicine is mainly taken up by reports on the Amazon Yellow Fever Expedition (1905-9) by Dr. H. Wolferstan Thomas. The opening words of the introduction bear witness to the perilous nature of the work so readily undertaken by our medical investigators. "The Liverpool School of Tropical Medicine despatched the fifteenth expedition comprising Dr. Anton Breiul and the writer to Manaos in April, 1905, in order to investigate yellow fever and the diseases of the Amazon State. This expedition was the second sent to the Amazon region, the first one, in 1900, having been stationed in Pará. Shortly after its arrival in Manaos, both members were attacked by yellow fever and subsequent complications in the case of Dr. Breiul unfortunately necessitated his return to Europe, and thus his valuable services were lost to the expedition." Dr. Thomas, who had to perform his work single-handed returned to England in February, 1909. A new expedition has now been organized. A photograph of the tablet erected to commemorate Dr. Walter Myers, who died in 1901 of yellow fever contracted on

the Liverpool School's previous expedition is published, together with a portrait of Dr. Myers at work with the microscope, as a frontispiece.

A number of experiments were carried out for the purpose of obtaining a cheap and efficient preparation for destroying mosquito larvæ. Crude petroleum oil was frequently too viscid to have a spreading power of the highest efficiency. When mixed with crude carbolic acid, however, its spreading powers were increased.

Much of the crude carbolic acid supplied had been found upon analysis to consist chiefly of inert neutral oils with a small proportion, 5 per cent. to 10 per cent., of tar acids, and as this crude acid was used extensively as a disinfectant, experiments were conducted for the purpose of utilising if possible this crude carbolic acid as a disinfectant and larvacide. It was found that crude carbolic acid, having a specific gravity not greater than 0.96 or 0.97 and containing about 20 per cent. of phenols or tar acids, when made into a soap with common resin and an alkali yielded a product which was an ideal larvacide, having excellent diffusing and toxic powers, and at the same time it was a very efficient germicide. It diffused perfectly with water, forming a milky emulsion very destructive to mosquito larvæ, and having a germicidal value of, or greater than, that of pure carbolic acid, or a Rideal-Walker co-efficient of one to two. In this way a very valuable larvacide and disinfectant, miscible with water, was produced from a very inferior disinfectant.

Experiments were made to determine the proper mesh of wire screening, a matter on which there has been much official correspondence. A No. 16 mesh (16 holes to the inch) was found sufficient to keep out Anophelines though not the smaller species.

The destruction of noxious insects by culture has been extended to locusts. There is a fungus which grows on their living tissues and which can be artificially cultivated and used for destructive purposes. There is a well-known and closely related example which is parasitic on the common house fly and known as *Empusa muscæ*. Everyone is familiar with the dead fly stuck to the window panes and a white halo round its body—the shroud which has also been the cause of its death. The tubes or hyphæ of the fungus are inside the body of the locust, and when they have used up all the nutrient material in the tissues, they project at the surface and produce pear-shaped conidia. When the conidia are ripe they are shot out as if from a pop-gun, and if they strike the body of another locust they may infect it, and in this way the disease is spread. These conidia are produced in countless myriads and scattered, so that the fungus is not only widely distributed, but also rapidly reproduced.

Rat Virus.

One of the Medical Officers of St. Lucia reports that the result of experiments into rat viruses is that those sold commercially are of little value, far less value in fact than the inorganic poison such as phosphorus and strychnine. Yet, if a virus, such as Danyasz's is raised in virulence by repeated passages through the peritoneal cavity of rats and grown on rat serum agar it appears to be of considerable value. In experimenting with these poisons he always supplied the rats with other food besides that which was poisoned, so as to see whether they avoided the poison or not. The advantage of viruses is that they are practically non-pathogenic to fowls, cats, dogs, mongoose, etc.

In Jamaica it was found that a bread bait saturated with milk cultures of virus grown at the Laboratory possessed marked virulence.

Mosquitoes and Malaria.

The same report gives the following results of an extended search :—

(1.) That their breeding places contain surface food, suspended by grasses and other plants growing in the water, or lowly organised plant life such as algæ growing on the surface, or floating and decomposing rubbish.

(2.) That in more than ninety-five per cent. of cases their breeding ground is non-permanent. That the pools tend to last during and for a short time after the rains, and they are usually shallow.

(3.) They are rarely or never pools in an open piece of land unprotected by rocks, bush, or other vegetation, and that tend to be continually wind swept.

(4.) They are never pools in which canes or tall reeds and bamboos grow, which exclude the light.

(5.) The larvæ are not found in pools which possess a continuous current of water, or if they occur in connection with these pools it is in those parts that are protected by vegetation from the current.

(6.) The Anopheline larvæ are not found in close association with their natural enemies, nor in any situation that is easily reached by their natural enemies.

The use of the "Millions" fish for the extirpation of larvæ is strongly recommended, and as difficulties have been experienced in exporting these the following observations may be useful to other medical authorities.

(1.) I obtained about twenty fish from the swamps of Gros-Islet and placed them in two old spirit barrels, which had previously been soaked in tanks for two months. In these barrels I have now bred many thousands, which have been variously distributed.

(2.) At first the fish would not live in iron tanks, but by mixing a little water from rusty tanks with a large quantity of rain water and gradually increasing the percentage of the rusty tank water, I obtained fish which would live and multiply in iron tanks.

(3.) In the same way I succeeded in immunizing fish to darkness.

(4.) By gradually adding water from brackish swamps they are immunized to brackish water.

(5.) I have had great difficulty in getting fish to live in and show signs of multiplying in water at and above 100° Fah., but I have now succeeded, and the difficulty I believe was entirely due to the dark incubator with which I was obliged to work, layers of fungi quickly appearing on the surface of the water, and their food material quickly decomposing. Continually changing the water and adding fresh food and allowing the sunlight to play upon the water each day, has enabled me to get fish to flourish at these higher temperatures. I have had difficulties with the lower temperatures, but the experiments conclusively show that these fish can be gradually immunized to temperatures ranging from 101·5° Fah. and 55° Fah. and there appears to me no reason why higher and lower temperatures should not be employed, if a considerable period of time is used to obtain the immunity.

(6.) I once placed six fish in a kerosene tin containing numerous mosquito larvæ, the next day all the larvæ had disappeared. I did not change the water, at the end of three weeks there were twenty-three individuals. Shortly after this some of them began to die. They had thus lived and multiplied in two to three gallons of stagnant unchanged water.

(7.) It is almost impossible to state their exact power of destroying larvæ and pupæ in figures, as both larvæ and fish vary so greatly in size, but this power is enormous, for I find two or three fish will soon clear a 10,000 gallon tank and keep it free of larvæ.

Northern Nigeria.

The European death rate in 1909 was 23·89 per 1,000, or, excluding deaths from accidents, 16·5. This seems satisfactory, but it must be remembered in comparing with ordinary statistics that the Europeans are mostly picked men. The invaliding rate was 118·7 for officials and 141·5 for non-officials, a difference which shows that the more

liberal arrangements made for the former have a good effect. Seven cases of sleeping sickness were met with, and there is no doubt that the disease has existed for many years in the country. Clearing the undergrowth and thinning the larger trees was found to give gratifying results in diminishing the number of tsetse flies, and this policy might be followed in other places in the neighbourhood of water.

Arrangements have been made by the Colonial Office for short courses on entomology to be given at the two Schools of Tropical Medicine, at Oxford, Cambridge, Edinburgh, and Dublin, for the benefit of officers in the African Colonies and Protectorates when home on leave. Advantage has already been taken of this in a number of cases, for during the present summer the following numbers have taken, or are taking, courses in entomology :—Officers from the Gold Coast, 7 ; from Sierra Leone, 2 ; from Northern Nigeria, 1 ; from Southern Nigeria, 8 ; from the East Africa Protectorate, 3 ; from Uganda, 1 ; from Nyasaland, 2 ; making a total of 24. Twenty-two other officers have intimated their desire to take the course in the near future.

COLONIAL STAMPS.

BAHAMAS.—The 1d. Queen's Staircase stamp will shortly be supplied for the first time on multiple watermarked paper.

BARBADOS.—2d. and 1s. stamps in the new colours (the latter a new value) have been supplied.

EAST AFRICA PROTECTORATE.—The 6 cents. stamps have been printed from a single plate, but there is no perceptible alteration in their appearance.

FEDERATED MALAY STATES.—The new Trengganu stamps have been supplied and the colours of the series of values mentioned in our July number correspond with the $\frac{1}{2}$ d., 1d., $1\frac{1}{2}$ d., 2d., $2\frac{1}{2}$ d., 3d., 6d., 1s. and 2s. 6d. values in the colour scheme respectively, doubly fugitive ink and surfaced paper being used for values over 10 cents.

GILBERT AND ELLICE ISLANDS PROTECTORATE.—Fiji stamps of $\frac{1}{2}$ d., 1d., 2d., $2\frac{1}{2}$ d., 5d., 6d. and 1s. values have been surcharged as above for use in that Protectorate. The surcharge in the case of the 1s. stamps is for the sake of distinctness in red, the other values in black.

GOLD COAST 2s. stamps have been despatched in the new colours, but in singly fugitive ink and unsurfaced paper.

HONG KONG 1 cent. stamps have been printed in the new colour for the $\frac{1}{4}$ d. value.

JAMAICA $2\frac{1}{2}$ d., 4d., 1s. and 2s. stamps have been supplied for the first time in the new colours, the last three values being of the Queen's Head design.

LEEWARD ISLANDS 5s. stamps in the new colours have been despatched to the Virgin Islands, and 3d. stamps to Antigua.

MALTA.—The colour of the latest printing of the $\frac{1}{4}$ d. stamp has been slightly altered to correspond with that chosen for this value on the colour scheme.

NEW HEBRIDES.—An issue of Fiji stamps surcharged "New Hebrides Condominium" has been made. The following are the values of the stamps:— $\frac{1}{2}$ d., 1d., 2d., $2\frac{1}{2}$., 5d., 6d. and 1s., and the colour of the surcharge corresponds with the Gilbert and Ellice Protectorate Series.

ST. VINCENT $\frac{1}{2}$ d. and $2\frac{1}{2}$ d. stamps of the new design have made their first appearance.

SOUTHERN NIGERIA 1d. stamps have been supplied printed from a 240 set plate at one operation, but the design is the same as before.

STRAITS SETTLEMENTS.—1 dollar stamps in the new colours, *i.e.*, red and black on blue paper, and two new values, *i.e.*, 21 and 45 cents., have been supplied. The colours of the two last named stamps are those appropriated to the 6d. and 1s. sterling values on the new colour scheme.

The first of the Crown Colonies and Protectorates to print advertisements on the interleaves of stamp books is Southern Nigeria. The advertisements are printed in red on one side only of the wax paper.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Captain H. DU B. O'NEILL (Assistant Political Officer, Somaliland),
Assistant District Commissioner, Uganda.

Mr. R. C. CORFIELD (Assistant Political Officer, Somaliland),
Assistant Resident, Northern Nigeria.

Lieutenant G. L. UNIACKE (Captain, Northern Nigeria Regiment,
West African Frontier Force), Assistant Resident, Northern
Nigeria.

Mr. L. C. DALTON (Assistant Resident Magistrate, Orange River
Colony), Registrar of the Supreme Court, British Guiana.

Mr. G. HAZLERIGG (late District Commissioner, Gold Coast),
Registrar of the Supreme Court, Ceylon.

Dr. L. H. BOOTH (Assistant Surgeon, New Providence Asylum,
Bahamas), Medical Officer, West African Medical Staff.

Mr. D. R. A. BETTINGTON (Inspector of Police, Sierra Leone), Deputy
Commissioner of Police, Gold Coast.

Mr. P. E. BRADNEY (Inspector of Police, East Africa Protectorate),
District Superintendent of Police, Northern Nigeria.

Mr. G. WATERS (South African Constabulary), Assistant Inspector
of Police, Uganda.

Mr. J. SOMERVILLE (Postmaster-General, Northern Nigeria), Post-
master-General, Gold Coast.

Mr. H. M. WOOLLEY (Deputy Postmaster-General, Northern Nigeria), Postmaster-General, Northern Nigeria.

Mr. G. C. ANDERSON (First Grade Customs' and Excise Officer, British Honduras), Assistant Receiver-General, Gambia.

Mr. W. F. O'TOOLE (Second Division Commissioner, Bahamas), Second Class Supervisor of Customs, Gold Coast.

Mr. J. F. H. GRANT (Customs' Officer, Barbados), Second Class Supervisor of Customs, Gold Coast.

Mr. C. S. CRAVEN (District Engineer, P.W.D., Gold Coast), Resident Engineer, Gold Coast Water Works.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ASH, W. R.	27 Oct., '10	HARDINGHAM, A. G. N.	18 Dec., '10
ASHTON, T.	11 Oct., '10	HILLS, A. J.	5 Dec., '10
BURTON, W.	12 Dec., '10	HOLMES, H. G.	13 Nov., '10
BECK, G.	12 Dec., '10	HUNT, Dr. E. L., C.M.G.,	12 Nov., '10
BLY, W. A.	8 Dec., '10	Sports Club, St. James'	
BRABAZON, Dr. E.	21 Nov., '10	Square, S.W.	
BEAL, W. P. D.	16 Oct., '10	HARPER, C. H.	11 Oct., '10
BERNEY, A. J.	3 Oct., '10	HARRY, H. P.	7 Oct., '10
BONHAM SMITH, R.	11 Oct., '10	JONES, A. J.	28 Nov., '10
Royal Colonial Insti-		JACQUEST, F. G.	15 Nov., '10
tute, Northumberland		JAMES, J. A. B.	22 Dec., '10
Avenue, W.C.		KILBY, R. N.	4 Jan., '11
BROWN, E. P.	7 Oct., '10	LAST, W.	18 Dec., '10
CRAGGS, G. H.	9 Oct., '10	LATHERIDGE, W. G.	29 Nov., '10
COGILL, F.	7 Nov., '10	LLEWELLYN, J.	7 Nov., '10
COTTON, A.	25 Dec., '10	LAMOND, C. H. P.	2 Nov., '10
COULDREY, A. C.	31 Dec., '10	LANGLEY, Dr. W. H.	13 Oct., '10
CRAVEN, C. S.	12 Nov., '10	Sports Club, St. James'	
DE LA POER, H. C. C.	21 Nov., '10	Square, S.W.	
DICKINSON, B.	11 Oct., '10	MICHELIN, W. P.	7 Oct., '10
ELIOT, E. C.	31 Oct., '10	Royal Colonial Insti-	
ELDRED, Dr. A. G.	31 Oct., '10	tute, Northumberland	
EMERY, J. C.	18 Dec., '10	Avenue, W.C.	
FRASER, J. B.	20 Nov., '10	MAUDE, R. A.	27 Oct., '10
GREIG, F. W.	25 Oct., '10	MAXWELL, J.	16 Oct., '10

GOLD COAST—continued.

McLEOD, N. C., c/o Messrs. Way & Co., 11, Haymarket, W.	13 Oct., '10	STOREY, Capt. H. J. ...	7 Oct., '10
McLAREN, H. ...	15 Dec., '10	SLACK, Dr. F. ...	7 Dec., '10
MUSS, L. J. ...	12 Dec., '10	SHEPARD, H. St. J. ...	18 Dec., '10
Royal Colonial Institute, Northumberland Avenue, W.C.		SIMMONS, W. H. ...	28 Jan., '11
O'KELLY, Capt. E. J. de P.	7 Nov., '10	STANLEY, A. ...	19 Nov., '10
OPIE, G. ...	9 Oct., '10	SILVERTON, A. E. ...	3 Nov., '10
O'HARA MAY, Dr. H. ...	16 Oct., '10	TIERNEN, B. S. ...	18 Oct., '10
PUNCELL, G. K. T. ...	7 Oct., '10	TIPLADY, C. E. ...	3 Nov., '10
PALK, D. S. ...	23 Oct., '10	TOMLINSON, G. J. F. ...	12 Dec., '10
PHILLIPS, J. ...	7 Nov., '10	VAN EEDEN, W. C. ...	13 Oct., '10
PURKIS, Dr. D. W. ...	10 Jan., '11	WILKINSON, E. F. W. ...	due back
POPE, P. N. ...	28 Dec., '10		12 Nov., '10
ROBERTS, L. L., c/o Messrs. Richardson & Co., 25, Suffolk street, S.W.	1 Jan., '11	WALKER, Dr. G. C. ...	15 Oct., '10
RALPH, Dr. C. H. D. ...	7 Nov., '10	WEBB, Dr. W. S. ...	10 Nov., '10
RICHTER, A. H. L. ...	7 Oct., '10	WHEATLEY, L. H. ...	11 Nov., '10
READ, Capt. H. ...	11 Oct., '10	WHIGHAM, R. D. ...	11 Oct., '10
		Sports Club, St. James' Square, S.W.	
		WOODS, P. S. C. ...	5 Dec., '10
		WILKINSON, S. J. ...	11 Oct., '10
		Sports Club, St. James' Square, S.W.	
		YOUTHED, S. H. ...	28 Nov., '10

SIERRA LEONE.

ADDISON, W. ...	2 Nov., '10	JOHNSON, E. O. ...	8 Nov., '10
ARBUCKLE, Dr. H. E. ...	7 Nov., '10	LAKE, W. S. ...	15 Oct., '10
BARKER, E. G. ...	5 Dec., '10	MORISON, R. J. ...	20 Oct., '10
BEATTY, K. J. ...		MORGAN, W. ...	2 Nov., '10
BARKER, R. O. ...		MURPHY, Dr. J. C. ...	17 Nov., '10
BETTINGTON, D. R. A. ...	28 Nov., '10	MOORBY, L. ...	7 Nov., '10
BERNE, J. L. ...	3 Oct., '10	NECK, F. A. ...	8 Dec., '10
COLEMAN, R. G. ...	18 Oct., '10	OSWELL, W. St. J. ...	25 Dec., '10
HANSON, B. E. ...	19 Dec., '10	PEARSON, Dr. J. S. ...	5 Oct., '10
HARDING, G. ...	28 Nov., '10	REANEY, C. T. ...	15 Nov., '10
HADDON-SMITH, G. B., C.M.G., Junior Athenaeum Club, Pic- cadilly, W.	2 Nov., '10	RANSLEY, W. ...	due back
HENDERSON, S. ...	27 Oct., '10		19 Oct., '10
HONTER, R. F. ...	26 Oct., '10	TILLOTSON, J. T. ...	3 Nov., '10
		TOWNSEND, W. R. ...	4 Oct., '10
		WAKELING, J. ...	23 Oct., '10
		WARD, Dr. J. F. ...	15 Nov., '10

GAMBIA.

BOYD, A. H. ...	3 Oct., '10	HUME, E. A. ...	due back
BOYD, W. ...	21 Oct., '10	Union Club, Trafalgar Square, W.C.	1 Nov., '10
DENTON, Sir G., K.C.M.G.	11 Nov., '10		
HOPKINSON, Dr. E., D.S.O.	due back	KINGDON, D. ...	due back
	5 Nov., '10		1 Nov., '10
HASKETT-SMITH, W., J.J.S., Capt. ...	23 Nov., '10	KIRKPATRICK, Capt. E. H.	11 Nov., '10
		Wellington Club, S.W.	

GAMBIA—continued.

McCALLUM, J. K. ...	<i>due back</i>	SANGSTER, G. H. ...	<i>due back</i>
	5 Nov., '10		5 Nov., '10
MEAD, F. W. ...	3 Oct., '10	STANLEY, Capt. W. B. ...	1 Dec., '10
MENSAH, J. A. ...	11 Oct., '10	THOMAS, C. W. ...	
PRYCE, H. L. ...	<i>due back</i>	VAUGHAN, E. ...	10 Nov., '10
	5 Nov., '10	WEBB, P. L. ...	8 Oct., '10

SOUTHERN NIGERIA.

ANSON, F. C. M. ...	31 Oct., '10	EDWARDS, Lieut. H. A., R.N.R. ...	1 Jan., '11
ARCHER, P. L. H. ...	7 Nov., '10	EVANS, W. ...	3 Nov., '10
AINSCOUTH, F. ...	2 Nov., '10	ELLIS, H. R. ...	7 Dec., '10
BATHGATE, J. D. ...	11 Oct., '10	FIRMIN, C. H. ...	28 Nov., '10
BOSANQUET, G. A. I. ...	21 Oct., '10	FOWLER, F. D. ...	1 Dec., '10
BROOKS, J. T. ...	23 Oct., '10	FITZPATRICK, M. ...	28 Nov., '10
BAIRNSFATHER, G. ...	10 Nov., '10	FINCHAM, R. ...	29 Oct., '10
BAKER, E. ...	5 Dec., '10	FIDDY, J. E. D. ...	5 Dec., '10
BOOTH, J. ...	12 Dec., '10	FRANKLIN, Dr. E. M. ...	28 Nov., '10
BLAIR, Capt. A. H. c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.	7 Nov., '10	GLADSTONE, H. S. ...	28 Nov., '10
BROWNE, Dr. A. J. A. ...	11 Oct., '10	GRAY, Comm. G. S. B., R.N.R. ...	13 Oct., '10
BLYTON, P. G. ...	8 Nov., '10	GRAHAM, Miss M. M. ...	7 Nov., '10
BELL, J. S. ...	7 Oct., '10	GREENBOUGH, F. H. ...	21 Nov., '10
BLY, J. E. ...	7 Nov., '10	GRANT, A. W. H. ...	16 Oct., '10
CUTHBERTSON, W. R. D. ...	3 Oct., '10	GALLAGHER, P. F. ...	15 Dec., '10
CRAIG, J. ...	16 Oct., '10	HADDON-SMITH, H. B. ...	17 Oct., '10
CAMERON, A. D. ...	21 Nov., '10	HOUSTON, J. A. ...	21 Nov., '10
CHEETHAM, CAPT. H. G. M. ...	5 Dec., '10	HOLE, W. F. ...	5 Dec., '10
COLLE, Dr. W. A. ...	<i>due back</i>	Bank of British West Africa, Lim., 17 Lead- enhall street, E.C.	
C/o Bank of British West Africa, Ltd., 14, Castle St., Liverpool.	15 Feb., '11	HARRISON, J. G. ...	20 Nov., '10
CARRERAS, B. H. ...	31 Dec., '10	HARVEY, G. L. ...	12 Dec., '10
CRAIG, Dr. H. L. ...	12 Dec., '10	HARWARD, F. H. ...	11 Oct., '10
COOK, A. ...	31 Dec., '10	HOPKINS, Dr. F. G. ...	28 Nov., '10
COOKE, Capt. W. H. ...	11 Oct., '10	HANSON, H. J. K. ...	9 Oct., '10
COLLIE, G. C. ...	17 Nov., '10	HUGGINS, H. C. ...	15 Nov., '10
COULTER, W. ...	16 Oct., '10	IVATT, A. E. ...	10 Jan., '11
COX, P. ...	10 Nov., '10	JOHNSON, F. E. G. ...	5 Dec., '10
CRAWFORD, Capt. H. R. H. Junior Naval and Military Club, 96, Piccadilly, W.	11 Oct., '10	KITSON, A. E. ...	
DENSHAM, A. ...	7 Nov., '10	Imperial Institute, South Kensington, S.W.	
DOBBIN, H. T. ...	27 Nov., '10	KNIGHTON, W. E. ...	8 Oct., '10
DEKANTZON, A. H. ...	18 Oct., '10	KITTOW, R. P. ...	21 Nov., '10
DAVIDSON, P. V. ...	5 Oct., '10	KERR, D. L. ...	29 Oct., '10
c/o Messrs. Cox & Co., 16 Charing Cross, S.W.		LEECH, C. J. F. ...	21 Oct., '10
DAY, Miss F. M. ...	22 Dec., '10	LORD, J. ...	2 Nov., '10
		LLOYD, Capt. R. L. ...	5 Nov., '10
		LOVERING, H. ...	3 Oct., '10
		McNAIRN, C. ...	8 Dec., '10
		MAPLES, Dr. E. E. ...	29 Nov., '10

SOUTHERN NIGERIA—*continued.*

MAIN, J.	11 Oct., '10	SHERRIS, G.	14 Dec., '10
MANSERGH, W. S.	27 Nov., '10	STURGES, C. H. M.	12 Dec., '10
Sports Club, St. James' Square, S.W.		THOMAS, M. W.... ..	1 Nov., '10
MAXWELL, T. D.	11 Oct., '10	THIELE, E. O.	
c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.		Imperial Institute, South Kensington, S.W.	
MEILANDT, H. S.	16 Oct., '10	TAYLOR, S.	28 Nov., '10
MEIKLEJOHN, J. R. C.	18 Oct., '10	TYSON, A. W.	17 Oct., '10
MANNION, J.	15 Nov., '10	THOMPSON, C. E.	29 Oct., '10
MATHER, W.	10 Nov., '10	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
PARKIN, A. W.	5 Dec., '10	THOMPSON, H. N.	17 Dec., '10
PONSTY, W. C.		c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.	
Royal Colonial Institute, Northumberland Avenue, W.C.		TURNER, A. E.	31 Oct., '10
PENNINGTON, A. R.	25 Nov., '10	THOMAS, E. L.	4 Oct., '10
RIGBY, E. F.	23 Oct., '10	VEECCOCK, Miss R. M.	7 Nov., '10
ROSS, R. J. B.	11 Oct., '10	WEARN, C.	21 Oct., '10
Royal Societies Club, St. James' St., S.W.		WEBB, R. A.	23 Oct., '10
RALSTON, W.	7 Nov., '10	WILLIAMSON, A.... ..	1 Dec., '10
RAVEN, R. M.	12 Dec., '10	WEBBER, G. P.	12 Dec., '10
SHEARER, H. S.... ..	12 Dec., '10	WALKER, Capt. G. H., D.S.O.	7 Nov., '10 Duc back
STACE, A. W.	6 Nov., '10	YOUNG, P. V.	30 Oct., '10
SMITH, W.	26 Oct., '10	Sports Club, St. James' Square, S.W.	
SMITH, G. R.	7 Nov., '10		

NORTHERN NIGERIA.

ADAMS, Dr. E. C.	7 Nov., '10	BRICE-SMITH, H. M.	27 Oct., '10
Sports Club, St. James' Square, S.W.		BACKWELL, H. F.	12 Nov., '10
ARSCOTT, C. M.	22 Feb., '11	BOSTOCK, W. C.... ..	11 Oct., '10
AVERY, W. H.	7 Nov., '10	BLAND, E. M.	
BOOTH, Major C. A.	17 Dec., '10	BRADLEY, L. R.... ..	16 Oct., '10
BOYLE, Capt., C. K. B.	3 Oct., '10	BRACKEN, R. G.... ..	10 Nov., '10
BURNSIDE, Capt. G. H.... ..	24 Feb., 11	BISHOP, G. H.	7 Nov., '10
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		BREMNER, Dr. A.	5 Dec., '10
BOND J.	21 Oct., '10	c/o Messrs. Way & Co., 11, Haymarket, S.W.	
BARLEY, R. F.	12 Oct., '10	CAMPBELL, J. A. L.	22 Oct., '10
BRATT, J. H. D.	20 Nov., '10	CRIPPS, Lieut. A.E.W., R.N.R.	21 Nov., '10
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		CUPIT, G.	9 Oct., '10
BOYTON, T. E.	8 Dec., '10	CAMERON, J.	28 Nov., '10
BOULDERSON, J. W. E.	16 Oct., '10	COLLINS, A. T.	4 Nov., '10
Junior Naval and Military Club, 96, Piccadilly.		CAREY-HALE, R.	12 Dec., '10
BARNARDISTON, Capt. S. J. B.	11 Jan., '11	CHARTRES, E. A.	1 Oct., '10
		CLARKE, Lieut., J.C.O., R.N.R.	5 Dec., '10
		CUNNINGHAM, C. A.	15 Nov., '10
		DUNN, R.	20 Nov., '10
		DUNN, C. M.	26 Oct., '10
		DOLMAN, A. J.	27 Oct., '10

NORTHERN NIGERIA—continued.

DIXON, Capt. H. B. ...	1 Oct., '10	MAXWELL-LYTE, J. M....	8 Dec., '10
ELDER, J. H. C. ...	27 Oct., '10	MIGEOD, G. E. H. ...	13 Oct., '10
EAGLESOME, J., C.M.G. ...	11 Oct., '10	Sports Club, St. James'	
c/o Messrs. H. S. King		Square, S.W.	
& Co., 9, Pall Mall,		MARTIN, J. C. ...	12 Oct., '10
S.W.		McALLISTER R....	15 Dec., '10
ELLIS, Capt. R. F. ...	2 Nov., '10	NEILL, M. ...	18 Nov., '10
Junior United Service		c/o Messrs. H. S. King	
Club, S.W.		& Co., 9, Pall Mall,	
EVATT, G. R. K. ...	16 Oct., '10	S.W.	
FURST, G. W. ...	12 Oct., '10	NEVILL, G. W. H. ...	5 Nov., '10
FORBES, C. W. ...	31 Oct., '10	ORR, Capt. C. W. J. ...	31 Oct., '10
FREEMANTLE, Capt. J. M. ...	12 Dec., '10	ORMSBY, G. ...	21 Oct., '10
c/o Messrs. Cox & Co.,		OLIVER, G. ...	18 Oct., '10
16, Charing Cross, S.W.		PIKE, F. ...	28 Nov., '10
FLOOD, Dr. B. ...	16 Nov., '10	REYNOLDS, Lt. R. M.,	
FITZ-HENRY, W. C. ...	24 Oct., '10	R.N.R. ...	21 Nov., '10
FAGAN, Dr. J. P. ...	15 Nov., '10	ROBERTSON, Capt. M. B.	15 Dec., '10
c/o Sir C. R. McGregor		RENNY-TAILYOUR, C. R.	28 Dec., '10
Bart. & Co., 25, Charles		ROBINSON, Capt. G. W.	11 Oct., '10
Street, S.W.		SECCOMBE, Capt. G. ...	11 Dec., '10
GRIER, S. Mc.G. ...	9 Nov., '10	Junior Naval and	
GEPP, N. M. ...	17 Oct., '10	Military Club, 96,	
GRAHAM, A. ...	12 Oct., '10	Piccadilly, W.	
GREGG, R. J. ...	25 Oct., '10	SINCLAIR, F. ...	2 Oct., '10
GARDINER, J. ...	12 Dec., '10	STRATH, A. M. ...	3 Oct., '10
HANSON, F. B. ...	12 Dec., '10	STEED, R. ...	10 Nov., '10
HERMON-HODGE, H. B. ...	12 Nov., '10	SPEED, E. A. ...	18 Oct., '10
HOLLIS, D. ...	19 Oct., '10	STURGES, Miss D. E. M.	25 Oct., '10
JONES, A. E. ...	11 Oct., '10	SCOTT, G. B. ...	7 Oct., '10
KNIGHT, Capt. R. B. ...	12 Dec., '10	THOMPSON, E. G. ...	5 Oct., '10
LANE, E. A. ...	1 Jan., '11	TWOOMEY, Dr. G. R. ...	17 Oct., '10
LEES, D. ...	17 Dec., '10	c/o Messrs. H. S. King	
LE BAS, Dr. D. ...	2 Nov., '10	and Co., 9, Pall Mall,	
LINDSELL, H. O. ...	2 Nov., '10	S.W.	
LAYMAN, E. H. C. ...	28 Nov., '10	UNIACKE, Capt. G. L. ...	3 Oct., '10
LAMBON, H. W....	6 Oct., '10	WEATHERHEAD, Major	
MARQUIS, F. A....	20 Jan., '11	G. E. ...	17 Oct., '10
MCLEAY, Dr. C. W. ...	4 Oct., '10	WILLIAMS, G. F. ...	12 Dec., '10
Royal Societies Club,		WILLIAMS, J. F. ...	18 Dec., '10
St. James' Street, S.W.		WATKIN, H. ...	28 Nov., '10
MACDONELL, Capt.		WOOLLEY, H. M. ...	11 Oct., '10
D. H., D.S.O....	13 Oct., '10		

NYASALAND.

ALEXANDER, E. M. ...	17 Nov., '10	COSTLEY-WHITE, E.	Steamer leaving
APLIN, C. E. ...	28 Nov., '10		12 Nov., '10
APLIN, H. D. ...	28 Nov., '10	HOFFMEISTER, H. R. ...	17 Nov., '10
BINNIE, I. T. ...	29 Dec., '10	JONES, G. E. ...	10 Nov., '10
BARRETT, H. T. ...	1 Feb., '11	MOGGRIDGE, L. T. ...	Steamer due
CASSON, J. O. ...	31 Jan., '11		4 Nov., '10
CREMER, J. A. ...	18 Dec., '10	MCDONALD, H. C. ...	28 Nov., '10

NYASALAND—continued.

OCKENDEN, C. O. ...	13 Dec., '10	STORRS, F. J. T....	17 Nov., '10
PURVES, J. M. ...	8 Nov., '10	SHARPE, Sir A.,	
PATERSON, Miss R. ...	17 Nov., '10	K.C.M.G., C.B. ...	19 Oct., '10
ROSBOROUGH, Capt. J. ...	18 Oct., '10	WYNNE-FINCH, G. ...	18 Dec., '10

EAST AFRICA.

AYRE, A. D. ...	27 Oct., '10	HENDERSON, Dr. F. L....	7 Feb., '11
AINSWORTH, J. ...	7 Dec., '10	KEMPE, W. A. ...	7 Nov., '10
AYLMER, Capt. L. ...	18 Nov., '10	KIRWAN, D. F. ...	
ALDRIDGE, A. ...	27 Dec., '10	LEYS, Dr. N. ...	27 Feb., '11
BROOK, Capt. W. B. ...	7 Jan., '11	LONG INNES, C. S. ...	30 Nov., '10
BLAND, R. G. ...	28 Oct., '10	c/o National Bank of	
BOTTING, F. W. ...	27 Dec., '10	India, Ltd., 17 Bishops-	
BEECH, M. W. H. ...	27 Dec., '10	gate St. Within E.C.	
BYRNES, F. M. A. ...	28 Dec., '10	LLOYD, L. H. ...	7 Dec., '10
BONHAM-CARTER, A. T. ...	7 Dec., '10	MONTAGUE, F. ...	27 Nov., '10
BUSH, A. G. ...	27 Nov., '10	MARTIN, G. R. F. ...	Steamer leaving
BREMNER, B. L. ...	27 Oct., '10		21 Oct., '10
BODEKER, Dr. H. A. ...	25 Oct., '10	MONTGOMERY, H. R. ...	28 Nov., '10
c/o The National Bank		MADDEN, A. ...	
of India, Ltd., 17,		McCLELLAM, J. W. T. ...	
Bishopsgate St. With-		MASH, E. J. ...	27 Jan., '11
in, E.C.		NORTHCOTE, G. A. S. ...	27 Nov., '10
BRUCE, Lt. G. W., R.N.R.	4 Nov., '10	NEAVE, Capt. C. A. ...	25 Oct., '10
BRANDT, F. R. ...	27 Oct., '10	PARTINGTON, H. B. ...	7 Dec., '10
CRISFORD, G. N....	27 Oct., '10	POWTER, G. E. ...	
CRAMPTON, D. R. ...	27 Oct., '10	PICKWOOD, H. ...	27 Jan., '11
CROFTS, D. G. ...	24 Oct., '10	RADFORD, Dr. W. J. ...	Steamer leaving
COUPER, S. ...	10 Nov., '10	c/o Messrs Cox & Co.	10 Oct., '10
CAINE, L. E. ...	27 Oct., '10	16, Charing Cross,	
CRESWELL, G. H. ...	18 Jan., '11	S.W.	
DEEK, S. F. ...	27 Oct., '10	ROSS, Maj. C. J., D.S.O.	27 Oct., '10
FULTON, W. ...	27 Oct., '10	RIGBY, Capt. W. ...	7 Nov., '10
FITZGERALD, Capt. T. O.	18 Jan., '11	REILLY, W. J. ...	27 Nov., '10
c/o Messrs. Cox & Co.,		REDDIE, C. S. ...	28 Dec., '10
16, Charing Cross,		SPAN, Capt. F. H. ...	27 Nov., '10
S.W.		SWEENIE, J. W....	27 Oct., '10
HAYES SADLER, Capt. E. R.	6 Dec., '10	SANDERSON, S. ...	27 Oct., '10
c/o Messrs. Grindlay		TEW, G. Mc. L. ...	27 Dec., '10
& Co., 54, Parliament		TATE, H. R. ...	
Street, S.W.		THOMAS, R. P. ...	
HARAN, Dr. J. A. ...	27 Jan., '11	WARDLE, T. N....	26 Jan., '11
HOWARTH, S. E. J. ...	28 Oct., '10	WILSON, H. S. ...	14 Nov., '10
HOLLIS, A. C. ...	27 Nov., '10		

UGANDA.

ANDERSON, R. D. ...	27 Oct., '10	CORDEAUX, Capt. H. E. S.,	31 Mar., '11
BOYLE, A. G., C.M.G. ...	28 Nov., '10	C.B., C.M.G., c/o Messrs.	
BOOTY, A. E. ...	27 Nov., '10	Grindlay & Co., 54,	
		Parliament Street, S.W.	

CLIFFORD, S.	7 Nov., '10	KNOLLYS, W. E.	27 Nov., '10
CARTER, W. M.... ..	28 Oct., '10		<i>Steamer leaving</i>
DE BOLTZ, W. H.	13 Jan., '11	KNOWLES, F. A.	12 Nov., '10
FENNING, E. G.... ..	28 Dec., '10	LARDNER, E. G. D.	8 Nov., '10
GRAHAM, B. R.	12 Jan., '11	Army & Navy Club, Pall Mall, S.W.	
Junior Naval & Military Club, 96, Piccadilly, W.	<i>Steamer leaving</i>	MACKENZIE, H. A.	27 Oct., '10
HODGES, Dr. A. D. P., C.M.G.	12 Nov., '10	PASKE-SMITH, R.	27 Nov., '10
HALDANE, J. O.... ..	1 Dec., '10	RICHARDSON, E.... ..	17 Nov., '10
IRELAND, Capt. DE C. ...	15 Jan., '11	TREVES, H. T.	17 Nov., '10
United Service Club, Pall Mall, S. W.		c/o Messrs. Holt & Co, 3, Whitehall Place, S.W.	
ISEMONGER, F. M.	28 Dec., '10	USBORNE, Capt. P.O.G.	18 Oct., '10
JOHNSTON, Capt. R. H. ...	16 Jan., '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
JERVOISE, G. P. V.	27 Nov., '10	WEATHERHEAD, A. E. ...	27 Dec., '10
Sports Club, St. James' Square, S.W.			

SOMALILAND.

BIDEN, A. G.	20 Nov., '10	HUNT, Capt. W.	9 Apr., '11
BIRD, Capt. H. J. G.	6 Nov., '10	LAWRENCE, Capt. A. S. ...	5 Feb., '11
HANNYNGTON, Lt.-Col. J. A., c/o Messrs. Cook & Son, Ludgate Circus, E.C.	25 Nov., '10	POWELL, H. T.	31 Dec., '10

BECHUANALAND.

HANNAY, H. D.	17 Jan., '11
----------------------	--------------

BRITISH HONDURAS.

REES DAVIES, C.... ..	28 Nov., '10
-----------------------	--------------

FIJI.

IM THURN, Sir E., K.C.M.G., C.B.	8 Nov. '10	THOMPSON, J. U.	25 Jan., '11
STUART, J.	15 May, '11	WILSON, Dr. B. M.	30 June, '11

CYPRUS.

HAYCROFT, T. W.		WILLIAMSON, Dr. G. A.	18 Oct., '10
PAULIDES, Dr. O.	14 Oct., '10	WOODHOUSE, C. B.	20 Nov., '10
TYSER, Sir C.	13 Oct., '10		

GIBRALTAR.

COLL, A. M., K.C.		PARSONS, L. D.	
HILL, C. W.		PIPON-SCHOOLERS, Sir H. R.	23 Oct., '10

BERMUDA.

GOLLAN, H. C.	24 Oct., '10
----------------------	--------------

LEEWARD ISLANDS.

PARKER, F. H.... ... 10 Nov., '10 | TEMPANY, H. A. ... 23 Nov., '10

ANTIQUA.

BRANCH, H. G. S. ... 24 Dec., '10	TIBBITS, E. D'A. ... 9 Dec., '10
PEARCE, Dr. A. H. B. ... 10 Dec., '10	Royal Colonial Institute, Northumberland Avenue, W.C.

GRENADA.

CUDDEFORD, W. ... 24 Jan., '11 | PATERSON, Dr. G. W. ... 9 Nov., '10

ST. LUCIA.

CALTHROP-CALTHROP, Commander W. H., R.N. 29 Nov., '10 c/o Messrs. Stilwell & Sons, 42, Pall Mall, S.W.	CAMERON, E. J., C.M.G. 10 Oct., '10 CUDDEFORD, W.... ... 24 Jan., '11 RYAN, T.... ... 1 Nov., '10 SMALLWOOD, H. A. ... 10 Jan., '11
--	--

ST. VINCENT.

CUDDEFORD, W. ... 24 Jan., '11 | KERNAHAN, J. B. ... 9 Nov., '10

MONTSERRAT.

DAVIDSON-HOUSTON, Lt. Col., W. B. ... 13 Jan., '11

ST. KITT'S.

MITCHELL, W. H. ... 7 Jan., '11 | WATTLEY, E. C. ... 21 Jan., '11

TURKS ISLANDS.

ROBERTSON, Dr. T. K. ... 11 Nov., '10

BARBADOS.

BRIDGER, Dr. J. F. E. ... 4 Jan., '11	ELDER, C. L. ... 6 Nov., '10
CARTER, SIR G. T., 16 Oct., '10 K.C.M.G., c/o Messrs. Cocks, Biddulph & Co., 43, Charing Cross, S.W.	GREAVES, SIR W. H. ... 9 Nov., '10 HARRISSON, S. T., C.M.G. 7 Nov., '10

BAHAMAS.

FRASER, C. A. ... 22 Dec., '10	MATTHEWS, J. B., K.C. 7 Nov., '10
HUNT, W. R. ... 27 Oct., '10	

JAMAICA.

ANDERSON, C. C. ... 28 Jan., '11	DE PASS, A. J. ... 31 Dec., '10
Steamer due.	FURNIVAL, W. R. ... 30 Oct., '10
ALEXANDER, T. ... 28 Oct., '10	FARQUHARSON, C. S. ... 31 Oct., '10
CORK, P. C. ... 15 Nov., '10	GEORGE, Dr. H. J. ... 13 Dec., '10

JAMAICA—continued.

HALL, C. H. V. ...	25 Oct., '10	ROSS, DR. G. H. K. ...	4 Nov., '10
HUGGINS, C. P. ...	15 Dec., '10	REED, F. E. ...	16 Nov., '10
ISAACS, F. N. ...	10 Nov., '10	SEATON, D. T. ...	1 Dec., '10
KERSHAW, LT.-COL. A. E.	28 Oct., '10		

TRINIDAD.

AANENSEN, E. F. ...	15 Feb., '11	LEHUNTE, Sir G. R.,	
BANSFIELD, J. ...	26 Dec., '10	K.C.M.G. ...	
BIZZELL, A. J. ...	7 Nov., '10	Travellers Club, Pall Mall, S.W.	Steamer leaving 9 Nov., '10
BUSHE, R. G. ...	22 Nov., '10	LITTLEPAGE, B. B. ...	7 Dec., '10
COLLEN, Lieut.-Col., J. H.	8 Dec., '10	MENZIES, R. ...	12 Nov., '10
CLARKE, E. DE R. ...	12 Dec., '10		Steamer leaving
DENOBRIGA, J. ...	9 Nov., '10	MEADEN, H. ...	12 Oct., '10
DEBOISSIERE, A. ...	29 Nov., '10	SCHULT, Dr. R. ...	9 Nov., '10
ELLIOTT, E. ...	24 Jan., '11	SAUNDERS, J. B. ...	6 Dec., '10
FENWICK, H. E. ...	22 Nov., '10	SWAN, R. A. ...	3 Jan., '11
HAMMOND, S. B. B. ...	4 Jan., '11	THORNE, W. H. G. ...	17 Nov., '10
KEATING, W. ...	8 Nov., '10	VILAIN, L. A. ...	22 Nov., '10
KNOWLES, W. F. ...	4 Jan., '11	WILSON, C. ...	21 Nov., '10

BRITISH GUIANA.

BAMFORD, H. ...	9 Nov., '10	KING, C. H. ...	23 Dec., '10
BAKER, A. H. ...	23 Mar., '11	LONGLEY, Rev. T. ...	9 Mar., '11
BUSH, H. W. ...	31 Dec., '10	MACPHERSON, Miss M. ...	20 Oct., '10
BRASSINGTON, H. D. ...	13 Jan., '11	MACADAM, Dr. P. E. W.	27 Oct., '10
EARLE, Dr. P. M. ...	1 Jan., '11	O'DOWD EGAN, Dr. J. ...	31 Jan., '11
FRASER, Miss J. ...	22 Oct., '10	PAIRANDEAU, G. H. ...	15 Dec., '10
GODFREY, Dr. J. E. ...	29 Jan., '11	SCONCE, H. W. ...	10 Feb., '11
HEWICK, J. E. ...	31 Mar., '11	SANDERS, W. T. ...	13 Nov., '10
HAWTAYNE, G. G. M. ...	5 Dec., '10	SYKES, Miss A. E. ...	7 Nov., '10
HOOTON, S. ...	24 Nov., '10	WALLACE, Rev. J. B. ...	10 Jan., '11
IRVING, Dr. M. H. C. ...	10 Mar., '11		

MAURITIUS.

BOLTON, Dr. J. ...	31 May, '11	NATLOR, A. S. ...	29 Mar., '11
EYRE, T. W. ...	28 Nov., '10	NAZ, L. ...	26 Nov., '10
GREEN, J. L. ...	24 Apr., '11	PITOT, L. E. ...	14 Dec., '10
HARWOOD, S. D. F. ...	22 Jan., '11	SEGRAIS, P. Le J. de ...	7 Mar., '11
LEBERRE, Rev. C.			

STRAITS SETTLEMENTS.

ARTHUR, J. S. W. ...	9 May, '11		Steamer due
ADAMS, J. ...	22 June, '11	BEATTY, D. ...	2 Feb., '11
BROWN, Miss L. ...	12 Nov., '10	BOWER, Capt. W. M. L.	15 Feb., '11
BROCKWELL, M. B. ...	17 April, '11	COLMAN, E. E. ...	10 June, '11
BUCKELL, C. P. ...	9 April, '11	CHANCELLOR, Capt. A. R.	13 July, '11
BICKWELL, W. A. ...	25 Mar., '11	CLARK, H. T. ...	20 July, '11
BROWN, A. U. ...	3 Mar., '11	COLEMAN, A. J. ...	20 April, '11

STRAITS SETTLEMENTS—*continued.*

ELLIS, F. T. ...	10 June, '11	RADCLIFFE, Commander, ...	18 Jan., '11
FINLAYSON, DR. G. A. ...	7 Nov., '10	C. A., R.N.	
FRAYNE, J. ...	22 Oct., '10	c/o Messrs. Stilwell	
GOMES, Miss L. H. ...	9 May, '11	& Sons, 42, Pall Mall,	
HAWKINS, T. G. ...	9 June, '11	S.W.	
HOWELL, J. G. ...	16 Feb., '11	REDRUP, T. M. ...	26 Feb., '11
HANITSCH, K. R. ...	8 Mar., '11	RYAN, W. ...	2 May, '11
HOWELL, J. ...	14 Oct., '10	SMITH, S. ...	13 Nov., '10
KIRKE, R. J. ...	20 May, '11	SHERWOOD, M. E. ...	24 Dec., '10
KNOX, A. ...	1 Dec., '10		<i>Steamer due</i>
LEONARD, T. A. ...	20 Jan., '11	SELLS, H. C. ...	22 Nov., '10
LEASK, DR. J. ...	20 Dec., '10	SPROULE, P. J. ...	20 Feb., '11
LORNIE, J. ...	14 Feb., '11	TAYLOR, W. H. ...	29 Mar., '11
MELLO, A. DE ...	13 June, '11	THUNDER, M. ...	21 Feb., '11
MASTERTON, W. N. ...	24 Nov., '10	THRALE, T. W. ...	11 May, '11
	<i>Steamer due</i>	WALLEY, T. ...	15 Aug., '11
PASTANA, J. V. ...	14 Dec., '10	WILSON, A. S. ...	10 May, '11
		WILLIAMS, J. H. ...	17 April, '11

TANJONG PAGAR DOCK.

DAVIDSON, J. ...	12 Jan., '11	SELLAR, A. M. ...	30 Dec., '10
MCQUARRIE, W. ...	12 Feb., '11	WEATHERSTONE, N. ...	9 Feb., '11
MUNRO, D. ...	30 Mar., '11	YULE, K. G. ...	31 July, '11
NIBLOCK, F. ...	12 May, '11		

HONG KONG.

ADLINGTON, R. ...	13 Feb., '11	KOCH, Dr. W. V. M. ...	16 Nov., '10
BULLIN, J. A. ...	31 May, '11	LUGARD, Sir F., K.C.M.G. ...	1 Nov., '10
BOULTON, J. F. ...	12 April, '11	LANE, A.	22 Dec., '10
BIDEN, F. A. ...	17 Mar., '11	LENEGHAN, J. ...	18 Dec., '10
BRAZIL, P. ...	22 Dec., '10	MACIVER, M. ...	28 June, '11
BOOLE, G. A. W. ...	18 Dec., '10	MARTIN, G. P. DE ...	22 April, '11
BROWNE, E. ...	18 Dec., '10	MAKER, Miss E. ...	<i>Steamer leaving</i>
CASHMAN, T. ...	13 Feb., '11		31 Dec., '10
CROFTON, R. H. ...	12 Dec., '10	RUSSELL, W. ...	14 April, '11
DEALT, T. K. ...	10 May, '11	REES, L. C. ...	6 Jan., '11
EDWARDS, W. T. ...	22 Mar., '11	SMITH, J. ...	18 Dec., '10
EARNER, M. ...	18 Dec., '10	TETSHALI, J. R. F. ...	8 Apr., '11
GIBBS, G. M. ...	24 Dec., '10	THOMAS, G. E. ...	22 Nov., '10
GALE, C. H. ...	26 Feb., '11	WALTERS, M. ...	18 Dec., '10
GOMPERTZ, H. H. J. ...	28 Apr., '11	WOOD, D. ...	12 Nov., '10
HUTCHINSON, R. O. ...	4 July, '11		

PERAK.

CROPLEY, J. H. P. ...	15 June, '11	NEUBRONNER, E. W. ...	3 Apr., '11
DICKSON, E. A. ...	3 May, '11	PHAROAH, R. S. ...	21 Mar., '11
FRY, Dr. W. H. ...	<i>Steamer leaving</i>	RICHARDS, G. H. ...	2 Jan., '11
	19 Nov., '10	RIGBY, J. ...	2 Aug., '11
FOSTER, R. ...	13 July, '11	SYKES, Miss F. ...	10 May, '11
KNAGGS, A. L. ...	2 Dec., '10	SLATER, A. J. ...	12 May, '11
LLOYD, H. ...	12 Feb., '11		

PAHANG.

BLATHERWICK, T. C. ...	Steamer due 10 Nov., '10	SUGARS, J. C. ...	Steamer due 20 Dec., '10
NORMAN, H. ...	25 Dec., '10		

SELANGOR.

DINSMORE, W. H. ...	30 Nov., '10	MATTHEWS, J. C. M. ...	29 Apr., '11
GERRARD, Dr. P. N. ...	30 Nov., '10	SCROBY, C. ...	28 Dec., '10

NEGRI SEMBILAN.

BROCKMAN, E. L. ...	24 Nov., '10	SWIFT, J. A. ...	25 July, '11
DOWDEN, R. ...	21 Jan., '11	Sports Club, St. James'	
STEELE, H. E. ...	10 Oct., '10	Square, S.W.	

FEDERATED MALAY STRAITS.

ALLEN, C. H. ...	18 Aug., '11	HATCHELL, H. M. ...	20 Apr., '11
c/o Messrs. H. S. King, & Co., 65, Cornhill, E.C.		INNES, J. R. ...	6 Dec., '10
BRIKEY, C. E. W. ...	2 Dec., '10	LISHMAN, G. F. ...	1 July, '11
BUCKWELL, R. L. ...	30 June, '11	LOGAN, J. H. ...	6 Mar., '11
BRESLAND, C. W. ...	21 June, '11	LEGGE, R. H. ...	11 Dec., '10
CLAYTON, L. H. ...	Steamer due 20 Oct., '10	MOSCROP, J. ...	25 Dec., '10
CORNWELL, J. G. ...	30 May, '11	MAUNDRELL, E. B. ...	5 Mar., '11
CONLAY, W. L. ...	20 April, '11	McDOWELL, Dr. D. M., C.M.G. ...	28 Jan., '11
COCHRANE, C. W. H. ...	Steamer due 30 Nov., '10	PHILLIPS, G. H. ...	10 Feb., '11
DOEL, H. ...	3 June, '11	PRYDE, W. ...	9 June, '11
DUNSTER, E. ...	13 June, '11	ROBINSON, H. C. ...	8 Feb., '11
ELLERTON, H. B. ...	17 May, '11	RICHARDS, D. S. ...	12 Aug., '11
Isthmian Club, Piccadilly, W.		STREET, F. ...	31 Oct., '11
FROST, M. ...	21 Dec., '10	SIMPSON, G. ...	25 July, '11
GREGORY, S. M. ...	4 Jan., '11	STONEY, B. O. ...	27 May, '11
c/o Messrs. H. S. King & Co., 65, Cornhill, E.C.		TAYLOR, Sir W. T., K.C.M.G. ...	
HUME, W. J. P. ...	Steamer due 15 Dec., '10	VANE, H. G. B. ...	29 May, '11
		VODDEN, F. R. ...	24 July, '11
		WOODWARD, L. M. ...	25 Mar., '11
		WALKER, Lt.-Col. R.F.S.	30 Oct., '10

CEYLON.

ALLNUTT, A. C. ...	19 Jan., '11	BAWA, Dr. H. ...	7 Dec., '10
ATKINS, M. R. ...	Steamer due 14 Nov., '10	CLIFFORD, Sir H., K.C.M.G. ...	26 April, '11
BIRD, H. J. ...	3 April, '11	The Athenæum, Pall Mall, S.W.	
BLOXHAM, D. ...	4 Dec., '10	COOPER, F. A., C.M.G.	4 May, '11
BROWNING, G. F. R. ...	11 May, '11	CODRINGTON, H. W. ...	3 May, '11
BROOKSBANK, W. ...	25 Oct., '10	CLARKE, A. H. F. ...	13 May, '11
BANDARANAYAKE, Sir S. D., C.M.G. ...	15 Oct., '10	CARTWRIGHT, H. T. ...	31 Mar., '11
c/o Messrs. Richardson & Co., 25, Suffolk St., S.W.		COLBERT, G. A. ...	5 Dec., '10
BROWNING, Prof. R. C. ...	15 Dec., '10	COX, C. L. ...	28 Jan., '11
		DANIELS, L. L. ...	13 Nov., '10

CEYLON—continued.

DE SILVA, H. ...	2 April, '11	PRICE, F. H. ...	29 Mar., '11
EMERSON, L. P. ...	8 Apr., '11	PEILE, L. A. B....	31 Dec., '10
GREEN, C. ...	28 Oct., '10	POOLE, Miss M....	2 Dec., '10
GREENE, G. P. ...	Steamer due 31 Oct., '10	RUSSELL, T. B. ...	2 Jan., '11
GODFREY, A. C....	4 Feb., '11	RICHARDS, H. M. ...	3 Dec., '10
HARWARD, J. ...	8 Jan., '11	SORENSEN, J. ...	18 Mar., '11
c/o Messrs. Richardson & Co., 25, Suffolk, St., S.W.		SHORT, E. M., DE C. ...	15 Feb., '11
HEAD, E. W. ...	5 Mar., '11	SPENCE, Dr. J. B. ...	26 Nov., '10
HUMAN, E. ...	18 Mar., '11	STONE, C. H. ...	Steamer due 5 Nov., '10
HAYNES, E. C. ...	21 Nov., '10	SMITH, R. W. ...	16 Nov., '10
INGRAM, N. M....	3 Dec., '10	c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.	
JEFFERY, J. ...	3 Jan., '11	SENIOR, B., I.S.O. ...	Steamer due 1 Jan., '11
JOSEPH, H. P. ...	30 Mar., '11	SAUNDERS, R. G. ...	6 Jan., '11
LUNDIE, C. R. ...	19 Dec., '10	Conservative Club, St. James' St., S.W.	
LOCK, R. H. ...	8 Sept., '11	UNSWORTH, H. G. ...	22 Nov., '10
LOOS, H. A. ...	1 Dec., '10	WILKINS, R. W. P. ...	10 Feb., '11
LUNGLEY, H. G. ...	8 Nov., '10	WOODSON, A. ...	20 Jan., '11
LOURENSZ, Dr. C. B. ...	28 April, '11	WAIT, W. E. ...	8 Dec., '10
LOVETT, H. J. ...	5 Nov., '10	WOODHOUSE, G. W. ...	22 Jan., '11
LASCELLES, A. G., K.C.	25 Feb., '11	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
MEADEN, C. B. P. ...	11 June, '11		
NAYLOR, W. ...	25 Oct., '10		
NATHANIELSZ, A. II. ...	9 June, 11		
O'DELL, H. C. ...	3 Nov., '10		

THE COLONIAL OFFICE JOURNAL.

VOL. IV.

JANUARY, 1911.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

It is a happy feature of the Royal visit to South Africa that Canada, Australia and New Zealand sent representatives to meet the Duke of Connaught, and to take part in the proceedings. Any occasion which tends to bring the great Colonies into contact with one another strengthens the union of the Empire, and the visiting delegates cannot fail to take home with them, and to be instrumental in spreading, a larger conception of the Empire and an appreciation of the common spirit which animates it. Probably in the near future there will be developments of direct trade between the dominions and the Crown Colonies which will give them a greater national interest in one another. The South African war led to a new trade between South Africa and Australia, and though this was accompanied by some political friction for a time over the labour question, the communication is sure to grow. The trade with Canada is also a promising field. The cost of freight is always a determining factor in such cases, and what is wanted, especially in the case of South Africa, is an increase of exports which will encourage the growth of shipping facilities. The excellent recent railway results in South Africa are a good indication of agricultural improvements, which open up a prospect of this result, and the Government is fully alive to the importance of the matter.

The referendum having recently become, in a somewhat unexpected manner, a live issue in British politics, attention is likely to be concentrated upon the use of this device by some of the self-governing dominions. The Commonwealth Parliament has recently passed two Bills for the amendment of the Constitution, both of which must pass the ordeal of the referendum before they can become law. But we doubt whether either friend or foe of the institution will be able to draw from this particular Australian instance any argument genuinely applicable to home politics. The real *raison d'être* of a referendum in Australia is to be found in the federal nature of the constitution of the Commonwealth. A federal constitution, as Mr. Bryce and others have pointed out, has about it much of the nature of a treaty, and an alteration of its terms may not unreasonably seem to require a reference to the original contracting parties. In the case of the United States of America, this doctrine has been pushed so far that an alteration of the constitution has proved to be practically impossible except under the strain of revolution or civil war. As might be expected, in so typically British a community as Australia, theory has not been pushed to such an extreme. But it must be remembered that the Commonwealth Constitution had its origin in a referendum, and it is only natural that recourse to a similar expedient should be necessary in order to alter it. Of the two Bills to be submitted to this process, one gives the Commonwealth control over all matters of commerce, trade and industry throughout Australia; the other empowers Parliament to nationalise industries which it may see fit to regard as monopolies. The origin of both is to be sought in the somewhat short-sighted policy of some of the States in fighting too hard for their own hands, and the general anticipation appears to be that both will be accepted by a majority of the people of Australia. Decisions of the High Court have in effect defeated Commonwealth legislation with regard to the settlement of labour disputes and the establishment of the so-called "New Protection," and Mr. Fisher has chosen a direct and drastic method of achieving results which Mr. Deakin failed to achieve by persuasion and conciliation.

The idea of an "all-red" cable has been recently brought up again in connection with a rumour that all the existing trans-Atlantic lines will be pooled in an American combine. It would never be safe to put any limit to the enterprise of our American cousins, but at any rate they cannot buy up the Atlantic Ocean; and if and when the pool is formed and managed in any way which would be prejudicial to British interests, it would be no difficult matter to lay other cables if this should seem advisable. It is not very likely, in view of the fact that the opportunities of competition cannot be limited, that the pool, if it became a fact, would put up

Atlantic rates. The object would probably be to save administrative expenses, and to secure the full advantages of combination between all the cables and all the land lines. Nor is a new line wanted for strategic purposes, as was urged in favour of the Pacific cable. The Empire has got both ends of the route within its lines. But both the Canadian and Australian Governments appear to be in favour of a State-owned trans-Atlantic cable, with the view of reducing rates. The comparatively heavy charge over this section for Press rates stands in the way of really low charges. Business of this kind pays to—

Atlantic ...	...	...	...	5d. per word.
Canada ...	...	...	...	1d. „
Pacific ...	...	...	...	2d. „
Australia...	...	...	...	1d. „

In addition to this the Atlantic companies refuse to accept messages from the Continent for the Pacific cable on the same terms as those from the United Kingdom. So the State line gets none of this business.

The difficulty would, of course, be the interference with private enterprise in a sphere where there is no lack of accommodation. An eminent electrician has recommended the adoption of a route via Iceland and Greenland, and, owing to the short spans, this line would give a rapid service and carry a great volume of business; but it would not be “all-red,” and the administrative difficulties would be considerable. Probably a better route would be from the North of Ireland to Newfoundland. The capital cost would be about the same.

The South African Parliament has a long programme before it for its first session. To begin with, it will enjoy the unusual privilege, already accorded by circumstances to the Imperial Parliament, of passing two Budgets during a single session. In order that the sittings of Parliament may be held during the summer months at Capetown, the financial year is in future to end on March 31st, and it will be necessary to make financial provision for the whole period from June 1st, 1910, to March 31st, 1912. The Union Government was given special authority by the South Africa Act to incur expenditure for the earlier part of this period without Parliamentary authority, but the Union Parliament is to be invited to consider the question of finance for the whole period of twenty-two months. General Botha in his statement foreshadowed a large number of measures rendered necessary by the Union of the four former colonies. It will be necessary to provide for the consolidation of various departments of the public service hitherto carried on separately, and to establish uniformity of law with regard to

marriages, and many other important questions which clearly do not admit of diversity within the Union. The first steps will be taken towards the establishment of uniformity of taxation, but it is recognised that the completion of this task must be a work of time. It would seem probable that the work of the first session of Parliament will not be of a highly contentious nature. There is so much purely constructive work to be undertaken that there is likely to be a general agreement to allow the more controversial questions to rest until a time of greater leisure. It is all for the good of South Africa that a period of co-operation between opposing parties appear to be inevitable.

Our ably-written South African contemporary *The State* devotes the first article in its November issue to the question of the payment to members of the Transvaal Legislature of the full sum of £300 each in respect of their last session, which, it will be remembered, formed the subject of discussion in both Houses of the British Parliament in the summer. It is important that the question at issue should not be misunderstood. The propriety of the action of the Transvaal Assembly in voting this payment to themselves is a matter for South Africa to decide. The Home Government was not in any way called upon to express an opinion, and the spokesmen of the Government in both Houses of Parliament carefully refrained from doing so. But our contemporary charges the Home Government with having instructed the Acting Governor to exercise a discretionary power vested in him in a manner which the Courts had declared to be illegal. In reply we can only point out that so high a legal authority as the present Attorney-General was clearly of opinion that the Home Government were bound to act as they did. The contention of *The State* is, in effect, that even when a statute assigns a power expressly to the "Governor-in-Council," the Governor retains a personal responsibility for its exercise. If this contention be correct, it is not easy to discover a motive or a justification for the distinction made in every constitution between the Governor and the Governor-in-Council. Under a system of responsible government, even when a power is assigned to "the Governor," he is expected to consult his constitution of advisers as to its exercise, but he cannot divest himself of a certain degree of personal responsibility. In the last resort he may decline to accept the advice of his ministers, and dismiss them or accept their responsibility. But when the power is expressly given to the "Governor-in-Council," it is for ministers to decide whether and how it shall be exercised. We wonder whether our contemporary would seek to attach to the King personal responsibility for the many and various powers exercised by "His Majesty in Council!"

In connection with the scheme for a London Memorial to the late King, Lord Northcote has addressed to the Lord Mayor a powerful appeal in favour of the establishment of a Research Fund for the furtherance of scientific and practical work in connection with Tropical Medicine. Other schemes are under consideration by the Mansion House Committee, and the amount of money which will be available is as yet uncertain. But Lord Northcote's proposal has behind it such a weight both of argument and of authority that we are confident that it will be carried into effect, whether as part of the King's Memorial, or as an independent scheme. Lord Crewe, Mr. Chamberlain, Lord Elgin, Lord Kitchener, and a host of others have lent their names in its support, and it makes so direct an appeal to a variety of worthy motives that it can hardly fail to arouse a ready response. To the humanitarian it offers an opportunity of effecting an immense abatement of the sum-total of human suffering; to the man of affairs, a means of opening the way for civilization and enterprise in tropical countries hitherto half-closed by the menace of disease; to the scientist, a further stage in the triumph of human intellect over the obstacles set in its way by nature. The amount of work which has already been accomplished with but slender financial resources is a testimony to the splendid devotion both of doctors and of administrators in our tropical possessions, and Great Britain is generally recognized as standing in the forefront of this branch of research. But the time has come for more systematic and continuous effort promoted by adequate funds, and we feel sure that the occasion will not be allowed to pass unheeded.

The recent strike on the French railways was followed with close interest in other countries. Trouble on the French lines causes a disturbance of the international traffic of all Southern and Central Europe, and also imperils or retards communication with the East. But the interest with which developments were watched was due less to immediate consideration of practical convenience than to the consciousness that every country is faced with the possibility of an outbreak at some time or another of similar difficulties. The French Government on this occasion took an extremely strong line, and by the issue of a mobilization order brought a large number of the strikers within the scope of military law. Their policy was successful, and a speedy collapse of the strike was the result. But the real cause of the collapse is probably to be sought in the resentment of the general public against the violent methods of the strikers, and the inconveniences and dangers resulting from them, and in the reluctance with which many of the men themselves had yielded to the order to strike. A critical situation may call for desperate remedies;

but it is very hard to defend, as a general method of preventing strikes, a measure which compels the employees of a private company to continue to work for their employers on terms unacceptable to themselves, under penalty of being treated as mutineers. The incident brings out the difficulties inseparable from the private ownership of so essentially national a service as that of the railways. A private quarrel which imperils the continuity of the service amounts to a national emergency calling for Government interference. But interference which takes the form of enforcing, even temporarily, the claims of one side, is contrary to the principle of impartiality which is expected to regulate Government action in respect of private quarrels. M. Briand apparently intends to introduce drastic legislation to render strikes on the railways impossible in future. If he succeeds, it will be a curious reversal of the recent action of the French Chamber in recognising the right to strike, even on the State-owned lines. M. Millerand has parted company with his former chief, and is understood to favour recourse to legislation on the lines of the Canadian "Lemieux Act," to which a good deal of attention has recently been directed in France. The Act appears to continue to give satisfaction in Canada, and we have on previous occasions suggested that it supplies a precedent which is likely to be more useful to the United Kingdom than the compulsory arbitration laws of Australia and New Zealand. In this connection, we may note that the Executive of the Canadian Trades and Labour Congress, in their last Annual Report, expressed the opinion that the organized workers of Canada were almost unanimously opposed to compulsory arbitration, and were of opinion that it would lead to strife and industrial disturbance; and that the Canadian Federation of Labour, at their Annual Convention, passed a resolution to the effect that the Lemieux Act has rendered great services to the country.

The negotiations in connection with the West Indian mail service have failed to bring about an agreement. This was not due to any lack of expressions of opinion in the colonies concerned in favour of the service. A meeting of delegates in Barbados in November expressed in stirring terms its conclusion that the discontinuance of the service would be highly detrimental. In quite a number of meetings in other colonies various bodies have expressed themselves to the same effect. But when it came to the prosaic business of paying, only one colony came forward. Trinidad was willing, if made the port of transshipment, to give a subsidy of £15,000 a year, the others nothing. This is a matter for the colonies to decide, and if they do not think that the service is worth paying for there is nothing more to be said: but it is difficult to reconcile this result with

the numerous protests against the discontinuance. A good many countries have to pay to secure a regular mail service. The case goes to show the weakness of an unfederated group in dealing with a subject for which combined action is necessary.

Portugal, with a population of about 5,000,000, still rules territory in Asia and Africa of some 2,300,000 square kilometres and a population of 20,000,000. Their West African administration has exposed itself to charges of which a good deal has been heard lately, but in criticising it it is as well for us to bear in mind that at no very remote period the English treatment of slaves was harsher than the Portuguese or the Spanish. Certainly the colour bar has counted for less with the Portuguese than with any other European race, and on the whole it may fairly be said that they were the first colonisers who cultivated the habit of sympathetic understanding of the natives. At the present day our most important point of contact with the Portuguese possessions is at Delagoa Bay, 52 miles from the Transvaal border, and connected by railway with Pretoria. The importance of this line is being rapidly augmented by the development of Rhodesia, and no doubt before long another direct line will be laid from the East Rand, bringing it within eleven hours of the sea. This work would open up Swaziland and create a great new agricultural trade. There is no reason to doubt that Portugal will cordially help these developments, and the suggestions that have been made in some quarters for endeavouring to acquire Delagoa Bay are, to say the least, inopportune.

The unity of nations is being more and more promoted by commerce, and, though no doubt rumours of wars and political complications give the most exciting and alluring matter in the columns of newspapers, it is as well to note that an immense amount of work is being quietly and efficiently done, by both public and private organisations, to deal with special interests internationally. Undoubtedly the old walls between nation and nation are largely breaking down. We are, of course, still far from the stage when frontiers will be mere administrative particulars, but the tendency is that way. All markets are now more or less international, and many products have a world-wide market. The improvements in communications are constantly bringing the world into closer relation, and a new process or invention affects the population from pole to pole. Comparative studies therefore become increasingly necessary. The ultimate object of these is mainly to prevent waste, by bringing the consumption and production of the world as far as possible into harmony. The attempt to do this with the most important and

universal of all industries—agriculture—is being made by the International Agricultural Institute at Rome. The method is to collect reliable, rapid and complete information on production from all quarters, so that, the facts being ascertained, prices will not be at the mercy of false alarms or deliberate manipulations, but will correspond to the real ratio between available supply and effective demand. It is not to be expected that this can be done at once, but very strong international support has been given to the movement. Our possessions are by no means backward in agricultural research, and the number of agricultural journals is very considerable. We must, however, yield place in this matter to Germany: in Prussia alone there are about 40 agricultural stations, and an international bibliography of agriculture has been formed. There is in fact a plethora of matter, and the Institute at Rome will undertake the valuable work of bringing the materials together.

A remarkable instance of advanced social work is afforded by the Australian departmental conference which was appointed to consider uniform standards for foods and drugs. The object was to fix specifications for the preparation of these articles, and all familiar food-stuffs were dealt with in this way. The primary object is to protect the health of the public, and the ingenious gentlemen who in less watchful latitudes impose on a credulous public cheap preparations under the name of infants' foods, invalids' foods, renovated butter, and mysterious essences and beverages, would find themselves checkmated by the definite requirements specified. In this country we are satisfied at present with a very partial provision against injurious adulteration, and an occasional police-court prosecution serves to reveal the curiosities of manufacture and the deceitfulness of trade descriptions. It is a big step forward to specify, not merely what a food or drug should not contain, but also what it should. But it is undeniably consistent and logical. In Australia the policy of dealing thoroughly with the matter has also been influenced by the desire to prevent imported articles from competing unfairly with the products of the country, and it was of course plain that if specific requirements were on this account applied to imports they should be extended to domestic processes. The result is a long list of specifications, on the following lines:

(1.) Standards for all commonly used manufactured or prepared food stuffs, such as condensed and concentrated milk, butter, renovated butter, margarine, cheeses (various), infants' foods, invalids' foods, manufactured meat, meat extracts, coffee mixtures, cocoa products, jams, jellies, preserved fruits and vegetables, glucose products, confectionery, essences, beverages (alcoholic and other),

cereal foods, cream of tartar, baking powder, vinegar, edible oils, sauces and pickles, spices.

(2.) Standards for drugs.

(3.) The prohibition, limitation, and conditioning of the use of preservative substances.

(4.) The prohibition, limitation, and conditioning of the use of added or foreign colouring substances.

(5.) The principle of explicit and conspicuous declaration of the presence, nature, and amount of any allowed preservative substance.

(6.) The principle of explicit declaration of the presence and nature of any added or foreign colouring matter.

(7.) The prescribing of uniform formulæ in descriptive labelling—for example, the labelling of condensed milk, to show to what extent it may be diluted to yield a milk of standard composition.

Mr. C. W. C. Parr, who was recently appointed by the High Commissioner for the Federated Malay States to enquire into the condition of indentured labour, has written two interesting reports, which have been laid before the Federal Council. Three classes of labour are dealt with in these reports—Javanese, Chinese and Indian. Javanese labour only came under the supervision of the Immigration Department on March 31st last, and it appears that there is some deficiency of exact information with regard to it, and a good deal of ignorance on the part of employers and others as to the terms of the Netherland Indian Labourers Protection Enactment, which was passed last year. The labourers engage under a contract of service which is executed before a Dutch official in Java. And this requirement appears to be an effective preventive of kidnapping. But there are some complaints of misrepresentation on the part of the native recruiters, and trouble is caused by the fact that the contracts are drawn up in Dutch. The health of the Javanese is satisfactory, the climate of the Federated Malay States being very much the same as that of their own country. They earn good wages which should enable them to save substantial amounts, but the majority of them are improvident and addicted to gambling. Mr. Parr thinks that the employers generally treat the Javanese well “from motives of humanity, or self-interest, or both, and also because the Javanese labourer is of an independent nature, and somewhat inclined to resent ill-treatment.” In the words of one witness, “It is not possible to make a slave of him.” Summing up his conclusion, Mr. Parr expresses the conviction that the Javanese, in addition to being a good labourer, is a most desirable settler in the Federated Malay States, and he urges that every possible measure should be taken to encourage immigration, and to render service under indenture as inviting as possible.

The account of Chinese indentured labour is less satisfactory. The demand for this form of labour, which had almost reached the vanishing point, has recently revived owing to the spread of rubber cultivation and the scarcity of other labour. Mr. Parr proposes the substitution of the "kangany" system of recruiting, under which Chinese trusted by the employer proceed to China and there enlist their own relatives and neighbours—a system well known in connection with Indian labour both in the Federated Malay States and Ceylon—for the employment of professional recruiters, who have an ill name among their countrymen, and are known as "sellers of young pigs." Failing this, the establishment of Government depôts in the treaty ports is suggested. Serious abuses have occurred on estates on the Kurau and Krian rivers, whose remoteness has rendered possible a degree of severity which cannot exist in more accessible districts. On these estates the indentured labourer is often practically at the mercy of Chinese sub-lessees of part of the cultivated property, and is exposed to many hardships without the protection afforded by adequate inspection. Rubber, however, is now being substituted for sugar in these districts. The estates are gradually coming under European control, and the system of letting to Chinese, with its attendant evils, is dying out.

The recruitment of Indian labour under indenture for the Federated Malay States was discontinued under instructions from the Secretary of State, on June 30th last, and Mr. Parr's report affords ample evidence of the necessity for this step. The principal consideration which led to its discontinuance was the very high death-rate among indentured labourers, and this is ascribed largely to the attitude of despondency general amongst them. They found themselves working side by side with free labourers, who earned higher wages for a shorter day's work, and were free from the restrictions imposed on the indentured coolie. Many of the stronger and healthier coolies deserted, leaving behind the weaker or sickly ones, with the inevitable result of raising the general death-rate figures. An appendix to the report deals with one very bad case of the treatment in which drastic punishment was meted out to the guilty parties. Mr. Parr's general conclusions on the subject are as follows:—

"In my opinion, indentured Indian labour is no longer required in the Federated Malay States, and the abolition of the system will lead to a healthier state of the labour market, as unhealthy or unpopular estates will have to pay higher wages than estates with a better reputation for health or treatment. Recruitment in India of free labourers by the Indian Immigration Department should

continue, in order to assist newly-opened estates in obtaining a labour force, but the majority of Indian labourers would be recruited as in recent years by 'kanganies.' "

It has been decided to deal at once with the question of the Chinese, who have come to the Straits Settlements on contracts made before leaving their country. It is clearly desirable that the Colonial Government shall exercise some supervision in such a matter, and not leave the emigrant to the mercy of any agreement which he has signed, whatever its provisions. A bill has accordingly been introduced, the object of which is to give the Government the same control over such agreements made outside the colony as it already has, under the Chinese Immigrants Ordinance, over those made within it. Under this bill no contract made outside is to be valid, except under conditions which secure that the immigrant will understand the nature of the engagement.

The Straits Settlements Freights and Steamships Bill is a heroic effort to deal with a shipping conference which uses the deferred rebate system as a weapon. The particular procedure adopted by this conference is of a peculiarly drastic nature. There is evidence that in addition to the ordinary rebates, there is a further secret rebate which is given to a limited number of privileged shippers. The effect is plain enough. The conference by this arrangement is able to shut out independent steamers, and naturally has advanced the rates considerably. The plan of the Government is to levy a duty of 20 per cent. of the freight on all bills of lading, which will be repaid to those traders who are not parties to the combination, and to enable all shippers to recover deferred rebate for any shipments by the conference lines, even if they have used other steamers. The measure is founded on the principle that anything done in restraint of trade is against public policy, and that the arrangement in question is an act of that kind. On the other hand, it is argued that the legislation is an interference with freedom of contract, and sets up an extraordinary procedure for which there is no example elsewhere. Between these two considerations it is clear that some form of pressure is wanted to compel the conference to meet the general trading community in a reasonable spirit, and that the particular plan embodied in the bill could be dropped when this object is realised. The bill, in fact, is used as a "bludgeon," and it is to be hoped that the parties can be brought to terms by a reasonable compromise.

The Festival of Empire will provide an attraction of a novel character in the "All-Red Route Railway," which will consist of an electric mono-railway flanked on each side by scenery representing the different parts of the empire and their industries. The line will be about $1\frac{1}{2}$ miles in length, and along it will be stations which will be used to exhibit the buildings and products of the various countries. The construction of this scenic railway will cost £25,000, and the council trust that the dominions and Crown Colonies will provide the buildings and exhibits. Presumably, the line will be of a sedate character, as the steep gradient beloved of the populace in other places would interfere with the tranquil appreciation of industrial progress. A number of the metropolitan boroughs are organising scenes in the Pageant of London, and there has been so much practice of this kind recently that the results are sure to be effective. The selection of subjects suggest local associations, and no doubt it is for good reasons that the "Rise of the English Theatre" will be shown by Ealing, and the "London of Merrie England" by Lewisham, and so forth; but it would require a profound knowledge of the history of London to give the right explanation in all cases. In the first scene there is to be a great gathering of representatives from all parts of the Empire. This should be an impressive spectacle. There will be a varied series of entertainments and receptions for visitors from overseas, and it is to be hoped that all our possessions will help to make the exhibition a complete and attractive one. From a business point of view, the opportunities for advertisement are excellent.

In an article on Marine Insurance in our issue of October, 1908, we pointed out that it might be advantageous for Colonial Governments to establish a common fund and organization of their own as a means of awarding loss from sea perils, and obtaining security for the value of consignments. This has now become an accomplished fact. A scheme has been formulated and has received the approval of the Secretary of State for the Colonies under which all Crown colonies which insure against marine risks will contribute at fixed rates of premium to a Marine Insurance Fund, under the control of the Crown Agents, instead of paying outside underwriters for protection against loss. At the outset the rates charged will be very much as they are at present, but if, as it is anticipated, the arrangement proves to be a financial success, a reduction in charges may be made in the near future, and it is hoped that eventually the fund will be large enough to carry the risk of all shipments with very little contributions from the Governments participating. To guard against the danger of financial embarrassment in the early stages arrangements have been made to limit for a time the risk on each

vessel, and, until it is properly established, the solvency of the fund will be based on the reserve securities held by the Crown Agents. It is proposed to give exactly the same protection to the assured as in the past, and the terms and conditions of the policy will, *mutatis mutandis*, remain unaltered. Claims will receive careful consideration, and will be settled promptly when supported by proper evidence. In all respects the scheme possesses features of great interest, and it seems likely that Colonial Governments will obtain eventually considerable advantage from the new undertaking.

In our last number we remarked on the unsatisfactory character of the news which is sent out from this country for colonial consumption. Since then we have seen an official complaint from a colony which pays for a supply of telegraphic news, that the greater part of what is received is "not news, but simply the daily rambling remarks of the press," and that with an excessive amount of repetition. Furthermore, there is sometimes no continuity in the accounts, and results are given without any explanation of previous circumstances. An instance is given in the statement that "the insurgents have taken over the management of the Regulation State Convention from the Regulars, at the same time recognising the national leadership of Roosevelt." This, it must be admitted, is a rather cryptic piece of information by itself for a community which cannot be expected to watch American politics intently. The cricket news is represented by such hieroglyphic fragments as, "Players, 119," "Kent drawn," but as it is not stated what elevens are playing, the reader cannot get much satisfaction. It is surprising that the news and telegraphic agencies cannot do better.

The Stationery Office have issued two volumes of coloured plates of the "Flags, Badges and Arms of the British Dominions beyond the Seas." (Part I. Flags and Badges, Price 3s. Part II. Arms, Price 5s.) The Arms and their "blazons" are of considerable interest, and may prove a source of amusement to the irreverent. It would be hard to find a more striking conjunction of old and new than the assignment to the very youthful province of Saskatchewan of Arms thus described:—"Vert three garbs in Fesse Or, on a Chief of the last a Lion passant guardant Gules." But this must yield place for mystery and magic to the description of the Arms of Queensland. "Per Fesse the Chief Or, the Base, per pale, Sable and Gules, in Chief a Bull's head caboshed in profile muzzled and a Merino Ram's head respecting each other proper, the dexter Base charged with a Garb of the first and the sinister Base on a Mount or Pile of Quartz, issuant therefrom a Gold Pyramid, in front of the

Mount, a Spade surmounted by a Pick saltirewise all proper." Ceylon is represented by "on a Mount Vert between a Grove of eight Cocoa Nut Trees and Mountains, in perspective an Elephant affrontée all proper." Mauritius has for one of its supporters "a Dodo per bend sinister embattled Gules and Argent," while British Honduras rejoices in "two Negroes proper breeches Argent."

The difficulties of the native official when he endeavours to rise to the height of the English language are notorious, but a request for leave of absence to attend a brother's funeral should be easy enough. The following letter, however, shows the result when the literary style is attempted, apparently with the help of a dictionary of choice phrases.

"Sir,—I have the honour to request you that I did not receive any answer of my petition as yet. Though I am flagrante delicto, aut fiat justitia ruat coelum, my younger brother has gone articulo mortis. Ipso facto O! tempera O! mores. Does the life of a man go out like a candle? Sic transit gloria mundi that veni, vidi, vici.

"Now please arbitrium send a man on my post, that may I do his proper work at home, it is a outrance affaire d'honneur which is agenda for your pertinently consider."

TO AUSTRALIA.

Australia, thou hast enriched thy store;
 Hast felled the forest, ploughed the desert, plann'd
 To link thy peoples by an iron band
 And gathering up their ample harvests pour
 These treasures of thy lap from shore to shore
 To speed their freights for many a distant strand—
 Corn, wine and wool and gold. O teeming land
 Of boundless wealth, what canst thou covet more?
 Ah, store of riches is an idle boast,
 If courage fail and well-knit valiance.
 Up then and gird a sword upon thy thigh
 To match thy pride, for fear some alien host
 Essay to spoil thy fair inheritance;
 So shall thy name and prowess never die.

H. W. J.

IMPERIAL FEDERATION.

THE Conference of 1907 put many new ideas in motion, and left behind it a substantial achievement. But it never discussed or used the term Imperial Federation. It established a permanent Imperial Conference. It thereby placed on a definite basis what previously, to use Sir J. Ward's words, had been looked upon as a sort of irregular assemblage of the responsible heads of the different Governments. It also established a Secretariat to prepare the work of the Conference in the intervals between the sessions. There was a good deal of discussion as to the constitution of this body, and in deference to the opinions expressed by the Australasian representatives the staff of the Colonial Office which deals with the dominions has been definitely separated from that which deals with the Crown Colonies. Mr. Deakin contended for an altogether separate office and a wider constitution of the staff. But this point is one of machinery rather than of principle. There was no suggestion from any quarter that the Conference should have wider powers than its predecessors. There were, on the contrary, clear indications of a desire to limit it strictly to the rôle of a merely consultative body. At the outset the name "council" was objected to and "conference" preferred, on the ground that the former would seem to indicate too large an assumption of authority.

There has, however, been recently a widespread renewal of the discussion of some stronger form of federation. In this country the idea is connected with the speculations as to the devolution of some of the powers of the Home Parliament. When so much is in the melting-pot, it is natural that the figure should arise of an Imperial Legislature relieved of parochial duties, and devoted to the greater affairs of the country and the common interests of the Empire. The constantly increasing interest in trade and defence questions promotes a corresponding feeling overseas. There is no doubt that the subject has a strong attraction for thinking men, and it is a healthy sign that it should be so. The King's subjects everywhere are conscious of

common ties, sympathies and objects, and many want to give form to this feeling by the creation of a body politic.

The advantages of union are being made more prominent year by year by the increasing range of international activities. While war is less likely to break out for inadequate causes than formerly, its effects whenever it does occur are more widespread and disastrous. So long as this is the case, it is a vast gain to civilization that so much of the world is preserved from internal war—so much secured open to peaceful trade. But how can the Colonies help this country to decide the question of peace? At present every voter in England can influence the decision, and the populations overseas cannot influence it at all. This is undoubtedly a grave defect in the system, and, while it could be disregarded when the Colonies were small and weak, it becomes more and more illogical and perilous every year to leave the matter in the old position. There is a Committee of Imperial Defence, on which the dominions are represented; but what is the use of that if we do not secure their adhesion and support in case of war? Let us remember that the great colonial world as we know it has practically grown up since England's last serious maritime war. We cannot now simply rely on the fact that all the colonists are the King's subjects, and presume that they would accept all the consequences of the connection. For this there must be clear consent and co-operation. The British Empire is sometimes compared with the Roman, but the Roman was held together by force. The nations had no part in the government, and when the force which held them together weakened they fell into a decay of energy. In our Empire the cohesion is not of force, but of free accord, and each member develops itself naturally. But political combination can only be secured by some central institution. The absence of it at present is illustrated by the trend of events in defensive matters. At the Conference of 1887, the Australasian Colonies were willing to pay a subsidy to the Home Government for the purpose of strengthening the Australian squadron. The ships so provided became the property of the Admiralty, and in the event of war were at its entire disposition. The scheme propounded by Mr. Hoffmeyr at the Ottawa Conference of 1894 similarly contemplated a scheme of all-round taxation for the support of the Imperial forces. But nowadays all the preparations and supplies are in the nature of local defence. The ships and the men are to belong to the dominions and to be under their orders. The movement for stronger defence is sound and welcome, but it must be recognised that it is on new lines. There is a clear divergence. If it goes much further, there is a danger that the unity of the Empire will be put aside by the assertions of scattered interests.

These and many other considerations, which it is unnecessary to set out, show the rising importance of common distribution and joint

action. On the other hand the growing spirit of nationalism has to be reckoned with. The Dominions are naturally and properly developing marked individualities. Few would suggest that one legislative or executive body would be conceivable as a working instrument for the whole assemblage. Such a union as there is in the United States is clearly out of the question. There the control will assert itself, if need be, by force. It is conceivable that a legislative and executive might be created with specified and limited powers, to deal with foreign relations, defence, and subjects of common concern, existing concurrently and side by side with the present machinery for the management of local affairs. There are not wanting cases of such a partition of powers. As a mere matter of machinery, the details of an arrangement could be evolved. Distance is not a fatal difficulty. Journeys almost as long in point of time have not prevented representation in other cases. The difficulty is more fundamental. In a previous number, issued after the Conference of 1907, we referred to the consideration that Imperial questions properly so called cannot excite the keen interest which attaches to local politics. If a Federal Parliament could be formed it would not attract the best energies and abilities of its territories. The statesmen who are powers in their lands would be out of it. They could not serve in two houses, and they would choose the one which deals with the home questions. Similarly the class of voters would show little interest in a federal chamber as compared with that which settles their education, their taxation, and all their domestic policy. Federation in this sense, therefore, implies a surrender of power from a body which is effectively controlled to a body which is not, and this is too much to ask from communities which prize their independence and individuality. These are the reasons why federation of this sort makes no practical headway. Since about 1870 it has been preached by a number of enthusiasts whose ideals have been unquestionably high. But no one has shown how to create a live thing.

It follows from this that the body which should represent the Empire cannot have a final authority. All acts must be legalised and all moneys raised by the local legislatures in their respective territories. Consent is the basis of the scheme, and must be given in full. But this condition leaves a great field to a central council. The aim is not one government, but one society. The first object would be to prevent complaints of neglect or injustice on the part of the home authorities towards the Dominions in connection with foreign negotiations about colonial rights. In the past practically every case of the kind has led to severe attacks, and the result has unquestionably been to diminish the affection felt for the mother country. There is a vast difference in the point of view. Great Britain undertakes the responsibility for war; she knows by

experience what it means, how easily an unyielding diplomacy may bring it about, and how enormous the cost is compared with any counter advantages. The colonies either do not fully appreciate this, or feel that they are involved in far less risk. More than once in our own time war would, undoubtedly, have been brought on if Great Britain had backed up the colonial demands with the persistency which she was urged to show. So lately as 1907 the Premier of Canada stated: "We take the record of diplomacy in so far as Canada is concerned, and we find it a repetition of sacrifice of Canadian interests. We have suffered on the Atlantic. We have suffered on the Pacific. We have suffered on the Lakes. We have suffered wherever there has been a question to be discussed between British diplomats." No doubt concessions have been made, but it would be idle to argue as if diplomacy turned solely on the merits of the case. The moral claims of right have not so far entirely displaced the advantages of might, and time and circumstance have still to be weighed. Moreover, Judge Langley, a distinguished Canadian authority, after an exhaustive examination of the cases in which Great Britain has been popularly supposed to have made a diplomatic sacrifice of Canadian interests, has come to the conclusion that no substantial ground of complaint exists. It is in any case very doubtful whether the average Canadian, if he weighed the risks of war and the possible result to his beloved dominion, would express any regret at the present day that British diplomatists had come to terms with their adversaries. In Australasia the trouble has been mostly caused by the assertion of a sort of Monroe doctrine over the South Seas—a doctrine which we would all like to see carried out, but which rests ultimately on force if there is any competition. But all along France and Germany have put in contrary claims, and to those who have followed the course of events it is clear that much of the feeling which prevails in Germany against this country dates back to the days when Bismarck fought fiercely against the Australasian demands for Samoa and New Guinea. In such difficulties, what is Great Britain to do? Is there any sort of all round guarantee to support her? If she sticks up for Canada in an Alaskan matter, will she get the enthusiastic support of Australia? If she runs the risk of warfare for an Australian claim, will Canada go with her? There is no security for this. The intention is always that the British taxpayer, whose own interest in the matter is negligible, should bear the brunt, and be thankful for any help that may be volunteered. On the other hand, the Dominions on the outbreak of a serious war would feel the moral effects of a weak political connection. They, too, have their perils, and have no guarantee that the Empire as a whole will support them in any trouble which may attend the claims of a "White Australia" or a "White Canada" or the dealings with native populations.

The position is obviously unsatisfactory. It could be greatly improved by an arrangement under which the Dominions would be represented in the councils of the Mother Country.

The present machinery provides a conference which meets once in four years and a secretariat which prepares work for it. A body which meets at this lengthy interval, aided by a staff of a departmental character and without pretensions to representativeness, is clearly inadequate for the purpose of taking part in the councils of empire. It was not created for that purpose. Mr. Secretary Stanhope's idea was to bring together the leading political chiefs of the colonies to discuss the subjects of defence and communications. He expressly deprecated the discussion "of any of the subjects falling within the range of what is known as Political Federation." The moral significance of such a meeting rightly counted for a good deal, and the new step was welcomed with enthusiasm. But for continuous working purposes the ideal was too high. It cannot be expected that Premiers can or will absent themselves frequently from the places which they represent. They are dependent on the popular will, and cannot long leave the field to their opponents. What is wanted is the strengthening of the continuous body. The first thing is to make it representative. Without going the length of setting up a legislative body, there is one strong and clear reason for a federal council. It would represent the participation of the overseas populations in the deliberations. It is immaterial from this point of view whether negotiations or deliberations would be improved by such machinery. The main object is to secure as far as possible the willing assent of all the parties to whatever is done. We do not nowadays rest the case for extensions of the franchise primarily on property or intellectual or any other personal qualifications. It is recognised that the reason for extending the vote is to bring in a larger body of the population, and so to ensure that solid support without which no government in civilised countries can be stable and effective. If this principle applies to a territory which is more or less compact, it is doubly important in the case of territories which are widely scattered. The further away a man is from the central seat of administration, the more difficult it is to excite his interest in the things that are done there. At present, if the truth must be told, the great bulk of our white population oversea is more or less apathetic about matters which appeal to Imperial spirit. There is nothing surprising about this. They have many difficulties to conquer and much hard and engrossing work to do. Their chief and best literature relates to the requirements of their daily life. There is, on the other hand, an increasing amount of wide public spirit among the leaders of opinion. It is impossible to contrast the utterances of to-day with those of a quarter of a century ago without seeing that a better feeling exists among colonial states-

men towards this country and the idea which it represents than was the case then. In Canada, Australia and South Africa there was a continuous stream of bitter attacks on the reputed acts and supposed objects of ministers here. A more sympathetic view is now taken of the many difficulties with which this country has had to contend, and which were not and could not be appreciated by populations lying remote from them. The improvement in feeling, welcome as it is, is, however, mostly on the top. The masses remain indifferent. Something is wanted to bring them into view of a larger horizon, and the only means of doing so is to give them a direct interest in the affairs of the Empire at large.

The Dominions are already represented here by their High Commissioners and Agents-General; but this fine material is not utilised as fully as it might be. They are not regarded as constitutionally the medium of communication between the home and the overseas Government. The Governors remain the sole correspondents except by courtesy of the Secretary of State. A copy of a correspondence may be sent to a High Commissioner, but it is a matter of favour and it is not always done. So far as the official correspondence is concerned, this arrangement must continue; the Secretary of State must deal with the Sovereign's representative. But there is much to be said in favour of making greater use of the experience and influence of the Dominions' representatives by giving them a more definite *status* in this country. They would by themselves form a very strong body for the purposes of representing the Dominions on all ordinary occasions. It would be well worth while to consider the possibility of an arrangement under which they would be associated with the present Secretariat. No one who has studied the recent blue-book can doubt the ability of the Secretariat to organise the questions and keep the correspondence alive, and if to this could be added the feature of representation of the Dominions, a federal council would be secured which would constitute definite evidence of union for common purposes. The ordinary monthly meetings of the Pacific Cable Board, which are attended by Imperial and Dominion Representatives, are a type of what might take place. Such an arrangement would satisfy the demand that the Dominions should have a hand in the continuous work. It would also go far to facilitate the work of the conferences. To such a body might be added temporarily any political chiefs who might be on a visit to this country.

It would further be desirable to invest the council with a formal constitutional character. There is a way of doing this. It is open to the King to constitute a committee of the Privy Council "*ad hoc*," i.e., for any particular purpose. If the council were established in this way, it would at once take its place in the recognised scheme of Government. At the same time it would be clear that it could only

collect and advise. The Conference would be the sole determining authority.

There is a question of a somewhat domestic character which may be referred to in this connection. Some dissatisfaction was expressed from the first with the existing constitution of the Secretariat, on the ground that it is part of an office, which, so far as volume of work is concerned, is mainly concerned with the Crown Colonies. It is needless to say that the administration of these possessions, which is carried out with varying degrees of detail, but always with the recognition of the paramount authority and ultimate responsibility of the Secretary of State, differs fundamentally in spirit and method from the negotiations which are conducted with the possessions which have been granted self-governing powers. But the difference is perfectly clear and well recognised. There seems to be a sort of suspicion that officials who have had or may be in contact with experiences of Crown Colony business will apply the same methods to the Dominions. It would be inexcusable if this occurred. But there is no reason for supposing that it has occurred. No Dominions representative who has had experience of the matter has alleged it. Bitter attacks have, from time to time, been made overseas on the Colonial Office. It has been accused of various sins, of which a well sustained apathy is the least. But when the occasions which have provoked these indictments are examined, it is clear that they had nothing to do with the contaminating influences of autocratic government. Mr. Deakin, at the 1907 Conference, complained of a lack of sympathy on the part of the Colonial Office towards the Dominions. He instanced "the case of Alaska in regard to Canada, and the New Hebrides and Pacific interests in our case; and of Delagoa Bay in South Africa." Now, these questions were one and all matters involving grave questions of foreign policy or home interests. They were not, in fact, settled by the Colonial Office, or even materially influenced by it. In Australia the things that rankle are the alleged neglect of their interests in the South Seas. On this view such places as New Guinea, Samoa, and the New Hebrides have been unnecessarily more or less surrendered to foreign Powers. This is not the place for examining whether this is true. The only point that need be made for present purposes is that these were matters of foreign policy which were settled by the Cabinet of the day. This shows, at any rate, that the institution of a separate department with the Prime Minister at its head would be no panacea for such troubles. They always have been, and must in their nature be, dealt with by the Prime Minister. There are also technical subjects, such as merchant shipping legislation, in which the Colonial Office has practically had no hand. It is no exaggeration to say that in all such cases the department has done all that it could to support the contentions of the Colonies. The public hardly realises the extent to which the offices of this

country carry on a wordy war with one another. Each has its own considerations, and stands up for them for all that it is worth. If it cannot get its way, it endeavours to induce its political chief to engage in knightly battle on its behalf with the head of the opposing clan. The proceedings on such occasions are veiled from mortal eyes, but whatever the result the department has done its best.

It does not seem, therefore, to be in any way a vital matter that the Secretariat should be in a separate office. This question turns on somewhat domestic considerations. It is a small staff of some nine officials, and is recruited from a much larger body in accordance with the personal aptitudes which are brought out by experience. It would certainly be practicable to constitute an entirely separate department, nominally under the Premier, to deal with the Dominions. Whether this arrangement would improve the staff or render the supervision more complete than it is now, is at least open to question. Furthermore, there is a vast body of experience and research in business, scientific and medical questions, which is common to both sides, and it would be regrettable if co-operation in these great fields of non-contentious and eminently useful work were made difficult. No doubt any views which the Dominions may put forward will receive the most sympathetic consideration, and as the matter is one of machinery only, it would be possible to meet them ; but it may be suggested that, before any change is made, the whole work done by the Dominions department should be reviewed with regard to the facilities which are given to it by the present grouping.

This matter would become of minor importance if the Secretariat were reinforced by the available Colonial representatives. But it may further be pointed out that the Dominions themselves have an interest in the Crown Colonies. There is much intercourse with them : there will be much more, and in our time. The Empire as a whole should stand together. Australia is interested in Fiji ; Canada in the West Indies ; the South African Union in all Africa. There is no telling how far the Union may go in due course. Sentiment and business combine to expand it. Future problems of administration will in many respects afford opportunity for wide consideration and the participation of the British race wherever it is. Carlyle had a lurid way of painting things, but there is sound sense under the colours, and we will hazard a quotation :—" There are portions of the general earth, where the children of Britain now dwell ; where the gods have so far sanctioned their endeavour, as to say that they have a right to dwell. England will not readily admit that her own children are worth nothing but to be flung out of doors ! England, looking on her Colonies, can say : ' Here are lands and seas, spice-lands, corn-lands, timber-lands, overarched by zodiacs and stars, clasped by many-sounding seas ; wide spaces of the Maker's building, fit for the cradle yet of mighty Nations and their

Sciences and Heroisms. Fertile continents still inhabited by wild beasts are mine, into which all the distressed population of Europe might pour themselves, and make at once an Old World and a New World human. By the eternal fiat of the gods, this must yet one day be; this by all the Divine Silences that rule this Universe, silent to fools, eloquent and awful to the hearts of the wise, is incessantly at this moment, and at all moments, commanded to begin to be. Unspeakable deliverance, and new destiny of thousandfold expanded manfulness for all men, dawns out of the Future here. To me has fallen the godlike task of initiating all that: of me and of my Colonies, the abstruse future asks, Are you wise enough for so sublime a destiny? Are you too foolish?"

KEDAH, PERLIS AND KELANTAN.

THE first Annual Report on the State of Kedah since its transfer to Great Britain under the terms of the Anglo-Siamese Treaty of 1909, has been presented to Parliament, and the Acting Adviser to the Kedah Government, Mr. W. George Maxwell, has taken the opportunity to give a general account of the country in addition to recording the principal occurrences of the year. The Muhammadan, and not the Christian, calendar is in use in Kedah and the Report is consequently described as being "for the year 1327 A.H.," which corresponds to the period from January 23rd, 1909, to January 12th, 1910. Mr. Maxwell prefaces his report with a sketch of the complicated and troubled history of Kedah. Legend has long connected the Malay Peninsula with the Golden Chersonese and with the Land of Ophir.

"The truth, however, is that until comparatively recent years the Malay Peninsula was a place to be carefully avoided. Before the twelfth century, the coast was probably only inhabited by the sea-Sakeis, now nearly extinct, who were certainly a treacherous and murderous race, if not actually, as stated by the Portuguese, cannibals. The Malays who began to populate the Peninsula in scanty numbers in the twelfth century were pirates, who, when any vessel fell into their hands, seldom scrupled to kill the crew as well as plunder the cargo. There was nothing to export. When, therefore, the ships of the Chinese and Japanese merchants came sailing down from the China seas on the north-east monsoon, and the ships of the Indian and Arab merchants came sailing down on the south-west monsoon from the Indian Ocean, it was with good reason that they avoided the Malay Peninsula and sought some port on the civilised Javanese coast where they could exchange their merchandise, and then sail back to their own ports on the following monsoon."

The local "Annals" affirm that the Kingdom of Kedah was founded by men who came from the West in a fleet under a leader named Marong Mahawangsa, whose descendants extended the

boundaries of their Kingdom north and east and south. Previously the country had only been inhabited "by men who had long canine teeth and cannibal propensities." This conquest may have taken place in the thirteenth century. Kedah is mentioned in a Javanese poem of 1365, and its first mention by a European writer appears to be in 1516. It suffered many vicissitudes, being subject at one time to the Sultan of Malacca and at another to the King of Siam, and was overrun in turn by Achinese, Portuguese, Bugis and Siamese. In 1821 it came permanently under the rule of Siam, but in 1843 the Sultan, who had been in retreat at Malacca, was allowed to return and to re-assume the government of Kedah proper, one of the four parts into which the ancient Kingdom was divided. To this was subsequently added the district of Kubang Pasu. Of the other two parts of the former Kingdom Perlis became a separate Sultanate, and Setul a part of Siam. Thanks to a system of finance, lax even for an Oriental country, Kedah became gradually more and more deeply involved, and matters were brought to a crisis by expenditure on a lavish scale on the occasion of the celebration of a number of royal weddings in 1904. The following year a loan of \$2,600,000 was made by Siam, and Mr. W. J. F. Williamson, Financial Adviser to the Siamese Government, came to Kedah and "in a marvellously short time reduced chaos to order." By an edict of July 23rd, 1905, a Council of State was set up to assist the Sultan in the administration of all public affairs, and this continues under the present *régime*, with the substitution of a British for a Siamese adviser. Mr. Maxwell gives a list of the matters dealt with by the Council at its 23 meetings during the year under review, which shows how important its functions have become.

"The State is more purely a Malay State than the States of the Federated Malay States. The Muhammadan, and not the Christian, calendar is used. Friday is, as well as Sunday, a day upon which the public offices are closed. The language of the Legislature, the Courts and the public offices is Malay. There are only ten European officers in the State, and of this number three are police officers, two are financial officers, three are professional officers (the State Surgeon, the State Veterinary Surgeon and the State Engineer), and the remaining two are the Adviser and the Assistant Adviser. There are a few Tamil officers in the Medical and Postal Departments, but with the exception of these officers, of the Sikh detachment of the Police Force, and of a few interpreters and detectives (Chinese, Siamese and Tamil) all the Government servants are Malays; and of the Malays perhaps not more than half a dozen understand any language except their own."

One of the most interesting items in the Report is Mr. Maxwell's account of the recent abolition of forced labour.

“ Forced labour (*krah*), if exacted in moderation, and for Government works, is perhaps in a country, where a voluntary labour supply cannot be obtained upon payment of a fair salary, not without advantage to the State; but in Kedah, by reason of the power of the *mukim*-holder to exact forced labour for his private use, and in the entire absence of any control over the *mukim*-holder, it has been nothing less than an unmitigated curse to the country.

In recent years forced labour has been but little employed upon Government works, the principal exception being in the case of the supply by forced labour of telegraph poles, which were obtained from certain special *mukims*, the *raia*s of which were called upon to perform no other forced labour. The only instances of forced labour for Government purposes which I found upon my arrival were that some schools in outlying *mukims* were being built by paid forced labour for the Public Works Department, and that all the men used for the transport of boats taking officers upon Government service up and down the Padang Trap, Pendang and Muda rivers were *krah*-ed and not paid. The privileges of the *mukim*-holders, of course, were unabated. The position, therefore, was that the system was of little practical use to the Government; deprived it of a considerable annual revenue that might otherwise be obtained from the land-tax, and solely benefited the *mukim*-holders at the expense of the unfortunate *raia*s.

I ascertained soon after my arrival that all the members of the State Council disapproved of the system, and that two or three attempts had been made to persuade His Highness the Sultan to abolish it. His Highness, however, was of opinion that the power to exact forced labour was a necessary part of the royal prerogative, and declined to alter the system in any way.

At a Council Meeting held on the 23rd August, a proposal by Syed Muhammad Shahabudin, Auditor General, that *krah* be abolished was carried unanimously subject to confirmation by His Highness the Sultan. A few days later all the members of the State Council had an interview with His Highness the Sultan, and, after some time, were able to persuade His Highness of the desirability of abolishing the system. There was some delay, partly owing to the fasting month and partly owing to minor difficulties, but eventually, on the 25th October, His Highness signed a proclamation abolishing forced labour in the State with effect from the 30th October. The notice was immediately printed, and copies sent to every *mukim*, posted in all public places and read in the mosques. It was, of course, welcomed everywhere. The effect of this important step cannot, I think, fail to have the most beneficial results, not only in setting the Malay agricultural class free from oppression, but in adding to the land revenue and in attracting immigration.”

But a difficulty perhaps even greater presented itself in the survival of a time-honoured system of debt bondage.

"Among the institutions of every Malay State have been, since remote ages, those of slavery and debt-bondage. Both are common to the Indo-Chinese races, and in respect of both the custom is at variance with the precepts of the Muhammadan religion. Slavery is but of historic interest in Kedah, for it was abolished many years ago by a proclamation, of which I have been unable to obtain a copy or even to learn for certain in which reign it was issued. Debt-bondage is, however, still in force. Under the system the debtor, in consideration of the loan, enters into an agreement with the creditor to work for him until the debt is paid off. The debt is a genuine one, and can be traced to a *bona-fide* transaction; as, however, the debts are transferable, the original transaction is sometimes remote. It is a common thing for a debtor to seek service with a new master by the simple process of borrowing from the new master sufficient money to pay off the debt to the old master. The amount of debts vary from \$30 to \$150, the average being about \$60. In the majority of cases there is an express provision for the debt being diminished (*susut*) by a fixed amount every year, but these annual diminutions are very small, varying from \$2 to \$10. The debtor may be of either sex, and in many cases the debt is incurred by a man and his wife jointly and severally. Except in the case of the caretakers in the orchards, whose duties are little more than nominal), the creditor feeds, clothes and houses the debtor, free of all charges.

From the Malay point of view, the transaction is merely a civil contract by which a person who has no property to offer as security for a loan is able to obtain credit upon the security of his personal labour. It is true that by the law of the country a run-away debt-bondsman is liable to arrest and punishment, but then so, too, is an ordinary absconding debtor; for both are held to be guilty of fraud. Cases of ill-treatment of a debt-bondsman by a creditor are rare, and the debt-bondsman has exactly the same redress that any other person would have. (A slave, of course, in former days had not.) Since my arrival here on the 15th July, I have received petitions and personal applications of all kinds in hundreds, but of this number only four have been from or connected with debt-bondage. I enquired carefully into all four. Two were from women whose husbands had died and who were prepared to marry again, but whose prospective husbands were loth to undertake the responsibility of their debts. The third was a frivolous complaint by a somewhat weak-minded old woman, who had done no work for years, and who would, if turned out by her nominal employer, have been absolutely destitute. The fourth was from a young woman who had been severely beaten by her mistress for immoral conduct. In this case, the President of the State Council and I decided that the chastisement inflicted by the mistress had the effect of breaking the contract for personal service, and we sent the woman to her parents' house.

On the 1st Jemad-al-Akhir, 1310 (A.D. 1892) His Highness the Sultan issued regulations for the registration of all documents relating to sales, mortgages, loans, promissory notes and similar documents, and the fourth paragraph of these regulations provides that all agreements entered into by debt-bondsmen shall be registered in the land office of the district in which the parties reside. Failure to register an agreement does not, however, render it invalid, but merely makes the holder liable to a penalty of \$25 by the Court in which he may produce it for the purpose of any suit upon it.

Kedah has now before it the problem which its neighbours have solved: the Straits Settlements by the Indian Act. V. of 1843, Perak by the Order in Council of 1882, Pahang by Enactment XIII. of 1906, and Siam by the Law of the 1st April, 1905, for the Abolition of Slavery.

At a Council Meeting held on the 22nd Zulhij-jah, a resolution was unanimously passed that the system of debt-bondage was one which was detrimental to the progress of the State, and it was decided that no new agreements, by which any person agreed to work for another person in consideration of a debt, should be valid, that the best means of terminating the existing agreements be considered at a later meeting, and that an Enactment be drafted for discussion and later for submission to His Highness the Sultan.

Simultaneously, instructions were issued to the Courts that they were to take no action whatever in respect of suits arising out of bond-debts without the express permission of the President of the State Council, and to the police, that they were to take no action upon applications for the arrest of absconding debtors unless a warrant was first obtained.

Three schemes have been laid before the Council. The first is on the lines of a Statute of Limitations, and provides that debts incurred before a certain date (say, seven years) shall not be the subject of any action in Court; that in respect of debts of standing between (say) five and seven years, the creditor may only sue as if they were ordinary debts, and may not demand specific performance of the contract to labour; that in respect of debts between three and five years, the creditor may have the option either of suing for the debt or of compelling the debtor to work for another year from the date of the passing of the Enactment, in which case the debt would be extinguished at the end of the year; that in respect of debts between one and three years standing, the creditor be given a similar option, except that the term of labour be two years instead of one; and that in respect of debts of less than one year's standing, the creditor be given similar option, except that the period of labour be three years. The second scheme is on the lines of the Siamese law above referred to, and provides for the debt being reduced by a fixed amount in respect of every month's work performed. The third scheme provides for the

Government buying all these debts at a valuation to be fixed by arbitrators, and then remitting the debts.

Each scheme has its advantages and disadvantages, and the State Council, in assuming the responsibility of cancelling, for motives which will be unintelligible to the contracting parties, a civil contract, recognized by immemorial custom and voluntarily entered into by both parties, feels bound to act with fairness to both parties, and has not yet been able to arrive at a decision. It is impossible to make a hard and fast rule that will apply equally to all cases, for it is obvious that a debt by an old man or woman, the value of whose labour probably does not cover the cost of his or her maintenance, has a very different value from a debt of the same amount by a strong young married couple; and the State Council is seeking for the fairest possible rule. It must, therefore, be left to the next Annual Report on Kedah to record the action taken in this important matter. The principal evil of the debt-bondage system in Kedah is, I venture to say, not that it entails any harsh treatment of the debtor, but that it deprives him of all inducement to work, for it is not in human nature to work hard when hard work brings no reward."

The transfer of rights from Siam to Great Britain has been signalized by a curious piece of ceremonial.

"In accordance with ancient custom the Sultan of Kedah sends a tribute offering, known as the *Bunga Mas* (the golden flowers), or *Bunga Mas dan Perak* (the gold and silver flowers), to His Majesty the King of Siam once in every three years. The offering consisted of a golden tree and a silver tree, each about five feet high, with branches and flowers of formal design, and it was sent in charge of a responsible Kedah official from Kedah to Singora on elephants, and from Singora to Bangkok by steamer. His Majesty the King of Siam always received the tribute personally.

"When the transfer of the suzerainty of Kedah took place, the two trees had already been made, and at a meeting of the State Council held on the 23rd August, it was decided to ask His Excellency the High Commissioner whether His Majesty the King would be pleased to accept the tribute, which might be deemed to have a special interest by reason of its being the last of a series extending back to a remote past.

"A reply was received to the effect that the offering would be acceptable, and Tunku Muhammad Jiwa, who for many years past had taken the tribute to Bangkok, proceeded to Singapore on the 15th November in charge of the cases containing two trees, and the 42 spears and 24 shields, which by custom always accompany the offering. The cases were forwarded to the Colonial Office, and were, together with the *Bunga Mas* from Perlis and an offering from Trengganu, presented by the Secretary of State for the Colonies in person to His Majesty the King, who was graciously pleased to

express his admiration of the workmanship of the gold and silver trees."

The same paper contains the Annual Report of the Acting Adviser to the Perlis Government, Mr. Meadows Frost, who remarks that "at the time when the treaty was pending the Perlis people's only anxiety was lest they should not be included among the States to be handed over to the protection of Great Britain."

The report of the British Adviser in Kelantan, Mr. J. S. Mason, is published as a separate Parliamentary Paper. Mr. Mason draws attention to the satisfactory expansion of land revenue, which has increased from \$24,730 in A.H. 1323 (1905-6) to \$102,656 in A.H. 1327 (1909-10), but he adds, "There is much evasion of taxes. The present system of taxation combines the maximum of trouble in collection with the minimum of result. A simple method for a young country, it depends for its results too much on the efficiency of the native collectors." Noteworthy improvements have already been made in the administration of justice.

"The Courts were not satisfactory and compared very badly with the Courts in the Federated Malay States. With the exception of one Siamese Judge, all Court officials were Malays. The Adviser sat as a Court of Revision but heard no evidence first hand. In one Court it was a common practice to allow two cases to be taken at the same time; the evidence of witnesses was taken down by clerks; the Magistrate paid little attention until the pages of evidence were handed up to him. It was the universal practice for the clerks to write down the evidence: the Magistrates kept no notes. Statements made to me by the foreign residents in Kota Bharu made it quite clear that the public had little confidence in the Courts. The clerical staff had too much influence and was generally untrustworthy. Cases were frequently allowed to drag on for months. The Magistrates, on the plea of illness, were irregular in attendance, and there was no qualified Medical Officer to say whether absence from duty was justified.

"On the resignation of the Siamese Judge I arranged that the Assistant Adviser should take his place in the High Court and the Appeal Court, so that Malay Magistrates have now for the first time before them the example of a European Magistrate attending Court punctually and regularly and deciding cases with impartiality and without delay. Owing to resignations and dismissals the personnel of the staff is being gradually improved. There is now little or no delay with criminal cases. The work of the Courts has been so re-arranged that all police cases in Kota Bharu are now taken into the Central Court. All serious cases are committed to the High Court, in which a European officer sits, and all appeals go before a European Judge.

"The Muhammadan Court, which has had a bad record for years, was even less satisfactory. There were numerous complaints of

delays in settling cases ; charges of corruption and misappropriation are now being inquired into. It will probably be necessary to take away the jurisdiction the Court at present holds in cases of inheritance of land."

With regard to the population of the State, Mr. Mason makes the following remarks :—

"The Kelantan Malay differs considerably from the F.M.S. Malay. He is a tallish, raw-boned man, much more bonily-built than a Pahang Malay. The difference has been well compared to that between a cart-horse and the polo pony. The Kelantan Malay is capable of much continuous labour and in this respect resembles the Javanese. There is little doubt that, although imported labour is a necessity on large rubber estates, the local labour will continue to be used in larger numbers than in the Federated Malay States."

BARO-KANO RAILWAY CONSTRUCTION.

WE have several times referred to the progress of this railway, which is extremely interesting, not only as opening up a vast territory, but as an example of a line built on the most economical principles. Nothing in fact but proof of the closest economy would have secured the consent of the Treasury to the outlay. For the following detailed account, which will, we are sure, be found valuable by all who may be concerned in similar enterprises, we are indebted to Capt. H. A. Mance, D.S.O., R.E.

Prior to the construction of the Baro-Kano Railway, the sole means of communication over all portions of Northern Nigeria not immediately served by the Niger or navigable portions of its most important tributaries, the Benue and Kaduna, was by native tracks, over which all stores had to be conveyed by head transport. These tracks were for the most part impracticable in the height of the rainy season, and at the best of times 15 miles was considered a good average day's progress. It became evident several years ago that further development of this Colony was impossible without improved communications, and the matter came into special prominence when the investigations of the British Cotton Growing Association brought to light the fact that Northern Nigeria was the most promising field for the production of cotton to meet the expanding requirements of our most important textile industry, now threatened with shortage of raw material owing to the increasing proportion of American-grown cotton required for American mills. In addition to the necessity for a cheap outlet for the products of the country, efficient administration was most difficult and costly, and there always remained the strategic difficulty of coping with any native rising with the small forces available under the existing adverse conditions of transport and personal travel.

To these primary considerations must now be added the discovery of a rich tin field in the region of Bucchi, some 140 miles east of the Railway under construction.

A large amount of official correspondence had taken place on the subject of Nigerian Railway construction, and a survey had been made from Baro to Kano via Zungeru before 1907. Various schemes were put forward and after consideration a 3 ft. 6 ins. gauge line was recommended over this route with a maximum gradient of 1 in 50. In May, 1907, Sir Percy Girouard, Governor of Northern Nigeria, formulated a railway policy in which he recommended the construction by the Public Works Department of the Protectorate, of a 3 ft. 6 ins. gauge railway from Baro to Kano, avoiding Zungeru, the present capital, the site of which ceases to be of importance as soon as a more efficient channel of communication than the Kaduna River becomes available. As the result of a survey, superintended personally by Sir Percy Girouard, it was found possible to adopt a ruling gradient of .7 per cent., or 1 in 143, for traffic going up country, and .6 per cent., or 1 in 166, for traffic coastwards throughout the first section of 111 miles. Construction was authorised in August, 1907, and ten miles of permanent way material were at once sent out. Thanks to very careful preparations and to the organisation of all the resources locally available, a full programme of work was carried out during the dry season 1907/8, thereby probably saving a year in the time required to complete the railway to Kano. An absolutely free hand has been given to the man on the spot as regards all engineering details including the alignment. Without this, such cheap and rapid construction would not be possible. It has also been decided to link up the Lagos Railway with the Baro-Kano Line by extending the former through Jebba and Zungeru to Minna.

The Niger at Jebba flows in two channels, one of which is now being bridged and the other will be traversed by train ferry till the traffic justifies the building of a bridge. The portion from Minna Junction to Zungeru has already been laid and railhead of the Lagos Extension is about half way from Jebba to Zungeru. The road bridge over the Kaduna at Zungeru is being strengthened and altered to carry the railway, and it is hoped that the systems will be linked up early next year.

Baro, the Niger terminus of the Baro-Kano Railway, is situated about 420 miles from the coast. At high water, from the beginning of August to the middle of October, it is accessible by steamers drawing from nine to twelve feet and containing up to 1,100 tons of cargo. For the rest of the year boats drawing four feet have no difficulty in reaching Baro, except for the months of April, May and June, when a draught of two feet was all that could be reckoned on. It was found, however, that there were only about two miles of shallows to be dredged to make the river available for vessels drawing four feet throughout the year, and that only some five miles of shallows stood in the way of a six feet channel all the

year round. A powerful suction dredger has therefore been obtained, by means of which it is hoped to maintain a channel for vessels drawing at least four feet, and it is a hopeful sign that the very small amount of work which was done by this dredger during the recent especially low river enabled the larger stern wheelers to work regularly up to Baro for the first time. With an available draught of four feet all traffic likely to pass over the Baro-Kano Railway for some time to come during the low river season can be easily handled by tugs capable of towing two barges each with a capacity of 100 tons.

Delivery of material at Baro.

In view of the very rapid rate of progress on which the estimates for the construction of the Baro-Kano Railway were based, the serious question arose as to whether it would be possible to deliver at Baro during the high river the large quantity of material required for a whole year's programme. Some difficulty had been experienced owing to an exceptionally low river in delivering by three large steamers (commonly known as "branch boats"), supplemented by stern wheelers, the three thousand tons required for the 1907/8 programme, and the estimated tonnage for 1908 high river was twenty-three thousand, and for 1909 nearly thirty thousand. The possible causes of failure were many, and it was freely predicted that the programme would have to be considerably amended for this reason. The unfortunate early experience of the French on the Senegal River under somewhat similar circumstances showed clearly how serious might be the consequences of any miscarriage. Thanks, however, to the careful co-operation of the shipping firms and to favourable high river seasons in 1908 and 1909 all these fears have proved to be groundless.

The appliances for dealing with railway material on arrival at Baro were of the most primitive nature. All that could be done in the time was to provide sufficient stacking ground, no easy matter on such sloping ground—and to obtain a number of 12 ins. by 12 ins. timbers, about 50 feet long, for employment as gangways from the branch boats to the shore. When the first steamers arrived the level of the water was such that a steep pull-up was involved, but later on this disadvantage ceased to exist. An unlimited amount of absolutely unskilled labour was made available, and from twenty-two to twenty-four European foremen were detailed at Baro for the work of dealing with the first year's shipping. Of these foremen, nine were Royal Engineers and 16 in all were quite new to the country. Under the circumstances it was only possible to employ the most rudimentary methods, and for the first day or two progress was decidedly slow. It was found best to employ about 60 to 75 natives at each

hatchway, and at first it was necessary to employ a foreman at each hatchway and one on the stacking ground for each ship, but the latter was dispensed with after the first fortnight. Two shifts were worked, the first being 6 to 8.30 and 9.30 to 3 p.m., and the second 3 p.m. to 7 p.m., and 8 p.m. to midnight. A number of Kitson lights were provided for night work. They were found to be rather delicate and to require a skilled European mechanic in charge of them, but otherwise answered the purpose most excellently, except actually during tornadoes. The staff subsequently tried an acetylene flare light, which appears to offer considerable advantages on account of its strength and simplicity. Work was carried out on Sundays, usually one shift only, but it was found necessary to arrange for every European and gang to have one day a week off the works.

Discharging Rails.

The procedure for discharging rails was to slide them in bundles of from three to ten, depending on the slope up to the bank, across a gangway consisting of two of the long timbers mentioned above spaced at about 15 feet interval, each of them having rails spiked along their upper surface and kept thoroughly greased. A hauling rope was fastened near each end of the bundles, and with a little practice the gangs on shore got in the way of keeping the bundle central with reference to the two timbers, or of adjusting any tendency to move aside or come up skew-ways. On the arrival of each sling at the bank, carrying parties were waiting in sufficient strength to take the rails to the stack beds at once, as an accumulation of more than a few rails on the bank resulted in impeding the work. The rail stack beds were most carefully prepared, the type usually employed consisting of four rail lengths of track side by side, the whole of the sleepers being carefully packed quite level. Owing to lack of space it was found necessary to have full layers in both directions throughout the stack, which was raised to a height of thirteen layers, or about 4 ft. 6 ins. Separate stack beds were provided for "special" rails and for the percentage of shorter rails from 18 feet upwards, and it is important to separate out all bent rails and stack them separately for subsequent straightening. A simple form of rail hook, made out of $\frac{3}{4}$ iron and about 2 feet long, was found very convenient for handling the rails on the stack beds. Care must be taken that the ends of the rails are not burred by blows from a hammer.

Discharging Sleepers.

Sleepers were carried ashore on gangways and can be stacked on almost any ground. Where space admits it is quicker and

more economical to throw them into piles. Time is also saved when re-loading, as sometimes two or three sleepers in a proper stack jamb together and have to be separated by a bar.

Handling Heavy Cases.

Owing to the lack of facilities the discharging of cases weighing from 2 to 30 cwts. was a source of much trouble, two or three handlings being sometimes necessary, and the cases having occasionally to be broken up on the beach. The best way of dealing with these would be by a quick-acting steam crane direct into trucks. It is well worth building a small jetty for the purpose, capable of receiving a lighter alongside, and to arrange for all such cases to be delivered from the steamers into lighters.

Handling Heavy Locomotives.

The most difficult problem was the discharging of the boilers, frames and tenders of the locomotives. These weighed up to 12½ tons, and the first consignment had to be got ashore from an insecurely moored steamer, over a clear span of 42 feet, then up an incline of 1 in 2 for 30 feet, along 40 feet of level, and finally lifted on to trucks. The only power available was one of the ship's winches, and less than a foot was available on board to receive the ends of the gangway timbers. The shore was reached by a gangway of four heavy timbers with rails spiked on top, the outer timbers having to be spaced only 9 ft. apart to fit the gangway of the ship. A cradle with smooth metal under-surfaces was constructed to slide on this gangway and provided with flanges at 9 ft. gauge. The heavy weights were carefully balanced on the centre of the cradle, to which they were lashed with wire rope. Large sheerlegs were erected on shore, 12 ft. by 12 ft. timbers over 50 ft. long being employed, and steel rope lashings and tackle throughout. The sliding track was continued from the gangway up to the sheerlegs, under which a siding was laid. The cradle was pulled from the ship's side to the siding by the main tackle of the sheerlegs, the angle of attachment of the sling which was passed round the cradle and its weight being arranged with very great care. As the blocks available for the first weights were much weaker than the rest of the tackle, every precaution had to be taken to avoid hitches which might bring indeterminate strains to bear, and a vital point to bear in mind is the disturbing effect on the ship's moorings caused by the use of the ship's winch for the main tackle of the sheerlegs. The use of steel rope lashings and tackle for sheerlegs required to lift regularly from 10 to 20 tons is strongly recommended. The second consignment of heavy weights was dealt with in a similar manner

without any difficulty, as stronger tackle was available, and owing to the higher river the clear span and steepness of the slope were much reduced. In 1909 the heavy weights were loaded direct into trucks from the steamers at a jetty erected for the purpose.

Waggon Frames,

which weighed about two tons, were transferred from the ships to the tops of lighters and slid off on to carefully prepared stacking beds, from which they were later on slid under a derrick for erection.

General.

In dealing with large quantities of material as above the secret of success is to look well ahead in the preparation of sufficient stacking beds, to insist on the economical use of the ground, and to be on the *qui vive* to repress the inevitable tendency of the carriers to get rid of their loads at the earliest possible moment, and thus by effectually blocking the entrance to the stacking ground very seriously retard the operations, which may have to be temporarily suspended to put matters right.

Arrangements were made to deal with three branch boats at a time. After the first few days it was found possible to deal with 500 tons a day with ease, and on August 31st a maximum of 870 tons was attained. The quickest bont averaged 355 tons a day for two shifts, or 25 tons per hour of actual work. The total number of natives employed at this time was about 1,200. A dressing tent on the site of the work saved a lot of time in dealing with minor injuries. Almost incredible to relate, in 1908 over 20,000 tons of material were handled with absolutely raw labour, with only one serious accident, which necessitated the amputation of a foot.

As regards the cost of handling, it was found impossible to analyse each class of work at the time, but with foremen costing £1 a day and native labour at 9d. there should be no difficulty in handling rails and sleepers at 1s. 2d. a ton, including the preparation of stack beds, stacking, and the clearing up operations frequently necessary after the periods of greatest stress.

Discharging Locomotives from Lighters.

After the high river some locomotives were sent up to Baro in lighters and proved an awkward task to discharge, as the banks were very high at this time, and the barges had to be lightly loaded to reduce the draught. The procedure was to jack the weights high enough above the level of the barge to allow a gangway to be inserted underneath them, together with the cradle referred to above. The weights were then pulled up a very steep incline in the same way as before, with the exception that an insufficiently powerful winch had

to be employed for the main tackle. As this winch had no capstan drum three separate lifts had to be taken before the weights were deposited on the trucks. For this purpose, and to guard against accidents, safety ropes were invariably provided and kept tight, a most useful precaution, in view of the fact that the cylinder cover of the winch blew off on one occasion. The most serious difficulty in off-loading from lighters is due to their instability, as any deviation of the weight from the centre made them heel over badly. It is well worth while rigidly lashing a second barge alongside.

At a certain level of the river it was found possible to use an exit slipway, and to arrange to traverse the heavy weights by jack direct from the barge to the truck over intervening staging.

Plate-laying and Ballasting.

The Baro-Kano Railway is being constructed as a pioneer railway, that is to say, the expenses of construction are cut down to a minimum, consistent with obtaining a railway capable of carrying all traffic in connection with the administration of the country, and such trade as is likely to develop during the first years of its existence. This economy has not been allowed to affect the most efficient grading and alignment, so that it will be possible, as the amount of traffic justifies it, to gradually strengthen the line and improve the accommodation to meet the requirements. One very considerable source of economy is in the ballasting, which is carried out with sand or any other suitable material available in the immediate vicinity of the line. It is only over a few comparatively short lengths, where the surrounding soil is entirely clay or black cotton ground, that ballast has to be brought by train. This saving in the actual cost of haulage is supplemented by the important reduction in the amount of rolling stock necessary for construction, a point of the highest importance. The extra cost of obtaining better ballast at the expense of a longer lead up to half a mile or even a mile is well worth incurring, but it may be found in rapid railway construction that shortage of labour may prevent full weight being given to this consideration. Ballasting was placed under the officer in charge of the Plate-laying District, and was carried out only a few miles in front of rail head.

Procedure.

The procedure of ballasting and plate-laying is as follows:

The formation is trimmed up by the earthwork parties, and the line is re-centred with pickets left standing about 3 inches above the surface. At the same time level pegs are given every 200 feet on the straight, and every 100 feet—or even 50 feet—on curves. These pegs are best driven on the edge of the formation flush with the correct formation level, and marked by reference pegs painted white,

two such reference pegs being used at each change of grade. This re-centring and levelling is of the greatest importance, as the quality, rapidity and cost of the work depend on the track being laid absolutely straight, and as nearly as possible to correct levels in the first place. Next come the ballasting parties, who make a platform of the best material available, 8 feet wide on the top, with the surface or straight portions of the line 7 inches above correct formation level. In this way an accurate graded surface is prepared for track-laying, notwithstanding slight irregularities in the formation. In the centre of this platform there is left a V shaped groove or furrow (to which fact this ballast platform owes its local name of "The Furrow") for the purpose of leaving the centre pegs exposed to view, and at the same time guarding against any chance of the centre of the sleeper being packed higher than the ends. Accuracy of the grading and alignment of the furrow is obtained by putting in side pegs every 25 feet to mark the outer edges of the furrow, these pegs being levelled to the exact height by boning from the formation pegs. One European, with from six to ten locally trained natives, have no difficulty in doing from $1\frac{1}{2}$ to 2 miles of this boning in a day. On curves the furrow is correctly super-elevated, the point under the inner rail remaining at the height of 7 inches. In this way the road is safe for construction traffic immediately after track-laying, a large amount of lifting is saved, and the extra quantity of ballast required is provided for. The section of the furrow was calculated to provide the requisite ballast for a correct lift to formation level, additional ballast being required for very low places or boxing in.

Track laying is carried out directly from the construction train which is pushed by the largest engine which it is safe to allow over the line. The material is loaded up in units of two trucks containing one-fifth of a mile of material complete. The bottom layer of rails in the rail truck rests on three or four transverse sleepers and each layer above on thin strips of packing, which is broken up as the truck is off-loaded. It is important that no bent rails or short "specials" are loaded up with the ordinary rails, as these delay the track-laying and are expensive and troublesome to pick up. The sleepers are carried from 100 to 200 yards ahead of the train and thrown down across the furrow. Here, they are roughly spaced at an even distance of 2 feet 6 inches centres by a few natives provided with gauges. This ensures the correct number being left per rail length. The centre of each sleeper is at once marked ready for the sleeper straightening and spacing party, consisting of about six natives provided with a special 90 feet chain, the links of which are exactly the length between the centres of the sleepers. This chain is stretched along the centre pegs and held by a boy at each peg, and the sleepers are accurately spaced, centred and squared to the chain by a trained head boy. It may here be mentioned that the weight of rail is 45 lbs.

per yard, and that 12 steel sleepers (weight 72 lbs.) are used for each rail length and spaced 2 feet $6\frac{1}{2}$ inches, except at the joints, which are 2 feet $0\frac{1}{2}$ inch.

The natives of Northern Nigeria carry all loads on their heads, and find considerable difficulty in picking up heavy weights from the ground. The work of rail carrying was, therefore, enormously expedited by the expedient of inserting short lengths of rails as cantilevers under the bottom layer of rails on the truck, and sliding the rails on to these cantilevers so that the carriers could take them directly on their heads. This expedient also avoids the tendency of rails being left behind when the construction train moves forward. The rail-carrying gangs vary from eight to ten men. For continuous work, especially when laying through deep cuttings or over high banks, it does not pay to cut down the gangs to less than ten. The number of linking in rail gangs depends on the rate desired. If over half a mile a day, a special gang lifts the rails and places them on the sleepers as near as possible in position, so that the gangs inserting the rails have less to do. The latter operation is carried out with the assistance of about six thin pointed crow-bars for each gang. The rails are next butted against the expansion irons (these are $\frac{1}{8}$ inch thick, hot weather mid-day; $\frac{1}{4}$ inch, hot weather morning, cool weather mid-day, $\frac{3}{8}$ inch cool weather, morning) and fixed with two bolts. After three or four rail lengths the track is straightened to centre pegs, the sleeper spacing checked, and the train signalled forward. The remaining two fish bolts and all the keys are put in later on, sometimes two or three weeks behind rail head, though it would be better to follow close behind. Within five miles of rail head should follow the first lift party, and these leave the track accurately packed, straightened and graded at the final height of 12 inches above formation level. It will be seen that accurate pegging out, ballasting and track-laying will greatly facilitate the work of this party, who should have no difficulty in averaging half a mile a day, including boxing in, for each party consisting of one European and 150 natives. The track is then fit to run over 30 miles an hour, except over special places, such as deviations. A few small maintenance gangs should work on the section immediately behind the construction train to deal with slacks on the newly made banks, put in points and crossings, and attend to bridge approaches and deviations. During the dry weather it is possible to run over the track just as it is left by the construction train for several weeks, and it is wonderful how the line holds up under these conditions with good sand ballast. On curves, special rails 29 feet 8 inches long were used at first to keep the joints square. Owing to a shortage in these, joints on curves were staggered by starting with an 18 feet rail on the outer side just before entering on the curve, and finishing with a closer just after the end of the

curve to bring the joints square again. No time is lost cutting the closer, which is fly fished for the time being. Except for the disadvantage of the irregular spacing of sleepers, there is no doubt that the staggered joints resulted in a better running track.

The usual working hours at rail head were from 6 a.m. to 3 p.m., with an interval for breakfast at an hour depending on the progress of the work, but is possible before 10 a.m. In the hot weather in the Bako valley these hours were slightly curtailed, and work started at 5.30 in the morning. The Europeans of the construction party were accommodated in type camps from 5 to 10 miles apart, the houses being mud or grass, supplemented by tents. It is difficult to get work done on the day of changing camp, and it very often pays to reconcile oneself to losing a day or to make it fit in with pay-day. It is most important that camps should be kept thoroughly clean, and an expenditure equivalent to £1 10s. per mile was freely incurred with this object.

Labour.

The labour question has hitherto been a most serious one. Some 15,000 natives were employed on the Baro-Kano Railway from January to March, 1910, and in a new country it is not easy to procure this number. Moreover, during the past season work has been carried on through large uncultivated areas, and the question of food supply has added to the difficulties. Markets were established at rail head camp, free passes were issued to traders bringing supplies to rail head, and rice was imported and issued at cost price. Weekly payments were found necessary to give confidence to the natives, and the arrangement of this, including the supply of specie from Baro, gave endless trouble.

General.

A covered tool truck was kept at Railhead Camp, and saves a lot of trouble and loss in view of the frequent moves as railhead progresses. A native blacksmith and a few native carpenters are required at railhead. The latter, besides attending to miscellaneous jobs, make from local timber all the pick and hammer handles used at railhead, and also all the wooden beaters used with sand ballast in preference to the ordinary form of steel beater.

When out of touch with the European doctor, a European medical orderly is attached to railhead, and in any case a native dresser to attend to minor injuries and ailments among the labourers, which would otherwise throw a lot of extra work on the engineer in charge. A canteen truck is arranged for at railhead, through one of the Baro firms, and was found a very great convenience.

It is most important that railhead should be in good telegraphic or telephonic communication with stations behind and head-quarters. With this end the advanced telegraph station was kept pushed forward to the railway station nearest Railhead Camp. A telegraph line was laid by a construction party attached to railhead, and had no difficulty in laying two miles a day. Great trouble was experienced through breakdowns caused by lightning and by bush fires.

Earth Works.

Earth works cost from £200 to £340 per mile, though, in a few places where there was very heavy work, the cost reached £800 per mile. The rate of progress has been from 15 to 26 miles per month. The cost of the work from $3\frac{1}{2}$ d. to $4\frac{1}{2}$ d. per cubic yard.

Rock cuttings have been carefully avoided, but heavy work has been faced to obtain a better ruling grade with a view to the best ultimate efficiency of the line.

Bridging.

Bridging on the first two sections—namely up to the Kaduna—has had to be very heavy for a Pioneer line. The waterways amount to 50 lineal feet per mile on the Baro-Minna Section. The largest bridge will be about 500 feet long over the Kaduna. The largest span employed is the South African type of 100 feet. In the first section practically all the founds are in sand, and consist of wells sunk up to a depth of 20 feet. The expedient of using concrete well curbs reinforced with a few tram rails was found to be most successful. With one exception, where a powerful steam pump was used, the founds were kept clear of water by diaphragm pumps. It is vital to get all the founds in before the first heavy rains, and towards the end of the dry season the work on the piers and superstructure is practically neglected till all the founds are secured.

Steel trestle piers are used for spans up to 30 feet and can be very quickly erected. The commonest spans are 15, 20 and 30 feet. The bulk of the culverts are thick corrugated iron, 2 feet, 3 feet, 4 feet, 5 feet and 6 feet diameter the weight being relieved by dry stone walls with a concrete arch or a platform of rails and stones in the case of all culverts over 3 feet diameter. A number of thick steel culverts 6 feet diameter have also been employed.

Climate.

The climate of Northern Nigeria is far healthier than that of any of the other West African Colonies, and the right type of man should have every prospect of keeping fit if he observes certain

simple precautions—namely, taking his quinine regularly; never sleeping except under a mosquito net which should be kept in perfect order; wearing mosquito boots instead of shoes in the morning and evening; always wearing a helmet between 8 a.m. and 5 p.m.; wearing a spine pad, especially during the hot weather, and not disdaining the use of an umbrella; keeping an extra blanket at the foot of his bed under the mosquito net to draw up in the cool of the morning; living temperately, and in no case touching intoxicants before sundown; taking as much exercise as possible and keeping the bowels open.

MUNICIPAL GOVERNMENT IN THE STRAITS SETTLEMENTS.

THE Report of the Commission which enquired into the administration of municipal affairs in the Straits Settlements has, naturally enough, made a deep impression in the Colony, and has a considerable interest for other places. The establishment of municipalities in Crown Colonies represents a sort of compromise. In the large affairs the severity of autocracy is maintained, but as regards purely local matters of the kind associated with municipal activities, there is a disposition to encourage the beginnings of representative government. This is clearly sound in principle, for it is only in this way that the public can be taught to form a judgment on correct materials about public matters. There must, however, be many failures and disappointments in the process. In a population which practically has no voice in the selection of officers, and not much influence in the conduct of affairs, the difficulty of taking the first step is very great. The voters probably neither know nor care about the idea of sanitary improvement, which is the mainspring of municipal action. They show their small interest by the low number of votes, and their representatives are usually animated principally by the desire to vote against anything which costs money. In some cases the experiment has been brought to a standstill by the refusal of the council to impose any rates. At such a stage the Government must, of course, intervene, and in some way or other resume its functions; but it is advisable to keep the form of a municipal body, and to utilise as far as possible the best members of the community.

In the Straits Settlements the chances of success were at least as good as in any average Crown Colony. The population is orderly and by no means unintelligent, and there is a considerable number of Europeans. But the latter are not men of leisure. They cannot afford the time required for the examination of the mass of details which grow up. It is distasteful to them to carry out work which may at any time bring

them into conflict with persons with whom they have business or social relations. The local world is a small one, and when prosecutions have to be undertaken, as is necessary with an ignorant and apathetic population if any good is to be done, it is not surprising if the representatives show a disposition to shirk the responsibility.

Accordingly, in view of "the small interest taken in municipal matters by the general body of voters, the frequent failures to get the necessary number of votes, even when nominations take place, and the dependence on Government which is generally shown in the matter of municipal representation," the Commission recommended the appointment of a Board of Members nominated by the Governor. This throws over the principle of election by the people; but if the privilege is not valued there is no help for it. There were other reasons for the recommendations which do not make pleasant reading. It is only fair to the Municipal Commissioners to observe that the flagrant irregularities lay not with them but with the Secretariat. The assessment of houses, the very basis of municipal work, had not been properly carried out, and in some cases this could hardly have been due to mere negligence. For the general sanitary policy the Commissioners were responsible, and here the weakness of the system is apparent. It is true that much useful work has been done and that the rate of expenditure has gone up rapidly. But the good effect of the measures taken was destroyed by the ignorance and neglect of the public, and the conclusion was forced on the Commission that it was practically useless to rely on any help from it. No work has been done on a systematic scale for the suppression of malaria, and in this important matter the Straits compare badly with other tropical countries. The only remedy is to give the Government larger powers of deciding what the sanitary schemes of the municipality shall be.

A large part of the evidence is devoted to the methods of inviting tenders for stores and materials. The time allowed on these occasions did not, it was stated, permit of prices being obtained from London, and the system resulted in the local firms being able to a considerable extent to arrange matters comfortably among themselves. "It is generally decided beforehand who should get the contract, the prices being arranged so as to secure to them a satisfactory profit on the cost price, and at the end of the year the other firms interested are paid a rebate by the firm obtaining the contract." Of course, when competition is confined to specific limits, there is a direct invitation to the firms that are inside the ropes to form a pool. The Straits merchants are in no way peculiar so far as this matter goes. In days when international pools are formed in articles of necessity, it is not surprising if a small community adopts the system. The fictitiously high price which appears in the tenders is not the only irregular feature. "It is also alleged that these

tenderers quote a low price for the articles of which a few will be required, and a high price for the articles which they have the means of knowing will be used on a large scale." Of course they do: this is the regular custom under such conditions. It is, in fact, impossible to compare tenders when tenderers are only asked to put rates against articles, without being told the quantities. No one can say how the thing will work out unless he knows from other sources to some extent what quantities of each item will be required, and the local merchant does his best to find out and to adjust the prices accordingly. The only sound method is to extend the rates by multiplying them in each case with the probable quantities, and to compare the totals.

But this is a small matter compared with the evidence of corruption. "It was asserted, and documentary evidence was produced in proof of the assertion, that a commission of 10 per cent. was granted on certain bills which passed through the hands of certain officials . . . these documents were shown to the parties whose initials they were supposed to bear and the initials were admitted by them as being theirs, the reason given being that these sums were paid for working overtime and for technical advice." Certain answers amounted to this, "that it would seriously inconvenience their business to discontinue payments to municipal servants, that it was good policy to pay them . . . that in Singapore, with a few exceptions, viz., of the highest officials, the officers who insisted on getting commission were in too high a position to be attached." We do not find any evidence that any official "insisted" or in any way asked for payments, and there are no grounds for inferring corruption of this grave nature. But presents were undoubtedly given in some cases, under a colourable pretext of being for technical advice or assistance.

The Commission concluded that all articles not in the printed schedule which are produced or manufactured in Europe and America (and not locally) should be obtained through the Agent (in the United Kingdom). They also stated that having regard to certain experience of local work it would appear desirable that tenders for all large construction works involving special skill and knowledge should be invited at home and not in the Colony, and that for supervising loan works, "it would be better to engage a specially trained man for each such work." The sound principles in such matters are plain enough. The local contractor has some advantages in his knowledge of the local conditions and in his supply of labour, and he is frequently extremely useful as a sub-contractor for plain work; but a great risk is run if he is entrusted with important work for which he has not had the proper experience and appliances. It is quite true that even with the best staffs estimates of money and time are from time to time exceeded, and

when it is difficult or impracticable to gauge the extent of a work before it is undertaken, there are likely to be troublesome questions with the contractor, as, unfortunately, the Straits are experiencing at present, but as engineering on the ground is not an exact science, all that can be done is to minimise the chance of disappointment by using the best men available. If there is enough continuous work in the Colony to qualify the appointment of a permanent official, it is, of course, wise to make one, but usually in large construction work it is cheaper and more satisfactory to send out an expert for the particular job.

The Commission conclude that the Colonial Government, as it raises the loan money required, should have some means of supervising the expenditure and securing that the money is wisely and properly spent, and recommend the creation of a composite board for this purpose.

The Commissioners have dealt ably and courageously with a trying and painful task, and left no stone unturned to get at the facts. They have been supported by the press of the Colony with excellent public spirit. "It cannot be said," the *Straits Times* wrote, "that the British have been unwilling to adopt the principle of free representative Government in their Colonies and dependencies. They have erred, if at all, in making experiments with such Government too readily. . . . The existing system stands condemned not only by reason of the deplorable corruption which has grown up under it, but by the waste of energy, the overlapping of powers, and the unsatisfactoriness of its results." This is striking language from a paper which has, with perfectly natural and proper motives, from time to time spoken on behalf of the representative system. That development is the ideal of the future; but when and where circumstances are ripe for it is another matter.

REVIEWS AND NOTICES.

The Broad Stone of Empire ; problems of Crown Colony Administration : with record of personal experience.—By
SIR CHARLES BRUCE, G.C.M.G. (*Macmillan & Co., Ltd.* 30s. net.)

These two volumes cover a very wide field, and the research and industry shown by their contents are remarkable. Sir Charles Bruce had a long and varied experience of the Crown Colonies, and now utilises it and the materials at his command to discuss the administrative problems connected with them. He thoroughly grasps at the outset the industrial importance of these colonies to Great Britain and the value of the various bodies which advise and assist them. He truly remarks that the employment of the white man in the United Kingdom depends, to an extent which he does not clearly realise, on the employment of the coloured man in the tropics. Every year the materials sent to this country for food, or for work, increase ; and if, as is sometimes complained, British capital is being sent abroad more and more, it may at least be urged that this is largely due to enterprise, the result of which is to feed the British market with the things that are necessary to the development of the home industries. In this matter the Crown Colonies are becoming steadily more important, and this process will surely continue.

Sir Charles Bruce deals with all the leading heads of administration, such as law, labour, health, education, religion, agriculture, forestry and defence. Any attempt to deal fully with these subjects would of course be encyclopædic. The matter given naturally reflects to a large extent the author's personal experiences, but he has displayed no little assiduity in endeavouring to complete his survey. He has also views on the question of the home methods of control. He advocates the creation of "an advisory council to assist the Secretary of State in all matters relating to the Crown Colonies." This proposal is largely based on the theory that the Colonial Office is administered by "junior clerks," a system which,

it is urged, is "deplorable, but apparently admitted." We would, with all respect, suggest that it is not admitted, and that it is not the fact. A governor who has received a despatch of an unpalatable character may occasionally have consoled himself, or others, with the theory that the objectionable criticism was really the work of a "junior clerk." But it is safe to say that no serious statement is ever sent out from the Colonial Office without the deliberate approval of a high official, and it is probable that in no other office in the United Kingdom does the Secretary of State deal so much with the work in detail. We are unable therefore to support the first advantage claimed for the proposal, viz., that the Secretary of State "will be informed of what is going on in his own office" (p. 196). Another reason is that the council would help to maintain "continuity of policy" (p. 185). The idea is that ex-governors would help to prevent this policy being changed by their successors. Very likely this would be the case, but it may be doubted whether continuity should be regarded so much as a sacred principle. In any case the existing system secures a considerable degree of continuity, and, valuable as would be the advice of a retired governor, such as Sir Charles Bruce, on a matter with which he has dealt himself, it must be admitted that circumstances are continually changing and policies with them. To follow such changes continuous work is necessary, and, if any control is to be exercised over the staffs in the colonies, it is surely better to exercise it through officials who are at work daily, than through a body which would be largely composed of officials who are presumably enjoying a well-earned rest, for the most part far from London.

We do not find in these pages any substantial evidence of such statements as the above proposal would seem to imply, and in fact Sir Charles Bruce's accounts of the measures which have been taken in the wide and varied field of administration will convey to most readers quite a different impression. Of this part of the work we have little criticism to offer. We notice that the annual average "disbursements" of the Crown Agents' Office are put at over £25,000,000 (p. 214). Some time ago the press gave prominence to a statement that these outlays amounted in one year to some £90,000,000, and manufacturers and suppliers may well wonder where these large amounts go to. The "disbursements" are in fact the total business, and are mostly loan and investment business. In the year of the £90,000,000 it was the passage of the Transvaal loan through the books, a formal matter, which produced this imposing figure. The actual purchases amount to about two and a half millions. We also observe that the Crown Agents' fund is supposed to receive the interest charged to Colonies on overdrawn accounts. Unfortunately, the interest has to be paid to the parties (sometimes another Colony which is in funds) who lend the money; the office gets nothing out

of the transaction, not even a commission. These, however, are trifling matters in so large a field, and we trust that Sir Charles Bruce will be rewarded for his labour by many readers, who will appreciate his clear style, his store of facts, and thoughtful observations on policy and practice.

The Illustrated Guide to the Federated Malay States.—

EDITED BY C. W. HARRISON. (*Malay States Development Agency*: 3s. 6d. net, leather).

In one sense Malaya has been of late prominently before this country. A great number of companies have been formed to produce rubber there, and in numerous cases the interest of the public has been demonstrated by great over-subscription. But the effect of all this on the Malayan States is hardly so considerable as might be inferred. Most of the new companies take over old coffee or rubber estates, and though of course a certain amount of development takes place, other means are necessary to supply the enterprise required for filling up the western side and breaking new ground on the eastern.

The present handbook is written to attract and guide the tourist or explorer, and begins by showing that travelling is safe and fairly comfortable. For one thing there is no "unrest" in Malaya. The labour class does not exist there, and the natives are courteous and ready to oblige. The physical features of the country are described by Mr. Harrison with a vividness which should attract the genus globe-trotter, and at the same time a good deal of information is imparted about the natural resources. The following extract deals with the fashionable industry:—

"It is a relief to find yourself amongst the rubber trees and their cool shade. Upstart cultivation though it be as compared with coconuts, rubber has made enormous strides of late years and in every district are large estates. In the burnt clearing you have left is seen the beginning of the cultivation. Here the little slim para rubber plants are planted out amongst the rotting timbers of the forest primeval. Originally sown as seed all together in a patch of cleared land they have rushed up through the soil with that endearing willingness to be good and grow quickly for which the planter loves them. At three or four feet high they are ready for transplanting, and each is carefully dug up, carried from the nursery to its prepared hole in the clearing, and left to the rapid development of a thoroughly happy tree. The rubber came originally from the other side of the world, from Paraguay in South America, but it took to Malaya at once, and had it not been that coffee was before it in Malaya, more attention would have been given it earlier. But Malaya is making up for lost time, and planting, planting, planting rubber with an almost feverish activity. The tree itself is of a picturesque habit,

leafy and very green, with a scented flower of the true tropical sweetness, adding a new but not quite a strange perfume to the innumerable sweet scents of the country. As you are not concerned with it merely as a money-maker you note the delicately pretty patterns of greyish bark splashed with patches of bright yellow mosses and decked with gleams of sunlight. But, after all, rubber is worth so much a pound, and the winning of it is interesting. So you turn to watch yet another expert. Perhaps you are by this time too late, for tapping is done in the early morning and all you see is coolies going round, emptying into large tins the bright white juice or latex from the little cups at the foot of the trees. But for your edification a tree is tapped. Estates have their fancies in knives, but probably the ordinary farrier's knife is most employed. Down the trunk of the tree runs a pattern of cuts. The knife is laid on, and slowly, carefully bearing on it, the tapper shaves off just a little slice of bark. At once the white latex oozes forth and as cut after cut is reopened the tree yields a stream of latex which runs down the backbone out to a little open spout of tin fixed into the bark near the ground. Thence it drips into a little cup, which may be a cigarette tin or some patent receptacle, or a china cup, or a coconut shell—anything indeed which is cheap and of the proper size."

Notwithstanding the discovery of other fields, the Malay States produce half the world's supply of tin, and there is plenty still left. Except on the East Coast little has been done to exploit lode or similar formations, and the explorer may find much to do.

"It is no exaggeration to say that in any part of the Federated Malay States on the West, anywhere in the thousands of acres of alluvial lands that lie at the base of the granitic hills, it would be the exception not to find a trace of tin ore in the alluvial strata. Underlying these alluvial deposits, and forming the bed-rock, are generally found on the alluvial plains, crystalline limestones, slates, schistose, or granitic rocks. In the valleys of the Kinta River, in Perak, and the Klang River in Selangor, the bedrock is mainly a crystalline limestone of commercial value. Probably one of the most unique formations in which alluvial tin ore is found is the marble cliffs that make such a striking feature in the Kinta scenery. They rise abruptly from the alluvial plains, with vertical sides, and are of the same nature as the limestone forming the bed of the valley. Whether their present exalted position is owing to volcanic action which has elevated them above the general level of the country, or whether volcanic action and metamorphism has enabled them to resist the general denudation of the other rocks, must be left to the geologist to solve. Some of these limestone cliffs are riddled with caves, and in these caves alluvial deposits of immense value have been found. Again, in many cases, these cliffs are like a bamboo structure, with a hollow core, the outer shell being of crystalline

limestone of varying thickness—the core being partially filled with alluvium highly impregnated with oxide of iron.”

The guide is well illustrated and is furnished with the indispensable map. We may mention that a station hotel will be opened at Kuala Lumpur in July next.

Malta.—Painted by VITTORIO BORON; described by F. W. RYAN. (*A. and C. Black. 7s. 6d. net.*)

Malta is, as far as any one place can be, an epitome of the successive stages of civilization. We need not lay stress on its claims to be the home of Calypso, as though her grotto in Gozo is there for anyone to see, the uncertainty of Ulysses' itinerary renders prosaic proof impracticable. But it is certain that at some such early period the Phœnicians, the foremost of barbarian nations, sailing out into the Mediterranean from the narrow strip of land that lay between Lebanon and the sea, came to Malta and occupied it for some 700 years. To the present day their rule is marked by some impressive stones, excavated in modern times, by the language, and by the characteristics of the inhabitants. To the Phœnicians succeeded the Greeks, and after them the Carthaginians. It played a part in the Punic wars and passed eventually to Rome. Under that rule occurred the event which holds the imagination of the Maltese and invests the island with a sacred character in the eyes of Christendom—the coming of St. Paul in 58 A.D. At the division of the Roman Empire, Malta was included in the Eastern half, and in the year 870 the Arabs, sweeping westward, took possession. It was so held for some two centuries when the Arabs were expelled, and then for nearly five hundred years it became a pawn in the wars of feudal lords. Eventually it fell to the Order of St. John of Jerusalem, and in 1565 underwent the “Great Siege” by the Turks. The conspicuous fortifications of the island are an indestructible monument of the rule of the military priesthood. At the outbreak of the French Revolution the Grand Master offered official condolences to the family of Louis XVI. This ended the career of the Order. Napoleon's reply was the seizure of the island, and the Knights were turned out with scant courtesy. In 1814, by the voluntary act of the inhabitants, the islands were finally vested in Great Britain.

From the first the difficulties of British administration were very great. The laws, customs and ideas of the inhabitants were wholly strange to the first governors. In recent years there has been much friction over the language and marriage questions. But on the whole, considering the wide differences between the two races, things have gone on with a remarkable degree of freedom from

serious trouble. The indigenous and exotic societies are as much apart as ever, and there is little social mingling. Each has its own ways and they do not blend. But despite some awkward incidents, such as almost inevitably arise from fundamental differences, the general spirit is one of loyalty on the one side and respect on the other. The political disputes are not perhaps so important, or excite so much feeling, as may appear on the surface. The Maltese are a light-hearted race and their Islands afford abundant attractions. It is of course well known socially to the military world, but the ordinary winter tourist is not as much in evidence as he should be. The limited hotel accommodation has something to do with this, but this would no doubt soon be rectified if more patronage were forthcoming. The present volume is excellently adapted to excite a wider interest in the place. The historical account and the description of the places of interest are vividly done, and the illustrations are numerous and captivating.

Letters and Sketches from Northern Nigeria.—By MARTIN S. KISCH, Assistant-Resident, with an Introduction by Sir PERCY GIROUARD, and numerous Illustrations by the Author. (*Chatto & Windus. 6s. net.*)

The Colonial service lost a most promising recruit when Mr. Kisch died of diphtheria after a few months' service in Northern Nigeria. Sir Percy Girouard says: "My personal acquaintance with him and his work was brief, but of sufficient duration to predict a brilliant future had he been spared. His early mastery of languages, his unfailing good humour and camaraderie, and his high mental gifts, would have placed him anywhere in the Nigerian Service." Diphtheria is almost unknown in Northern Nigeria, and its origin in this instance could not be traced.

The letters abound with allusions to the men whom the writer met and whose identity can in many cases be easily detected by the initial given, to say nothing of the lively sketch which usually accompanies it. But there is only the spirit of good-fellowship in these references, and no one's feelings will be hurt, though naturally things are given a turn of humour, as when the first "old coaster" met is described as about 5 feet 11 inches high, and 10 feet 11 inches round the equator, and a military officer is mentioned as having a glass eye which was so good that it rolled a little and had far more expression in it than the other optic. The journey out from Liverpool and up to Sokoto is described with the vivid detail of a clever writer who meant to tell his people exactly what he was going through, though naturally the style is of a domestic character and there is no attempt to get below the surface of things. Everything is illustrated

with an amusing sketch. The following extract shows the sort of work which may fall to the lot of the young official just arrived :—

“I have to take over the whole Provincial Office work on Tuesday, which means taking charge of £7,000 in the safe: collecting and counting £23,000 from the Sarikis; paying everybody; ordering carriers or donkeys; sending in countless returns every month, quarter, and six months; hearing cases in the Provincial Court, of which I am a judge; taking a record of all cases in the native courts; copying maps; measuring prisoners on arrival, and entering particulars in six different books; estimating the price for guinea-corn; and ordering any building necessary to be built, and paying for it. Yesterday there were 1,000 carriers, all in one tremendous string, in front of my office for me to inspect their loads of corn. I have to inspect 4,000 more loads. I have four messengers and an interpreter, all tremendous “bloods” who ride horses and wear enormous turbans and beautifully embroidered trousers and rigas.”

Imperial Institute.

The report for 1909, issued last October, contains an account of minerals collected in Southern Nigeria. Lignite has been found of good quality and suitable for use as fuel and for the production of gas. In Northern Nigeria there are immense deposits, favourably suited for export, of iron ores of good quality. Limestone has been collected between Jakura and Wa and should be a valuable article in West Africa. Large quantities of pegmonite carrying tinstone easily workable, were found in the Eri district. In Nyasaland a fine quality of flake graphite has been received from Mkoma, and this discovery will attract attention. Promising samples of asbestos have been received from Cyprus.

Ceylon Mineral Survey. (Cd. 5390).

This report shows that the island contains, in addition to gem stones, a number of minerals of commercial importance, of which only graphite, mica, and thorianite are at present worked. There is room for more enterprise as regards mica. Thorianite is a new mineral only so far found in Ceylon, and is used as a source of the thoria in incandescent gas mantles. This mineral will no doubt be in increased demand and should attract further exploration.

The Report on Nyasaland for 1909–1910 contains a very encouraging account of cotton prospects in the Protectorate :—

“The cotton crop has been successful and is rapidly improving its already strong position.

“The European acreage under cotton has increased from 6,037 last year to 8,975 for the year under review, while the crop at present being harvested covers over 12,000 acres. The European

output for the year 1909 amounted to 852½ tons (unginned). A particularly gratifying feature is the increasing yield per acre. Many estates which produced 100 lbs. of lint per acre a few years ago, are now averaging as high as 165 lbs., while some gardens have yielded over two hundredweight. As to quality, the highland grown cotton is superior to that produced on the lower levels, although the yield of the latter is generally heavier. Nyasaland Upland cotton in point of lustre, silkiness, and length of staple, leaves practically nothing to be desired, and at its best is unrivalled. It has obtained the record price of 1s. 2½d. per lb., and the brokers have given it as their opinion that the Nyasaland Upland crop of 1909 is the finest cotton ever grown from Upland seed in any part of the world. This excellent variety is now thoroughly acclimatised here and is doing very well over an unusually wide range of altitude namely, from 1,000 to 3,000 feet. The European-grown Egyptian cotton on the Lower Shire River was a partial failure, owing to the ravages of bacterial blight, an American disease. However, although the crop was small, it sold at prices which compare favourably with those of cotton grown in Egypt.

"The native cotton industry has likewise made satisfactory progress. If an important export trade in cotton is to be created here, it is imperative that the interest of the natives should be aroused and their willing co-operation enlisted. The constitutional apathy of the local tribes towards all novel forms of industry seemed at one time to present an almost insuperable obstacle to the establishment of cotton as a general staple of native cultivation. It may even yet be too soon to indulge in too sanguine predictions, or to assume that cotton will eventually take its place in every village garden and obtain a fair share of the attention which is now given to cereals, such as maize and millet. This, however, is the object which the Protectorate Government has in view. Its accomplishment must necessarily be a gradual process, because if the co-operation of natives is to be of any real and lasting value, it must be given freely and intelligently from a conviction of the benefits which it confers on the cultivators themselves rather than from any unreasoning acquiescence in the wishes of those in authority. There can be no doubt that very encouraging progress has already been made towards this end. The native cotton crop for the year under review amounted to 220 tons, an increase of 130 tons on the previous year. The crop now approaching maturity promises well, and, as seed distribution has practically doubled in amount, there is reason to anticipate a further large increase in the output.

"The quality of native-grown Nyasaland Upland cotton has always been as good as, if not better than, European-grown Upland, but the native-grown Egyptian crop has in the past been very disappointing. A marked improvement has, however,

resulted from teaching the natives how to grade their cotton, and a large proportion of the native crop from Port Herald, on the Lower Shire River, obtained 1s. 1d. per lb., one of the highest prices hitherto secured by Egyptian cotton in this Protectorate. Under the system at present in vogue natives grow and sell their cotton more or less under the auspices of the Resident of the district, who, while leaving the vendors a perfectly free choice as to the disposal of their produce, assists them in every possible way by seed distribution, by advice as to methods of cultivation and otherwise. It is interesting to note that not a few natives are now opening up independent plantations of their own, apart from the ordinary village gardens, where the cotton is tended jointly, and the profits are divided as a sort of communal enterprise.

"In course of time it is to be hoped that native planters will be able to reap the benefit of any rise in the value of raw cotton, but at present there is much to be said in favour of adhering to a fixed purchase price, since the native mind is not yet competent to grasp the idea of market fluctuations and would be inordinately puzzled and discouraged by any sudden depreciation in the value of his wares."

We have received the first number of *The Round Table*, a new quarterly periodical which will be concerned solely with Imperial affairs. The place of honour is given to an article on Anglo-German rivalry, and, under the head of British politics, "The Constitutional Crisis and "The Revival of Home Rule" are discussed in articles, which have inevitably lost something of their actuality in consequence of the political developments which have occurred since they were written. Canadian and South African affairs are dealt with by local correspondents, and in future issues it is intended that other parts of the Empire shall receive similar treatment. The papers in the first number reach an unusually high level of ability, and the attempt to avoid partizanship and sectional bias has met with a considerable measure of success. The price of *The Round Table* is 2s. 6d. a copy, or 10s. per annum, post free, and it may be obtained from The Secretary, 175, Piccadilly, W.; A. J. Glazebrook, Esquire, James Buildings, Yonge Street, Toronto; J. Tyndall, Esquire, 29, Sauers Buildings, Johannesburg; and J. A. Atkinson, Esq., 162, Featherstone Road, Wellington, N.Z.

The November number of *Travel and Exploration* contains an article on Bermuda as a resort for tourists. The claims upon this fortunate class are continually increasing in number, but, certainly, Bermuda has special attractions as a "winter paradise." Amongst them may, perhaps, be numbered the fact that there are no railways, tramways, horse cars or motor cars.

BUSINESS NOTES.

Oil.

The great rush of capital to the Russian oil fields has no doubt checked developments in our own possessions. Probably the Russian boom would have come earlier but for paucity of suitable shipping, and the heavy dues on oil through the Suez Canal. The Texas developments seriously affect the position of the big American trust, and the action of this body in reducing rates abroad, which was forced upon them by increasing competition, tends further to put off exploration. For export purposes the good distribution, the elaborate steamship and barge service, and the wide business ramifications of that body will be powerful weapons. Meantime the use of liquid fuel is spreading in all directions, not only in marine engineering, but in power stations, locomotives and metallurgical processes. The most striking recent improvement is that of the Diesel Engine Company in producing a marine engine which is coupled direct to the propeller shaft without the intervention of a clutch. The engine itself is reversible and variable in speed. It is said that a vessel so fitted, running nine knots an hour, with an engine of 500-h.p., could cover 2,000 miles with 25 tons of fuel, costing about £52. The Lloyd's report, lately issued (1909-1910), contains the following remarks on the subject :—

“The use of internal combustion engines for marine purposes has hitherto been confined to small vessels and yachts, but the possibility of the use of this description of engine as the motive power of large vessels is now becoming a question of immediate and practical importance.

“The internal combustion engines in most general use on land and also those fitted in small vessels are worked upon the 4-stroke cycle principle, and are single-acting, so that with each cylinder there is only one impulse for two revolutions of the shaft. With this type of engine there is considerable difficulty in effecting the reversal of the direction of rotation of the engine, and

when these engines are used for marine purposes the astern motion of the screw has usually been obtained by the use of toothed wheel gearing.

“Comparatively recently there has been a development in the Diesel Oil Engine for marine work. A 2-stroke cycle has been successfully adopted, and the reversal is effected in the engine itself, the crank shaft being directly coupled to the screw shaft. The Diesel Oil Engine is now being fitted to three fairly large vessels being built on the Continent under the supervision of the Surveyors to Lloyd's Register. One set is being constructed on the older principle of the 4-stroke cycle with single-acting cylinders, and will be of about 450 i.h.p. Another set is being made on the 2-stroke cycle, also single-acting, and is intended for a twin-screw vessel, the power being about 900 i.h.p. on each shaft. The third set is being made on the 2-stroke cycle double-acting system, each cylinder providing two impulses per revolution; this also will be fitted in a twin-screw vessel, the total power being about 1,800 i.h.p. In each of these cases the engines will be directly coupled to the screw shafts.

“In a set of internal combustion engines, which is being constructed under the Society's survey in this country for a vessel of about 260 tons, there are several novel features. The engines are intended to work with gas produced on board from anthracite coal. The cylinders are of comparatively small size, and the engines are intended to run at a high rate of revolution, and will not be reversible. The connection with the screw shaft will be made by means of a hydrodynamic transformer in which a turbine pump driven by the engine delivers water to another turbine coupled directly to the screw shaft. The arrangement is such that the screw shaft will rotate at a much less rate of speed than the engines, and provision is also made for reversing its direction of rotation.

“The experience which will be obtained from these four applications of the internal combustion engine is being looked forward to with great interest and will provide data of extreme value.”

The Trinidad Government have decided to institute a licence authorising applicants to examine or explore the surface of any Crown lands or other lands on which the Crown has oil and mineral rights, with the object of selecting areas over which to apply for prospecting licences. These exploration licences will carry no obligations other than a deposit of £2 with the application. The licence may be made an exclusive one; but this would only be done in the case of companies of the highest standing, financially and technically. Such a licence has been approved to the British and Foreign Oil and Rubber Trust over lands totalling some 47,000 acres.

It is a great convenience to a Colonial Government if there is a leading company which can act as a common carrier and make other arrangements which benefit the whole trade. Thus in Burmah the Burmah Oil Company is bound by its agreement with the Secretary of State to place 20 per cent. of the carrying capacity of its pipe at the disposal of other persons in the business, and to maintain large tanks for the reception of oil brought in by outside producers. The Trinidad Government have a similar object in view.

West Africa has so far been disappointing; the geological formations are favourable, and there are numerous patches of bitumen; all that is wanted is the oil.

Mineral oil springs have been discovered in Newfoundland, and one company is at work on them. Each year, in fact, tends to confirm the opinion that the mineral resources of this near colony deserve better attention than they have received. There are extensive formations of asbestos and chromite which await development. Mining leases are granted on easy terms. The Harmsworth Company have been very successful in the introduction of paper, and there is room for much further enterprise.

Tin.

In Nigeria the prospects are good, and a great number of prospectors are at work. A "Mineral Proclamation" has been issued in Northern Nigeria; the fee for a "prospecting right" is £5, and for an exclusive licence to prospect, £50 per square mile. Mining leases are only granted on proof of the possession of sufficient working capital (which has been put at £500 per square mile), and on various terms according to kind; a royalty of £5 per cent. is imposed on all metal won under mining leases. We observe that all mining areas extend "downwards to an unlimited depth from the surface:" it is to be hoped that full advantage will be taken of this liberal permission.

Other Products.

The fall in the market price of rubber has not materially affected the activity of producers. Many calculations as to the future price seem to be based on the assumption that all the new plantations will secure a good yield from all their trees and for a long time: in practice the yield is very variable, and this must be taken into account.

Sugar, after the heavy fall, is likely to show a more regular level, but no product is more uncertain in price, partly because it is the subject of extensive gambling which causes artificial variation.

One article that has gone up considerably is copra. This is due to its making a good sort of butter, much used now in the Continental armies. On the whole it is likely that there are bigger profits in the coconut than in any other tropical product. It is said to yield 87 products. We ought to do more with it. The Dutch, who know a good business thing as well as any one, sent in 1909 some 250,000 tons through the Suez Canal. One result of the higher price is that soap manufacturers, who use coconut oil, finding supplies expensive, are looking out for cheaper sources. The enterprising firm of Lever Brothers, which has already exploited the South Seas, are arranging to deal with palm kernels in Southern Nigeria.

Another promising product is fibre. There have, of course, been many disappointments, but the nature of suitable soil is now better understood, and more effective machinery is available. We append an estimate of cost and profit made by the agent of a company, operating in a West Indian island, who has a good practical knowledge of the subject:—

“I give you herewith the cost of cutting, carting, extracting, baling and hanking 1,000 bundles of 4 ft. leaves, which from the experience I have had should give one ton American (2,000 lbs.) of dry fibre, delivered to New York, viz:—

Cutting 1,000 bundles of 50 leaves each, at $\frac{1}{2}$ -cent.			
per bundle	£1	0	0
Carting ditto to the mill, at $\frac{1}{2}$ -cent. per bundle ...	1	0	0
Extracting, hanking and baling, at 1 cent. per bundle	2	0	0
Cost of freight per ton of 5 bales (each 400 lbs.)			
at 2s. per bale, say	0	10	0
Agent's commission, at 1s. 3d. per bale	0	6	3
Freight to New York, at $\frac{1}{4}$ -cent. per lb. (2,000 lbs.)			
per ton	1	0	0
Agent's commission, New York, $2\frac{1}{2}$ per cent. on,			
say, £25	0	12	6
	£6	8	9

Taking the American dollar at 4s. 2d., will add 3s. 4d. to the above amount, which will bring it up to £6. 12s. 1d.

The additional cost for leaves from the natives works out at, say, £4 per 1,000 bundles more, less cost of carting and cutting, as above, £2. 1s. 8d., bringing the outside cost to not more than £8. 10s. 5d. delivered into New York, including all agent's commissions. As the larger portion of the money paid for bought leaves, cutting, carting, and extracting our leaves is spent in the store, on which we get between 30 per cent. and 40 per cent.

profit, the cost of a ton of fibre is materially reduced, and with cheaper means of transport, this branch will be reduced by one-half its present cost. With the present hydraulic press it costs us about 6d. a bale to bale, cover, and mark the bales. It is a very slow process, as only five bales per day are turned out with this machine, as against six bales with the old hand press, which cost about £30 as against £200 for the hydraulic machine. If a lever press as supplied by Roberts, of Liverpool, with four additional boxes, were installed later, we should be able to turn out between 20 and 25 bales per day, at a cost of, say, 3d. a bale. Roberts' press costs about £60 to £70 more than the press obtained from Pynegar, and it would soon pay for itself by giving larger and cheaper returns. You will see that, taking the larger cost which is incurred by buying native leaves £8. 10s. 5d. a ton, American, of fibre delivered into New York, there is a very large margin of profit, even at the low price of £23 to £34 obtained in New York at the present moment."

Wanganui, New Zealand, boasts a well equipped fire brigade, and claims the distinction of having been the first Australasian town to adopt self-propelled fire apparatus. A steam-driven motor fire engine has been in satisfactory service for over seven years, and has now been supplemented by a petrol motor first-aid machine, comprising a hose tender, ladder carriage, hose reel and chemical engine. This will be used for first turn-out to a fire, and as it can start instantly, and travel at between 20 and 30 miles an hour, it should prove of immense value; in fact, there is no doubt that a large number of fires will be extinguished by the chemical engine alone, without resort to more powerful pumping plant. The chemical cylinder contains 33 gallons of fire extinguishing fluid, and can be brought into action in a few seconds. The ladders, which can be used for life-saving, or as a means for gaining access to the flames, extend to 30 feet, and can be rapidly unshipped from the carriage when required. Both the new motor and the old are productions of Messrs. Merryweather & Sons, of London, who, in the course of the last ten years, have built over 150 fire brigade motor vehicles, and have recently been appointed fire engine makers to His Majesty King George V.

Trinidad Floating Dock.

This dock was taken over by the Government in May, and it was an interesting question whether any better results would be obtained under such management than the company had been able to show. So far there are clear indications that this will be the case. A clientèle is being steadily built up, and the result of the first four months' working showed a surplus of receipts

over expenditure of about £300. This certainly means that officials can compare favourably with a private company in zeal and efficiency.

Motor Boats.

The fitting of auxiliary motors is, as was to be expected, greatly increasing, especially for vessels which have to manœuvre in narrow waters. A very successful instance was shown at Cowes, in the new schooner yacht "Sylvana" of Col. Courtenay Morgan, which threaded the lines of the assembled yachts with remarkable ease. The installation is a 47 b.h.p. Thornycroft oil engine, four cylinders, transmitting the power through a reversing gear of special construction to a three-bladed propeller revolving at 350 revolutions.

Water Turbines.

The scientific treatment of this subject is inadequate in this country, and German treatises have to be resorted to for the best information. Messrs. Raithby Lawrence & Co. have brought out a well got-up work by Mr. Jens Orten-Böving (10s. 6d. net.), which deals fully and clearly with the modern theory, designs and application of water turbines. The work should be of practical use to those responsible for such installations.

Reinforced Concrete.

Concrete, in its October number, discusses the report of the Special Committee of the Institution of Civil Engineers, and gives an account of the system used in the imposing "Wesleyan Hall," which is arising in Westminster. On this building Kahn bars are employed.

RAILWAY NOTES.

Ceylon.

There was a very satisfactory increase of revenue in 1909, all the staple products showing development, especially rubber. The increase naturally caused some congestion, and the works which are in progress added to the embarrassment; thus the staff had many difficulties and may be congratulated on the results.

On the Ratnapura extension, by the end of June last, for the first nine miles the earthwork and masonry were complete except at a few points, and were in a forward state for a further nine miles. The permanent way was laid for five miles. The work appears to have been done within the estimate.

The Colombo Station extensions were about three-quarters finished.

On the sea-coast duplication and Ragama widening, the work generally made fair progress during the first half of 1910, the earthwork and bridges and culverts to the north of Colombo being well advanced, and south of Colombo as far as Wellawatta, the work was about half finished, and at rates closely approximating to the estimates.

The Negombo railway, which was opened on 1st December, 1909, was completed well within the estimate, though in some respects expenditure was incurred which had not been contemplated. This result is largely due to the good work of Mr. Bowen and his staff.

Federated Malay States.

The profit on the open lines in 1909 amounted to a dividend of 3·18 per cent., a slight falling off from the previous year, and the motor service is not a financial success. There has been a serious falling off in the carriage of live stock, which is probably due to the system of cold storage. On the Johore State Railway there was a loss of \$50,259·38.

Straits Settlement.

It is contemplated to complete the Penang Hill railway, which would thus render possible a settlement on the high levels, which would be a health resort for the whole of the Malay States.

Mauritius.

A loan of £270,000 has been authorised for the renovation of the railways, which is urgently needed.

Kowloon-Canton.

The British section was opened for passengers on the 1st October last. The history of this railway has been a chequered one. The concession for it was obtained in 1898 by a private company, but this body was so exceedingly slow to set to work that the Colonial Government took over the British section. This was done with dramatic effect. The loan bill provided not only for the cost of the Hong Kong section, but for "other purposes," and it soon became known that this meant a loan to the Chinese to enable them to buy out the American and Belgian interests, and to construct the Hankow-Canton section themselves.

The original estimate has been considerably exceeded owing to the exceedingly hard rock encountered in the Beacon Hill tunnel. This excess, and the faults of some of the bridges, to which we have previously referred, have caused a good deal of criticism, but, on the other hand, the Chief Engineer of the Chinese section states that the British section is a "lasting monument to British engineering," and the General Manager considers that the cost compares favourably with that of similar work elsewhere.

The line will, no doubt, introduce a new element into the social arrangements of Hong Kong. "All of us," observed Sir H. May at the opening, "Europeans and Chinese alike, have a feeling while resident in Hong Kong, akin to what the now historic Kowloon tiger would feel if he were caged. We want more elbow room. We need more frequent change of environment. This railway will enable some of us to take short holidays from our work—and from each other."

Thirty miles of the Chinese section of the Canton-Kowloon railway have been opened, and it is expected that the through communication will be established by June next.

Uganda.

It is contemplated that the Magadi branch shall start from the main line at mile 282, and the ruling gradients will be 1.5 per cent. to 2.5 per cent., compensated with 10° curves. Steel sleepers will be used throughout.

The soda ash to be carried will weigh about 62 lbs. per cubic foot, or 36 cubic feet to the ton. The "Mallett" type of engine is considered suitable for the purpose, with 9.5 to 10 ton axle-loads.

Lagos.

Record floods occurred in August in the Kaduna River, and the work was, consequently, retarded. The girder material, which had been forwarded to Minna, was therefore returned to Baro, and taken up the Kaduna and over the Barijiko-Zungern tramway. The delay is regrettable, but the heavy wash-outs on the Link line made it unavoidable.

Railway at that date remained at the Mutu River, as it was thought best to allow the new banks to settle, and to get on with the earthworks ahead before continuing the platelaying. The programme contemplated completion to the Igberi River by the end of the year.

The Niger Bridge, North Channel, will be open about the end of January.

The half-year ending 30th June last, showed a great increase of revenue on the Lagos Railway, the revenue being £127,825 as against £95,117 in 1909. This result was practically due to palm kernels.

Lagos Harbour Works.

The Secretary of State has authorised the carrying out of the whole of the contemplated works continuously to completion. It is desirable to hasten the progress of the Mole works as quickly as possible. The difficulty is the supply of labour at the quarry, the work being comparatively severe, but an extra rate of pay may overcome this. The works to be carried out are those recommended by Messrs. Coode, Son and Matthews in their report of 1898, which has been published.

An interesting feature of the work done is that the westerly line of breakers has receded about 700 feet.

Gold Coast.

The revenue for 1909 showed a good increase, and is the largest ever earned. There was a marked activity in the mining industry which enhanced the spending powers of the population, and benefited the trading firms. Native timber was the only backward item. The output of gold decreased, but this was chiefly due to the suspension of crushing to allow of development work and new plant.

Accra-Akwapim.

The damage done by the flood was, no doubt, due to insufficient openings, and the only remedy is to build extra openings. Instructions have been given for this, and the banks and bridges will be raised at places. The line suffered very severely owing to the water being banked up against it, and prevented from flowing away. Such floods are most dangerous when subsiding, as the water appears then to have a power of suction. The line was laid on low-lying ground, apparently to avoid cutting and comparatively heavy gradients; but it is clear that this policy is expensive, ultimately, if there is a possibility of floods.

A working survey is in hand from Mangoase to Komfrodna. Reconnaissance surveys will be made of the two routes recommended by the Accra Chamber of Commerce and the West African Chamber of Mines respectively.

Tarquah-Prestea.

By August the rails were carried into Broomassie, and it became possible to deal with some of the mines traffic. The open road, where the ballasting was completed, was being maintained in a very satisfactory manner. The Ancobra bridge was nearly finished. The bridging of the Ancobra and Hurri Rivers was carried out against unusual difficulties, and both structures are striking examples of engineering skill.

The delay in completing the branch railway has, no doubt, caused much inconvenience to the mining companies, which were expecting an earlier date; but the first locomotive passed Ancobra Bridge on the 5th November. The works beyond had been completed. The work could have been finished earlier, but only by the simultaneous construction of all the heavy bridges, and this would have necessitated the carriage of material on the natives' heads. The construction of the siding has recently been stopped for want of money.

Sierra Leone.

It has been decided to continue the railway from the present terminus near Yonni to Rowalla, a distance of about 50 miles. It will be constructed by Mr. F. A. Target. It is expected to be completed by the end of 1912, and at a cost within £130,000.

The results of 1909 continue to show an improvement, but they do not furnish any immediate prospect that the line will contribute, otherwise than indirectly, to the interest on its capital cost. This would be altered if the sources of traffic are increased by the extension to productive areas.

Gambia.

A further expenditure on the Kai-Hai Channel Dredging Works has been approved, on the understanding that, if vessels of 15 feet draught can pass, the shippers of ground nuts are prepared to pay an extra shilling export duty per ton. This is an interesting case of a sort of bargain between Government and public for payment by results.

A survey by an officer of the Royal Navy is contemplated of the part of the Gambia River between Tendaba and McCarthy Island.

A considerable area of "Wunderlich" patent stamped steel sheeting has been used in the new Colombo buildings for ceilings and dados, with a very pleasing effect.

In these days of competition by railways for the patronage of tourists and sportsmen, much thought is given to the ways and means by which the attention of these fortunate and presumably moneyed classes can be drawn to a particular country and road. Perhaps few people would guess what organ of public opinion proved in a recent much advertised case to be the best medium abroad. It was *Punch*, and quite rightly.

MEDICAL NOTES.

Sleeping Sickness.

The *Bulletin* of the Sleeping Sickness Bureau (Vol. II., No. 20) gives full particulars of fifty recorded cases of sleeping sickness in Europeans, from which we extract the following particulars:—

“ *Sexes*.—Of the 50, 45 were men and five women.

Occupation.—Their occupations were as follows:—

Missionaries	...	...	...	...	11
Traders	...	...	...	...	6
Planters, &c.	...	...	...	...	6
In military employment	...	...	...	...	6
Employed on river steamers	...	...	...	...	5
Engineers	...	...	...	...	3
Doctor	...	...	...	...	1
Not stated	...	...	...	...	12
					50

“ *Place of infection*.—As far as the places of infection can be ascertained they were:—

Belgian Congo	...	...	...	...	19
French Congo	...	...	...	...	14
Uganda	...	...	...	...	4
Angola	...	...	...	...	3
Island of Principe	...	...	...	...	3
Gambia	...	...	...	...	2
Cameroons	...	...	...	...	1
Katanga	...	...	...	...	1
Nigeria	...	...	...	...	1
Sierra Leone or Gold Coast	...	...	...	...	1
Fernando Po or Gold Coast	...	...	...	...	1
					50

Result.—Of the 50 patients, 30 are known to be dead, 11 survive, and the fate of the remaining nine is uncertain. Of the 30, 14 lived a year or more after trypanosomes were discovered, and four, two years or more. Of these, one lived three and a quarter years and one (Case 10) six years.

“The fact that of 30 patients who died, four only survived more than two years after the disease was diagnosed, suggests that in cases which have exceeded this duration there is good hope of ultimate recovery. Case 10 appears to be quite exceptional. It seems safe to consider Case 6 to have made a real recovery, and if we admit this, there are grounds for hope that Cases 11, 19, 21 and 22, if not others, have done the like. No attempt has been made in this analysis to consider the treatment in any detail, but it may be noted that these early cases were variously treated, and in no instance with the large doses which are given nowadays. Their recovery may be attributed to the resisting power of the human organism at least as much as to the treatment. It is possible, however, that they were mild cases, and that energetic treatment, not needed for them, was necessary to save any of the 30 persons who died.”

We have also received Nos. 21 and 22 of the *Bulletin*.

Yellow Fever in West Africa.

As a result of the enquiries which he undertook during his recent mission to West Africa, Sir Rubert Boyce has come to the conclusion that yellow fever is an endemic disease on the West Coast. Should this opinion be definitely substantiated, it marks a discovery of first-rate importance. Sir Rubert Boyce is the last man to desire that his theory should be accepted without the closest scrutiny, but the arguments with which he supports his case are exceedingly weighty. At first sight, such a discovery might seem to give ground for serious alarm, in view of the terrible reputation of the disease, and its peculiar deadliness to newcomers from temperate climates. But if Sir Rubert Boyce's view is correct, it will only mean that a danger always existent, but hitherto unrecognised, has at last been fully understood; and, thanks to the recent advances in the science of tropical medicine, yellow fever may now be regarded as a disease which can be controlled and stamped out with comparative ease, so soon as it is recognised. In fact, should it be determined that many of the severer forms of “fever” long prevalent in West Africa are true yellow fever, we may look forward with confidence to their eradication at an early date, and the discovery may prove to be the starting point of a great improvement in health conditions on the West Coast.

Entomological Research.

It will be remembered that in June, 1909, the Secretary of State for the Colonies appointed an Entomological Research Committee, under the Chairmanship of the Earl of Cromer, with the especial object of furthering the study of economic entomology, and primarily of the part played by biting flies in the dissemination of human and animal disease in tropical Africa. Under the auspices of this committee a *Bulletin* of Entomological Research is published, of which three numbers have already appeared. The articles printed in the third number show how wide is the field of research covered; the insects dealt with being responsible for diseases in plants, as well as in human beings and animals. Mr. Guy A. K. Marshall is Scientific Secretary to the Committee, and copies of the *Bulletin* (price 3s. each) may be obtained from Messrs. Longmans, Green & Co., 39, Paternoster Row, E.C., and Messrs. Taylor and Francis, Red Lion Court, Fleet Street, E.C. It is very desirable that this publication should become widely known in all tropical regions.

Anthrax.

Professor Annett, of the University of Liverpool, has recently elaborated a quick and certain method of diagnosis which does not rely entirely on the microscopical examination of stained specimens, but involves the use of an incubator, petrie dishes and Agar culture tubes. It is extremely simple, and furnishes, it is claimed, absolutely certain diagnosis in three hours. The apparatus costs about £40.

Plague.

The Lister Institute hope to bring out shortly an improved anti-plague serum, and will, no doubt, be prepared to supply samples for trial.

Professor Ronald Ross has published a little book ("Philosophics," Murray, 1s. net), which must, we think, be unique in character. It is a collection of verse expressing the moral or poetical side of a medical man's experiences. There is a striking elevation of thought and diction throughout, and the semi-professional treatment of subjects gives the poems a serious interest:—

"The painful faces ask, 'can we not cure?'

We answer, 'no, not yet'; we seek the laws.

O God, reveal thro' all this thing obscure

The unseen, small, but million-murdering cause."

COLONIAL STAMPS.

In view of the necessity for an early decision, as to any changes which the various Colonies may wish to make in their issues of stamps in consequence of the accession of H.M. King George V., it may be of interest if we recapitulate shortly the courses which are open and explain their several advantages.

The majority of the Colonies, which have stamps carrying the King's head as the central portion of the design, make use of one or more of the general keyplates for which no charge is made, having already purchased border or duty plates to fit the keyplate.

The four keyplates may be for clearness divided into two divisions:—

(A) The keyplate used by Sierra Leone, Seychelles, etc. This carries not only the King's head, but also either the word—(1) "Postage" on each side, (2) "Revenue" on each side, or (3) "Postage" on one side and "& Revenue" on the other. These are three distinct keyplates, each of which is fitted by the plate bearing only the name of the Colony and the value. The advantage of using this keyplate is that either of the three kinds of keyplates can be used at will with one set of duty plates, producing postage stamps, revenue stamps, or stamps for both purposes. Thus Sierra Leone uses the double purpose stamps, whereas Seychelles has two distinct series. The latter plan naturally facilitates the discrimination between revenue from postal and fiscal sources, but is not so convenient to the users.

(B) The keyplate, which has been comparatively recently introduced, carrying the King's head alone in an oval, the name of the Colony, the value and the use to which the stamp can be put being supplied from the border plate, *e.g.*, the Nyasaland Protectorate stamps. The appearance of stamps printed from this keyplate is very much the finer, but, as the purpose for which the stamps may be used is indicated in the border plate, unless so-called "unified" or double purpose stamps are required or stamps for one purpose only, it is necessary to have two sets of border plates,—one for postage and the other for revenue stamps.

There are, however, certain Colonies, such as Ceylon, which purchase their own keyplate as well as border plates. On the present occasion such Colonies will have to decide between buying a fresh keyplate or a set of border plates for use with one or other of the general keyplates. Where the number of values required is comparatively small, the latter course would be the less expensive, as, in buying a new keyplate, it is necessary also to contribute to the cost of the original King's head die from which the special keyplate is made.

The remaining Colonies which use stamps carrying the King's head are the Falkland Islands and the Turks Islands. In both cases the head, unfortunately, appears without a crown. They are printed by the copper plate process, which is decidedly more expensive than the surface process, and at one operation, so that a complete set of new plates will be required.

Colonies which have adopted their own badge or arms as the design of their stamps, can, at a very small cost, show the King's head on a certain number of values, as Mauritius does, by ordering duty plates for some values to fit one of the universal keyplates.

The disadvantage of a Colony using its own keyplate of the King's head design is apparent at the present moment from the necessity of having a new one made instead of using one which is supplied gratuitously. Colonies which use the universal keyplate will be put to no expense by the present change.

BRITISH SOLOMON ISLANDS PROTECTORATE.—4d. stamps have been despatched.

BRUNEI.—\$5 and \$25 stamps have been supplied for the first time. The colours are those appropriated to the 10s. and £1 values respectively, there being no colour appropriated on the colour scheme to any value between £1 and £5.

CEYLON.—2 cents and 3 cents stamps have been supplied, the former in a slightly different shade, the latter in the same colour as before, but showing the value in solid figures on a white ground.

FEDERATED MALAY STATES.—Another of the three States on the Eastern side of the Malay Peninsula, which came under British protection in July, 1909, *i.e.*, Kelantan, has now been supplied with a set of stamps of the following values :—1, 3, 4, 5, 8, 10, 30 and 50 cents, and 1, 2, 5 and 25 dollars. They have been printed by the keyplate system and the surface process ; the first six being on unsur-

faced and the last six on surfaced paper. The colours of the stamps follow the Federated Malay States series, value for value, with the exception of the 30 cents stamp, which is substituted for the 20 cents stamp, and is printed with purple centre and red border.

GIBRALTAR has received a supply of 8s. stamps in the new colours.

GILBERT AND ELLICE ISLANDS PROTECTORATE has now been provided with a series of stamps showing a representation of a Pandanus tree or Screw pine. The values are the same as those which we reported in our last issue, and the colours are those of the colour scheme designed for steel-plate stamps, by which process they have been produced.

JAMAICA has now been supplied with a 2d. stamp printed from the new Universal keyplate, *i.e.*, that showing the late King's head in an oval.

NEW HEBRIDES (Condominium).— $\frac{1}{2}$ d., 1d., 1s., 2s. and 5s. stamps and 5 and 10 cents., 1, 2 and 5 francs have been despatched, the former to the New Hebrides and the latter to Paris, whence they will be consigned as required to the islands, and where they will be on sale to the public at the Agence Comptable des timbres poste Coloniaux, 36, rue Vaneau. The colours of both sets of stamps correspond as far as possible with the copper-plate colour scheme, but where they diverge in value different colours are given to the French stamps. These values will shortly be followed by 2d., $2\frac{1}{2}$ d., 5d., 6d., and 20, 25, 50 and 75 centimes. The colours decided upon for 75 centimes is orange on white paper; 1 franc, red on blue paper; 2 francs, purple on white paper; and 5 francs, red on green paper.

ST. LUCIA.—6d. stamps have been despatched, the value being now indicated in the colour assigned to it in the new colour scheme.

STRAITS SETTLEMENTS.—A new \$25 stamp has been supplied, printed in purple on blue surfaced paper.

SOMALILAND PROTECTORATE.—3, 4, 6 and 8 annas stamps have been supplied for the first time on surfaced paper, which also for the first time bears the multiple watermark.

The stamps of Jamaica, which form the subject of the latest Melville Stamp Book, have a special unity, in that they have all been printed by one firm, and 1910 marks the fifteenth anniversary of the first issue of stamps by the Colony. Incidentally, it is curious to notice that, in several cases, the original designs have been adhered to till the present day. The book, like its predecessors in the series, leaves nothing to be desired in style or matter. It is abundantly illustrated and a wonderful production for the price.

A second edition of "Great Britain : Line Engraved Stamps," in the same series, has also reached us.

The Melville Stamp Books, "Jamaica " and " Great Britain : Line Engraved Stamps, 2nd Edition " 6d. net ; published at 47, Strand.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

SIR ARTHUR YOUNG, K.C.M.G. (Colonial Secretary, Straits), Chief Secretary, Federated Malay States.

Mr. E. L. BROCKMAN, C.M.G. (British Resident, Negri Sembilan, Federated Malay States), Colonial Secretary, Straits.

Mr. A. G. BOYLE, C.M.G. (Provincial Commissioner, Uganda), Colonial Secretary, Southern Nigeria.

Dr. C. L. SANSOM (late Medical Officer of Health, Transvaal), Principal Medical Officer, Federated Malay States.

Mr. H. J. HYDE-JOHNSON (Headmaster, King's School, Lagos), Director of Education, Southern Nigeria.

Dr. W. F. SAMUELS (Medical Officer and Magistrate, Anguilla), Medical Superintendent, Central Lunatic Asylum, Tanjong Rambutan, Federated Malay States.

Captain R. R. GIBSON (late Inspector, Foreign Labour Department, Transvaal), Immigration Agent, British Guiana.

Mr. W. C. H. TRIPP (late Principal Clerk, Audit Department, Transvaal), Chief Clerk in Treasury, British Guiana.

Mr. A. F. CHURCHILL (Chief Assistant Engineer, Colombo Drainage Works, Ceylon), Assistant Director of Public Works, Hong Kong.

Mr. OWEN MITCHELL (Assistant to Chief of Customs, East Africa Protectorate), Assistant Comptroller of Customs, Gold Coast.

Captain W. B. STANLEY (Travelling Commissioner, Gambia), District Commissioner, Sierra Leone.

Captain G. J. L. GOLDING (Deputy Inspector-General of Police, Northern Nigeria), Inspector of Police, Trinidad.

Mr. J. C. WALKER (Assistant Political Officer, Somaliland), Assistant Resident, Northern Nigeria.

Captain A. S. LAWRENCE (Company Commander, 6th Battalion, King's African Rifles), Assistant Resident, Northern Nigeria.

Mr. J. F. WOLSELEY BOURNE (retrenched from the South African Constabulary), Assistant District Superintendent of Police East Africa Protectorate.

Lieutenant E. V. M. SHELLEY (late Lieutenant 1st Battalion Gold Coast Regiment, West African Frontier Force), Assistant District Commissioner, Southern Nigeria.

Major A. J. DIGAN, D.S.O. (Captain, Northern Nigeria Regiment, West African Frontier Force), Travelling Commissioner, 3rd Grade, Gambia.

Mr. C. E. LANE-POOLE (District Forest Officer, Transvaal), Forestry Officer, Sierra Leone.

Dr. H. C. JEFFREYS (late Medical Officer, British Honduras), Medical Officer, West African Medical Staff.

Mr. D. G. ROBERTS (late Clerk in Accounting Branch of the Colonial Secretary's Office, Cape Town), Customs Clerk, Nyasaland.

Mr. H. G. S. BRANCH (Manager of Barbuda, Leeward Islands), European Assistant, Agricultural Department, Gold Coast.

Mr. T. J. GIBBS (retrenched from South African Constabulary), Town Warden, Bathurst, Gambia.

Mr. H. G. S. PERRY (retrenched from the Transvaal Town Police), Assistant Inspector of Police, Uganda.

FORTNUM & MASON,

Piccadilly, London, W.

FORTNUM & MASON

remind their numerous customers in the Army and Civil Service of their special Chop Boxes and Stores. These have doubtless been seen at all the large Centres overseas on their journeys into the interior.



Boy with Chop Box.

FORTNUM & MASON'S GROCERIES and PROVISIONS

are world famous.

FORTNUM & MASON'S PRICES

are in line with those of all houses of repute.

FORTNUM & MASON'S WINE DEPARTMENT

is thoroughly up-to-date.

	12 years old.	10 years old.	9 years old.	6 years old.
Whisky in bond	32/-	29/-	26/-	20/.
	Per 1 dozen case.			

FORTNUM & MASON'S EQUIPMENT DEPARTMENT,



Showing construction of bottle.

started in 1908, has everything of the most modern—Strong, Reliable, and Cheap. They invite especial attention to their patent "FORTMASON" Water-bottle, the invention of a Soudan Government Official to whom all the exigencies of the Saffarieh are well known. The feature of the bottle is the shoulder, which unscrews to admit a hand for the purpose of thoroughly cleaning the inside.

Please write for Export Catalogue or call on—

FORTNUM & MASON, Ltd., 181-4, Piccadilly, W.

Telephone: 41 Gerrard.

Telegraphic Address: "Fortnum, London."

BANK OF NIGERIA LIMITED.

Directors.

GEORGE MILLER, Esq.

CLIFFORD B. EDGAR, Esq., J.P.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—J. CADMAN, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c. &c.

Also Agencies at **SIERRA LEONE**, and the principal ports on the **COLD COAST**.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bara-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET,

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	£1,000,000.	Called-Up Capital	£200,000.
Subscribed Capital	£500,000.	Reserve	£80,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G.
Geo. W. Neville, Esq.

Henry Coke, Esq. Wm. F. Moore, Esq.
O. Harrison Williams, Esq.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown
GOLD COAST and **ASHANTI**—Axim, Secondee, Cape Coast Castle, Accra, Tarquah, Coomassie.
LIBERIA—Monrovia. **NIGERIA**—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Ahldjean, Abonnema, Biama, Bonny, Bo, Dakar, Egwanga, Fernando Po, Grand Bassam, Hangha, Lahou
Loanda, Madeira, Matadi, Oluassi, Opobo, Pendembu, Saltpond, Seghwema, Tencriffe, Warri, Winnebah.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody. Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

AULIFF, H.	9 Mar., '11	FLETCHER, H.	27 Feb., '11
BERINGER, Dr. F. J. A. ...	12 Apr., '11	FOUNTAIN, J. T.	10 Jan., '11
BURNARD, J.	26 Feb., '11	FILGATE, D. L. N. M. ...	18 Jan., '11
BRANCH, H. C.	2 Mar., '11	FINLAY, A. A. C.	14 Jan., '11
BURTON, P. F.	17 Mar., '11	GOODENOUGH, G.	7 Feb., '11
BOSTOCK, J. E.	22 Jan., '11	HALL, E.	14 Jan., '11
CASTELLAIN, L.	21 Jan., '11	HUTT, W.	14 Jan., '11
COLLINS, E. V.	26 Feb., '11	HARRY, C.	28 Jan., '11
CRAIG, R.	28 Jan., '11	HOOD, S. J.	6 Feb., '11
COPE, Dr. R.	16 Feb., '11	HEARNSHAW, W.	6 Jan., '11
CORSER, R. B.	28 Feb., '11	HALL, T. L.	6 Feb., '11
CULLIP, J. A.	23 Mar., '11	HOOD, T.	21 Feb., '11
COCHRAN, Capt. H. P. G.	17 Jan., '11	HINSON, D. B.	14 Mar., '11
Caledonian Club,		HOBBS, H. J.	3 Apr., '11
Charles St., S.W.		JEFFREY, J.	21 Feb., '11
DALE - GLOSSOP, Capt.		JAMES, E.	7 Feb., '11
H. W.	28 Jan., '11	JENSEN, O. J. L.	27 Mar., '11
DALEY, J. H.	27 Feb., '11	JOBSON, F. J.	7 Mar., '11
EARNSHAW, A.	27 Feb., '11	KINGHORN, Dr. A.	17 Mar., '11
EVANS, A. E.	21 Feb., '11	KILBY, R. N.	4 Jan., '11
FRANKLIN, Dr. J. C. ...	17 Feb., '11	KELK, Rev. W. H.	23 Feb., '11
FERGUSON, B.	28 Jan., '11	KEYWORTH, Capt. R. D.	1 Mar., '11
FITZGERALD, B.	28 Feb., '11	LONG, L. W. S.	14 Jan., '11
West Indian Club,		LEAH, M. S.	9 Jan., '11
Howard Hotel, Nor-		LEES, Capt. E. F. W. ...	28 Feb., '11
folk St., W.C.		LORENA, Dr. A. C.	9 Mar., '11

GOLD COAST—continued.

LOCKE, H.	7 Feb., '11	RICHTER, A. H. L. ...	7 Jan., '11
MESSUM, S. R.	25 Feb., '11	RICH, Capt. C. S. ...	20 Mar., '11
MADDOCK, J. H.	9 May, '11	ROBERTSON, J. P. ...	21 Feb., '11
MONTGOMERY, Dr.		REECE, M. D.	8 Mar., '11
W. H. B. S.	15 Feb., '11	RUTHERFORD, Dr. G. J.	27 Feb., '11
McCLOUGHLIN, R. J. c/o	6 Feb., '11	Sports Club, St. James'	
Messrs. Holt & Co., 3,		Square, S.W.	
Whitehall Place, S.W.		REECE, E. B.	27 Mar., '11
MASSEY, B. E.	21 Jan., '11	SWIRE, Capt. W.	2 Apr., '11
NASH, G. W.	18 Feb., '11	SWAIN, A. C.	7 Feb., '11
NASH, Capt. S. D.	23 Mar., '11	SIMMONDS, Dr. F. M. ...	1 Feb., '11
O'HARA MAY, Dr. H. ...	15 Jan., '11	SIMMONS, W. H.	28 Jan., '11
O'KELLY, Capt. E. J., de P.	7 Jan., '11	SMITH, W. E.	17 Mar., '11
PURKIS, Dr. D. W.	10 Jan., '11	SYMMONS, J. E.	27 Feb., '11
PANTER - DOWNES, Maj.	27 Feb., '11	SEATON-WADE, H. J. ...	24 Feb., '11
E. M., Junior Naval		TAPLIN, B. B. M.	14 Jan., '11
and Military Club, 96,		TURNER, A. D.	3 Apr., '11
Piccadilly, W.		UNDERHILL, W. A. ...	14 Jan., '11
PHILLIPS, R. G.	9 Jan., '11	WILBERFORCE, A. R. G.	21 Mar., '11
RUTHERFORD, A.	17 Mar., '11	WOOD, R. E.	3 Feb., '11
RUBERY, C.	17 Mar., '11	WHITE, A.	6 Feb., '11
RATTRAY, R. S.	13 Mar., '11	WADE, Dr. W. M.	27 Mar., '11
Junior Conservative		WALLACE, Miss A. ...	28 Mar., '11
Club, Piccadilly, W.			
ROBERTS, R. L.	1 Jan., '11	WALKER, Dr. G. C. ...	15 Apr., '11

SIERRA LEONE.

ANDREWS, E.	9 Mar., '11	MURRAY, Capt. L. ...	9 Jan., '11
BURRA, J. S.	7 Mar., '11	MARTIN, J. D.	2 Mar., '11
BURROWES, Dr. D.	7 Mar., '11	MEGGETT, A.	14 Jan., '11
BARKER, R. V., c/o Messrs.	4 Jan., '11	MAXWELL, Dr. J. C. ...	14 Jan., '11
Cox & Co., 16, Charing		Grosvenor Club, Dover	
Cross, S.W.		St., W.	
CORNER, G. H.	2 Mar., '11	NEWMAN, G. H.	14 Jan., '11
CHAMLEY, J. W.	25 Feb., '11	PROBYN, Sir L., K.C.M.G.	
FRERE, N. G.	8 Jan., '11	ROSS, Hume A.	2 Mar., '11
FARRAR, A.	21 Feb., '11	SIDNEY, J. B.	28 Jan., '11
HATTON, T.	9 Mar., '11	STANLEY, G.	19 Mar., '11
HOLLOWAY, W. J.	24 Jan., '11	THOMPSON, H. H.	17 Mar., '11
JOHNSTONE, R. M.	13 Apr., '11	VARLEY, G.	25 Feb., '11
LUKACH, H. C.	22 Jan., '11	VERGETTE, E. D.	25 Mar., '11
LE MESURIER, Maj. F. N.	28 Feb., '11	WILBRAHAM, D. F. ...	14 Feb., '11
MILES, W. J.	9 Mar., '11	Wellington Club,	
MICKLETHWAITE, Miss		Grosvenor Place, W.	
G. G.	19 Jan., '11	WHITE, R.	17 Mar., '11

GAMBIA.

GWYN, C....	10 Mar., '11	PICKERING, W.	4 Apr., '11
MACAFFEN, M.... ...	10 Mar., '11	SAVAGE, J. A.	2 Feb., '11

SOUTHERN NIGERIA.

ADAMSON, W. J. ...	23 Feb., '11	DOYLE, J. H. ...	21 Jan., '11
ALLIN, Dr. J. R. P. ...	21 Jan., '11	DAVIS, H. R. H. ...	24 Jan., '11
ADAMS, F. B. ...	8 Jan., '11	EVETTS, W. ...	21 Feb., '11
BICKEL, W. H. ...	14 Jan., '11	EMERY, W. ...	21 Jan., '11
BAILEY, J. C. M. ...	9 Mar., '11	EVANS, L. M. ...	19 Mar., '11
BEDFORD - GLASIER, F., C.M.G. ...	9 Mar., '11	ELGEE, Capt. C. H. ...	14 Jan., '11
BINNY, J. M. ...	19 Feb., '11	FINNEY, F. J. ...	24 Jan., '11
BEAMISH, Capt. W. E. ...	8 Jan., '11	FOSTER, E. W. ...	9 Mar., '11
BAILEY, W. ...	23 Jan., '11	FORD, A. M. P. ...	28 Jan., '11
BALNAVE, W. F. ...	23 Mar., '11	c/o Capital & Counties Bank, Ltd., 22, Fenchurch Street, E.C.	
BUTLER, H. B. ...	23 Mar., '11	FRANCEY, W. M. ...	14 Jan., '11
County Club, Carlisle.		FARMER, W. ...	5 Feb., '11
BROWN, A. W. ...	21 Jan., '11	FRANCIS, A. C. ...	6 Feb., '11
BONELL, T. H. M. ...	14 Feb., '11	FROST, A. ...	21 Jan., '11
BROOKS, R. B. ...	17 Mar., '11	GREENSTOCK, A. ...	13 Jan., '11
BOLTON, H. ...	21 Jan., '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
BAULCH, A. ...	17 Mar., '11	GLADSTONE, H. S. ...	9 Jan., '11
BEARD, E. ...	6 Feb., '11	GILL, R. ...	8 Jan., '11
BRODIE SMITH, G. T. ...	28 Jan., '11	GOODWIN, A. J. ...	23 Mar., '11
COLE, Dr. W. A. ...	due back	GRAY, E. A. S. ...	21 Mar., '11
CUMMINS, E. O. ...	8 Jan., '11	GRAY, Capt. W. B. ...	2 Mar., '11
CARLEY, W. J. ...	21 Jan., '11	GARDINER, R. D. ...	27 Feb., '11
CLARK, Dr. W. S. ...	24 Feb., '11	Caledonian Club, Charles Street, S.W.	
CAMPBELL, S. D. ...	19 Mar., '11	GORDON, W. ...	14 Feb., '11
COAST, P. J. ...	17 Mar., '11	GINGELL, S. J. ...	23 Jan., '11
CRAWFORD, W. E. B. C. ...	9 Mar., '11	GOODWIN, H. H. ...	23 Jan., '11
COTTON, J. C. ...	6 Apr., '11	GARVEY, F. W. ...	9 Mar., '11
CHICHESTER, C. R. ...	2 Mar., '11	HEWITT, W. S. ...	2 Apr., '11
CASTLE, A. ...	21 Feb., '11	HAGGERTY, H. J. ...	2 Apr., '11
CHAPPLE, A. J. ...	21 Jan., '11	HACKETT, W. W. ...	21 Jan., '11
CRICKMAR, G. R. ...	8 Feb., '11	HILL, W. H. F. ...	26 Jan., '11
CLARKE, W. F. ...	11 Feb., '11	Royal Colonial Institute, Northumberland Avenue, W.C.	
COOKSON, J. ...	17 Jan., '11	HODGSON, G. F. ...	12 Apr., '11
CULLEN, C. S. ...	27 Feb., '11	HUSSEY, H. E. ...	3 Mar., '11
COLES, T. W. ...	14 Jan., '11	HINCHCLIFFE, F. ...	8 Jan., '11
DAWSON, E. B. ...	21 Jan., '11	HOOD-RANKIN, T. ...	6 Feb., '11
DENE, H. ...	21 Jan., '11	HARRIS, H. ...	6 Feb., '11
DARE, J. ...	23 Mar., '11	IVATT, A. E. ...	10 Jan., '11
DERRIMAN, F. H. ...	8 Feb., '11	ISON, T. A. ...	17 Jan., '11
DEACON, A. J. E. ...	9 Mar., '11	INGLES, F. H. ...	17 Mar., '11
DAY-BARKER, F. ...	23 Apr., '11	JOHNSTON, Capt. O. A. ...	18 Jan., '11
DUNCOMBE, H. F. ...	17 Mar., '11	JACKSON, E. ...	17 June, '11
DOBBIN, Capt. M. T. ...	6 Jan., '11	JONES, H. E. ...	21 Feb., '11
DAWSON, F. J. ...	9 Mar., '11	JONES, O. ...	28 Jan., '11
Sports Club, St. James' Square, S.W.		KELLY, A. ...	21 Jan., '11
DUNCOMBE, W. K. ...	16 Apr., '11	KENNELLY, M. M. ...	6 Feb., '11
Royal Colonial Institute, Northumberland Avenue, W.C.			
DYER, H. ...	17 Mar., '11		

SOUTHERN NIGERIA—continued.

KING-CHURCH, L. A. ...	2 Mar., '11	ROSEDALE, F. H. ...	5 May, '11
KIRBY, J. ...	28 Jan., '11	c/o Messrs. Cox & Co.,	
LATTON, R. C. ...	28 Jan., '11	16, Charing Cross, S.W.	
Oxford and Cambridge Club, 7, Pall Mall, S.W.		RAIKES, R. D. N. ...	2 Apr., '11
LUMLEY, G. ...	3 Apr., '11	SPROSTON, S. W....	17 Mar., '11
LOMAX, J. F. ...	23 Mar., '11	SIMPSON, E. D. ...	21 Jan., '11
MCMAN, Miss C. ...	31 Jan., '11	STEVENSON, W. G. ...	14 Jan., '11
MACDONALD, Dr. P. H... 4 Jan., '11		SPECK, A. ...	14 Feb., '11
MCCOTTER, Miss J. ...	2 Mar., '11	SHEFFIELD, Capt. G. N.	9 Mar., '11
MACFARLANE, J. ...	3 Apr., '11	SMITH, S. ...	10 Jan., '11
MANN, W. S. ...	28 Jan., '11	SAYER, M. B. ...	1 Feb., '11
MAYHEW, E. F. W. ...	21 Feb., '11	STATEN, J. T. ...	28 Jan., '11
MARSLAND, C. ...	28 Jan., '11	STEVENSON, W. F. ...	17 Mar., '11
MUIRHEAD, J. ...	23 Mar., '11	THOMPSON, Dr. F. B. ...	3 Apr., '11
MCCALLUM, R. ...	23 Mar., '11	TOWNLEY, T. H....	17 Mar., '11
MURPHY, W. F... 14 Feb., '11		TYSON, D. ...	8 Jan., '11
MCCRATH, J. ...	28 Jan., '11	TYNAN, Dr. E. J. ...	21 Jan., '11
NEAL, Capt. H. V., D.S.O.	14 Feb., '11	TROUSDELL, W. H. C. ...	8 Jan., '11
OSBORNE, C. ...	21 Feb., '11	THOMAS, M. L. ...	23 Mar., '11
O'DRISCOLL, R. P. F. ...	21 Feb., '11	TABOR, F. L. ...	8 Jan., '11
O'KEEFE, Dr. A. W....	14 Feb., '11	TAYLOR, Dr. W. I. ...	5 Jan., '11
OGILVIE, C. S. ...	9 Mar., '11	WILSON, G. ...	24 Jan., '11
O'SHAUGHNESSY, Major		WRIGHT, P. A. T. ...	28 Jan., '11
J. J. P. ...	14 Jan., '11	WOTHERSPOON, W. ...	17 Mar., '11
Royal Societies Club, St. James' St., S.W.		WHIPPLE, H. C....	14 Jan., '11
PALFREMAN, L. ...	2 Mar., '11	WOOD, J. A. ...	21 Feb., '11
PEGDEN, J. W. ...	29 Mar., '11	WYATT, F. ...	27 Feb., '11
PALMER, E. C. ...	17 Mar., '11	WEIR, T. D. ...	17 May, '11
POE, J. H. L. ...	9 Mar., '11	Royal Societies Club, St. James' St., S.W.	
PARRY, T. F. R....	28 Jan., '11	WILLIAMS, W. ...	2 Apr., '11
PIPER, J. H. ...	8 Jan., '11	WHISKER, L. P....	17 Mar., '11
REYNOLDS, C. G. ...	21 Feb., '11	WILLIAMSON, A....	1 Feb., '11
ROBINSON, F. S....	27 Feb., '11	WADDELL, D. L....	14 Jan., '11
ROSS, W. J. ...	3 Apr., '11	WEBB, S. G. ...	14 Jan., '11
ROBERTS, R. A. ...	27 Feb., '11	WAUGH, A. J. ...	2 Feb., '11
RYAN, J. R. ...	17 Feb., '11	WANTON, E. B....	6 Apr., '11
RYDER, D. J. ...	3 Apr., '11	WEIR, E. W. B....	27 Feb., '11
RIMMER, J. D. ...	21 Feb., '11	WEBER, A. F. C. ...	7 Mar., '11

NORTHERN NIGERIA.

ASH, B. C. ...	17 Mar., '11	CHURCHER, Capt. A. E.	19 Mar., '11
BROWN, Capt. J. G. ...	26 Jan., '11	CHATFIELD, K. R. ...	14 Jan., '11
BARBER, Capt. W. D. ...	28 Jan., '11	CHAPMAN, H. J. ...	22 Mar., '11
BARNARDISTON, Capt.		CAUDELL, C. J. ...	21 Jan., '11
S. J. B. ...	11 Jan., '11	CHARTRES, J. ...	31 Jan., '11
BRIDGES, H. C. ...	23 Mar., '11	CAHILL, J. F. ...	17 Jan., '11
BURNSIDE, Capt. G. H.,	24 Feb., '11	CANTRELL, B. O. W.	2 Apr., '11
c/o Messrs. Cox & Co.,		CRIPPS, A. E. W. ...	17 Jan., '11
16, Charing Cross, S.W.		COOPER, W. A. J. ...	1 Feb., '11

NORTHERN NIGERIA—*continued.*

COLLINS, A. T. ...	4 Feb., '11	NUGENT, Capt. G. O. ...	21 Jan., '11
DYER, Capt. T. W. P. ...	4 Mar., '11	Junior Conservative Club, Albemarle Street, W.	
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		MERRICK, Capt. F. S. ...	13 Mar., '11
DEARING, W. ...	9 Mar., '11	ORME, T. H. ...	27 Feb., '11
DE GREY, G. ...	21 Feb., '11	OLIVER, T. E. ...	28 Feb., '11
EVANS, W. S. ...	14 Jan., '11	O'BRIEN, P. ...	23 Apr., '11
ELLIOTT, C. ...	9 Mar., '11	c/o Bank of Nigeria, Ltd., Mowbray House, Norfolk Street, W.C.	
FREESTONE, A. L. ...	6 Feb., '11	PYE, Capt. F. J. ...	28 Jan., '11
FOY, Dr. H. A. ...	19 Mar., '11	PIRIE, Dr. G. J. ...	26 Jan., '11
FREEMANTLE, Capt. J. M., c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	12 June, '11	PRICE, G. F. ...	2 Mar., '11
GABBETT, G. F. A. ...	3 Mar., '11	c/o London City and Midland Bank, Ltd., Temple Row, Birmingham.	
GOODWIN, G. E. ...	25 Jan., '11	PEARSON, J. ...	17 Mar., '11
GIBBS, G. W. ...	1 Feb., '11	PIKE, R. N. ...	5 Mar., '11
GASKIN, D. ...	2 Apr., '11	PHILLIPS, W. ...	15 Jan., '11
GORDON, Capt. C. F. ...	9 Mar., '11	PAUL, A. H. D. ...	6 Mar., '11
Junior Naval and Military Club, 96, Piccadilly, W.		New Club, 4, Grafton Street, W.	
GOSLING, C. H. ...	20 Mar., '11	ROBINSON, T. H. ...	12 Mar., '11
HOPKINS, F. F. ...	21 Feb., '11	RYAN, H. B. ...	14 Jan., '11
HAY, M. J. ...	23 Jan., '11	RIDSDALE, A. C. ...	17 Mar., '11
HIDES, Major E. C. ...	2 Mar., '11	Royal Societies Club, St. James' Street, S.W.	
HAY, C. S. ...	22 Jan., '11	SLANEY, E. R. ...	3 Jan., '11
HANSON, A. ...	3 Mar., '11	SCIORTINO, J. C. P. ...	23 Mar., '11
HASTINGS, A. C. G. ...	18 Jan., '11	SWAIN, J. W. ...	24 Feb., '11
Sports Club, St. James' Square, S.W.		STONE, A. W. ...	9 Jan., '11
JOHNSON, H. W. ...	24 Feb., '11	SHAW, R. ...	9 Jan., '11
JONES, A. W. ...	21 Jan., '11	SIMPSON, Capt. J. M. ...	17 Mar., '11
JARVIS, A. M. ...	27 Feb., '11	SECCOMBE, Capt. G. ...	11 Jan., '11
JAMES, C. P. ...	8 Jan., '11	Junior Naval and Military Club, 96, Piccadilly, W.	
JONES, Miss H. M. ...	1 Feb., '11	SHORT, Capt. P. H., D.S.O. ...	14 Jan., '11
KEWLEY, T. E. ...	5 Feb., '11	TRUMPER, Dr. W. A. ...	3 Mar., '11
LARYMORE, Major H. D., C.M.G. ...	13 Apr., '11	UNIACKE, Capt. A. G., D.S.O. ...	14 Feb., '11
LANE, E. A. ...	1 Jan., '11	VAUDREY, W. ...	17 Mar., '11
LANGWORTHY, H. W. ...	22 Mar., '11	VINCENT, J. W. ...	25 Jan., '11
LIDDARD, M. L. ...	18 Feb., '11	VICARS, W. G. ...	27 Feb., '11
Royal Societies Club, St. James' Street, S.W.		WIGHTWICK, C. ...	24 Feb., '11
LANE, A. E. ...	19 Jan., '11	WILL, J. P. ...	16 Mar., '11
LYON, P. ...	14 Feb., '11	WILLIAMS, Dr. R. F. ...	18 Jan., '11
MCGAHEY, Dr. K. ...	1 Mar., '11	New Club, Grafton Street, W.	
MAXWELL-LYTE, J. M. ...	8 Feb., '11	WRENFORD, A. L. ...	8 Jan., '11
MANNING, Dr. F. ...	18 Jan., '11	WRIGHTON, C. ...	3 Apr., '11
MARQUIS, F. A. ...	20 Jan., '11		
MCKINLAY, W. ...	28 Jan., '11		
NOOTT, P. J. ...	24 Feb., '11		

NYASALAND.

BRANDER, G. G. S. ...	6 Apr., '11	PHIELPS, W. G. ...	5 May, '11
BARRETT, H. T. ...	1 Feb., '11	ROSS, A. C. J. ...	22 Apr., '11
CASSON, J. C. ...	31 Jan., '11	SHERIDAN, J. ...	5 Mar., '11
DOYLEY, P. W. ...	6 Feb., '11	SMITH, L. ...	7 Feb., '11
EDWARDS, B. ...	1 Apr., '11	WARREN, E. H. ...	25 Feb., '11

EAST AFRICA.

ARCHER, G. F. ...	9 Apr., '11	KIRKPATRICK, Lt.-Col.	
BEECH, M. W. H. ...	27 Jan., '11	H. F. ...	23 Jan., '11
BROOK, Capt. W. B. ...	29 Jan., '11	Sports Club, St. James'	
c/o Clydesdale Bank,		Square, S.W.	
30, Lombard Street,		LODER-SYMONDS, R. F. ...	14 Apr., '11
E.C.		LOGAN, E. R. ...	27 Apr., '11
BROWNE, E. D. ...	27 Mar., '11	LEYS, Dr. N. ...	27 Feb., '11
BRETT, F. W. ...	27 Mar., '11	MADDEN, A. ...	27 Jan., '11
CRESSWELL, F. J. ...	9 Mar., '11	MCCLELLAN, J. W. T. ...	27 Jan., '11
CLAIDEN, A. C. ...	30 Apr., '11	MASH, E. J. ...	27 Jan., '11
CHELL, Dr. G. R. H. ...	13 Mar., '11	MITCHELL, O. ...	27 Jan., '11
de CARTERET, H. J. F. ...	9 Mar., '11	NEENAN, G. ...	13 Feb., '11
ELLARD, J. B. ...	13 Apr., '11	PEARCE, Major F. B.,	
FAULKNER, S. M. ...	13 Mar., '11	C.M.G.	10 Mar., '11
FINCH, J. ...	Steamer leaving	POWTER, G. E. ...	27 Jan., '11
	27 Feb., '11	PICKWOOD, H. ...	27 Jan., '11
HARAN, Dr. J. A. ...	14 Jan., '11	SPAN, Capt. F. H. ...	14 May, '11
HENDERSON, Dr. F. L. ...	8 Feb., '11	STRANG, J. ...	9 Apr., '11
HARCOURT, L. A. ...	13 May, '11	TALBOT SMITH, L. ...	13 May, '11
HOEY, A. E. ...	13 May, '11	TATE, H. R. ...	8 Feb., '11
		THOMAS, R. P. ...	8 Feb., '11
		WARDLE, T. M. ...	26 Jan., '11
		WALDEGRAVE, F. ...	27 Feb., '11

UGANDA.

BOVELL, Capt. C. W. K. ...	30 Apr., '11	GRAHAM, Capt. C. ...	5 May, '11
BALDWIN, Capt. R. H. ...	19 Mar., '11	LARDNER, Capt. E. G. D. ...	30 Apr., '11
CORDEAUX, Capt. H. E. S.,		MACFIE, Capt. W. C. ...	5 Mar., '11
C.B., C.M.G. ...	31 Mar., '11	Sports Club, St. James'	
c/o Grindlay & Co., 54,		Square, S.W.	
Parliament Street,		MORRIS, E. G. ...	31 Mar., '11
S.W.		WAITE, S. ...	5 Feb., '11
CARTER, W. M. ...		WYNDHAM, Lt.-Col.,	
DUFFY, J. T. ...	28 Feb., '11	L. C. E. ...	31 Mar., '11
FREEMANTLE, W. L. ...	29 Feb., '11		

SOMALILAND.

BELLENGER, A. J. ...	9 Feb., '10	LAWRANCE, Capt. A. S. ...	5 Feb., '11
HUNT, Capt. F. W. ...	9 Apr., '10	WHITTY, J. L. ...	25 Jan., '11
c/o Messrs. H. S. King			
& Co., 9, Pall Mall,			
S.W.			

BECHUANALAND.

EDWARDS, E. V. ... 16 Apr. '11

BASUTOLAND.

EALES, S. ... 18 Mar., '11 | MARCH, B. O. ... 8 May., '11

BRITISH HONDURAS.

GANN, Dr. T. W. F. ... 28 Mar., '11

FIJI.

STUART, J. ... 15 May, '11 | WILSON, Dr. B. M. ... 30 June, '11
THOMPSON, J. V. ... 25 Apr., '11

CYPRUS.

HAYCRAFT, T. W. ... 26 Jan., '11

ANTIGUA.

MACKISON, W. M. ... 29 Oct., '11

GRENADA.

CUDDEFORD, W. ... 24 Jan., '11 | PATERSON, Dr. J. W. ... 31 Jan., '11

ST. LUCIA.

CUDDEFORD, W. ... 24 Jan., '11 | RYAN, T. ... 1 Feb., '11

ST. VINCENT.

CUDDEFORD, W. ... 24 Jan., '11

ST. KITT'S.

NURSE, Dr. J. S. M. ... 31 Mar., '11 | WATTLE, E. C. ... 21 Jan., '11

DOMINICA.

YOUNG, W. D., C.M.G. ... 4 June., '11

JAMAICA.

RICHMOND, J., C.M.G. ... 16 Feb., '11 | TAYLOR, C. C. ... 5 April, '11
SEATON, D. T. ... 1 June, '11

TRINIDAD.

ELLIOTT, E. ... 24 Jan., '11 | GUISEPPI, Dr. P. E. H. ... 23 Feb., '11

BRITISH GUIANA.

BUGLE, C. W. H. ... 18 Sept., '11		<i>Steamer leaving</i>
BAKER, A. H. ... 23 Mar., '11	KING, C. H. ... 4 Jan., '11	
BRASSINGTON, H. D. ... 13 April, '11	LONGLEY, Rev. T. ... 9 Mar., '11	
DUFF, R. ... 11 Feb., '11	SCONCE, H. W. ... 10 Feb., '11	
	SHANKLAND, W. C. ... 30 June, '11	
	WISE, Dr. K. S. ... 28 July, '11	
EARLE, Dr. P. M. ... 18 Jan., '11		<i>Steamer leaving</i>
HEWICK, J. E. ... 31 Mar., '11		
HAWTAYNE, G. G. M. ... 5 April, '11	WALLACE, Rev. J. B. ... 1 Feb., '11	
IRVING, Dr. M. H. C. ... 10 Mar., '11		

MAURITIUS.

BOLTON, Dr. J. ...	31 May, '11	MIDDLETON, J. ...	28 Feb., '11
D'AVRAY, A. E. ...	28 May, '11	NAZ, L. ...	26 Jan., '11
LESEUR-GREENE, J. ...	24 Apr., '11	NAYLOR, A. S. ...	29 Mar., '11

STRAITS SETTLEMENTS.

ADAMS, J. ...	22 June, '11	HOWELL, J. G. ...	16 Feb., '11
ARTHUR, J. S. W. ...	23 July, '11	HANITSCH, K. R. ...	8 Mar., '11
BROCKWELL, M. B. ...	17 April, '11	KIRKE, R. J. ...	20 May, '11
BUCKELL, C. P. ...	9 April, '11	LORNIE, J. ...	14 Feb., '11
BOWER, Capt. W. M. L. ...	15 Feb., '11	MELLO, A. DE ...	13 June, '11
	<i>Steamer due</i>	MARSHALL, G. J. ...	25 Aug., '11
BEATTY, D. ...	2 Feb., '11	PAGE, R. J. ...	15 Aug., '11
BROWN, A. V. ...	3 Mar., '11	ROSS, F. H. ...	13 Oct., '11
COLMAN, E. E. ...	10 June, '11	RYAN, W. ...	2 May, '11
COPLEY, G. ...	14 May, '11		<i>Steamer due</i>
CHANCELLOR, Capt. A. R. ...	13 July, '11	SPOULE, P. J. ...	17 Mar., '11
CLARK, H. T. ...	10 July, '11	TAYLOR, W. H. ...	29 Mar., '11
COLEMAN, A. J. ...	20 April, '11	THUNDER, M. ...	21 Feb., '11
CONLAN, E. ...	25 Oct., '11	THRALE, T. W. ...	11 May, '11
DENT, F....	31 Aug., '11	WILLIAMS, J. H. ...	17 April, '11
ELLIS, F. T. ...	10 June, '11	WILSON, A. S. ...	10 May, '11
GOMES, Miss L. H. ...	9 May, '11	WALLEY, T. ...	15 Aug., '11
HAIGH, W. N. ...	20 Sept., '11	YOUNG, Sir A. ...	25 Jan., '11
HAWKINS, T. G....	9 June, '11		

TANJONG PAGAR DOCK.

MCQUARRIE, W. ...	12 Feb., '11	SELLAR, A. M. ...	7 Feb., '11
MUNRO, D. ...	30 Mar., '11	YULE, K. G. ...	31 July, '11
NIBLOCK, F. ...	12 May, '11		

HONG KONG.

ADLINGTON, R. ...	13 Feb., '11	JACOBS, Miss L. M. ...	22 Oct., '11
BIDEN, F. A. ...	17 Mar., '11	KING, T. H. ...	25 Oct., '11
BOULTON, J. F. ...	12 April, '11	KEMP, J. H. ...	17 Aug., '11
BULLIN, J. A. ...	31 May, '11		c/o Messrs. Grindlay &
BIRD, Miss M. J. ...	15 Aug., '11		Co., 54, Parliament St.,
BOYD, S. R. ...	15 Aug., '11		S.W.
BELL, Dr. J. ...	22 July, '10	MARTIN, G. P. DE ...	22 April, '11
	Thatched House Club	McIVER, M. ...	28 June, '11
BRETT, C. W. T. ...	17 Oct., '10	RUSSELL, W. ...	14 April, '11
BROWNE, F. ...	8 Nov., '11	TETSTALL, J. R. F. ...	8 Apr., '11
CASHMAN, T. ...	13 Feb., '11		<i>Steamer leaving</i>
DEALY, T. K. ...	10 May, '11	TUTCHER, Mrs. E. ...	7 Jan., '11
EDWARDS, W. T. ...	22 Mar., '11	THOMSON, A. M. ...	28 Feb., '11
GALE, C. H. ...	26 Feb., '11		c/o Hong Kong &
GOMPERTZ, H. H. J. ...	28 Apr., '11		Shanghai Bk., Ltd.
HUTCHINSON, R. O. ...	4 July, '11	Walker, A. T. ...	30 Aug., '11
HUDSON, R. ...	14 Aug., '11	WRIGHT, A. E. ...	15 Aug., '11

PERAK.

CROPLEY, J. H. P. ...	15 June, '11	PHAROAK, R. S. ...	21 Mar., '11
DICKSON, E. A. ...	3 May, '11	PIZER, H. ...	9 Sept., '11
FOSTER, R. ...	13 July, '11		<i>Steamer due</i>
	<i>Steamer due</i>	RICHARDS, G. H. ...	21 Jan., '11
FRY, Dr. W. M. ...	26 Jan., '11	RIGBY, J. ...	2 Aug., '11
GOUGH, E. J. ...	26 Jan., '11	SYKES, Miss F. ...	10 May, '11
HENRY, Miss K. ...	7 Feb., '12	SLATER, A. J. ...	12 May, '11
KNAGGS, R. S. ...	2 Mar., '11	SHORT, P. G. ...	20 Nov., '11
LLOYD, H. ...	12 Feb., '11	STONOR, O. F. G. ...	25 June, '11
NEUBRONNER, E. W. ...	3 Apr., '11		

PAHANG.

HILL, V.	11 Aug., '10
--------------	-----	-----	-----	-----	-----	-----	-----	--------------

SELANGOR.

MATTHEWS, J. C. M.	29 Apr., '11
------------------------	-----	-----	-----	-----	-----	-----	-----	--------------

NEGRI SEMBILAN.

	<i>Steamer due</i>	JONES, H. W. J. ...	19 Aug., '11
DOWDEN, R. ...	15 Feb., '11	Sports Club, St. James' Square, S.W.	
		STEELE, H. E. ...	10 Oct., '10

FEDERATED MALAY STRAITS.

ALLIN, C. H. ...	18 Aug., '11	HUMMEL, C. ...	5 Feb., '11
BARNARD, H. C. ...	23 Dec., '11	INNES, J. R. ...	6 Mar., '11
BUCKWELL, R. L. ...	30 June, '11	LOGAN, J. H. ...	6 Mar., '11
BRESLAND, C. W. ...	21 June, '11	LISHMAN, G. F. ...	1 July, '11
CONLAY, W. L. ...	20 April, '11	McKENZIE, J. ...	29 Nov., '11
DOEL, H. ...	3 June, '11	MAUNDRELL, E. B. ...	5 Mar., '11
DUNSTER, E. ...	13 June, '11	PRYDE, W. ...	9 June, '11
ELLERTON, H. B. ...	17 May, '11	PHILLIPS, G. H. ...	10 April, '11
Isthmian Club, Piccadilly, W.		RICHARDS, A. F. ...	4 Mar., '11
FURNIVALL, H. ...	16 Mar., '11	RICHARDS, D. S. ...	12 Aug., '11
GOLDTHORP, J. W. ...	28 Nov., '11	STREET, F. ...	31 Oct., '11
GREGORY, S. M. ...	28 Feb., '11	SIMPSON, G. ...	25 July, '11
c/o Messrs. H. S. King & Co., 65, Cornhill, E.C.		VANE, H. G. B. ...	29 May, '11
HATCHELL, H. M. ...	20 Apr., '11	VADDEN, F. R. ...	24 July, '11
HEMMANT, G. ...	16 Oct., '11		<i>Steamer leaving</i>
		WOODWARD, L. M. ...	4 Mar., '11
		WILSON, A. ...	4 Nov., '11
		WILKINSON, E. ...	30 April, '11

CEYLON.

ALLNUTT, A. C....	... 19 Jan., '11	JINADASA, Dr. M. J. ...	19 Aug., '11
BOWES, J. S. ...	... 30 June '11	JOSEPH, Dr. H. P. ...	30 Mar., '11
BIRD, H. J. ...	... 3 April, '11	LASCELLES, A. G. ...	25 Feb., '11
BROWNING, G. F. R. ...	11 May, '11	LOURENSZ, Dr. C. B. ...	28 April, '11
CLIFFORD, SIR HUGH, K.C.M.G. ...	26 April, '11		<i>Steamer due</i>
Athenæum Club, Pall Mall, S.W.		LUNDIE, C. R. ...	22 Jun., '11
COOPER, F. A. ...	4 May, '11	MEADEN, C. B. P. ...	11 June, '11
CODRINGTON, H. W. ...	3 May, '11	NATHANIELSZ, A. H. ...	9 June, '11
CLARKE, A. H. F. ...	13 May, '11	PETCH, T. ...	10 Oct., '11
CARTWRIGHT, H. T. ...	31 Mar., '11	RIDOUT, J. B. M. ...	5 Oct., '11
COX, C. L. ...	28 Jan., '11	RICHARDS, J. ...	15 April '11
CHAMBERS, F. H. ...	23 Jan., '11		<i>Steamer due</i>
DICKSON, A. C. H. ...	1 Sept., '11	RICHARDS, H. M. ...	2 Feb., '11
DE SILVA, H. ...	2 April, '11	SORENSEN, J. ...	18 Mar., '11
EMERSON, L. P. ...	8 Apr., '11	SUTER, E. B. F. ...	11 Sept., '11
FYSH, Mrs. M. N. ...	29 Mar., '11	SAXTON, G. L. ...	3 July, '11
GROOCCOCK, H. L. ...	21 Aug., '11	SOUTHORN, W. T. ...	29 Oct., '11
GODFRAY, A. C....	4 Feb., '11	SMITH, F. J. ...	22 Dec., '11
HEAD, E. W. ...	5 Mar., '11		<i>Steamer due</i>
HUMAN, E. ...	18 Mar., '11	WARREN, P. N. ...	23 Jun., '11
HYDE, G. H. M. ...	22 Jan., '11	c/o H. S. King & Co.,	
HELLINGS, R. B. ...	9 Jan., '12	15, Cornhill, E.C.	
		WILKINS, R. W. P. ...	10 Feb., '11
		WOODHOUSE, G. W. ...	22 Jun., '11

THE COLONIAL OFFICE JOURNAL.

VOL. IV.

APRIL, 1911.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE paper which has been presented to Parliament on the subject of the agenda of the forthcoming Imperial Conference indicates that a very full and varied programme has been arranged. In a despatch to the Dominions dated the 20th of January, Mr. Harcourt enumerated the subjects proposed for discussion by the various parties to the Conference. Some of these were eliminated as being more suitable for discussion at subsidiary conferences, but the following list of topics reserved for the full Conference should suffice to satisfy the most healthy deliberative appetite:—

Merchant Shipping and Navigation Laws ;
Cheaper cable rates ;
All Red Route ;
Imperial Court of Appeal ;
State-owned Atlantic Cable and Telegraph line across Canada ;
Publicity of Proceedings ;
Imperial Representation ;
The reconstruction of the Colonial Office ;
Interchange of Civil Servants ;
State-owned British Wireless Telegraph Stations ;
Double Taxation, and Stamp Duties on Colonial Bonds ;
Commercial co-operation for the encouragement of British Manufactures and Shipping ;
The Declaration of London ;
Emigration and the position of Labour Exchanges ;

VOL. IV., No. 4.

Currency and Coinage ;

Co-operation between the naval and military forces of the Empire and the status of Dominion navies ;

The position of British Indians in the Dominions.

At the date of this despatch neither Canada nor South Africa had formulated any proposals for discussion, and the Canadian Government subsequently intimated that they did not desire to suggest any particular topics. South Africa, however, submitted the text of six resolutions, some of which may be regarded as falling within the scope of the programme previously arranged. The fourth of these resolutions read as follows :—

“ That the desirability be considered of replacing the system of Trade preferences at present granted by the overseas Dominions to Great Britain by a system of contributions in money or services to Imperial naval and local defence.”

The Union Government shortly afterwards decided to withdraw this resolution, but stated that the Prime Minister hoped to have the opportunity of discussing with His Majesty's Government the question raised by it.

Every endeavour has been made on this occasion to enable the statesmen who will participate in the Conference to prepare themselves beforehand by a study of the questions for discussion, but with the limited time available and a programme of such immense scope, the task is necessarily one of great difficulty. It is further complicated by the obligation, which our visitors from overseas can hardly escape, to attend during their brief visit many public functions and social gatherings. It may be anticipated that the Conference will seek to improve the arrangements already in force for carrying on its work continuously and systematically during the intervals between the quadrennial meetings, and this matter will naturally come up for discussion in connection with the proposals for the reorganization of the Colonial Office, to which Mr. Harcourt proposes to assign an early place in the programme. Sir Francis Hopwood is to resume his old position of Permanent Under-Secretary of State for the period of the Conference. In 1907 it was Australia which pressed most strongly for a reorganization of the Colonial Office, with the support of Cape Colony. On this occasion two distinct proposals emanate from New Zealand and South Africa. The former desires the complete separation of the Crown Colony and Dominions Divisions, each to be placed under a distinct Permanent Under-Secretary. The latter proposes to place the Dominions Division, together with the Secretariat, directly under the Prime Minister. The views of the home Government have not been stated, and will presumably not be definitely formulated until the feeling of the Dominions has been clearly brought out by discussion.

In Imperial affairs, the principal event of the past few months has been the conclusion of the agreement for reciprocal tariff concessions between Canada and the United States of America. The negotiations at Washington in the first instance attracted little attention. It was generally realized that the day of Canadian "pilgrimages" was over, and it was anticipated that any agreement would be limited in its scope and of only secondary importance. The conclusion of an arrangement introducing free trade in a large number of products and substantially reducing duties on many others took the world by surprise. It has given rise already to "full dress" debates in the Canadian Parliament, the Imperial Parliament, and the American Congress. Its probable effects on the agriculture, commerce and industry of Canada, on the future of such lines of communication as the Canadian Pacific Railway, the Grand Trunk Pacific Railway, the Hudson's Bay Railway, and the projected Georgian Bay Canal have been extensively canvassed. Its bearings on the general question of Imperial Preference have given rise to heated controversy. There is a considerable division of authority upon most, if not all, of these questions. But one fact stands out clearly. The consumer, whether in Canada or the United States, so far as it is possible to regard him as something more than an economic abstraction, and to isolate his interests from those of the producer, the transporter and the financier, is likely to benefit largely. The origin of the agreement is to be sought in economic and not in political causes. Ottawa has not had time or opportunity to forget the monster demonstration of the Western grain-growers in favour of a reduction of duties. Washington has been perturbed by the growing volume of the demand for a reduction in the high cost of living and for a genuine "revision downwards" of the tariff, delay in hearkening to which has already cost the Republican party dear.

It is incumbent on us to avoid in these pages a discussion of the possible political implications of the agreement. But we may be permitted to express the opinion that an agreement which is good for Canada—and on that question Canada must be the judge—cannot in the long run be bad for the United Kingdom or the Empire. The Government has strenuously denied the suggestion that the policy of the preferential tariff has been abandoned and has treated with dignified contempt the charge that American reciprocity is a prelude to American annexation. There has been some tendency in this country to overlook the fact that one result of the agreement will be to admit into the Canadian market either free, or at a reduced rate of duty, many articles from the United Kingdom and from other British dominions. In no single instance will American manufacturers enjoy in Canada a preference over their British competitors. Canada, in fact, in making provision for her own economic interests, has continued to show a steady regard for those of the United Kingdom.

There appears to be every probability that the agreement will be carried into effect. In Canada it has aroused, as was inevitable, a good deal of hostility. The Opposition as a whole is committed against it, and some Liberal supporters of the Government have disclaimed the policy of their party. But Parliament has given its approval, and there seems to be no doubt that the general feeling of the country is behind it. In the United States the House of Representatives has endorsed the agreement. The Senate, which has proved a fatal obstacle to so many international arrangements, has failed to approve it during its ordinary session. But it appears to be agreed that had it been possible to carry it to a vote, the decision must have been favourable, and in this instance the Senate had plausible grounds for maintaining that the time available for discussion was inadequate. Moreover, President Taft from the first made clear his intention to resort, if necessary, to an extra session—an expedient no more popular among legislators in the United States than in the United Kingdom—to secure the passage of the agreement. In the new Senate the Democrats will be in a majority, and the chief danger to the prospects of the agreement would seem to lie in the possibility of its being put on one side to make room for a more general reduction of the tariff.

It is inevitable that Canada and the United States should develop closer personal relations as time goes on. It is calculated that in ten years from now the greater part of the population of the Dominion will be west of Lake Superior, and there the American element and influence will be very strong. There are already strong points of resemblance in business matters between the Dominion and the United States, as contrasted with the United Kingdom. Their commercial laws and banking systems are similar; currency and mechanical standards are the same. No surprise need be felt at the movement for closer trade relations, and, with an annual immigration of some 200,000 Americans, it is fairly sure to grow. It does not, however, by any means follow that Canada will ever cease to preserve her distinctive character politically. Some observers foresee a time when the tariff wall between the two countries will altogether disappear, but in practice the dependence in both cases on taxation of goods for raising revenue will operate strongly against so complete a result. But whatever the outcome commercially, the Americans who settle in Canada are quickly imbued with the national spirit of the Dominion. They become proud of the resources and prospects of their new country; they respect the orderliness of the population and the firm administration of the law. Whatever may be said of regrettable exceptions, such as occur in Canada as elsewhere in a world of imperfections, the general standard of social and political life is a high one, and few persons will settle there without sharing

eventually in the public spirit and loyalty which characterise its people. It is true that the new-comers from the United States know and care little about the British Empire, but loyalty to Canada herself is the first necessary step. In the meantime the United States are likely to undergo a considerable personal change, owing to the influx from southern Europe, which is calculated to increase the divergence of national character.

Whatever may be said of other trade, the solid fact remains that Great Britain will be, as it is now, the great market for Canada's chief industry. Within three years, it is believed, the United States will not export, but will have even to import, wheat. When the Panama canal is opened, the grain of western Canada will reach Great Britain by that route. Instead of moving east in Canada it will go west. Even now Alberta sends to Liverpool via Cape Horn. The ships that come out with grain will not go back empty. A full cargo one way, as all shippers know, is a vast help to shipments the other way. It is to be hoped that the British manufacturer will utilize the advantage, and in view of the use he has made of the Suez canal it is more than likely that he will.

The discussions of the Canadian reciprocity agreement recall the parts played by two protagonists of political debate, the Marquis of Lansdowne and Mr. J. Chamberlain, in connection with the Dominion's relations with the United States. Commercial disputes between the two countries loomed large through the second half of the last century. The United States abrogated the reciprocity Treaty of 1854 in 1866, and though the fishery provisions were renewed by the Treaty of Washington in 1871, this Treaty was likewise abrogated, it is believed as an expression of dissatisfaction with the award under which the United States were required to pay 5,500,000 dollars for the privilege of fishing under the Treaty. In both countries there were, however, parties in favour of reciprocal tariff concessions, and, in 1884, it fell to the Marquis of Lansdowne to explain to the Foreign Office that "it is indeed a matter of notoriety that the Dominion has consistently expressed its readiness to become a party to an arrangement which might have the effect of affording increased facilities for international commerce between itself and the United States. It has given the best proof of its sincerity by taking under its existing Customs Laws powers, of which your Lordship is aware, to admit upon favourable terms by Proclamation of the Governor-General those products of the United States which were included in the Treaty of 1854, whenever a similar course in regard to the natural products of the Dominion may be adopted by the Government of Washington. It regretted at the time the termination of the Treaty of 1854,

which it believed to be advantageous to the interests of both countries, and it would be fully prepared, on receiving from the Government of the United States an intimation that negotiations would be likely to produce useful results, to enter into such negotiations in an amicable spirit."

The immediate result of the abrogation was to throw back the fishery question to a Convention of 1818, the construction of which led to a long and technical controversy. Eventually, in 1887, Mr. Chamberlain was appointed, with Sir L. West and Sir C. Tupper, to negotiate a settlement, and this difficult task was successfully carried out. So ended a long-standing course of irritation. It left, however, some feeling behind it, and other disputes which arose contributed to delay the friendly consideration of reciprocal trade.

Canada enjoyed another prosperous year during 1910, the process of recovery from the depression of 1907 and 1908 in consequence of the American financial crisis being continued and increased. There is no better index in this matter than the immigration returns, and these show that all previous records were surpassed, the total of arrivals considerably exceeding 300,000. Even these figures are expected to be exceeded in 1911. The agricultural returns were not quite so good as those of the previous year, but manufacturing concerns and transportation companies enjoyed increased prosperity. Fresh railway construction was continued on an immense scale, no less than 6,000 miles of track being in various stages of completion during the year. Employment in nearly all branches was active and wages tended to increase. On the other hand, the rise of prices, which appear to have extended to all countries, made itself felt in Canada, and the cost of living rose in consequence.

At this period there is the annual exodus of farmers, or would-be farmers to the West, and presently Canada will be enriched with a great number of sturdy settlers. The attraction is one which Europe cannot give; it is free land, and in most of the favourite places it is 160 acres. This quantity is arrived at as being one quarter of a square mile, which is usually taken as a section. In parts of the United States, where the land is not inviting, you can get a whole or a half section; on the other hand the Canadian Pacific Railway allows 40 acres, or one-sixteenth of a section, of irrigated land. The new Canadian Townships are formed in pieces of 36 sections or square miles, and when fully settled are reckoned to hold a population of 720 (36×4 homesteads $\times 5$ persons). In Manitoba, Saskatchewan and Alberta about 18,000,000 acres have been disposed of in such free grants, leaving a trifle of some 86,000,000 for future applicants. Twice this amount is available

in the dry zone of South Africa, giving room for a population of one million. As these spaces fill up the necessity will increase for scientific farming and intensive culture.

It is, however, reassuring to the historically old parts of the earth, which are frequently decried as more or less played out in comparison with virgin territories, to find that an official United States report has declared that the older agricultural soils of Europe, as a whole, are not deteriorating, and that there is no marked difference between the composition of the old European soils and that of the new American soils in respect of potash, phosphoric acid, lime and magnesia. Not very long ago economists dwelt upon a supposed law of the diminishing productivity of land, and alarming inferences were drawn, but nowadays we hear little of all this. Individual farms deteriorate, and soils wear out, as has always been the case, but on the average an acre produces more than it used to do. This is, of course, largely due to better methods of cultivation and to the greater use of fertilisers. But even without such treatment there is a power of recovery in soils. It is mostly a question of nitrogen. The nitrates may be exhausted by excessive cultivation. But we know now that they are replaced, not by chemical action, but by bacteria, and in course of time this activity restores the land to a fairly high level of productivity. The great necessity is to give this process a fair chance by preventing erosion by water, and care should be taken that the drainage is not excessive.

Great Britain is now lending money to Canada to the amount of about £40,000,000 a year. The British public is certainly showing much greater confidence in the Colonies than was the case towards the end of the last century. Last year the visible capital raised here for Australasia was about £10,000,000, and the credit of the Territory has recently improved with the increasing production. The comparatively recent investments in South Africa amount to about £350,000,000, nearly equal to the whole amount which has been supplied to Canada and Australia. These three possessions and India have in fact received much the same sums. India has absorbed some £365,000,000, obtained at a very low interest, and this has undoubtedly been due to the autocratic control which has been maintained, but it must be admitted that the cost of developing India has taken up a vast amount of capital much of which would otherwise have gone to the building up of our Colonies.

Since the establishment of the Australian Commonwealth there have been repeated controversies as to the respective limitations of the powers of the Commonwealth and the component States, and in our last issue we drew attention to the proposals which are to be submitted to the Australian electorate for the amendment of the Constitution in this connection. The Commonwealth

Government has now taken a further step of no little interest with a view to lightening its difficulties. We have from time to time taken occasion to refer to the cases in which the Courts have held that the legislation of the Commonwealth was *ultra vires*, and it is unnecessary to enumerate these cases again here. It will be sufficient to remind our readers of the crucial decision which sufficed to frustrate the policy of the "New Protection." Under the Judiciary Act recently passed by the Commonwealth Parliament, the Government is enabled to submit to the Court for decision the general question of the validity of a particular piece of legislation. By this means it will be enabled to avoid the inconveniences resulting from a decision that legislation which has actually become and remained operative is invalid. In this country the absence of a "written constitution" has to a large extent saved us from these inconveniences, but from time to time a decision of the Courts suffices to upset the generally accepted view as to the actual law. The famous decision of the House of Lords in the Taff Vale case, and the more recent but not less famous decision in the case of *Osborne versus The Amalgamated Society of Railway Servants* are striking examples, both falling within the comparatively narrow domain of Trade Union law. It is also often possible to determine the validity of a statute—or perhaps it would be more correct to say to determine its effect—by means of a test action in which the particular issue to be decided is only of minor importance. But the Courts are not accustomed to determine abstract legal questions except when they arise from the concrete facts of a particular issue between parties. Similarly it will be remembered that one of the most important decisions ever given with regard to the constitution of the United States was in form only a decision as to the duty payable upon a cargo of hay. The expedient now adopted by the Commonwealth is novel but not unprecedented. Mr. Hughes was able to show that even in the United Kingdom the judges have on occasions been invited to express their opinion upon questions stated in an abstract form, and have not shirked the duty. But it undoubtedly constitutes an onerous addition to the functions of a court of justice, and as so doing came under adverse criticism from Mr. Deakin. We notice that a writ calling in question the validity of the new Federal Land Tax has been issued by a plaintiff bearing the ominous name of Osborne, but these proceedings are taken under the old law and may be compared to the suit initiated here to determine the validity of "Form IV." Should the new legislation prove successful,—for it must be regarded as more or less experimental—the decisions of the Federal Supreme Court should in time constitute a valuable storehouse of constitutional law. But it would clearly be easy to overburden the Court with its new duty, and it will be observed that it is open to the Government only, and not to the private citizen, to set the newly devised machinery in motion.

The New Zealand Licensing Amendment Act of 1910 makes important alterations in the law relating to local option. Hitherto, when polls have been taken, three issues have been submitted to the electors, namely, the continuance, reduction or abolition of licences. In future a vote will be taken only on the two issues of continuance of licences or "no licences." But the most noteworthy change in the law is that providing for a poll on the question whether or not licences for the sale of liquor are to be issued in the whole of New Zealand. The question of national, as opposed to local, prohibition is thus raised. Electors will be required to vote either for or against national prohibition, and in the event of three-fifths of the voters expressing themselves in favour of it, national prohibition will come into force on the expiration of a period of four years from the date of the election. If national prohibition is carried in this manner, a proposal for the restoration of licences is to be submitted to the electors at the first general election which is held after the expiration of three years from the time when national prohibition came into force. This proposal also will require, if it is to be carried, the support of three-fifths of the voters, but should such support be forthcoming it will take effect after an interval of three months.

The effect of the Australian legislation against shipping rebates possesses no little interest for other places which are agitating against the system. The enactment is perhaps not quite clear, but the inter-state steamship companies have bowed to the evident intention and have notified that the bonuses which they have paid to customers who give them the whole of their business will be discontinued. It is of course clear enough that this result can be brought about by legislation, but in this case the companies have retaliated by increasing the net freight charges. The shipper therefore loses his 10 per cent. and gets no advantage. In some quarters it has been urged that this result is a proof of the uselessness of such legislative attempts. But at any rate the law clears the road for competition. Whether competition will spring up in such circumstances is a matter which depends on the economic position. The law cannot create it; commercial demand may or may not. In Australia prices have gone up materially and the awards of the Arbitration Court tend further to put up rates. On the whole it seems likely that, irrespectively of the law, rates would have been raised under the operation of these causes. At such a time it can hardly be expected that the companies will compete against one another in the only form left to them, viz., by cutting rates. But from the public point of view it is something gained if competition is made possible when circumstances encourage it.

The South African bill provides that the Postmaster-General of the Union shall not enter into any contract with a shipping company

which offers any rebate in consideration of exclusive dealing with the company. Here again the practical question will be whether any effective competition can be established against the Union-Castle Steamship Company.

A "Committee of Colonial Intelligence for Educated Women" has been founded under the Presidency of H.R.H. Princess Christian of Schleswig-Holstein. The Hon. Mrs. Norman Grosvenor is Chairman of the Committee, which includes representatives of the British Women's Emigration Association, the South African Colonisation Society, and the Central Bureau for Employment of Women, and Mrs. John Buchan, 13, Bryanston Street, W., is Honorary Organizing Secretary. The objects of the Committee are stated to be:—

"1. The maintenance of an Intelligence Office which shall estimate the demand for women's work in the Colonies, and bring it into relation with the supply in this country.

"2. The establishment in the Colonies of expert agents who shall investigate local openings and report on them.

"3. The establishment in each Colony of settlements for women, where they can be trained for Colonial conditions."

The scope of the Committee's work is indicated in the following extract from the prospectus:—

"It must be clearly understood that the actual work of Emigration will not be undertaken by this Society. This work is already admirably done by the British Women's Emigration Association and the South African Colonisation Society. We hope to assist both these organisations and the Central Bureau for the Employment of Women in the difficult and intricate task of finding suitable openings for educated women overseas—a task which, owing to the enormous amount of work already on their hands, they have not found it possible to develop fully. It is proposed, therefore, to send out from this Committee to each Colony an educated practical woman who will investigate conditions of employment and new openings for women, and who will endeavour to establish a network of reliable agents throughout the Colonies. It is also hoped later on to found settlements in the Colonies where training, suitable to the needs of each Colony, can be given, and which will form centres to which the girls can return in the intervals of employment. It will at once be seen that both these proposals involve considerable expense, and contributions towards this much-needed work are earnestly requested."

The new organization, if it succeeds in its aims, will be accomplishing a very useful piece of work, and we are glad to note that care has been taken to prevent wasteful competition or overlapping with the work of existing agencies.

The Governor of the East Africa Protectorate states in his last annual report that "there would appear to be very little doubt

indeed that the Colony is about to witness considerable expansion in its European farming population. The progress which has been made in seven years in spite of many difficulties is very striking. Very few of even the oldest of our Colonies can provide the amenities of this, our youngest. There is hardly a farmer unprovided with communication by road—not always of a high-class character, but fully equal to that existing in any new country; one settlement only is fifty miles from the railway—the Uasin Gishu Plateau. The lands are mainly held in leasehold. This is held by some to be a deterrent to the country's progress—a contention which is, to my mind, erroneous. It is conclusively proved that the countryside will be agricultural as well as pastoral. Many of the farms, the bulk of which are from 3,000 to 5,000 acres in extent and have been granted on pastoral leases, will undoubtedly become agricultural. The rent charged is from a halfpenny per acre to threepence for the best agricultural lands.

It is a fact that in other countries, and notably Canada, freehold agricultural land is being granted. It is to be remarked, however, that it is limited to 160 acres, and that in most cases the best lands are in the hands of railway or other companies, and the settler seeking a free grant has to go far afield for it. If he seeks to come close to the railways, he finds virgin land standing at from £1 to £2 per acre. Moreover Canada, Australia and New Zealand are purely European countries."

The leasehold system, as we have pointed out in a previous number, will preserve East Africa in the future from the land difficulties which have befallen Australia, and it is not likely that farmers will be deterred by it.

In addition to the ordinary grant of East African land to settlers, there are the special cases of concessions on a large scale for the purposes of exploiting some natural product. The usual term for leases in such cases is 21 years. A shorter period may lead to an improvident and wasteful use of the land, as the lessees would have no interest in maintaining its value; on the other hand, as little is known of the market value of the grant and future prices might be much higher, it is always possible that a very long lease might prove to have been let on too easy terms. Only uninhabited land is so dealt with and therefore there can be no question of interference with native rights; natives have, therefore, to be recruited for the necessary labour, and it will be necessary for the Government to exercise proper supervision. It is usual to require that a substantial amount shall be spent during the first two years on the development of the estate.

It is satisfactory to find from their last report that the British North Borneo Company are doing well. The British Empire has been largely built up by the labour of trading companies, which have taken the risks and have been allowed by a somewhat indifferent

government to manage things after their own fashion. The idea that colonial territory may be regarded as an asset on which Government funds may be laid out as an investment is quite a recent one. It certainly had no footing in 1882 when the North Borneo Company got its charter. The Liberals were then in office and were much more disposed to let private adventurers take the field than to do it themselves. The debate in the House of Commons reads curiously now. Mr. Balfour took Mr. Gladstone to task for his jingo spirit. But this was when the fourth party was in existence. The next year under Lord Salisbury a Protectorate was established. It is clearly an important possession, if only in virtue of its position. It would not be pleasant if this island with its splendid harbours and useful coal mines, in the centre of the Malayan Archipelago, had been in the possession of another Power. The Company resembles a government even in its commercial capacity. It mostly follows the policy of granting concessions to subsidiary companies. Of these there were twenty-five in 1910. Some desire has been felt that the administration of the territory should be taken over by the Government, but the difficulties which have led to this elsewhere—foreign complications and the existence of a large native population—are not encountered here.

The doubts and controversies which have attended the progress of the British South Africa Company have formed a marked contrast with the absence of history which has characterised the North Borneo Company. The courage with which the original settlement, then remote and forlorn, was entered upon will always be a source of legitimate pride. The difficulties were enormous, and it is most gratifying on every account that the Company has at last turned the corner. This is pre-eminently, from top to bottom, a British enterprise. Trade has, in this case, followed the flag. For the present, development waits chiefly on the pick, but a great agricultural activity is in progress, and cereals, tobacco, cotton and other valuable products are coming on apace.

The formation of a British West African Association, similar in character to those which represent the West Indies, Ceylon and the Straits Settlements, is a step which has certainly not been taken too soon. Commercial interests on the West Coast have increased remarkably in recent years, and have commanded special recognition from the Colonial Office. In all these matters the personality of the late Sir Alfred Jones strongly asserted itself, and as often happens when a strong man fills the stage, there was little opportunity for others, but now there is ample room and reason for an organized association which will represent all classes of producers and merchants. We trust, nevertheless, that some one will presently arise, who will don Sir Alfred Jones' mantle,

and unite with successful commercial enterprise the keen spirit of patriotism and good endeavour which was the joy of his life. It would not be difficult to pick out from the first list of the Association some one who could fill such a rôle.

The address of the Association, of which Earl Cowley is President, is 1 and 2 Oxford Court, Cannon Street, E.C.

Sir Sydney Olivier's report on Jamaica for the year 1909-10, concludes with some interesting observations on the general condition of the Island, which we reproduce below :—

“The year was, on the whole, one of prosperity and progress for the Island, notwithstanding that some districts suffered from drought and others from the exceptional storm of November, 1909. The damage done by the November storm to bananas, cocoa, yams, and in a smaller degree to other less important crops, was considerable, and seriously affected the export of bananas and cocoa. The generally excellent weather of the succeeding period has, however, now completely re-established the condition of plantations and provision ground through the Island. At the date of which I write it would appear that the prospects of a good crop for the coming season are assured in all the districts of the Island in which the sugar-cane is cultivated for the production of sugar or rum. Unfortunately the disorganised state of the rum market may discount this advantage for those estates (considerably in the majority) which rely upon the production of Jamaica rum, and are not equipped with modern sugar-making machinery. I am glad to say that the tendency to equip sugar estates for this purpose has received encouragement by the success of recent ventures in the equipment of factories, and bids fair to progress further. The effects of the storm of November, 1909, which, whilst they were much exaggerated to the prejudice of the Island by alarmist telegrams at the time, were unquestionably violent and severe, but were met and combated with great cheerfulness, energy, and resolution by the classes affected by them, should serve as a reminder that the Island is much more largely dependent for its income and support upon one single very easy destructible crop, the banana, than is at all satisfactory. The encouraging experiences of sugar planters during the last ten years, and the improvement to the price of cocoanuts have accordingly been specially valuable in calling attention to the profits of those staples. The attraction of banana cultivation lies in the quick returns and high profits which it yields in successful years; but the periodical losses are considerable, and when the fields are blown down their yield is destroyed for a year. Tougher cultivations, such as cotton and possibly rubber, will probably not be greatly extended until the profits of planting bananas have been reduced by the

exhaustion of soils and the consequent increase of the cost of cultivation, and at the same time money has been saved for investment in more permanent and slower-yielding staples. The extension of the skilled cultivation of bananas (as distinguished from the same peasants' cultivation) still progresses: the United Fruit Company continues to lease or buy neglected properties and turn them into banana plantations; and I am glad to be able to report that similar operations with local capital, by syndicates and individuals, have also been witnessed during the year of report. These developments, when successful, are, however, I regret to say, not very frequently due to capital or personal ability introduced direct from Great Britain, although several opportunities have recently been offered to British investors to take shares in large undertakings for planting in this Island. The enquiry is frequently made whether Jamaica offers a good field for the investment of British capital in planting enterprises, or for a livelihood to young men with a moderate patrimony. There can be no question that planting in Jamaica has been yielding large profits during recent years; but these profits have been earned by the application of high ability in the handling and financing of large enterprises, either by corporations, such as the United Fruit Company, or by a few individuals in the Island, and of personal knowledge, ingenuity, and industry on the part of individual agriculturists in no inconsiderable numbers. The young men of the class with regard to whose prospects as immigrants enquiry is made have too frequently neither of these endowments, and both are indispensable to success. They may attain the latter, but they must serve a more than nominal apprenticeship before they can hope to make money in planting here. Nor, I regret to say, have the directors of certain British companies and syndicates that have taken in hand the planting or fruit dealing businesses in Jamaica shown that grasp of sound business methods and that appreciation of the conditions to be coped with which enables the United Fruit Company and others with American capital continually to extend their profitable interests in this Island, nor even, in some instances, a reasonable modicum of financial conscientiousness or prudence in their engagement. Such enterprises unjustly damage the good repute of the Island's resources which, to capable and straightforward enterprise, have yielded and continue to yield a substantial return."

The defeat and death of Senoussi, which are reported in the French papers, are hardly noticed here, though a few years ago he was a very disturbing influence on our West African Frontiers. He was one of the typical desert leaders, a Mohammedan, but of an independent sort, relying largely on religious fanaticism, and living

on the spoils of war. He came into notice in 1892, as the captain of several hundred riflemen. He soon entered into an alliance with Rabah, a chief of similar kind, and became a Sultan of importance in the North of Ubanghi. In 1899 he threw Rabah aside, and effected an alliance with the French. His new allies were so confiding as to furnish him every year with a certain number of quick-firing rifles. It is not altogether surprising that, with these resources, he proceeded to construct an active campaign of raiding. On one of these occasions, his son put some 20 natives in a cage and burnt them alive. Their offence was that they had run away from the slave traders. By 1909 he had from three to four thousand rifles, and was raiding far and wide. The French authorities found this "très gênant." They sent him an invitation to stop, and as he took no notice it was decided to fight him. At the engagement the French were about 210 in number, against 1,200, and evidently behaved with great gallantry and complete success. The result removes a terror which has sorely afflicted a wide district for many years. It is hardly likely that Senoussi will have a successor. His fate will probably have an effect in furthering the peacefulness of our own possessions.

An interesting discussion, which has been recorded in a sessional paper, has taken place in British Guiana on the principles of taxation applicable to such a place. There, as in most other Colonies, taxation consists chiefly of import duties levied for purely revenue purposes. These taxes are applied to the necessities of life, and are open to the obvious objections that they may press hard on those whose incomes are hardly sufficient to provide for such necessities. The Receiver-General argued that this objection loses much of its weight in a country where the conditions of life are so simple that the number of persons who are unable to provide themselves with the necessaries must be practically nil. There is, no doubt, much force in this contention, and the fact explains the universal practice in young countries of raising money in this way. The demand for setting up a difference between rich and poor does not arise at this early stage. Later on, when society is more complete, and the number of comparatively rich people greater, the principle of an income tax becomes more applicable. But, in practice, the system of direct taxation, when once it held the field, has a great advantage, and outlasts the original conditions. It is easy to increase the taxes if greater revenue is required; it is easy to urge objections to an income tax. When the amount of inherited property is small, the only substantial difference is between the successful and the unsuccessful workers. "Is it even fair," asks Mr. C. Grannum, "when two men start life without any very considerable disparity of opportunity, and one rises to an income of say, £1,000 a year, to tax him at the rate of, say, 1s. 6d. in the pound, while the other who

risers only to £200 a year, is taxed at the rate of, say, 1s. in the pound?" His own answer is that it is not, except in cases where incomes are so large that it is obvious that they have not been built up without the infliction of injustice on other members of the community, or where the condition of the State is such that money must be had even if it has to be collected by a system which does not embody justice to all alike. It is generally difficult to get the two men occupying the different positions indicated to agree about the justice of the matter, and as justice is not a simple thing, but a highly technical art, the question is not usually worked out so much on that ground as on the ability of various classes to pay. From this point of view the principle of progressive taxation has established itself. Up to the present the Crown Colonies have as a rule steered clear of income tax, and though the Straits Settlements have been brought face to face with the grisly phantom, it appears to have been exorcised for the present.

The decision of the Union-Castle Line to call once a month at Lobito marks the growing importance of this port, which has so much in its favour that it may become the most important point on the West African Coast. A proof of the enterprise now characterising the place is the installation of electric light obtained by damming the Catumbella River. The dam is of monolithic concrete and will hold up a head of 21 feet of water. The current is to be stepped up to 22,000 volts and transmitted to three sub-stations where the pressure will be reduced by step-down transformers to 500 volts for distribution. Three 225-k.v.a. turbine driven alternators are to be installed. The dam has been completed. The work may be taken as an example by other West African towns which possess streams which could be turned to account.

The progress of Katanga is of much interest to us, partly because its mineral wealth makes it important and partly because it is a place where the qualities of the competing commercial countries are put to a comparative test. We have received a book published by the Belgian Institute on Sociology which is highly complimentary to British enterprise and methods. There is certainly no trace in this description of detailed facts of the lethargy of which the British trader is being continually accused. The English language and currency predominate in the district. Official etiquette requires the officials to use French (the official language of Belgium) only, but the result is to relegate them to a state of "inaction" in commercial matters.

The making of the railway from Lobito is being hastened on. The distance to Elisabethville is 2,140 kilometres. The distance

from Beira by the present route is 2,615; but by the short out which is to be built with the aid of the Beit legacy this will be reduced to 1,575. The superiority therefore in point of distance will rest with the Rhodesian route, and for some time to come the commercial organization in Rhodesia will be able to command the situation. As regards the sea transit, Beira is much less favourably situated than Lobito. It is true that at present the freights from the former are lower than from the latter port, but this cannot last.

As Fiji is entering into the list of borrowing colonies, it is satisfactory to find that the revenue in 1910 exceeded that of the previous year by £27,158, and established a record. It is remarkable that the revenue at Levuka from import dues exceeded that of 1909 by almost 50 per cent. The principal factors in the improvement are the revision of the tariff, the increased output and enhanced price of copra, and a correspondingly increased buying power on the part of the natives. At the port of Lautoka the increase is to a large extent due to the expenditure of capital by the Colonial Sugar Refining Company, Limited. The earnings of the natives have been largely increased by a new industry, the collection and sale of a shell known locally as the "Sici," which is now largely exported to Japan and Germany. The improvement is the more welcome because not very long ago the finances of Fiji were in a state which in private affairs would have made for bankruptcy, and the necessity for retrenchment was so great that the salaries of the whole civil service were cut down. The appointment of Sir J. Thurston proved the turning point of affairs; the administration was carried on with a masterly hand and excellent results; and the deductions made from the civil servants' salaries were eventually repaid.

Suez Canal.

It is estimated that by the beginning of 1914 the Canal will have been dredged throughout its length to a depth of 11 metres (about 36 feet), and widened to 45 metres (about 148 feet), measured at a depth of 10 metres (about 32 feet 10 inches). By that time, it is estimated that the depths in the channels at Port Said and Suez will be practically equal to those in the Canal. The maximum draught allowed for vessels passing through will be brought up to 30 feet, so that there may be under the keels about 3 feet under the most unfavourable circumstances, where shoaling may have occurred to the extent of 3 feet. It is almost certain that additional dredging and other works, principally with the object of further deepening the Canal, will be undertaken in the near future.

Eastern ports will of course make efforts to bring themselves into harmony with these improvements.

In our number of last October some remarks were made about fighting ticks in Africa by dipping the hosts on clearing spaces. We are informed that in St. Helena the mischief was dealt with by importing Indian Mynah birds (*Acridotherus tristis*). These birds thrive in the island and consume the ticks as they appear on the cattle. They might have been designed by nature for the purpose, as they attend on the cattle all day long, and no inconvenience has been caused by ticks for the last twelve years. They multiply very quickly, and would do so in Africa. They also clear vegetable crops of the caterpillar, which used to devastate whole fields before the birds were imported. The only objection is that they pillage fruit, especially peaches. We hope that they may be tried in Africa.

SURSUM CORDA.

When, in this life of little ease,
 Our vision takes a wider range,
 Where, compassed round by chance and change,
 Our brothers toil beyond the seas ;
 Then we behold, in scattered bands,
 From where the bright Aurora belt
 Shines in cold fire, to bush and veldt
 And areas of burning sands
 A race who, with a single eye
 To duty, serve the Empire's need—
 Spare handful of a precious seed
 Sown amongst tares to fructify.
 And whilst we mix with party strife,
 Absorbed in insular concerns,
 The exile spreads the flag, and learns
 The wisdom of the broader life.
 Unmarked, save when the Motherland
 Assembles all her sons to swell
 The pageant, or to bid farewell
 When Death has severed man's command.
 • • • • •
 Far comrades on the Indian plains
 Or on the dank Nigeria coast
 Lift up your hearts ! The work at most
 Is finite, but the fruit remains.
 Lift up your hearts ! We may forget
 The pioneers who won to fame ;
 But there is glory in the name
 Of undivided Empire yet.

W. E. J.

THE ADMINISTRATION OF WEST AFRICA.

“The Niger and the West Soudan, or the West African’s Note Book,”
by CAPT. A. J. N. TREMEARNE. (*Hodder & Stoughton, and
A. H. Wheeler & Co.*) 6s. net.

“Anthropological Report on the Edo-speaking People of Nigeria,”
by N. W. THOMAS, F.R.A.I. (*Harrison & Sons.*)

THERE is no doubt that West Africa, though described as “undesirable, insalubrious and entirely damned,” exercises a peculiar fascination. The climate is more or less unhealthy, the scenery mostly dull and depressing, the life often rough and uncomfortable. Yet there are never wanting men who are willing to go there, and a large proportion of them feel the indescribable attraction of the place. The most obvious explanation is the opportunities which it gives. The agent or clerk finds himself in a new position; instead of being a mere machine he becomes an authority, and if he can keep himself going he is sure to rise. The young official usually touches a higher level of work and responsibility than is possible in any other part of the world. The frequent vacations at home help greatly to preserve the intellectual freshness. The West coaster shows an interest in all things West African, and is the backbone of more than one London club where sociability is a pronounced characteristic. The same man in the West Indies would certainly find a more comfortable home for himself and his family, but he would probably confine his attentions to his immediate surroundings, and would know little more of the adjacent colonies, if it is permissible to describe them as such, than if he had stayed at home. Perhaps at bottom the main reason why a white man comes to like the West Coast is that there is an enormous native population which, for practical purposes, is greatly inferior, and recognises the inferiority, to his own race. The life is dangerous and more or less primitive, but it ministers to personal

pride and the love of change and adventure. There is a freedom from conventionalities which has a subtle attraction, and the natives have on the whole a simplicity of character which makes them easy to get on with.

It would hardly be possible to reside in any part of West Africa without taking an interest in the racial history and characteristics of the people which inhabit it, and the attention which is now given there to anthropological studies is considerable. This is extremely important from the administrative point of view. The invariable result of such investigations is to show much meaning and value in ideas and customs which would otherwise be passed over as of no practical importance, and to suggest modes of building on the foundation of the existing system, rather than undertaking the unnecessary and perilous work of uprooting ancient methods. The sense of duty and of respect for authority has had in all countries to be evolved from the practice of centuries. But it is at best a delicate product, and if the established authority is suddenly destroyed it is impossible to replace it by any ready-made machine. It may be said that the leading mark of modern West African administration is the utilisation of native systems, and this accounts for the apparent ease with which effective control has been extended over the great spaces of Nigeria.

No doubt the old organization is already breaking down, or losing its original meaning. Speaking of the Edo district, Mr. Thomas observes that nowadays the only material advantage of becoming a chief seems to be the share in the fees paid by the new chiefs, which are squandered in riotous living. Each payment is made an excuse for a feast, and the only result is the impoverishment of the community. The pre-European tribal divisions, which to a certain extent regulated the work, are being dissolved by the increasing practice of the younger men to leave the villages to work on concessions. The general result is that the power of the heads of families and of the older men is hereby weakened. The process is clearly set out by the Governor of the East African Protectorate, where the circumstances are essentially the same.

"The elaborate structure of native custom and belief is apt to fall when we touch it, and yet we express surprise at the disorder of our own creation. We hold out inducements to natives to leave their homes, and yet we are astonished that these natives will not always return to their reserves. We cannot comprehend why, because they have tasted the sweets of town life, they will not carry on their former occupation in their own villages and hamlets under the rule of their chiefs and headmen, which rule we are endeavouring to maintain and strengthen. We forget that by bringing the native into contact with civilisation his mind may be rudely awakened; he discovers that he is naked;

he observes that others ridicule the superstitions, customs, and beliefs which he has hitherto held sacred; and he finds that his chief is, after all, not so important nor so rich as he imagined. In consequence he often prefers being a wage-earner to a capitalist, and following a free life to the discipline and restraint of his elders.

"The opening up of the country by European settlement, and the construction of the Uganda Railway and other public works, have tended greatly towards denationalisation. Civilisation is everywhere, outside the native reserves, marching apace; officials, missionaries, planters, farmers, merchants and traders, sportsmen and globe-trotters, one and all require labour, and one and all are adding their quota to breaking down the tribal systems, to denationalising the native, and to emancipating him from the rule of his chief. Although the native in European employment is at times worse housed and fed than in his own village, and the habit of daily work may be irksome, he feels that he is to a certain extent his own master, and if the employment is uncongenial he can legally terminate it. It is therefore in the interests of the employer to make him as comfortable as possible, and to try and persuade him to settle down and accept permanent employment. If he is well treated, is given ground for a garden, and earns sufficient to enable him to marry and live comfortably, why should he wish to return to his savage or semi-savage life in a native reserve? Apart, however, from his material comfort, we must, if we are to ameliorate his status and make him a more useful member of society, do all in our power for his moral welfare, as also towards making his improved condition a more permanent one."

The native principles of law must yield largely to civilised ideas. Under the former, crime, except in extreme cases punishable by death and regarded as "God palaver," was dealt with largely as a debt. In some districts even murder was settled by the purchase of a substitute by the offender. In a primitive community a utilitarian view is taken of such matters, and the first object is to repair the loss. When this has been done honour is satisfied. In practice it is quite possible that the system was as deterrent as the method of detention. The fines were substantial, having regard to the general poverty, or rather the absence of accumulated property. The immigration of labourers and the greater demand for production must, however, set up a more definite view of property and its right to protection. The education of the native will advance gradually in such matters in his own courts of law, and in the newly administered districts it is fully recognised that, so long as order is maintained, the best policy is to leave him to settle cases in accordance with his own sense of justice. In no country is it more necessary to bear in mind that it is impossible to expel nature with a pitchfork. Nor is there

any excuse for trying to do so, for owing to the climate West Africa must be developed by the work of the native, and their problems are not ours.

It is therefore fit and proper that in a book designed as a *vade mecum* of a practical character Capt. A. J. N. Tremearne has given a good deal of space to the anthropology of West Africa, a subject on which he is an authority. Much writing has been poured out on the topic, but a thoroughly scientific treatment is still to come, and the appointment of an expert in Mr. Thomas is a good step in this direction. Perhaps the study of origins is not particularly important to the administrator. Lucubrations as to whether the Stone Age held sway in West Africa as it did in Europe, or as to the respective infusions of Hamites or Semites are of little more than academical interest, considerable as that may be. But the actual beliefs and customs of the natives are a vital matter. In former times the chiefs maintained their authority by military powers. We have now substituted for the profits of raids more or less fixed stipends. This system, as elsewhere, in the long run wins over the chiefs. But in the first place it takes away from them the inducement which they had under the old régime to keep their people in order, and in the second place the shifting of authority and the introduction of new methods undermine the old relations. It must be recognised that sooner or later this is inevitable. Tribal or family institutions cannot hold their place when the necessity for them has been taken away. The West African native is in fact, as a rule, when in contact with a white race, quickly weaned from the traditions of his fathers. Whether he is individually a better man for the process is questionable. He passes into a state of liberty for which he has had no preparation, and which to him is morally equivalent to licence. Endowed as he frequently is with a sublime conceit, he easily absorbs the more objectionable traits of civilisation, and the results often induce a feeling of despair as to the possibility of dragging him up to a higher plane. Very pessimistic views have in fact been pronounced by experienced observers. Sir Harry Johnston says in "British Central Africa" that the negro "in his wild state exhibits a stunted mind and a dull content . . . which induces mental stagnation . . . and even retrogression towards the brute. . . . I can believe it possible that, had Africa been more isolated . . . and cut off from the immigration of the Arab and the European, the purely Negroid races left to themselves . . . might have actually reverted to a type no longer human."

The author of "Travels in West Africa" is equally emphatic. "I do not believe that the white race will ever drag the black up to their own particular summit in the mountain-range of

civilisation. . . . The African is not keen on mountaineering in the civilisation range. He prefers remaining down below and being comfortable. . . . And if he is dragged up into the higher regions of a self-abnegatory religion, six times in ten he falls back damaged, a morally maimed man, into his old, swampy, country-fashion valley." These are extreme conclusions which, we believe, are not by any means borne out by the facts. They are based on some disappointing results of attempts to develop the West African on European lines, but it must not be assumed that this is the only or the best method.

Opinion on the subject is largely influenced by comparisons drawn from the United States, Hayti, and Liberia. These cases may be held to establish the fact that the negro as a class is incapable of rising to a high position among civilized races, and is inclined to deteriorate after such contact if left to himself.

There is however a substantial difference between those cases and that of the West African at home. There he is not, as in America, living in the midst of a white race, in competition with them, and held apart and banned by them. Nor has he been uprooted from his origins and then left to evolve his own imitation of civilized administration, as in other places. The hope of the future is that the development of the West African races will proceed in their own countries on more natural lines. They have there the great advantage that they are not looked down upon and ostracised. Their country will never become a home to the European labourer, and there is no occasion for racial feeling. Every year, we believe, increases the feeling of confidence and respect on both sides. A great shock occurred when the outbreak in Sierra Leone in 1898-99 occurred, and the atrocious crimes which were then committed, in some cases by natives who were supposed to have been Christianised, made many people jump to the conclusion that the negro is irreclaimable. There was evidence at the time that the guilty tribes were exceptionally given over to superstition, that no effective control existed in what is now the Protectorate, and that the house-tax was introduced without preparing the native mind for it. Other causes of the outbreak have since been seen in their proper importance. There was at the time a demand for labour on the Congo, and all the young men who were available were promptly shipped off to that country. When they came back, accustomed to the system of wages, they were not inclined to work for the chiefs for nothing. This broke down the old control, and it was only in human nature for the chiefs to rebel. No sign of a recrudescence of violence has occurred since, but in the character of the administration the lesson has not been thrown away. Thus in the school for the sons of native chiefs at Bo, which was opened in 1906,

the boys are given ethical teaching but their religion and traditions are respected. "Under existing conditions pupils educated in Freetown invariably return home with a feeling of contempt for their native towns, and even for their nearest relatives. To prevent this both the native teachers and pupils will be expected to wear *country clothing*, and their lives outside of school hours will be spent in a small town, the government of which will be upon ordinary native lines. They live in their own village, in native houses, each of which contains five boys, one of whom is chosen 'head man.' Most of the households show great method in their division of labour, and the inmates are swift to resent and punish laziness and neglect, and careful in seeing that cleanliness is maintained. Boys are encouraged to write letters home, and constantly do so, and it is not uninteresting to observe in their frequent requests for pocket-money, country cloths, and other delicacies from home, a strong similarity to the habits of the schoolboys of their own years in England."

Throughout the West Coast the tribes have now settled down to a state of peace and order which has exceeded anticipation. They are, in fact, like most natives, ready to accept authority when once its force is proved. They view the position with philosophical calm. It is fate. The commercial instinct then develops at leisure. As soon as this process sets in generally, vast economic possibilities are opened up. The population is a great one; the products are rich and varied. Agriculture, which will be the mainstay, will be left to the native. The negro is at his best as a peasant proprietor as may be seen in the West Indies. The "concessions" which have been granted in many cases on a liberal scale to companies and syndicates and have come lately under the ban of much suspicion, are after all not really grants of the land. They are grants of certain rights over the land, mostly mineral, which the natives do not prize and could not properly work, but the customary rights of the natives are reserved. There is no question in such cases of ousting resident natives, and the creation of new markets in their neighbourhood is of course to their advantage. There is no real antagonism of interest between whites and blacks as there is in South Africa. Moreover, from an economic point of view, the West African is more promising than the Kaffir. He absorbs the requirements of civilization more appreciatively, and becomes a better buyer. This characteristic, of course, does not influence the British market much until he has got past the stage of native production. Thus it cannot be expected that Kano will deal extensively with Manchester as soon as the railway is at work, and even the cotton which is being grown under Lancashire auspices will in the ordinary course go mostly to native looms. But that a big exchange will

grow up in no long time is certain. The main difficulties have been overcome and the future promises to run smooth under an administrative policy which acknowledges the native ownership of land, respects tribal customs, maintains the native courts, regulates taxation in accordance with native ideas of justice, and sets itself to promote technical education and rational methods of dealing with the products of the soil. We borrow a further extract from Sir P. Girouard's East Africa report which puts the matter in trenchant language.

"The fundamental principle, and the only humane policy to be followed in dealing with peoples who have not reached a high stage of civilization, and are still dependent on a communal system of government, is to develop them on their own lines and in accordance with their own ideas and customs, purified in so far as necessary. Whilst retaining all the good in their government which makes for manliness, self-respect, and honest dealing, only that which is repugnant to higher ideals of morality and justice should be rejected. All authorities on African native government have deplored the great harm that has been done, not purposely but unwittingly, by administrative officers possessing little or no knowledge of the language, habits and customs, institutions, and traditions of the people they are called upon to administer. Impatient for so-called progress, they have at times trampled under foot the very institutions which should have been preserved if they had had any regard for the essential advancement of the people. Great and enduring patience is therefore expected from all administrative officers, for, exasperating though it may seem to see things go slowly, it is worse to upset ideals and customs so little understood. It is not from the present generation that we may look for much; the succeeding generations are in the hands of the administrative officers, and it is for them to mould the people as best they can with the educative means at their disposal. It must certainly be their endeavour to lift the natives to a higher plane of civilization, but this can only be achieved by gradual methods and by observing existing conditions. Every improvement must be by a natural process of evolution which will cause no extreme dislocation of present circumstances. We should support the authority of the chiefs, councils of elders, and headmen in native reserves, and the prestige and influence of the chiefs can be best upheld by allowing the peasantry to see that Government itself treats them as an integral part of the machinery of the Administration. Native tribes vary greatly; and whilst some have a natural genius for self-government others are more primitively constituted. Many of the tribes in East Africa have no chiefs of recognised authority, but where this is the case tribal or family authority is vested

in a chosen council of elders. By upholding the authority of the chiefs and elders it is not intended to imply that officers are to sit down and enforce blindly all orders issued by these men who, after all, are in a sense savages. The main object of administering the people through their chiefs is to prevent disintegration amongst the tribe; but active interest, supervision, and guidance on the part of the officers of the Administration are all necessary for the prevention of abuses. There are not lacking those who favour direct British rule; but if we allow the tribal authority to be ignored or broken it will mean that we, who numerically form a small minority in the country, shall be obliged to deal with a rabble, with thousands of persons in a savage or semi-savage state all acting on their own impulses and making themselves a danger to society generally. There could only be one end to such a policy, and that would be eventual conflict with the rabble."

EARLY DAYS IN CEYLON.

So on he sailed from zone to zone,
 Till he came to the Garden of Eden, Ceylon ;
 And the devil chuckled with might and main,
 As he thought how his mischief he there began,
 When he first declared war 'gainst the race of man !
 Now it chanced to be "upon a day
 In the merry, merry month of May :"
 He found it so hot he began to roar,
 And, what's strange for the devil, he cursed and swore,
 And he fled to his boat with hurried pace,
 In haste to quit such a roasting place ;
 And, going he shriek'd with doleful cry,
 "It's high time for me back to hell to fly :
 If I've any refractory spirits there,
 I'll send them to Trinkomalee ;
 'T will be pretty warm work for them to bear.
 Since it's even too hot for me !"

Old Colombo Journal.

In the year 1782 there was published in Germany an account of the life and travels of John Christopher Wolf, Principal Secretary of State at Jaffanapatnam in Ceylon. The author appears to have run away from his home near Berlin and to have made his way in a sailing ship of a more or less piratical character from Amsterdam to Ceylon, where he landed in a destitute condition. But he faced the situation with national determination. He set to work to learn Dutch and Portuguese. He ingratiated himself with the powers that were and the story of the recognition of his merits may be of interest if only by way of contrast with the almost inhuman methods with which secretaries of state and governors are in these times wont to trifle with the claims of the deserving. "My diligence did not pass unobserved by the Governor. One morning he conversed with me in a very friendly and familiar way ; and at last concluded with saying, 'but may I absolutely depend upon your fidelity,

obedience, and discretion ?' I replied, 'I would pledge my very soul upon it.' 'But would I swear this by the Holy Trinity ?' I answered, 'with all my heart,' and took the oath accordingly ; after he had previously threatened me with the rack and gallows, in case I should prove untrue to him. After this, he gave me a key, and took me to a chest of books, fast locked up, in which all his private papers, containing the most full and accurate instructions, and exposing the real principles of government in that part of the world, were found disposed in the best order. 'By the perusal of these,' says he, 'you may acquire knowledge, and become master of your business : but in order that I may be able to judge of the progress you make, you shall write some remarks on the principal things you meet with worthy of observation.'—By these means I became, in a year's time, fit to be employed in state affairs, of which, an unexpected event obliged me to give a proof sooner than I thought to have done. On this occasion the Governor appeared extremely well pleased, saying, at the same time, 'I could never have expected so much of you. You are now come to that pitch, as to be capable of serving me essentially.' And to show how much he was pleased with me, he gave orders for a silver hilted sword, with an elegant embroidered sword-knot, the whole accompanied with a suit of blue velvet, to be made for me. My sword he put on himself ; at the same time clapping on my head a hat of great value, and saying, 'Now you are a gentleman.'"

The favour of the Governor extended so far that he offered the author his brother's daughter for wife. Herr Wolf, however, explains that "I politely excused myself ; on which account I was out of favour with the Governor, for more than half a year. This period of my disgrace might, perhaps, have lasted longer, if the Lady had not, in the meanwhile, got married to a Governor's son. It is true, I should, in all likelihood, have made my fortune early in life, by this match ; but I could not help having some apprehensions on account of two things, which I choose to pass by in silence." He shows in this matter a commendable, if somewhat disappointing reticence, and it is clear from his story that he owed much to a well-disciplined discretion, which must have been rather severely tried on some occasions. It would have been interesting to have had some account of the "full and accurate instructions," and probably in that case a useful comparison might have been made with that valuable code known as the Regulations for His Majesty's Colonial Service, which is no doubt regarded with the like veneration by British officials. The author, however, carefully guards himself from lifting the veil of secrecy. But he has the highest praise for the Dutch administration. "I openly before God, and with a safe conscience can say, to the honour of

the Dutch nation, that in this cabinet I learned, saw, and practised no other maxims of state than those, by which the Christian Religion, together with an impartial distribution of justice, may be kept up, without the molestation of any one, and at the same time the public peace be preserved. And with this protestation I close this cabinet, remembering my oath, from which I do not even now consider myself as free."

On the whole this encomium seems to have been deserved. The Dutch undoubtedly tried to administer justly, though occasionally their methods would hardly commend themselves to modern ideas. Thus no offender was doomed to death until he himself had confessed his crime. This appears to be on the side of humanity, till we read that if he would not confess, though found guilty, he was put to torture. However the law was carried out fairly, and Dutch evil-doers were treated with no favour. Liberty of conscience was fully allowed, and all religious disputes were discountenanced. They established numerous schools, and in this matter set an example which the English were slow to follow. It was a source of grief to them that their teachings had little effect on the religious beliefs of the Island, and in one matter they were greatly embarrassed. They could not quite reconcile Christianity with slavery, and it was unlawful to baptize a slave. On the other hand they did not see their way to doing without slaves. An ingenious device was for a master to have his slaves baptized by a Catholic Missionary, a step which was apparently considered good enough for religious purposes without involving the master. Apparently the progress of Christianity was seriously impeded by the bad example set by many of the newcomers. We do not find any striking evidence of depravity, and that the standard of conduct was put extremely high is testified to by the following edifying and no doubt veracious story :—

"Among the common people which come here from Europe, there are frequently found many that lead a sad dissolute life, as they know their conduct is not so closely inspected by the clergy here as it is with us in Germany. On two fellows of this kind, we once saw a remarkable instance of Divine vengeance inflicted : they were both sailors, that made swearing (as it were) their profession, and at that time were inventing new oaths to abuse each other with, and in which they endeavoured mutually to out-do one another. Now just as they were pleasing themselves with the idea of having invented a new and horrid oath, the master of the equipage ordered them to go off with a boat to a ship lying off the shore of Colombo, and bring away from thence a subaltern officer, whose presence was required at the fort. They did as they were ordered, and lo ! they had scarce got to the distance of two gun-shots from the shore, when they both sank, in the sight of several people, in very calm and pleasant weather, and were never seen any more."

It will be remembered that there are similar illustrations of retributive fate in *Pickwick*.

The lot of the Dutchman on the Island appears to have been far from a happy one. The dangers and discomforts of the long voyage were of course always serious, and are narrated by the author with a detail in *Robinson Crusoe* style. On arrival the climate was found very trying.

"In such spots as the wind cannot arrive at, or thoroughly ventilate, by reason of their being situated in the neighbourhood of high mountains or thick forests, the air is very unfriendly to any new-comer from Europe. There are, however, many posts, which it is necessary to occupy with Europeans: some of these wretches I have often seen (not without compassion) in the most miserable condition, who, were it but possible, would willingly have been in their own country, begging at other men's doors; but a poor sinner is often made to repent in this country the crimes he has committed in his own." We trust that no such case occurs now. With all drawbacks, however, a great trade was done, and the author gives a great amount of information about the fauna and flora of the Island. Amongst it is a long account of the pearl fisheries, now so well known in parliamentary circles in this country. These were so well established even then that "some hundred thousands of people" assembled to buy the pearls, and the produce was valued at five to six hundred thousand dollars for a period of three years, for which it was farmed out. Large fortunes were made by the lucky ones.

"The poor European soldier, who with many others, to the amount of several companies, is sent hither by toilsome marches, to see that no malpractices are carried on, is an uninterested spectator of this private traffic; not but that he wishes (and that not a little) likewise to become a chapman, as he has heard from every body, that he might sell these commodities again to great advantage; but alas! his purse is quite empty, and so far is he from being able to buy pearls, that his finances will not even afford him a pipe of tobacco."

That Paradise was situated in Ceylon was firmly believed at one time by the settlers. In the first place there was the Adam's apple, beautiful in appearance but rank poison within. Then there was more specific evidence. "On a prodigiously high mountain, called Pico d'Adam," wrote Herr Wolf, "are found two tomb-stones, to the full as large again as the ordinary ones, with an inscription engraved on each, which hitherto no one has been able to read or write. Now there can be no doubt but that under these stones lie the bodies of Adam and Eve, who, as being the first of the race, are certainly entitled to this honourable distinction." The reasoning may not be convincing to the modern mind, but it was quite satisfactory at the time. After this it was an easy step to Adam's bridge, thrown over by our progenitor so that he might walk "with

his beloved consort from this Island, over to the Malabar coast." Perhaps it is owing to this particular sanctity that the elephants of Ceylon hold their heads higher than those that come from other parts, for "it is reported that when they chance to meet together these latter give them the pas and show evident signs of submission and respect."

The chronicles of early Ceylon history are largely devoted to the memories of kings, as in our own case, with their usual concomitants of intrigues, wars and sudden deaths, but they shed a glow of philosophical feeling over these incidents which is absent from our more humdrum productions. If a great man is murdered, the question is put: "What wise man, after being informed of this, would covet riches, life or prosperity?" A fall in life elicits the observation: "Thus worldly prosperity is like the glimmering of lightning! What reflecting person, then, would devote himself to the acquisition thereof?" These are certainly somewhat pessimistic sentiments, and it is not surprising to find honour paid to those who, to quote one way of putting it, "illustrating the destiny of the world, abstract the mind from the desire to protract existence." Perhaps this indifference explains the readiness with which the Cingalee acknowledged any ruler who could reach the throne, easily won by treachery and as easily lost. The royal fortress of Sigiri often changed masters, but never stood a siege. Passion was the rule of conduct in royal circles, and a large number of kings came to a violent end, but the general life of the Island owed much to the Buddhist system, essentially moral, contemplative, humane and peaceful, contrasting with the trammels of caste and the bloody sacrifices associated with Brahminism. No doubt it was possible to overdo things in the practical application of this system to public affairs. This may be seen from the sad end of King Sirisangabo, who, to quote Major Forbes' "Eleven years in Ceylon" (1841), "was a rigid devotee, and had taken the vows of the order 'Attasill'; the ordinances of which, together with the observance of many rules of devotion and acts of self-denial, totally prohibited the destruction of animal life. It may readily be conceived that the feebleness of a government administered by so bigoted an enthusiast soon led to anarchy. Crimes of the greatest enormity, committed with impunity, rapidly increased in all parts of the kingdom. When the malefactors were brought to the prison of the capital, as the King's vows precluded the possibility of their being executed, they were secretly released at night after condemnation, and the corpses furnished by the usual casualties of a populous city were exhibited at the place of execution, on gibbets and impaling poles, as the victims of the violated laws. By these means, says the Buddhist historian, a pious King successfully repressed crime, and yet gave the criminal time and opportunity to reform. The result, however,

as might have been expected, was precisely the reverse of that representation. The whole frame of society was disorganised ; and a famine, with its usual concomitant, a pestilence, combining with these public disorders, Goloo Abhaa, who then held the office of treasurer, easily wrested the sceptre from the weak hands which then swayed it. Sirisangabo offered no resistance. He privately left the city, taking with him nothing but his 'pirankada' (water-strainer), which is used by devotees to prevent the destruction of the lives of the animalculæ which they would otherwise imperceptibly swallow in drinking unstrained water, and met his fate while wandering as a hermit at this rock of Hattanagalla."

The Dutch policy was to treat the Emperor with the greatest respect, and on any audience they addressed him kneeling on one knee. Their concern was mainly the trade, and this they secured. The arrangement was really convenient to both parties. It is described by Herr Wolf in terms which suggest the underlying principle of the Modern Protectorate.

"The Emperor of Ceylon, in his present situation, may be considered as sovereign of one of the finest islands of the inhabited world. He resides almost in the middle of it, and sees the Dutch keeping watch round about him every where on the coast, that he is not attacked by an enemy unawares. It is true, he is by this means somewhat limited, and has not the liberty of trading with any other nation ; but this is of no import, he is Emperor notwithstanding, and his security must always be of greater value to him than any advantages by which his sovereignty might be endangered."

The year of the publication of this account marked the coming of the new rule, for in 1782 Fort Ostenburgh, at Trinkomalee, was taken possession of by the British.

IN THE TIME OF KING THAKOMBAU.

THAKOMBAU was King of Fiji when that group was ceded to Great Britain. The proper native way of spelling the name is Cakobau, the letter *c* having the sound of *th* and *b* that of *mb*. Mark Twain says that foreigners always spell better than they pronounce. Perhaps inherently recognising this, the bluejackets on the station generally called His Majesty, Cockaboo. There is a story, probably untrue, that the Governor of Fiji, shortly after the hoisting of the flag, was expected off to dine on the man-of-war then on duty in the Islands, but His Excellency at the last moment became indisposed, and when the captain's boat came ashore for him, sent one of his staff to make excuses. That gentleman, for an Englishman, was swarthy in the extreme, so much so that he was considered by the simple bluejackets as a superior and educated sort of Fijian. The old Government House jetty steps were steep and greasy, and he slipped on them and barked his shins and expressed his feelings with language suitable to such an occasion. After the boat had returned to the ship and the crew were dismissed, the quartermaster ranged himself up alongside the coxswain and asked for news of the shore. "Oh!" replied the commander of the galley, "the bloomin' Guvnor's got an 'eadache and we've brought off Cockaboo's son instead; but my word, Bill, can't he speak English!"

Although this is an attempt to interest people in Fijian matters by writing in a light vein, there is no intention of really deriding King Thakombau, or those who worked so hard to help him establish a fixed and stable form of government, in what a local song used to call "the dear old cannibal days." That was in 1871, when goodness knows the times were bad and hard enough. To use the present colloquialism, the bottom was just falling out of cotton planting and most of the planters were at the verge of ruin. They were, with some Americans, mostly of

British extraction, who had tried their luck in Australia and New Zealand, and lured by the high price of cotton during the civil war in the United States, had come on to Fiji. The natives then were about 150,000. So, at least, it was supposed, but there was no effective way of taking the census, all the inland tribes of Viti Levu, the mainland of the group, being man eaters, always at war and therefore impossible of being counted. Any one brave enough to make the attempt would probably have been added by assimilation to the permanent population. However, the maritime tribes and those closely adjacent had for a long time been under the influence of the missionaries and were Christians. They were well in hand under the sway of their own hereditary chiefs and greatly outnumbered the cannibals of the interior. Most of the whites were young, rollicking and adventurous. They demanded the most democratic form of government, which was, of course, totally unsuited to the Fijians, who were used to an aristocratic and patriarchal system. As the settlers were mostly British they fell back on their own old time-honoured institutions, and business was started by a House of Commons elected by the white population, a House of Peers formed by the hereditary native chiefs and a Sovereign in the person of King Thakombau. Over all waved the national flag, which sported a red escutcheon charged with a white dove bearing in its beak a green olive branch, and the motto was "Rerevaka na Kalou, Doka na Tui," which being interpreted means, "Fear God and honour the King." His Majesty, it is reported, was heard to say that he did not like his flag, as it reminded him of a fowl being boiled in a pot, and the European opposition used to sarcastically allude to it as a dying duck in a thunderstorm. But the motto was distinctly good and we still retain it with the coat-of-arms granted to us as a Crown Colony.

Imitation is the sincerest flattery. We tried to adopt our dear old institutions. With them we had something very like an Irish question. At any rate we had a disaffected portion of the group over which presided a Viceroy. History has in many ways repeated itself in the Southern Ocean. Whilst great events were stirring in northern latitudes, similar ones, equally great in proportion to the relative state of affairs, were occurring in the Pacific. The traveller on the beaten track of the All Red Route between Australia, the Fijis, Hawaii and Vancouver, may see engraved on the rocks at the Pali, just outside of Honolulu, how there, in 1799, King Kamehameha drove his enemies over the precipice and consolidated his power in Oahu. That was the year of the battle of the Nile. Whilst we were fighting our Crimean and Indian battles in the early reign of Queen Victoria, vikings were still ranging the South Seas, and one of them, a Tongan adventurer by name Maaфу, had begun to

establish himself in the Lau Archipelago, the eastern or windward islands of the Fijian group. Captain Cook, whilst at Tonga or the Friendly Isles in 1772, noted that the young bloods there acquired their military fame and did the grand tour among their Fijian neighbours, who were then considered, and very justly too, the most warlike and savage of the nations in those parts. How few know that charming little book "*Mariner's Tonga*," which treats of the author's captivity there in the early years of the last century! He bears out Cook's observations on the influence of Fiji on the character of the Tongans. In those days the latter were considered inferior in warlike prowess, but in our days by their superior intelligence and assimilation of European ideas the situation became changed.

Maafu was of such high rank in Tonga that there was scarcely room for him and King George Tubou, the reigning monarch. It was politely hinted to him that Fiji offered a fine scope for chiefs of daring and resource and he was supplied with war canoes, the new and greatly dreaded muskets, and such adventurers as cared to try their fortune with him. So he sailed from his native shores, never to return thither, save as a visitor. Hitherto the Tongans had but temporarily gone to Fiji as free lances, returning with booty and plunder. But under Maafu they affected a definite lodgment. By fighting and diplomacy, setting one small chieftain against another, he established his sway throughout the Lau Islands, the eastern or windward portion of the Fijian group. Probably he would have subdued the whole of it had he not have been resisted by the British consular officers, who consistently supported the legitimate rights of the native owners, and by the aid of our men-of-war checked his power. Seeman in his mission to Viti, *tempus* 1859-1860, gives a most picturesque account of how Commodore Seymour, in H.M.S. "*Pelorus*," compelled Wainigolo, Maafu's lieutenant, to evacuate the Macuata district. The description of the departure of the Tongan war canoes as they passed, with their crews cheering, under the stern of our flagship, is particularly fine. But only those who have seen a large fleet of native canoes with their huge triangular mat sails, with their war drums booming and painted crews yelling for all they are worth, can realise the picture.

Maafu in Lau proved an enlightened ruler, and with the aid of some English gentlemen endeavoured to introduce law and order. Before the proclamation of the sovereignty of Thakombau over the whole of Fiji, the islands under Maafu were banded together under the name of the Lau Confederation, the native name for which was the Tovata, which is still, in the Fijian, the designation for the United States of America. The idea was the union of the small islands known as Yatu i Lau, or Lau Archipelago. Many wise regulations

were there adopted, which subsequently upon the annexation by Great Britain, were extended to the whole of the Colony. Notable amongst them was the prohibition of the alienation of native lands and the substitution instead of tenure by lease, thus preserving the property for the original indigenous owners. When the late Sir John Thurston and Mr. George Austin Woods consolidated the power of Thakombau as King of the whole group, Maafu gave in his allegiance and received the title of Viceroy. But he was never loyal to the new administration. As in Tonga there was not room for him and Tubou, so in Fiji he could not brook the superior authority of Thakombau. He continued his intrigues among the chiefs and laid in great quantities of warlike stores, and was on the eve of commencing hostilities when the Union Jack was hoisted. Thakombau, aided by his European advisers, saw that that was the only way of preserving peace, and Maafu, seeing that events were too much for him, also gave in his adherence to the new government. He was made Roko or native Lieutenant-Governor of Lau, and having yielded to superior force that he could respect, remained a loyal servant until the day of his death.

As we had so many good old British institutions, a King, a Viceroy, and a House of Lords and Commons, we had to have all the rest of the paraphernalia. Thakombau, up to the time of his adoption of Christianity, was a most notorious cannibal and dreadful warrior. Once an enemy, a rival chief, was brought captive to him. It is said that he plucked out his enemy's tongue, eat it before his face, and then brained him with his ironwood war club. This dire instrument was sent to Sydney and was there festooned with silver doves and olive branches, and came back to be the mace of the House of Commons. When the sovereignty passed to Queen Victoria, the erstwhile weapon of the Vunivalu or War Lord of Fiji was sent to her in token of homage and fealty, and now probably is stored with other treasures of the Crown, where, let us hope, it rests in peace. But before that, like its prototype our own mace, the bauble was removed when His Majesty and his ministers subsequently usurped the power of Parliament. Of course there was a Speaker, and he lived up to his office by giving dinners and garden parties. As we had no road to speak of, we arrived thereat by means of boats, and we might well have been taken for a part of old London with its processions of barges, and Levuka in those days used to be very gay. Then there was the regular army, which, with its reserves, the painted club and spearmen of the feudal chiefs, was employed in fighting the cannibals of the interior, where it did remarkably good service. The headquarters was naturally at the capital, the streets of which were enlivened by the uniforms of the officers, which were modelled on a cross between those worn in France and America. The headgear were like kepis, and altogether there was a good deal

of gold lace. We were a young and an excitable community, and perhaps not quite so sober as we are nowadays, and like the heroes of Major Flushfire's song in Marryat's "Rattlin the Reefer," inclined to drink when we were thirsty and when we were not thirsty, and occasionally assisted in drinking matches. Parliament had not yet imposed customs dues, and Hollands gin was popular and cheap. It is white and innocent-looking, and in a glass water-bottle looks like what that vessel is supposed to contain. Such a one stood on the green baize-covered table, just below the mace, and, scandal has it, contained something stronger than water. Most stories are chestnuts, and probably this one dates back somewhere to about the time of Thebes; but it is said that after a stormy debate prolonged until close upon the dawn, an excited gentleman who hailed from somewhere in the north, insisted upon reciting "A Man's a Man for a' that," whereupon, after he had finished, another jumped up and said, "Mr. Speaker and gentlemen of the House: When Shakespeare wrote 'Write me down an ass,' do you think that he had in his mind the honourable member for Taviuni?" Then came into use another good old institution, the Serjeant-at-Arms, in a gallant effort to preserve the King's peace.

All went gaily for a while, but the inevitable crisis came, and His Majesty's ministers were outvoted and expected by the white inhabitants to resign. Many years ago there was an article in the old *Saturday Review* on a paragraph that had appeared in one of the dailies to the effect that there had been a ministerial crisis in Spain. It observed that when you play a game you must do it according to the rules, and that as Spain was indulging in constitutional government an occasional ministerial crisis had to occur, but that in matters of real import the Captain-General of Madrid had to have his say. With us the determined ministry, backed by His Majesty, the feudal chiefs and the army, refused to resign, and King Thakombau reigned on and did not meet with the fate of Charles the First.

Who can tell with what indignation the white settlers received this unconstitutional procedure? With the natives it was the proper chief-like behaviour under the circumstances. Each community took it according to its national characteristics. The Germans, of whom there were but few in those days, took it fighting. They had no warships in that part of the world then, and were a law unto themselves. Not so the unfortunate British; they were between the devil and the deep sea. England was playing the game of the dog in the manger. It would neither annex Fiji nor recognise the Thakombau government; yet, if its subjects resisted it, they were liable to deportation by the nearest man-of-war, and, as a matter of fact, some of them, for doing so, were arrested by the captain of H.M.S. "Dido." When the time for which supply had

been voted expired, the Germans refused to pay any more customs dues, seized their bonded goods, and fortified themselves in their principal warehouse. They were besieged by native troops, and bloodshed was only averted by the timely appearance of the British Consul, to whom the warlike Teutons surrendered, and were by him sent on board H.M.S. "Blanche" for safety.

The British section relieved themselves by writing letters to the local thunderer, the *Fiji Times*. Many and learned were the arguments of the amount of allegiance due to *de facto* and *de jure* governments. Our local supply of wisdom was truly remarkable, and it was wonderful how so much had become collected in such an out of the way part of the world. Other pacific remedies were also tried and the Levuka merchants made a deputation and waited upon King Thakombau to endeavour to show him the errors of his way. It was supposed to be strictly unarmed, but the usual foolish person was there, armed with a revolver, which managed to go off, happily without hurting anyone. But it roused the wild blood of the household brigade, who luckily in this case belonged to the regular army and were officered by white men. But they were not as yet very well disciplined, and they roughly handled the white-coated, panama-hatted gentlemen of the deputation, who fled panic stricken before His Majesty's foot guards. This episode is known in Fijian history as "The Retreat from Nasova," the latter being the suburb of Levuka where the Royal Palace was. It is said that one prominent merchant, as he put his best foot foremost, gasped out, "Tell my brother I died a Christian, and the key of the office safe is in the top drawer in my bedroom." What might well have ended in a tragedy was saved by the presence in the harbour of H.M.S. "Blanche," which, when the emeute was seen, manned and armed boats and covered the retreat of the deputation. Her commander, Captain Simpson, also issued an ultimatum to the effect that no bodies of armed native soldiery were to be allowed within the bounds of the European portion of the town.

From this state of tangle Fiji was at length rescued by the hoisting of the Union Jack. King Thakombau was presented with a cutter yacht purchased in Sydney, which was called the "Victoria," after her late most gracious Majesty, and he received a pension of fifteen hundred pounds per annum, which he lived to enjoy for nine years. Having given in his allegiance he most loyally supported the new administration, evidence of which is to be found in the despatches of the Colonial governors. He was thorough in all things. As a cannibal he was terrible and blood-thirsty; when he embraced Christianity he did so with his whole heart, and finally as a subject of the Queen he gave her his full obedience. He was a typical old-fashioned South Sea chieftain, cunning in council, brave and resourceful in war, yet simple and patriarchal

in life and habits. As an example to his people he cultivated with his own hands his own food plantations, and as becoming a chief he excelled in all things that he undertook. At the close of his life, perhaps in his simplicity he caused a certain amount of consternation to his family and spiritual advisers. His consort, Queen Lydia, had predeceased him, and when old and feeble he announced his intention of espousing a young and buxom maid. When remonstrated with he quoted King David and Abishag and was not to be gainsaid. Not only had he such an undoubted precedent, but he also had native custom on his side. The lady was his according to Fijian law and he was entitled to do as he liked with her. So he had his way, but like even as his illustrious example, he soon after was gathered to his fathers and sleeps with them in the sepulchre of his race.

A. B. BREWSTER.

REVIEWS AND NOTICES.

Fables and Fairy Tales for Little Folk, or Uncle Remus in Hausaland. By MARY & NEWMAN TREMEARNE. Illustrated. (Cambridge: W. Heffer & Sons Ltd.)

WE have already drawn attention in previous issues to English versions of Hausa folk stories. But the present volume differs, we believe, from all its predecessors, in being especially designed for children's reading. The inexhaustible charm of the fairy-tale, and especially of that form of the fairy-tale which makes animals act and reason like human beings, attaches scarcely less closely to the folk stories of West Africa than it does to those of Europe, and though a good many of these stories necessarily involve conditions either of geography or of culture unfamiliar to the European mind, there is no reason why they should not win a considerable popularity in English nurseries. Should they do so it will be a striking repetition of *Græcia capta ferum victorem cepit*. From the child's point of view most of these stories possess the crowning merit that they have no particular moral. Virtue is occasionally rewarded and wickedness occasionally punished, but it is a happy-go-lucky process at best. Brer Rabbit possessed little moral earnestness, but undeniable charm of character—that charm with which Providence, for some inscrutable motive, has chosen so often to invest the scapegrace. The spider in these stories is far more of a moral reprobate than Brer Rabbit ever was, and not nearly so attractive—though his charms proved too much for the lovely Hausatu—but he generally manages to get the better of the other animals. For the child's sake we are glad, for the just resentment of children is awakened when the moral lesson whose proper home is the schoolbook and the hymn audaciously intrudes itself into the fairy-tale. Devotees of Uncle Remus will welcome the reappearance of their old friend the Tar Baby in a very thin disguise. The authors cannot lay claim to the rare literary gift which has made Uncle Remus immortal, but the stories are told with

a simplicity and absence of affectation which are welcome. The illustrations include simple drawings and a few photographic reproductions of West African scenes.

Notes on the History of the Cayman Islands. By G. S. HIRST, M.B., Commissioner of the Islands. (*Press of the P. A. Benjamin Mfg. Co., Jamaica.*)

Every part of the West Indian Archipelago is indissolubly connected with seething events in Europe, and Mr. Hirst has done a useful work in collecting the writings and traditions which show the part played by this small isolated part of our possessions. The Caymans have not loomed largely in literature, but they are alluded to in Scott's "The Pirate" as a place described by the worthy Bunce "where a brace or two of fellows may be shot in the morning and no more heard of or asked about them than if they were so many wood pigeons." There is certainly a strong flavour of piracy about the early history, but Mr. Hirst pleads that under the humanising influence of the islands the buccaneers generally settled down to a quiet life and peaceful occupations. The descendants of these Homeric wanderers do not appear to have produced any distinguished person so far, but the Commissioner very properly hopes for better things, and the following passage displays a spirit of optimism not unworthy of the old British confidence.

"This history, I hope, is published on the verge of a new era which I have no shadow of a doubt will ere long prove that Caymanians still carry in their veins the blood of the stolid persevering Briton, who from nothing has built up the greatest empire this world has ever known, and who means to keep it. Let Caymanians now enter with their hearts and bodies into this laudable object, let them vie with one another in building up this Dependency and thus help in building up this Great Empire. Let it be that when this history has to be written afresh, or revised at least, the name of one Caymanian will be introduced as a patriot of whom the British Empire throughout the world will have occasion to honour and hold up to the rest of the world with pride. If Corsica could give to France an epoch maker, cannot the Caymans do the same for the British Empire?"

"The tendency of the present day, however, is to denounce the British nation and scorn the patrimony one ought to be thankful for. The young men of Cayman are too fond of renouncing Britain and embracing citizenship of one of the numerous modern republics the American Continent is so notorious for. Whether any of them are of any more credit to the republic of their selection than they were to the British nation has not so far been proved. We

hope, should another edition of this history ever be published, that this stain on the loyalty and patriotism of the Caymanian will have been wiped out and redeemed by the uprising of a native of Cayman either as a great soldier, sailor, patriot, or in some other capacity useful to his nation at large."

India : Eight Lectures prepared for the Visual Instruction Committee of the Colonial Office. By H. J. MACKINDER, M.P., M.A. (*George Philip & Son.*) 1s. net.

These lectures were prepared for delivery with a set of lantern slides, which can be bought, and constitute the first instalment of a complete course of lectures on the Colonies and India. Lectures on the United Kingdom, adapted for use in different parts of the Empire, are already in the field. Mr. Mackinder's treatment of his subject is admirably adapted for the purpose. But even without the slides his descriptions are throughout vivid and picturesque. The traveller could not have in his hands a better guide, for its size, than this, and for educational purposes it is excellent.

The Imperial Department of Agriculture in the West Indies.

A Paper on this subject, which was read by Sir Daniel Morris before the Royal Colonial Institute on the 10th of January, has been published in the miscellaneous series of Colonial Reports (price 1½d.). In this paper, the history of the Department, since its first establishment in consequence of the recommendations of the West India Royal Commission of 1897, is traced in some detail, and its work in connection with the cultivation of such products as sugar, cocoa, rice, tobacco, cotton and fruit is described. In all its activities the close interdependence of scientific research and practical work is illustrated, and the contributions of officers of the Department to our knowledge of plant diseases and insect pests, the composition of soils and manures, hybridization and artificial selection of seeds, have formed no inconsiderable part of its achievements. Another important branch of its activities has been connected with the development of agricultural education. Sir Daniel Morris pays a tribute to the readiness of West Indian planters to co-operate with the Department's work, and with reference to their reluctance to experiment with new methods and new products, he affirms that the charge against them in this respect has never been generally true, and has become less and less true in recent years. With justifiable pride he points to the manner in which the West Indian Department has been accepted as a model when the establishment of agricultural

departments elsewhere in the tropics has been undertaken. It is satisfactory that the Imperial Government has agreed in principle to the continuance of the Central Office of the Department for a further period of ten years from the 1st of April in this year.

The Agricultural and other Industrial Possibilities of the Gold Coast. By J. A. BARBOUR JAMES. (*St. Bride's Press.*)
Nominal price 2s. 6d.

The writer, who has had considerable experience of agriculture in British Guiana, argues with force in favour of scientific training. The lesson is particularly wanted on the West Coast, where agriculture is and must be left to the native. But neither there nor elsewhere can primitive methods be nowadays successful. A good deal of information is given in a practical shape on the various tropical products.

The first two numbers of a quarterly review devoted to agricultural matters of interest in connection with the Congo (*Bulletin Agricole du Congo Belge*) have appeared under the auspices of the Belgian Colonial Office. The bulk of the review is written in French, but there are one or two articles in Flemish. The office of the review is at 7 Rue Thérésienne, Brussels. It should prove of interest to all connected with tropical agriculture in Africa.

We have received "A Guide to the Flora of Gibraltar," by B. H. T. Frere (Gibraltar Garrison Library), which will be found very convenient by residents or visitors who interest themselves in the botany of the place.

The "Writers' and Artists'" Year Book, 1911, published by Messrs. A. & C. Black (1s. net), would be of help to those who have to order English Magazines from the Colonies, as the subjects and prices are given. The last seems a very complete one, and an account is added of American journals.

BUSINESS NOTES.

THE figures of the foreign trade done by the United Kingdom in 1910 are very satisfactory. In the decade 1900-1910 the export of British goods increased by 47 per cent. in value, though on the whole prices were lower at the end of the period. This excellent position is largely owing to the investment of British capital in other countries which produce food and material for manufacturers. These investments represent part of the capital which is put into the country's industries, and it is certainly better that money should be applied in this way, though "going out of the country," than on luxuries or purposes which are not remunerative. The greater part of the capital goes to the safe side of foreign development, the public loans, the railway and public works; but money is never lacking for any concern which is or can be made to appear promising, and every year seems to see an increase in the City of companies, great and small, formed for every exploitation in the colonies and foreign countries. This growth creates a demand for directors of reputation, and the retired colonial civil servant is very much in evidence, a fact which, we may fairly assume, is some tribute to the ability and integrity of the service.

The renewed boom in rubber indicates an expectation of the maintenance of the price for some time to come. The world's consumption is now calculated at 100,000 tons; of this the Middle East supplies about 8,000, but by 1915 it may supply about 100,000, equal to the present consumption. The price, therefore, must fall eventually, unless the consumption increases substantially. But 1915 is a long way off from the point of view of the Stock Exchange speculator, who gathers his harvests as he may.

Since the beginning of 1908 the value of fine hard Para rubber from South America, which forms the market standard, has fluctuated from 2s. 9d. per lb. in February of that year to 12s. 6d. per lb. in April, 1910. Lately it has fallen to about

6s. per lb. There do not appear to be any signs at present of such increased demand as would send up the price when the increased yield has told, and having regard to this increased production a gradual fall may be expected during the next few years. At 3s. it might not be profitable to extend operations in South America, and at some such point history would repeat itself and the market would go up.

It should be observed by producers that smoke-dried rubber commands a premium as the process has a preserving effect, so that the article stands handling better and the inevitable deterioration is put off. The less handling done on the plantations the better, so long as the impurities are washed out. Crepe is often now rolled out thin to hasten drying, but it should not be reduced to less than one-eighth of an inch thick.

To some extent rubber has displaced tea on the plantations, and as the demand for this product expands steadily, it is likely enough that the tea planters will see good times.

The growth of maize is striking, and is likely to be more so if it can be established, as stated in America, that it can compete with sugar cane and beet as a sugar producer. It also produces alcohol and paper pulp. It is claimed that it yields, per acre, 2,850 lbs. of sugar, 388 gallons of alcohol, and 4,050 lbs. of paper pulp. The immediate effect of these expectations is to limit the production of cotton, which is grown in the same districts of America. This fact should help on the industry in such countries as East Africa and Nyasaland, where it could be produced on a good scale.

Oil.

The Annual Report on Trinidad and Tobago for 1909-10 contains some interesting particulars with regard to the Colony's oilfields. Boring for oil was actively carried on during the year by the New Trinidad Lake Asphalt Company and the Trinidad Oilfields Company. The former company has given evidence of its belief in the stability of the oil industry of the Colony by the erection of two large iron tanks with a storage capacity of over two-and-a-half million gallons (64,000 barrels) each of which is connected with settling reservoirs into which the oil flows from the wells. In the case of one well, the oil has been running for some months into a reservoir by natural gas pressure and without pumping. A pipe-line of 10-inch diameter has also been laid from the storage tanks to the sea, and has been carried out on a special jetty built alongside the company's main pier (which is 1,700 feet in length) into deep water with secure anchorage for ships. Boring is also being carried on at Guayaguayare (General Petroleum Properties Limited) and Palo Seco (Petroleum Options Limited). In all cases the furnaces are fed by oil fuel or by natural petroleum gas. At La Brea the boring

area at present being developed is within $1\frac{1}{2}$ miles of the village, and barracks have been erected in close proximity to the wells. At Guayaguayare and Guapo bungalows and barracks have been erected for the employees. At the former place a tramway has been laid down from the beach to the works, and at the latter a railway and jetty are, at the date of writing, in course of construction. An aggregate of 5,927 feet of borings were drilled during the year. The total aggregate within recent years over the various oilfields is about 18,000 feet. Generally speaking, oil was struck at fairly shallow depths.

There is every likelihood that the oil industry will before long contribute materially to the resources of the Colony, though for the present there is some slackening of the market activity in this direction.

There is some reason to think that the oil-bearing strata of Trinidad pass into Venezuela through a part of British Guiana, and two applications have recently been made for prospecting licences. These have been granted, but leases cannot be issued until provision is made for them by law.

The Newfoundland Government has granted 80 square miles for oil working without any royalty.

Perhaps the most serious question with regard to oil is that of monopoly. The industry is at present largely in the hands of two companies, the Standard Oil Company and the Shell Company, both of which are exceedingly active. It is said that the latter body is part of an organisation in which the Royal Dutch Company has a large interest. It is conceivable that in a short time the world's supply may be controlled by companies which are not under British influence. Having regard to the naval importance of the article, it is essential that care should be taken to secure that any bodies exploiting oil in the Crown Colonies should be really of British character.

Tin.

In Northern Nigeria the activity of the prospectors for tin has been considerable, and numerous companies have applied for licences and leases. The price of tin during 1910 rose from £153 per ton to £190. This was due to a considerable falling off in the supplies from the Straits Settlements, caused largely by the transfer of labour to the rubber plantations, and to the demand for the tin plate in America, and probably a high price will on the whole be maintained. Much of the Bauchi ground is of proved richness, but the mineral has been found mostly in shallow deposits in river beds near the sources of the streams, and doubts have been expressed whether these will be of long life.

The construction has been arranged of a branch of the Baro-Kano railway to the Bauchi highlands as far as Leri, the Treasury finding the money on a guarantee by the Niger Company to meet half any deficit for ten years. The estimated cost is £200,000, and £10,000 have been provided for the period ending on the 31st of March this year. It has been decided that the gauge shall be 2 ft. 6 ins.

Ramie.

This product has so far been very disappointing. It has some indubitable virtues. It is the strongest of all fibres; its filaments are very long, fine and soft. It can be spun into yarns of all kinds, and can be used by itself or mixed with other substances. But as a rule the companies which have been formed to exploit it have entirely failed to fulfil expectations. The explanation is fairly clear. In many cases the selection of land was unfortunate, but the chief cause of failure was the imperfection of the machinery. The decortication of ramie is a simple matter, but the difficulty is that the dried juices of the ramie stems are very gummy. When these juices are exposed by decortication to the air, they are oxydised, like a slice of an apple, and the dried juices cling tenaciously to the fibres. In this state it is obviously exceedingly difficult to remove them, but unless this is done the fibres will not pass through the teeth of the combs, except with a good deal of tearing and damage to the yarns. It is necessary to avoid this mischief to remove the juices before they dry and harden. This must be done during, and not after, the decorticating process. A proper washing of this sort reduces the weight of the produce by about 30 per cent. It is said that by the new machinery designed for this purpose the cost of degumming is about 1½d. per pound, and of course there is a great saving on the freight when the process has been carried out.

Sisal.

There is no doubt that in suitable situations and with good management large profits can be made out of this product. The following calculation has been made on behalf of a company with a small capital which is operating in the Caicos Islands. The cost of leaves bought from the natives is put at £4 per 1,000 bundles of 50 leaves each, and of extraction, barking and baling at £2; with freight to New York and agent's commission there at 2½ per cent., the whole outlay figures at £9 10s. This quantity should give one ton of dry fibre delivered at New York, where the price is £23 to £24. This represents a margin of profit which should satisfy anybody. The company in this case can also make a handsome profit from its store, to which much of the money paid to the natives comes back. The cost of production should be less eventually when the proprietors use their own leaves.

The sisal plantations in German East Africa are paying high dividends, up to 80 per cent., and enterprises in the British territory should do well.

Decorticating Machinery.

The *Queensland Agricultural Journal* gives information concerning several large types of these machines, such for instance as are capable of cleaning from 40,000 to 150,000 sisal leaves per day of ten hours, with six men to attend to the machinery. The examples of these that are mentioned are the Prieto, the Todd, the Finnigan-Zabriski, and the Ajax, which is of British make. These are not suited to small plantations, although an instance is given of a Finnigan-Zabriski machine, which is producing 1 ton of marketable fibre daily, in use on an estate of 60 acres. The cost of the best machines is as much as £600, including freight and other expenses. They are also costly in that the power for driving them ranges from 50 to 70 h.p.

Efforts are being made towards the production of lower-priced automatic machines. One of the latter is the Irene No. 51, made by the Prieto Company, which requires 12 h.p. and which has an output of 20,000 to 30,000 cleaned leaves per day. The cost of this is £300, f.o.b. London.

The same journal states that, of the British made machines, the automatic Ajax is stated to be a perfect, low-priced machine. This does not require more than 15 b.h.p., as it is a single-drum machine, with an output of about 2,500 to 3,000 leaves per hour. It weighs $2\frac{1}{2}$ tons net, and like the Irene, it is suitable for plantations having an area up to 200 acres; it produces $\frac{1}{2}$ to 1 ton of fibre per day, according to the character of the leaves. The machine is made by the Alma Machine Works, Liversedge, Yorkshire, and sold by Messrs. Walter Griffith & Co., 6, Crosby Square, London.

Cotton Growing.

It appears from a Ceylon report (M. 38, 1910), that Indian cotton can only be regarded as a paying crop by the small proprietor who puts his own and his family's labour into it. No one could put costly labour into it and make it pay. But Mr. J. S. J. McCall, Director of Agriculture in Nyasaland, while on a visit to Ceylon, furnished a report prognosticating a great future for cotton in the dry zones of the Island provided the water is conserved and distributed. There is certainly a great amount of land available for the purpose, but while rubber is booming it is hopeless to expect that capitalists will take up cotton. Other products, too, such as tea and cocoanuts, pay better. The best chance for cotton in such a place is as a catch crop amongst young cocoanuts.

The following clear directions are given in the report for the guidance of planters:—

“Before picking the crop, arrangements must be made for getting seed for the following year, and selection of the seed *must* be carried on; otherwise the crop will rapidly deteriorate from year to year, and in a few years' time the Sea Islands will be only of the quality of Uplands and fetch perhaps 6d. a pound. The fields should be carefully gone over, and the best bushes marked by tying a red rag to them. The main qualities to be attended to are length and silkiness of the fibre, and a three-inch measure should be carried. No seed whose fibre is less than one-and-a-half inch should if possible be taken. All the pods on one bush tend to be nearly alike, so that examination of two or three of them is sufficient, and if they are found to be good enough the bush may be marked and all its seeds taken. To estimate the length of the fibre, a tuft should be pulled out by the finger and thumb of both hands, placed side by side across it, and then the two portions of lint put together and pulled again, and so on. It is found that a rough estimate of the crop to be obtained may be got by counting the bolls or pods on a bush, and if there are 15 bolls on bushes 20 inches apart, in rows of five feet apart, the crop of lint may be estimated to be 100 lbs. an acre. Or, in other words, about 80,000 bolls give 100 lbs. of lint and 200 lbs. of seed, so that 2,600 bolls or 175 plants at 15 bolls to a plant will give enough seed to plant an acre. These plants should be marked and coolies paid extra to pick only the seeds of these plants and no others, and this seed should be ginned separately, and, in fact, if there be enough, should be baled separately, as its lint should be of better quality than that of the rest of the fields and should fetch a higher price. Great care must always be taken to keep each bale of uniform quality.

“The cotton may now be picked, before it has begun to fall. The pickers, who may be paid a cent a pound at first, should be provided with canvas bags about two feet deep and 18 inches wide. In picking Sea Island cotton the very greatest care must be taken to get it perfectly clean, without any stains of earth, and without any bits of leaf or other dirt clinging to it. Any cotton brought in dirty must be thoroughly cleaned before the picker is paid. The least dirt or admixture of leaf may lower the value a quarter. Picking should be done with both hands, the boll being held with the left hand and the cotton cleanly removed in one mass, at one operation, with the right.

“When brought in the cotton should be spread out thinly in the sun for several hours to dry, and then if necessary should be whipped, *i.e.*, threshed against a grating of wire netting ($\frac{3}{8}$ -inch mesh) about three feet by two feet, in a wooden frame; the dirt, sand, etc., passes through. One man should be able to whip about 300 lbs. a day.

"Sea Island cotton must be ginned in a roller gin, and the usual gin employed is the Macarthy double action roller gin, whose roller should be made to turn at about 160 revolutions a minute. A Hornsby Akroyd oil engine of two-and-a-half horse power has ginned all the cotton grown on 60 acres at Maha Illuppallama, and could have done twice as much if necessary."

With the above may be compared the following directions issued in South Africa:—

"The seed must be planted in hills or ridges. The distance between the rows and the plants in the rows depends very much on the land and the kind of cotton grown. It is recommended that Sea Island cotton be planted in rows six feet apart and two feet apart in the rows, whilst in the case of other sorts the rows are only four to five feet apart and the plants 18 inches apart in the row. The actual distance, however, is a matter which only local experience can satisfactorily decide. About 10 to 12 lbs. of seed is required per acre, according to the variety, say, 10 lbs. Sea Island and 12 lbs. Egyptian.

"In each 'hill' put about four seeds an inch deep, which should germinate in four or five days. As soon as the young plants are about a fortnight old, pull out the weaker ones, only leaving the two strongest ones in each 'hill.' A fortnight later still, the weaker of the two remaining plants should also be pulled out, leaving the stronger only. At this time any blanks, if such there be, in which the seeds have altogether failed to germinate, or which show signs of weakness, may be replanted with the most vigorous plants removed from other 'hills.'

"On level, or nearly level grounds, it is not necessary to throw up ridges to plant the seed on, but in slopes it would be advisable to do so, about six inches high, and as nearly level as possible, in order to check the flow of water during heavy rains.

"When the plants are about eight inches high, and again when from 12 to 16 inches high, they should be 'moulded up.' The land should be kept free from weeds until the cotton plants cover the ground sufficiently to prevent the weeds from growing, but no weeding should be done after the 'bolls' or cotton pods begin to form.

"A cotton plant should be low and compact, branching near the ground, and should have small close-pointed limbs and a large number of 'bolls.'

"In about five months (depending on climatic conditions) after planting, the first 'bolls' will begin to open, and if the plants are properly cared for they will keep on fruiting and opening for four months or so. Cotton should only be plucked out of the 'bolls' when the latter are fully opened, but it must not be left on the plant any longer than is unavoidable after this occurs. The art of picking

cotton is quite an easy one to master, and the labourer soon becomes expert and rapid, picking readily 100 pounds per day. The 'boll' or case should be held firmly with the left hand, and the whole of the cotton (of course including the seed) should be removed by the right hand with one pull. In order to have both hands free each picker should be supplied with a canvas bag two feet long by 18 inches wide, made to hang from the shoulders, and which should be divided into two divisions for first and second grade cotton. He is then enabled to remove anything in the shape of leaves, etc., which may possibly adhere to the cotton, before dropping it into the bag. This is easily done at that time, but will be found much more difficult afterwards. When the bags are full they should be emptied into a sheet or large basket placed at the end of the rows where there should also be some contrivance to cover up the cotton in case of rain.

"Except in very dry weather it is advisable to spread the cotton for a little in the sun after picking, and this is absolutely necessary if the cotton shows the least sign of dampness, as it is then liable to heat and to become discoloured, and deteriorates much in value after being packed. It cannot be too strongly impressed on the planter that everything that stains, discolours and dirties the cotton in any way tends greatly to lower its market value. In determining the value of a sample, cleanliness and good colour come only second to silkiness and length of staple, in fact, dirt and stains will enormously reduce the price of otherwise splendid cotton."

Mr. Barbour James in his book on the Gold Coast deals with the subject as follows:—

"Where the tendency is to produce much growth, a greater distance must be allowed than where the habit of the plant is smaller; in other words, the poorer the land the less the distance. There can be no doubt that cotton planted in rows sufficiently wide apart to allow the sun to enter freely is less liable to disease than cotton planted closely, and much less likely to suffer severely from attacks of worms. The latter delights in dampness and shade, both of which are induced by close planting. There are minor differences in various countries, yet the principal point aimed at is always to get the same, viz., to get deep tilth to get the cotton roots to go deeply into the ground. The cotton plant has a tap root which will, under favourable circumstances, go three feet down or more into the soil in search of food and moisture. The deeper the soil is stirred the deeper the roots will go; and consequently the greater the feeding area. By the operations of culture already mentioned, the soil is left in a loose friable condition, very suitable for the reception of seed. As the land is left fallow some time before cotton planting to enable the ordinary atmospheric agencies to act upon it, the soil does not turn up in that lumpy condition, but is in such a condition that

in passing the plough between the furrows the earth is easily thrown up to form the ridges, and falls naturally from the sides in a finely-divided state. High beds are in favour, as they promote drainage. If manure is used, there is no reason why cotton may not continue in continuous cultivation. The land having been properly prepared, operation of planting now begins. This depends on climatic conditions. From the middle of March to as late as May 1st, seed should be sown shallow and early, for as the soil is much cooler then, the seed has, when not planted deeply, more warmth for germination.

"Planting is done on the top of the beds. A shallow furrow is first opened on the top of the bed, about two or three inches deep; the seed is deposited and covered by one or two inches of soil. In some countries these operations are carried out by what is described as a 'cotton planter,' which is drawn by a mule in a similar manner to an ordinary plough. A man and a mule can accomplish as much as from six to eight acres a day. A small cultivator would not employ a 'planter,' but he opens a furrow on the top of the ridge and deposits the seed through a tin tube about five or six feet long, with a funnel at the upper end. The seed is carried in a bag suspended around his shoulder, and the tube is fed by the hand through the funnel, the lower end of the funnel resting in the line where the seed is to be deposited. The seed is subsequently covered by drawing a harrow—a wooden block or board—over the land. On very rich land, where only very little manure is employed, the seed and manure are sometimes deposited together. Originally, planting was done by opening the places in the ridge with a hoe or cutlass at more or less regular distances, the seed dropped into each hole by female labour, accomplishing one acre per day each woman. With the 'cotton planter' seeds are deposited one inch apart in the row, the plants being subsequently thinned to the required distance. The question of selection of seeds for planting is one of very great importance; in fact, it is one that cannot be over-estimated. The choice of good seed is an essential to the production of good staple cotton. Transplant when four weeks old; in about seventy days first flowers appear, seventy more the bolls open. At this time the plant is about four to five feet high. Moulding and ploughing should be undertaken when six weeks old; guinea corn or peas planted to stem the wind."

Instructions are also given in the report of the Director of Agriculture in Nyasaland for 1909-10. Satisfactory progress is being made here, and the quality of the cotton is very good. In a few years, it is believed, native-grown cotton will form the largest export of the Protectorate, and the British Cotton Growing Association will find an excellent field there for their ginneries.

In Nyasaland, where the growing season is short, the branching character of the plants has a great influence on the ripening of the crop, and therefore the yield per acre depends in no small degree on the type of plant grown. It is necessary, therefore, to take advantage of every character that leads to early ripening, and the heaviest yields are obtained from plants which, though carrying many fruiting lateral branches, arranged round the main stem in such a manner as to allow the maximum amount of sunlight to reach the entire plant, yet do not unduly shade their neighbours or obstruct the necessary tillage operations. Plants with very long horizontal or prostrate lower branches should be avoided, as they interfere with cultivation; if they are fruiting branches the lower bolls open late and the cotton is liable to be stained by the soil; if they are purely vegetative branches they receive insufficient light for maximum assimilation. Plants with dense upper foliage should also be avoided, as they generally shed a large percentage of their lower bolls.

It might be thought possible to obtain as good a yield from a few large plants as from a greater number of smaller plants; this may be true in a country with a very long growing season, but in Nyasaland the season is too short to mature large plants. In the experiments so far made the Director finds that branching character is to a great extent handed on from parent to offspring and is not influenced by the nature of the soil. Thus plants of the same parentage grown on sand and clay soils showed similar modes of branching, although the plants on the sand were only half as high as those on clay. Once a type is selected from acclimatised seed, branching character remains practically constant in the offspring of Upland cottons. Egyptian cotton is generally much more influenced by change in climate than Upland cotton, especially as regards branching character; the decreasing crop of Nyasaland-grown Egyptian seed is attributed in large measure to the increasing percentage of tall scarcely-branched plants; in practice cultivators of Egyptian cotton in Nyasaland prefer newly-imported seed. If Egyptian cotton were carefully selected, after being grown in Nyasaland for a few years, it is believed that it would give better results than newly-imported seed, and confirm experience in the United States, where the crop was at first pronounced a failure, but where, after five years' selection, Abassi cotton gave a yield of 460 lbs. of lint per acre.

Turtles and Sponges.

The New York market, of course, deserves special study in the West Indies, and there are various possibilities which are well worth considering. Thus attention might be given to the breeding of the green turtle and the shell turtle, commonly called "Hawksbill."

These turtles have been raised in Lake Katherine in the centre of the Caicos, and have done very well in past years, and when the people who raised them left the Island, large numbers of the turtling boats landed and cleared the lake of all the turtle. There are still, however, a few turtle left in the lake. The green turtle grows to marketable value (60 to 80 lbs.) in three-and-a-half years, this being confirmed by the rate of growth observed in both wild turtles and any hatchings in captivity. A female turtle will lay 500 to 600 eggs in a season, and from experiments made by others in the adjoining islands, about 65% of the eggs set have been hatched, and it has been proved that green turtle can breed in captivity. Hawksbills do not mature so quickly as green, taking six to seven years to make a five to six pound shell. The value is, of course, weight for weight, much higher than green. The shell has been taken to average 24s. per lb. for good seconds. Green turtles are worth 9d. to 10d. per lb. live weight in New York wholesale, and consequently an 80 lb. turtle would bring £2 10s. to £3 10s., less commission on sale, and $\frac{1}{2}$ d. per lb. freight from Turks Island to New York. There is no duty on turtles in the United States. When green turtles are ready for shipment, the profit for 1,000 of these annually can be reckoned at £2,000, and 1,000 Hawksbills turtle annually at £5 each, which return should be available in six years from the date of hatching. The bottom of the lake is, for the most part, a fine white sand, overlaying coral limestone, and carries a large part of the grass ulva on which the green turtles feed, while there is sustenance for Hawksbills in the shape of fish, zoophytes and molluscs.

There is another source of income with very little outlay, viz., the raising of sponges. Experiments in this industry have already successfully been carried out, the Caicos Bank being one of the world's great sponge fisheries, producing both sheep's wool and reef sponges. The sponges obtained on the banks at present run small, owing to the operations of the negro fishermen, who give them no chance to grow to their proper size. The United States Fisheries Bureau estimate sponge profits nett, in four years, at £160 per acre. Expenses are estimated at £40 per acre, and the method adopted of raising these sponges is to cut up a live sponge, attaching the small pieces to slips of cement with aluminium wire, when the sponge will grow readily, having a flat bottom, and this class of sponge commands the biggest price.

Milk and Mutton.

On the New York market the milk from the fruit of the Papora trees fetches, dried, about 10s. per lb. The cost of preparation is very small, and the tree fruits in two years after planting from seed.

On the other hand the West Indies could take supplies of mutton and possibly, some day, the intercourse of our colonies will be augmented by some enterprising combination which will take mutton from the Falkland Islands, in which favoured region it is sold at 2d. per lb.

Uganda Forests.

There have been several applicants recently for leases in the Budonga Forest, a dominion situated in the Unyoro Province in the neighbourhood of Lake Albert and containing, on a cautious estimate, 160 square miles. It contains a vast number of rubber trees and vines, the most important species being *Funtumia elastica*, one advantage of which over Para is that it yields a much larger quantity of latex at a single tapping. Large forest trees abound, many with clear erect boles 80 to 90 feet in height and six to seven feet in diameter; these are generally of the mahogany class. But at present the exploiters think only of the rubber and the big trees are merely in the way. There are no practicable means of exporting to Europe. Nevertheless, the timber is a great asset, and it will be sound policy to reserve it for future requirements. It could be floated from the lake to Khartoum, except for a distance of 120 miles covered by the rapids, and before very long a market may be available in the Sudan and Egypt.

Magadi Soda Concession.

£1,250,000 of the Company's capital (£1,312,500) have been subscribed, being all the ordinary shares, and the Company have exercised the option given to it. The enterprise will now go on, and it will be very interesting to follow the commercial working of this unique natural treasure. The principal difficulty at the outset was that of ensuring that the market would buy the soda from this source, there being strong interests against the addition of this enormous supply, but the promoters are no doubt prepared to overcome any opposition of this kind.

Castor Oil.

The castor oil bean is indigenous in East Africa, and a sample has been sold in this country at a fairly satisfactory price. It would probably repay cultivation. There would be a good market for it on the South African railways.

Jamaica Government Buildings.

The Kingston earthquake of January, 1907, destroyed most of the large buildings, and the Governor attacked the task of reconstruction with characteristic vigour and expedition. The

result appears in two buildings, the General Post Office and the Treasury, and the King's House, the Governor's official residence. The architectural character selected by the architects, Messrs. Nicholson and Corlette, has met with some criticism, as is inevitable in such matters, but it is obviously well suited for tropical conditions, and will no doubt be better appreciated when it has become more familiar. Very large verandahs and colonnades are provided. The roofs are flat as offering the least resistance to hurricanes, and made in reinforced concrete, covered with several inches of gravel as a protection against the sun. The buildings are practically monolithic, the principle being to have a general raft in reinforced concrete of slabs and beams uniting the footing of the walls and pillars. The new Law Courts are being built by contract of Messrs. Mais and Sant, of Kingston. In all the cases the Coignet system is adopted. This employs plain round bars of mild steel, the pillars being constructed of vertical bars bound by spiral hooping of small diameter.

Wireless Telegraphy.

Messrs. Preece, Cardew and Snell have made observations as follows upon the question of telegraphic communication between Nairobi and the Northern Frontier of the East Africa Protectorate.

It is difficult to express a definite opinion upon the cost of establishing and maintaining communication by means of ordinary telegraph lines or by means of wireless telegraphy in East Africa, without an intimate knowledge of the actual country. A land line is, generally speaking, preferable to wireless telegraphy. The apparatus required is very simple, and well understood. The attendance is not necessarily highly skilled, and the cost of maintenance of the apparatus is trifling. In the case of wireless telegraphy, the two installations provided with apparatus are in communication with each other only, whereas with telegraph lines, stations can be inserted at any point along the route, and anyone travelling thereon can maintain constant touch with headquarters either by means of telegraphy or by telephone. The maintenance of wireless installations is highly technical, and the apparatus is of a more complicated character.

The plant required for a wireless station of 5 kw. capacity, capable of working over about 300 miles of sea, such as is now being supplied to Fiji, consists of the following :—

PLANT:—A 10 h.p. oil engine, alternator, motor generator, storage battery, and switchboard.

TRANSMITTING APPARATUS:—Transformers, keys, adjustable inductance coils, controllers, main condenser, adjustable condenser, rotary spark gap and jigger.

RECEIVING APPARATUS:—Aerial, adjustable inductance, adjustable condensers, detectors, telephone and sundry testing apparatus.

The aerial itself will consist of five masts, one being 160 feet high and four 50 feet high, and a quantity of bronze wire is stretched between the poles, forming a carpet insulated from earth by means of special high tension insulators.

Wireless stations also require a considerable supply of stores. With an oil engine, it will be necessary to provide a good many gallons of oil per day, according to the use to which the station is put, and the supply of oil would be a matter of considerable difficulty to an isolated station, and require the maintenance of a road of communications which might be as expensive to keep open as a land line. It may be possible to use small boilers and steam engines, providing there is an available supply of wood within easy reach of the frontier station, but the matter is one which requires careful local consideration.

Experience at present with commercial wireless telegraphy overland, especially in the tropics, is limited. We believe that there are only two stations working successfully over a distance exceeding 400 miles, namely in Brazil, where communication is maintained between two towns about 500 miles apart. In this case, it has been necessary to have plant at each station having a capacity of about 70 h.p.

The successful operation of wireless telegraphy depends largely upon the type of country which is served, and it is not possible to state definitely that communication can be maintained under all circumstances with any particular plant. The matter must be the subject of experiment. The chief difficulty is due to atmospheric disturbances, which apparently vary in every climate, and they might be so bad in the district under discussion, that communication would be difficult to maintain. Rough experiments recently made in Southern Nigeria shew that atmospheric disturbances occur which would probably render wireless telegraphy difficult through the greater part of the day. Experience with the telephone service in Uganda also shews that considerable electrical disturbances occur there during the daytime. Of course, such disturbances would not necessarily interfere with communication during the whole of the 24 hours, and it is quite possible that there would be no difficulty in maintaining communication for a few hours daily with some regularity.

Assuming, however, that wireless telegraphy is possible, the following estimate may be given of the probable cost of two installations, which should be capable of maintaining communication over 400 miles of land. The plant proposed would consist in each case of a 25 h.p. oil engine, and a 15 kw. dynamo and other apparatus. This plant is capable of communicating over the sea for a distance up to about 800 miles. It would be necessary to provide 6 masts at

each station, two of about 250 feet high, and the others about 150 feet high. The cost f.o.b. for each station would be approximately as follows :—

6 Masts	...	...	...	...	...	£1,200
Oil engine, dynamo and other apparatus...						3,000
						<hr/>
Total	...	...	...	...	...	<u>£4,200</u>

The cost therefore of the two stations would be approximately £8,400 delivered f.o.b. London.

With regard to the cost of a land line, it is understood that at the present time telegraph lines extend as far as Fort Hall in the direction of the Frontier, a distance of 50 miles, so that the additional land line would be approximately 350 miles in length. The cost of the materials for a line consisting of iron poles, iron wire and apparatus of the best type should not exceed £22 per mile f.o.b. The total cost therefore of the land line would amount to about £7,700. The cost of transportation and erection of the wireless stations and of the telegraph line cannot be estimated by us with any degree of accuracy. The cost of transporting and erecting a land line has been put approximately at £18 per mile, and on this basis, 350 miles would cost £6,300. The cost of transporting and erecting the wireless stations should not exceed this figure.

Upon the above basis, it would appear therefore that the capital cost of providing two wireless stations is likely to be very similar to the capital cost of a land line.

As regards the annual cost of working the above installations, in the case of wireless telegraphy, it would be necessary to provide at each station one white man in charge who would be skilled in wireless telegraphy, one Indian telegraphist, and two Indian mechanics to look after the mechanical details. Assuming the white foreman is paid £400 per annum, and the Indians £120 per annum each, and allowing a sum of £340 for fuel, stores, etc., the total cost will be approximately £1,100 per station. There would be, in addition, certain costs for supplying rations and stores to the isolated station.

With regard to the land line, the staff required would consist of two inspectors at £250 per annum, two Indian telegraphists and two linesmen at £60 per annum, and fourteen native patrol men at £15 per annum. Assuming the cost of keeping the bush clear would be about £200 per annum, and stores are £100, the total annual cost of maintenance would be about £1,250.

There can be no doubt that installations of wireless telegraphy in difficult countries, such as the East African Protectorate, might be of considerable service, and on the whole the proper course to be adopted would be to erect a small wireless installation of 5 kw. capacity, using a long wave, at Nairobi or Fort Hall, and a similar station

temporarily at about 200 miles towards the Frontier. This should at any rate reduce the lines of communication between the Frontier by that distance, and enable something to be done towards keeping up communications. Careful experiments could be carried out, and if it is found that communication can be relied upon with a 5 kw. plant over this distance, additional plant could be added to the Fort Hall station of sufficient capacity to ensure communication up to a further distance, or if the experiments justified, for the full distance of 400 miles.

The cost of two complete plants of 5 kw. capacity delivered f.o.b. would be approximately £3,600, but if the storage battery and motor generator be omitted, which might be done in the first instance, the cost f.o.b. should not exceed £3,000.

Linotype.

The details of this composing machine are fully set out in printed pamphlet, but it is sometimes enquired what amount of skilled labour is required. The machine, though apparently full of intricacies, is really very simple to operate, and all the parts are very accessible. It is claimed that in England, with ordinary intelligent but not specially skilled labour, the machine will do the work of six skilled compositors. But in India it is found necessary to have a white overseer, and this would usually be the case where native labour is employed. One machine requires one quarter horse power to drive it. The type-metal pot can be heated with oil or gas; unless otherwise specified a gas burner is always supplied. The type-metal is specially made and must be procured from the Linotype Company. If a machine is ordered it is prudent to get an extra magazine of matrices.

Aero and Motor Boat Exhibition, Olympia.

Some complaints were made in this country when a Colonial Government ordered motor boats from Holland, but at that time this country was undoubtedly behindhand in this industry. It is to be hoped that this exhibition will show the advances which have been made since. Messrs. Thornycroft, who have made substantial reductions in price, exhibit the following:—

1. The new (M/1) type Thornycroft single-cylinder $4\frac{1}{2}$ " \times 6", $7\frac{1}{2}$ b.h.p. paraffin Marine set, with reversing gear, shafting, stern tube and propeller.

This set shows the greatest departure from previous practice in the very compact and ingenious arrangement of the reversing clutch which is contained in and forms part of the flywheel. Another

point is the single lever control. The general simplicity of the equipment should particularly appeal to those who are interested in a small power auxiliary set.

2. The M/2 Marine set, two cylinders, $4\frac{1}{2}$ " \times 6", 15 b.h.p. on paraffin, with Thornycroft reversing and stern gear.

3. The M/4 Marine set, four cylinders, $4\frac{1}{2}$ " \times 6", 30 b.h.p. on paraffin, with Thornycroft reversing gear.

4. The C/4 Marine set, four cylinders, 6" \times 8", 47 b.h.p. on paraffin, with reversing and stern gear.

This latter set embodies many notable improvements, among which may be mentioned the special automatic lubricating arrangements. The control for all practical purposes is by single lever, thus simplifying handling.

This type has been very largely adopted for auxiliary purposes in large yachts, among which may be mentioned Col. Courtenay Morgan's "Sylvana" (R. Y.S.), and Mr. Tom Sopwith's "Neva." It has also proved its worth in East Coast fishing vessels and barges, such as the "Rocklight," owned by the British Petroleum Company. Thirty-six sets of the six-cylinder size are now in hand for orders for boats for one European government.

5. P/4 type, four-cylinder, 4" diameter \times $4\frac{3}{8}$ " stroke, complete with reversing and stern gear. This engine is one of the series of light engines Messrs. Thornycroft have found it necessary to list to meet the demands of an engine which is more suitable for fast boats than their heavier or commercial type M engines. It has been fitted with success into a large number of river pleasure craft where shallow draught is essential, and also into some fast launches of the "Gyrinus" and "Miranda" types. It is designed to give 20 b.h.p. on petrol.

6. Thornycroft $7\frac{1}{2}$ b.h.p., $3\frac{1}{2}$ kilowatt motor dynamo set.

7. A very handsome Solent Cruising Thornycroft Launch for Col. Cowper-Essex. This boat is of a class which should appeal to all those wishing for a boat of high speed, comfort and safety. It is fitted with a Thornycroft 30 b.h.p. light type petrol motor, and will have a speed of from 18 to 20 miles per hour.

Waterproofs.

A good deal of trouble is experienced with these articles in hot and wet climates as rubber perishes and oil-skins stick. The manufacturers of "Pegamoid," which contains no rubber or other article likely to deteriorate, have been making experiments with a view to using this material for the purpose, and also for ground sheets and the like. If they succeed, the cheapness and durability of the material will make it a formidable rival to rubber goods.

Universal Time Watch.

A watch has been put on the market which gives the local time and also the time at the principal places in the world at a glance. It is specially adapted to keep accurate time in any climate. It should be useful in offices which have to send and receive cablegrams, and the price, 22s. 6d., cannot be considered high.

Hints for Collecting and Drying Plants.

In preserving plants for permanent collections, the object is to prepare specimens in such a manner that they may be thoroughly dried, the colours as far as possible retained, and such a degree of pressure given that they do not curl up in drying. For this purpose a quantity of paper is necessary, brown or stout grey, moderately absorbent, of ordinary demy size (17 inches by 11 inches) when folded.

Two boards (or better, stout frames of wire grating) are requisite, of the size of the paper, one for the top, the other for the bottom of each mass of papers. Pieces of millboard placed between the papers, if the specimens are numerous, or particularly thick, or woody, are very useful. For pressure, nothing is better than a heavy weight on the topmost board, or, while travelling, two leathern straps and buckles to bind the boards and papers transversely. Thus provided, gather your specimens—if small, root and stem; if large, cut off portions of the branches, a foot or rather more in length, always selecting those in flower and in a more or less advanced state of fruit. Long, slender plants, as grasses, sedges, and many ferns, may be doubled once or twice. Place them, before they wither, side by side, but never one upon the other on the same sheet, taking care that the thick parts of the specimens are, as far as possible, distributed to different parts of the sheet, and lay over the specimens one, two, three, or more sheets of paper, according to its thickness or the thickness of your plants; and so on, layer above layer of paper and specimens, subjecting them then to pressure. In a day or two, according to the more or less succulent nature of the plants, or, to the nature of the climate, remove them successively into fresh papers till the moisture is absorbed, and dry the spare papers in the sun, or by a fire, for future use.

Circumstances permitting, succulent plants should be placed in a separate press, otherwise the complete drying of others is retarded. When practicable, very delicate flowers should be separately dried and preserved in blotting, or other soft paper and subsequently added to the specimen of the rest of the plant.

When sufficiently dry, the specimens should be put into papers, one sheet (more if the specimens be thick) between each layer of plants; and thus a great many may be safely arranged in a small compass, and are ready for transport, covered with oil-cloth or packed in boxes. Mosses, and other cryptogamic plants, may be generally dried in the common way, those which grow in tufts being previously opened out, so as to form neat specimens. Most seaweeds require a slight washing in fresh water, and the more delicate kinds should be floated out on sheets of writing paper before being subjected to pressure.

Local Sales.

Most colonies will find it very much to their advantage to provide free or very cheap storage for their chief products at the ports. This, where land is available, does not cost much, and it often changes the character of the trade to the advantage of the local community. In the absence of such accommodation the producer may be practically compelled to ship at once to London or elsewhere, and his goods have then to bear the heavy warehousing charges at such places, and he is to a large extent at the mercy of the buyers, who are generally not slow to fix a price among themselves. This practice, therefore, is less advantageous to the producer than a direct sale to a manufacturer's agent, and when storage presents no difficulties, this class of dealer is sure to spring up. These considerations are having their effect, and a great amount of produce which used to be shipped to London for sale is now sold on the spot and sent direct to the buyer.

RAILWAY AND HARBOUR WORKS.

Harbour Works.

DURING 1909 in the Sydney harbour an amount of timber was used which denuded at least 4,000 acres of the best forest country. Obviously this cannot go on much longer, especially as wooden piles are greatly affected by marine worms and climatic effects, and a great number of ports which have relied on timber will have to find a substitute. Many are trying reinforced concrete wharves and jetties, but there is some scepticism as to its efficiency. A timber pile is highly resilient and in any length in which it can be obtained will bear the bending movement of its own weight while being lifted. But a reinforced concrete pile of great length cannot be lifted without danger of fracture unless slung in two or three places, and is not so suitable as strong timber for resisting shocks. If any concrete is detached by shock, the steel bars may be exposed to the water and corroded. Thoroughly satisfactory methods have yet to be evolved for this purpose. No satisfactory method of bracing jetties laterally in this material has been devised, as braces cannot be moulded under water and if they are moulded on land they cannot at present be properly connected. As a retaining wall, the material is stable and can be adapted to indifferent foundations.

Wooden piles can be encased with Monier pipes filled in with concrete as a protection against the teredo. This gives a strong construction, but the extra cost is about £10 per pile.

Suva Harbour Works.

A case where new harbour works are made necessary by the deterioration of timber occurs at Suva, where it is said that there is hardly a sound pile in the wharves, and a heavy jar from a large vessel might at any time be attended by serious consequences. The scheme in contemplation provides for a quay face, backed

by an extensive reclamation of about 2,000 feet, and of another quay on the south facing it of about 900 feet. One of the first steps in such a matter is to take careful borings so as to ascertain the depth and character of the mud. The harbour works at Singapore are suffering from the omission to carry out this important examination effectively, and it is obvious that if a scheme is drawn up with wrong assumptions on this matter it may be necessary to alter it largely, with serious complications if the work is being done by contract. It is further contemplated at Suva to arrange the works so that the depth alongside the quay, facing the harbour, shall be 28 feet at low water in the first instance. No doubt when the works are decided on, Australian contractors will be invited to send in tenders.

Concrete.

Concrete materials are obtainable everywhere, but this very simplicity lends itself to abuse. One of the best aggregates for most purposes is ashes from locomotive boilers. Another factor, observes "Concrete," is the labour. "The cement may be good, the aggregate of a suitable nature and well graded, and the water clean, but if the materials are not thoroughly mixed and the water not suitably proportioned, the value of the concrete is seriously diminished. Machine mixing remedies this to a great extent, but for many building purposes mixing machines do not seem as yet to find much favour. The mixing of concrete is not a favourite occupation with workmen; it is laborious work which can be lessened if the materials are not wrist turned, but simply lifted in the shovel and deposited close at hand without being turned over."

Many "waterproofing compounds" have been put forward and have failed in practice. The theory of the requirements is set out as follows:—

1. The impermeability of concrete is simply a matter of density or closeness of texture. This is arrived at in no other way than by filling the pores of the concrete with finely divided insoluble material, which can be done either by properly grading the aggregate, or by the addition of powdered substances, of which slaked lime and China clay appear to be the two best, and most effective. Slaked lime has, however, a tendency to produce efflorescence on the surface; China clay has no such tendency.

2. Water repellants, such as greasy substances—lime soap, etc., have no real waterproofing properties. The waterproof compounds on the market are beneficial only so far as the slaked

lime (which forms 90 per cent. of their composition) acts as a pore filler. The 10 per cent., or thereabouts, of lime soap contained in these compounds is a defect rather than an advantage.

3. The action of sea water on concrete is probably entirely due to the permeability, and will be prevented if the concrete is made sufficiently dense and impervious.

4. The substances used as pore-fillers—especially clays—should be added to the cement or concrete in a *dry* state.

American Locomotives.

The following remarks by Mr. G. G. Elliott, Pretoria, might well be studied by our makers.

"We have purchased two special types of locomotives in America, one because that particular type had been developed to a remarkable degree in America, and brought about a great departure in locomotive design, resulting in enormous economies. The idea did not, however, originate in that country. The United Kingdom, on the other hand, had done practically nothing in that line.

"Another reason was due to the enormous difference in cost, which we did not feel justified in incurring, in spite of the superior workmanship in the United Kingdom, compared with that of America.

"The other type was purchased to pit American design and workmanship against an engine of similar power and design built in the United Kingdom.

"Previous experience had proved that there is a great deal to be learnt from the Americans, who are an ingenious race, and we may surely not be accused of disloyalty to the Mother Country by patronizing the American markets occasionally; they are an English-speaking race and our cousins—in fact, English Colonials in many respects. Why not give them orders as well as scholarships?

"I feel convinced, too, that British manufacturers could offer lower prices were they not hampered by our marvellously expensive ideas of what we consider should be good workmanship. There seems to be a general tendency for the two countries to meet half-way, as to finish and workmanship."

The American Malet locomotive has been designed to provide a greater hauling capacity without exceeding the axle load to which the permanent way is limited. In many cases that limit has been reached, and the only means of increasing the power is to adopt the articulated type of locomotive by which the weight is distributed over a greater length. The articulation of the joints, which is made necessary by the double carriage, is a

source of some trouble, but the greater power of the Malet locomotive is very substantial. It hauls about 50 per cent. more load than the simple locomotive, having eight driving wheels and the same weight per axle. Of 10 ton axle limit and 58½ tons adhesive weight, it cost about £5,000 in working order on the road. The American Locomotive Company alone have built a large number. The British firms have not yet acquired this experience, but they are building for South Africa and India.

Harbour Cranes.

The question of suitable plant for harbours often arises and the following comparison may be useful.

For about £14,000 f.o.b. London, a crane on a pontoon can be supplied with a radius of 62 ft., and for loads up to 80 tons; the barge self-propelled to a speed of 6 knots an hour; the crane is fitted with an extended jib adapted for lighter loads. Such a crane has been supplied to the Auckland Harbour Board.

At nearly the same price sheers fitted to a pontoon can be provided for dealing with loads of 80 tons; the overhang from the perpendicular is 40 ft., pontoon similar to the above.

Fixed sheers on the pier for 80 ton loads, delivered and erected in a colony, would cost about £4,500; to this must be added the cost of any necessary foundations.

A floating plant is preferable in places when the wave disturbance is not so great as to affect the stability of the pontoon.

Depreciation.

Depreciation of capital assets is a primary element of transportation expenses and should be shown in the statistics. This principle has been adopted on the South African Railways. Sir Thomas Price gives the following example of the working of the depreciation funds:—

“A locomotive is purchased at a cost of £5,000 on the opening of the Railway and is placed in traffic on 1st January, 1908. Its life is estimated at twenty years. Each year (in addition to the cost of all repairs) one-twentieth of its original cost is charged to working expenses under Locomotive Maintenance (depreciation) and credited to ‘Locomotive Renewals Fund.’ By the 31st December, 1927, this fund will show a credit balance of 20 times £250, £5,000. The original locomotive is now worn out, its scrap value being, say, £500. It is desired to purchase a new locomotive in place of the old one, and the following adjustment is made in the books:—

“An asset worth £5,000 has disappeared, so Capital Account is credited with £5,000 and Renewals Fund debited with that

amount. On the purchase of a new locomotive, say, for £6,000, Capital Account is debited with the cost.

"As regards the scrap value of the locomotive it is considered desirable for the present to credit Renewals Fund with the amount realised (less any cost of breaking up for sale), this amounts in fact to an additional contribution for depreciation.

"In case the locomotive were scrapped at the end of ten years (*i.e.*, 10 years before its estimated life expired) working expenditure would still be charged with depreciation on the engine for the remaining 10 years. If on the other hand, it lasted 50 years (*i.e.*, 30 years beyond its assumed life) no depreciation would be charged for it during the last 30 years."

Sir Thomas Price goes on to say that this principle is extended to all assets of the railway which are liable to depreciation, the percentage set aside for depreciation being based on the estimated life. The following percentages have, in fact, been adopted on the Central South African Railways:—

Permanent Way, etc.	...	...	3½ per cent.
Brick and Stone Buildings	...	...	1½ "
Wood and Iron Buildings	...	...	5 "
Rolling Stock	...	...	5 "

Labour charges are included in the Capital value, except in the case of Permanent Way.

Australian Railway Extensions.

The Premier of New South Wales has stated that it is the intention of the Government to build pioneer railway lines in advance of settlement. This policy is justified if it is clear that the accommodation will result in a much greater value added to the land than is represented by the cost. He stated that between Wyalong, Hillston, and Lake Cudgellico there are one-and-a-quarter millions of acres of wheat land, held under lease. That land has been reported on as being suitable for settlement. The rainfall was sufficiently great to ensure a permanent settlement, and it would mean an expenditure of £3,000 a mile for 100 miles, a total of £300,000, to bring every acre of that one-and-a-quarter million acres of land in close proximity to market, under permanent settlement, and increase the value to the State to the extent of four-and-a-half millions of money, or from being valued at 10s. per acre to £3 per acre. The expenditure of little more than a quarter of a million of money would provide for a settlement by the making of a railway in that district, and give back to the State and the taxpayers the value to something like five times by the expenditure of that quarter of a million.

Straits Settlements.

Owing to difficulties which have arisen over the contract with the contractors, Sir John Aird and Sons, in respect of the Lagoon Wet Dock and Main Wharf Reconstruction, the Tanjong Pagar Dock Board have taken possession of the works, under a power reserved to them. The state of the work at the time will be recorded, and the rights of the parties will be a matter for settlement.

A very serious difficulty has also arisen over the Harbour Works. The scheme adopted was settled on the basis of certain borings, which, it is believed, cannot be relied on. A committee of experts has been appointed in London, to consider how the scheme can now be completed.

Hong Kong.

A boat shelter at Mongkoktsui is to be provided, the accommodation in the Boat Harbour in Causeway Bay being inadequate for the native craft which seek shelter in it. The tender of a Chinese contractor has been accepted, the amount being \$2,018,002.

East Africa.

Messrs. M. Samuel and Co. have entered into a further agreement, setting out detailed terms as to the proposed lease and contract, for the purposes of the construction of a railway and other works in the Protectorate, the option of which was given to them by an agreement of 1911, and the contract is under preparation. The Uganda Railway Administration has, under this agreement, to make such improvements in its main line, at an estimated maximum cost of £146,500, as may, in the opinion of the Governor, be necessary for carrying the quantity of 50,000 tons.

Jinja-Kakindu.

The preliminary traverse showed a length of 55 miles, an excess of eight over the estimate, due to broken country. To avoid heavy earthwork 10° curves have been used in a few cases with compensated grade, but on the whole the curvature is easy and gradients light.

An attempt to do the earthwork by piecework, with a minimum wage, proved a failure, the labourers being perfectly content with the minimum wage of Rs. 3 per month and rations, and openly doing as little as possible. It was thus decided to abolish the minimum wage. Some 4,000 natives are engaged and, as they are quite new to such work, the building of the line with native labour will be notable.

Accra-Akwapim.

In view of the unavoidable delay caused by the damage done by the floods of last year, the contract time for the completion of the railway has been extended to August 27th, 1911.

Good progress has been made with the survey of the proposed extension to Komfrodna. Due regard has been paid to the flood line of the Densu, to avoid the misfortunes experienced on the first works. Except for three trestle bridges there will be little heavy work.

Freetown Harbour.

The general situation has been arranged of a proposed export wharf with warehouse accommodation, and an examination is contemplated of the foreshore to determine its suitability for the work and the character of the berthage to be provided. The location of the branch railway will be governed by the result.

Dredging the Niger.

The dredger last year at the lowest water maintained a uniform depth of 5 feet in crossings between Lokoja and Baro, but the river was exceptionally high at the low water season.

Nigerian Railways.

It is contemplated that these shall be surveyed shortly by Major W. D. Waghorn, R.E., of the Indian service.

Lagos Harbour Works.

By the end of December the East Mole had been carried to a length of 5,571 feet, and the tonnage of stone deposited was 168,558. Of that length 1,503 feet are taken up by the extension of the mole northward from the wharf, which was decided on to protect the margin of the harbour from corrosive action. This mole will probably have advanced to such a point by the end of this year that it will be desirable to begin the West Mole. The train accommodation will be increased early next year to permit of a greater supply of stone from the quarry.

A start was made in January with Apapa Wharf, which is to be 345 feet long, with connection to the railway system near Ebute Metta.

The bar draught for steamers last year was from 13 to 16 feet.

The Customs Wharf will probably be completed in June.

Trinidad.

Three schemes for laying out the Siparia line from San Fernando have been under consideration. The original scheme

is the shortest, but it interferes with the Paradise Recreation Ground at San Fernando. The second route goes round the foot of the cliff and rises through a gap in the cliff beyond the recreation ground; this would necessitate a sea wall nearly 60 chs. in length to protect the line from damage by the waves, and the extra cost would be about £8,000. The third route continues round the coast from the point where the second commences to mount the cliff, at a lower level, in order to reduce the height of the walls, and to pass round the end of the hill near the Plague Hospital through the lower land bordering the Ciparo river, so as to join the San Fernando tramway further in advance. This line would be the longest, and the most expensive, as the wall though lower would be much longer. There is a fourth alternative, of passing from the wharf to a junction with the tramway at a point in the cutting between the Hospital and Harris Promenade, but the objection to this is the cutting would have to be sunk 21 feet lower, and this would involve risk to adjoining lands and in any case would be costly.

Headlights.

It is rather curious that there is no method, in this country at any rate, of swinging the headlights to follow the movements of the bogie and so keep the beam of light on the road. There would be an obvious advantage in this. And apparently there is no demand for such an arrangement on our railways. On railways where obstruction and faults are more frequent the advantage would be greater. The headlight might be mounted in the frame with a spring weight arranged so that the tilting of the engine on a curve would swing it to point round the curve.

Tropical Axle Oil.

Favourable reports have been received on this oil, supplied by the Vacuum Oil Company. The packing in one case in the axle box was quite clean after running nearly 3,000 miles, whereas other axle oils are often dirty and gummy and cause hot axles. Indian axle oil is also a fine oil but more expensive.

Ash pans.

When a coal is used (such as Indian) which has a very high proportion of ash, the usual arrangement for damping the ash pan ashes is not effective enough. The small pipe from the gauge column cock may be too small, and the large pipe inside ash pan soon gets burned away. What is wanted is a branch from the overflow pipe of injector.

Derailments.

These are sometimes caused by excessive superelevation of the outer rail of the track on curves. The normal amount allowable should not be used until the road is in good order and the banks consolidated, or otherwise low places may be found which will increase the cant. If the side bearing springs are too stiff the vehicle is liable to derailment. The running can be improved by the use of the McCord Dampener on these springs.

Decauville System.

The Société Decauville, whose London office is in 40, Trinity Square, E.C., have, in addition to the many awards conferred on them, been awarded the Grand Prix at the Buenos Aires Exhibition, and have also been nominated Member of the Jury Hors Concours at the Universal Exhibition at Brussels.

Till further notice.

The following is a copy of a telegram despatched on the Lagos Government Railways:—"Head beater reports again that thunder took all the ballast away at 255½ miles. Driver to please look sharp or to wait at J.D. until further notice."

A dam mistake.

The following telegram was received at an African railway office on the 19th December last:—

From Works Foreman. To District Superintendent.

Now at Erin Dam.

After much scrutiny it was discovered that the wire should read: "No water in dam."

MEDICAL NOTES.

THE practical importance of the study of tropical medicine has been brought home to the British public in an unpleasantly vivid manner by the recent discovery that plague among rats has established itself to a wide extent and on a firm footing in East Anglia. The small batch of human cases which occurred at Freston, in Suffolk, has fortunately not been followed by others. But it now appears that the infection among rats has become so widespread that there is little hope of stamping it out entirely. It has been conclusively proved that the agent of transmission is the rat-flea. There are different species of rats, the liability of which to infection differs, and there are also different species of fleas, some of which are more active as transmitters of the disease and more prone to attack human subjects than others. There is appreciably less risk of the transmission of the disease to human beings under the conditions prevailing in England, than under those characteristic of the Eastern communities where the plague has counted its most numerous victims. But it should be noted that the Freston cases were all of the pneumonic type, which, unlike the bubonic, is directly transmissible from one human being to another, and which has resulted in a terribly high rate of mortality in the present Manchurian epidemic. Striking as the results of research into the causation of plague have been, more knowledge on the subject is urgently required, and can only be obtained by organized continuous effort and adequate funds. The outbreak in Suffolk affords no ground for exaggerated alarm, and the many months of immunity from further human infection are distinctly encouraging; but it should serve as an object-lesson to bring home to everyone the vital importance of scientific research in this particular field as the sole weapon of defence against one of the most terrible scourges which humanity has known.

The Sleeping Sickness Bureau has issued Bulletins No. 22 (completing Volume II.), 23 and 24. In addition to special articles dealing with recent research into trypanosomiasis, each number contains the latest news relating to the disease from the various parts of Africa affected by it. We have also received from the Liverpool School of Tropical Medicine, Vol. IV., No. 3, of "Annals of Tropical Medicine and Parasitology," the principal article in which, by Major Ross and Doctor David Thomson, deals with "Some Enumerative Studies on Malarial Fever."

The Report of the Advisory Committee for the Tropical Diseases Research Fund for 1910 has been published (Cd. 5514, price 1s. 1d.). Expenditure for the year amounted to £5,258, against a revenue of £3,245, necessitating a heavy draft on the accumulated balance, and the Committee emphasize the need for further funds. Appendices to the Report contain accounts of anti-malarial measures in the Colonies, and of research work at London and Cambridge Universities, the London and Liverpool Schools of Tropical Medicine, and various Colonial Laboratories. There are also included a report on beri-beri from Siam, and an account by Dr. Breinl, Director of the Australian Institute of Tropical Medicine, Townsville, of the results of his journey to the northern part of Queensland.

A "Summary of Facts regarding Malaria, suitable for Public Instruction," which has been taken from Professor Ross's work on "The Prevention of Malaria," has been published in pamphlet form by Mr. John Murray. Price Twopence. First issued in December last, it has already had to be reprinted, and it is to be hoped that it will be widely circulated among residents in, and visitors to, malaria-infected countries.

Blood Stains.

A case has come before us in which a Colonial police were exercised by this cheerful subject. It is sometimes helpful in criminal cases if it can be decided whether a blood-stain is recent or old, and though scientific examination does not enable a definite answer to be given it gives a rough estimate. After a blood-stain has become dried, and is about a week old, no definite change occurs for some months. The spectra then becomes altered owing to the hæmoglobin changing to met-hæmoglobin, then to hæmatin, then to hæmatoporphyrin. There is no definite rate of

change as it varies according to the atmospheric conditions, but a rough idea is given by the amount of shrinkage of the blood corpuscles shown by microscopical examination.

Entomological Research.

In connection with the gift of £1,000 per annum for three years made by Mr. Andrew Carnegie to the Entomological Research Committee (Tropical Africa), two students have been selected to proceed to the United States to take a course of instruction in economic entomology.

COLONIAL STAMPS.

It is improbable that any Colonial stamps showing the head of H.M. King George will be ready until the close of the year. Since the issue of our January number a way of combining the advantages of the two forms of General Keyplate there referred to has been thought of, and if the design proves to be a success it will be possible to secure the fine appearance of the stamp of the Nyasaland Protectorate type without the disadvantage of a separate set of duty indicating plates for each of the purposes to which the stamps may be put. The great obstacle to the alteration of the Keyplate for the better has been that many Colonies have overprint plates to fit it, but it is hoped that this difficulty may be got over by the manufacturers agreeing to supply overprint or border plates free of charge to replace those which would be rendered useless. The use of the General Keyplate will probably be extended by the fact that the price of printing stamps in two operations has been very greatly reduced, and even comparatively small numbers of stamps can be printed by this system in two colours at a very much cheaper rate than a larger number of stamps in one colour by the copper plate process.

It may be useful at this point to sum up the chief advantages of the copper plate and surface printing processes, a matter into which we went at some length in the first number of this journal.

The advantages of surface printed stamps are :—

- (1) The cost of printing is much less as the process is much more rapid.
- (2) Two colours can be employed at a price not very much higher than one.
- (3) A much more fugitive ink can be employed, and, where necessary, doubly fugitive ink ; the removal of cancellation without affecting the colour is thus rendered much more difficult.
- (4) The perforation, so far as this is of importance, is much more accurate, as the paper is not wetted before printing with consequent unequal shrinkage on drying.

(5) A General Keyplate is available for use by any Colony, without appreciable charge, which will enable "Postage," "Revenue" or unified stamps to be produced at will.

The advantages of the copper plate system are:—

(1) It admits of a better finished or more elaborate design; and of (2) a more varied series of stamps, as the cost of dies is so much less than those required by the other process that separate ones can be used for each value.

As indicated under the head of surface printing the cost of printing in two colours by the copper plate process is very high. The reason for this is that the paper has to be wetted for each printing and the shrinkage has to be allowed for; the time occupied by drying, etc., is considerable, and the gumming and milling of the sheets have to be done after printing, and not in large quantities in anticipation of the order for the stamps.

It does not appear to be generally known that the stamps issued by the groups of Islands in the Western Pacific are not obtainable from Fiji. In order to save trouble to the authorities at Suva, and disappointment to applicants for the new stamps, we append a list of the addresses to which applications should be sent, but this notice must not be taken as a guarantee that the stocks in hand are at any moment sufficient to meet all applications.

NEW HEBRIDES (Condominium).—English values, The Postmaster, Vila, New Hebrides. French values, Agence Comptable des timbres poste Coloniaux, 36 rue Vaneau, Paris.

BRITISH SOLOMON ISLANDS PROTECTORATE.—The Postmaster, Tulagi, Solomon Islands.

TONGA.—The Postmaster, Nukualofa, Tonga.

GILBERT AND ELLICE ISLANDS PROTECTORATE.—The Postmaster, Ocean Island, Gilbert and Ellice Islands.

BERMUDA.—½d. stamps of the new design have been supplied.

HONG KONG.—20 cents, 30 cents, and 50 cents stamps have been recently despatched in the new colours.

NEW HEBRIDES (Condominium).—In addition to the French values given in our note in the January number, two others have also been issued, *i.e.*, 30 and 40 centimes, in the colours appropriated to 3d. and 4d. stamps respectively. The whole of both series is printed by the copper plate process and on ordinary paper.

ST. LUCIA.—5s. stamps from the old King Edward's Head Keyplate have been supplied for the first time in the new colours.

SIERRA LEONE.—£1 stamps have been supplied for the first time in the new colours.

SOMALILAND PROTECTORATE.—The note under this head in our last issue should have stated that the paper was, for the first time, both surfaced and multiple watermarked.

STRAITS SETTLEMENTS.—4 cents stamps are now being supplied in a rather brighter purple. The colour has been changed in order to make it easier to distinguish this stamp from the 21 cents stamp.

TURKS ISLAND.—The colour of the $\frac{1}{4}$ d. stamps of the "Turk's Head" design being considered unsatisfactory, the second consignment, which has recently been despatched, has been printed in a brighter red.

"The Cayman Islands: their Stamps and Post Office," by D. B. Armstrong, is a truly exhaustive treatment of its subject, from the external appearance of the little Post Office to the time tables of the local clearings and deliveries. The intervening matter must, we imagine, be the fruits of enormous research, every minute variety seeming to be described and, in most cases, accounted for and fully illustrated.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Mr. A. M. COLL, K.C. (Attorney-General, Gibraltar), Chief Justice, Jamaica.

Mr. W. D. BARNES (Resident of Pahang, Federated Malay States), Colonial Secretary, Hong Kong.

Major J. E. CLAUSON, C.M.G. (Chief Secretary to Government, Cyprus), Chief Secretary to Government, Malta.

Mr. H. C. GOLLAN (Chief Justice, Bermuda), Attorney-General, Trinidad.

Mr. B. H. T. FRERE (Police Magistrate and Coroner, Gibraltar), Attorney-General, Gibraltar.

Mr. J. E. GREEN (Solicitor-General, Southern Nigeria), Puisne Judge, Southern Nigeria.

Captain C. W. J. ORR, D.S.O. (First Class Resident, Northern Nigeria), Chief Secretary to Government, Cyprus.

Mr. E. CARLYON ELIOT (Provincial Commissioner, Gold Coast), Warden and Magistrate, Tobago.

Dr. G. J. RUTHERFORD (Provincial Medical Officer, Gold Coast), Assistant Principal Civil Medical Officer, Ceylon.

Mr. C. V. A. ESPEUT (Executive Engineer, Public Works Department, East Africa Protectorate), Chief Engineer, Uganda.

Mr. F. H. LONGHURST (Executive Engineer, Public Works Department, Northern Nigeria), Deputy Director of Public Works, Gold Coast.

- Lieutenant C. S. BURNETT (late Lieutenant, 2nd Battalion, Southern Nigeria Regiment, West African Frontier Force), Assistant Resident, Northern Nigeria.
- Lieutenant A. W. NORRIS (late Lieutenant, 1st Battalion, Gold Coast Regiment, West African Frontier Force), Assistant District Commissioner, Gold Coast.
- Mr. H. E. M. CAMPBELL (5th Class Clerk, Post Office, British Guiana), Inspector, Post and Telegraph Department, Gold Coast.
- Mr. H. E. FENWICK (District Officer, Public Works Department, Trinidad), Engineer of Roads, Gold Coast.
- Mr. F. le C. BELMAR (Sub-Collector of Revenue, St. Lucia), Junior Assistant Treasurer, Northern Nigeria.
- Mr. W. CUNNINGHAM (Second Assistant Surveyor, British Honduras), First Class Officer, Department of Lands and Mines, British Guiana.
- Mr. C. F. BRISTOW (retrenched from the South African Constabulary), Assistant Inspector of Police, Uganda.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ARTHUR, S. H.	GARDNER, A.	11 June, '11
BAND, R....	GRAHAM, C. H.	
BARRETT, F. R.	HENDERSON, R. M. H....	7 May, '11
BERINGER, Dr. F. J. A....	HARRISON, E. L.	7 May, '11
BARTLETT, H. E. G.	HOBBS, H. J.	3 Apr., '11
COCHRAN, Capt. H. P. G.	HOOD, S. J.	6 Apr., '11
Caledonian Club,	IRVINE, Maj. R. A.	19 Apr., '11
Charles St., S.W.	Junior Naval and	
CHAPIN, S. H., D.S.O. ...	Military Club, 96,	
CREAGHE, Capt. H. A. W.	Piccadilly, W.	
c/o Messrs. Cox & Co.,	JARDINE, J.	13 June, '11
16, Charing Cross, S.W.	LUMSDEN, Capt. A. F. ...	3 Apr., '11
ELMES, G. B.	LE FANU, Dr. C. V.	20 May, '11
EWALD, Capt. F. C. T. ...	LOWRY, T. M.	11 June, '11
ELLIS, W. B.	LINDSAY, W.	
FULLER, F. C., C.M.G.	LESLIE, Maj. G. A.	13 June, '11
Traveller's Club, Pall	Army and Navy Club,	
Mall, S.W.	Pall Mall, S.W.	
FELL, T. E.	MATTHEWS, C. W.	18 Apr., '11
FISHER, W. A.	McMULLIN, A. J. F. ...	21 June, '11
GRIFFITH, G. R.	MIGEOD, F. W. H.	7 May, '11
GEAR, A. F.	MAYALL, R. P. W.	19 Apr., '11
GALE, E. E.	Royal Colonial In-	
GOODMAN, T.	stitute, Northumber-	
GARLAND, R.	land Avenue, W.C.	

GOLD COAST—(continued.)

MULGRUE, Capt. E. C....	<i>Due back</i>	SOMERVILLE, J. ...	26 Apr., '11
	24 May, '11	Royal Societies Club,	
MADDOCK, J. H. ...	9 May, '11	63, St. James' St., S.W.	
OKELL, G. ...	26 Apr., '11	SEDDON, T. R. ...	26 Apr., '11
PALMER, Dr. H. T. ...	16 Apr., '11	SWAN, J. H. ...	1 May, '11
PAYNE, D. S....	17 June, '11	STOKES, S. F. ...	3 Apr., '11
PACKWOOD, G. H. ...	29 June, '11	SWIRE, Capt. W. ...	2 Apr., '11
QUINN, T. ...	7 May, '11	TURNER, A. D. ...	3 Apr., '11
RATTRAY, R. S. ...	11 Apr., '11	THORNE, G. H. ...	26 Apr., '11
Junior Constitutional		TIGHE, Dr. A. B. ...	4 June, '11
Club, Piccadilly, W.		WARDEN, Capt. E. O. ...	30 Apr., '11
ROBERTSON, W. C. F. ...	19 Apr., '11	WRIGHT, G. W. F. ...	7 May, '11
RANDALL, G. W. ...	17 May, '11	WELMAN, C. W....	7 May, '11
ROSS, H. ...		WYPER, J. ...	19 June, '11
SELF, J. ...		YOUNG, L. ...	21 June, '11
SAYERS, C. W. ...	20 May, '11		

SIERRA LEONE.

ALEXANDER, Dr. W. N.	29 Apr., '11	JOHNSTONE, R. M. ...	13 Apr., '11
ALLAN, C. H. ...	3 Apr., '11	NEWTON, J. J. ...	16 Apr., '11
ANGUS, J. ...	28 May, '11	PAGE, G. W. ...	26 Apr., '11
BRADSHAW, A. S. ...	20 May, '11	SHELDRAKE, J. H. ...	18 May, '11
DREWE, Miss A. E. ...	11 Apr., '11	SMITH, H. ...	16 Apr., '11
FOSTER, W. S. ...	5 Apr., '11	SCOVIL, F. H. ...	10 May, '11
GILBERT, D. P. ...	7 June, '11	c/o Messrs. Cox & Co.,	
c/o Messrs. Cox & Co.,		16, Charing Cross, S.W.	
16, Charing Cross, S.W.		TINLING, J. A. ...	
HENSTRIDGE, H. G. ...	11 June, '11	TWELLS, J. ...	16 Apr., '11
HAMILTON, F. H. ...	19 Apr., '11	WILLOUGHBY, E. D. ...	16 Apr., '11
c/o National Bank of		WOOD-MASON, Dr. E. W.	26 Apr., '11
S. Africa, Circus Place,		WILKINSON, R. W. H. ...	26 Apr., '11
London Wall, E.C.		WARREN, Lt.-Col. H. G.	20 May, '11

GAMBIA.

PICKERING, W.	4 Apr., '11
-------------------	-----	-----	-----	-----	-----	-----	-----	-------------

SOUTHERN NIGERIA.

ARCHIBALD, Dr. J. W....	26 Apr., '11	BLAKELEY, J. F. ...	3 June, '11
ALEXANDER, C. W. ...	26 Apr., '11	BEATON, J. ...	25 Apr., '11
AMBROSE, Capt. W. G....	20 May, '11	BRIDGMAN, A. H. ...	5 Apr., '11
ASHTON, Capt. C. C. G....	19 May, '11	BUTLER, S. J. ...	8 Apr., '11
c/o Messrs. Cox & Co.,		BEDWELL, H. ...	3 June, '11
16, Charing Cross, S.W.		c/o Sir C. R. McGriegor	
BUCHANAN, R. A. ...	3 June, '11	Bart., & Co., 25,	
BELLAMY, C. V....	28 Apr., '11	Charles Street, S.W.	
BEATTY, G. ...	11 June, '11	BODEN, H. ...	20 May, '11
BROWN, G. A. ...	7 May, '11	BARLOW, R. J. ...	20 May, '11
Primrose Club, Park		BARNES, W. J. ...	7 May, '11
Place, St. James', S.W.		BROWNE, C. W. ...	19 Apr., '11

SOUTHERN NIGERIA—(continued.)

BRIGGS, Miss E. ...	9 Apr., '11	JERVIS, J. T. ...	25 June, '11
COLLINS, W. A....	17 Apr., '11	KIRKLAND, J. H. ...	1 May, '11
CHEETHAM, Lt. H.C.V.B.,		KEILLER, G. W. ...	30 May, '11
R.N.R. ...	7 May, '11	LAMBERT, J. A. P. ...	26 Apr., '11
CROCKER, A. E. ...	20 May, '11	LUMLEY, G. ...	3 Apr., '11
CHAMBERS, C. H. ...	16 Apr., '11	LYONS, Capt. J. G. ...	11 May, '11
Royal Colonial Institute, Northumberland Avenue, W.C.		Grosvenor Club, Piccadilly, W.	
COTTON, J. C. ...	6 Apr., '11	MORRIS, P. H. T. ...	4 May, '11
CHATTERIS, A. B. ...	16 Apr., '11	MOORE, E. V. ...	27 June, '11
DITTON, W. B. ...	18 June, '11	MOREHEAD, Dr. H. R. ...	16 Apr., '11
DUNCOMBE, W. K. ...	16 Apr., '11	MOORMAN, F. W. ...	1 May, '11
Royal Colonial Institute, Northumberland Avenue, W.C.		MILLS, H. M. ...	28 May, '11
DAVIDSON, J. ...	9 Apr., '11	MADDISON, T. ...	27 Apr., '11
DAVIDSON, H. J. ...	9 Apr., '11	MEARS, C. B. ...	15 May, '11
DOWERS, H. ...	9 Apr., '11	MACFARLANE, J. ...	3 Apr., '11
DE LIVERA, C. ...	28 May, '11	McKAY, Dr. J. H. ...	15 May, '11
DITCH, G. B. ...	17 Apr., '11	NICHOLS, J. E. ...	7 May, '11
DUNN, S. W. ...	1 May, '11	NORTON-HARPER, Capt.	
DAY-BARKER, F. ...	23 Apr., '11	A. G. M. ...	15 May, '11
FAIRHURST, W. C. ...	15 May, '11	OWEN, O. G. ...	11 June, '11
FOSTER, E. W. ...	9 Mar., '11	PICKELS, Dr. J. A. ...	1 May, '11
FURLONG, A. E....	15 May, '11	PATTINSON, H. ...	3 June, '11
FOUNTAIN, E. P. ...	18 June, '11	PONTIFEX, S. C. O. ...	3 Apr., '11
GARDNER, R. D....	27 Apr., '11	PEDDIE, W. G. ...	3 June, '11
Caledonian Club, Charles Street, S.W.		PULLEN, J. ...	26 Apr., '11
GILCHRIST, A. M. ...	26 Apr., '11	PYKE, C. C. ...	8 May, '11
GREEN, J. E. ...	21 June, '11	PICKWOOD, C. A. ...	9 Apr., '11
GRAY, Dr. G. M. ...	27 June, '11	PEARCE, E. G. ...	15 Apr., '11
GRAHAM, F. R. W. ...	15 May, '11	PARTRIDGE, C. ...	21 May, '11
GEbbie, F. St. J. ...	3 Apr., '11	ROSS, W. J. ...	3 Apr., '11
GLEDALL, E. D....	1 May, '11	ROBERTS, G. W....	20 Apr., '11
GREHAN, P. L. ...	8 Apr., '11	RYDER, D. J. ...	3 Apr., '11
HEWITT, W. S. ...	2 Apr., '11	ROBERTS, D. ...	15 May, '11
HALLAHAN, H. ...	16 Apr., '11	ROSEDALE, F. H. ...	5 May, '11
HILSDON, J. E. ...	1 May, '11	RAIKES, R. D. N. ...	2 Apr., '11
HEWSON, C. L. B. ...	18 June, '11	SMITH, Dr. J. S. ...	3 June, '11
HOSKIN, F. ...	16 Apr., '11	SOUTH, G. F. ...	17 May, '11
HERON, R. M. ...	19 Apr., '11	SWAN, C. B. ...	25 Apr., '11
Junior United Service Club, Charles St., S.W.		SINCLAIR, Capt. F. ...	15 May, '11
HIVES, F. ...	9 Apr., '11	STEWART-BROWN, J. P.	1 May, '11
HYDE-JOHNSON, H. J. ...	17 Apr., '11	c/o Messrs. Way and Co., 11, Haymarket, S.W.	
HUMFREY, Capt. L. E. H.	26 Apr., '11	SANDELL, A. E....	26 Apr., '11
HEAPS, R. ...	18 June, '11	STONE, J. E. ...	9 Apr., '11
INSLEY, T. B. ...	3 June, '11	TAYLEUR, C. E. ...	25 June, '11
JACKSON, E. ...	17 June, '11	c/o Messrs. Cox and Co., 16, Charing Cross, S.W.	
JONES, J. C. ...	25 June, '11	THOMPSON, E. J. ...	18 June '11
		TAYLOR, V. B. ...	17 June, '11

SOUTHERN NIGERIA—continued.

THOMPSON, DR. F. B. ...	3 May, '11	WHITING, W. A. ...	15 May, '11
VAUGHAN, E. G. S. ...	7 June, '11	WANTON, E. B. ...	6 Apr., '11
WEAVER-SMITH, F. ...	9 Apr., '11	WHEELWRIGHT, J. C. ...	16 Apr., '11
WHITAKER, T. H. ...	5 Apr., '11	WILLIAMS, W. ...	2 Apr., '11
WOODTHORPE, J. M. ...	1 May, '11	WILSON, LT. J. D., R.N.R.	25 June, '11
WILLIAMS, J. ...	7 May, '11		

NORTHERN NIGERIA.

ARNETT, E. J. ...	6 July, '11	KEENEN, P. F. ...	20 May, '11
ANDERSON, C. L. ...	18 June, '11	KERRISON, W. G. ...	26 Apr., '11
BELL, SIR H. H., K.C.M.G.	21 June, '11	LLOYD, R. A. ...	11 May, '11
BENNETT, G. W. R. ...	18 Apr., '11	LARMORE, Maj. H. O.,	
BRESFORD, M. H. DE LA		C.M.G. ...	13 Apr., '11
P., D.S.O. ...	23 Apr., '11	MATTHEWS, H. DE C. ...	8 May, '11
BOWLBY, T. R. ...	9 Apr., '11	MOISER, DR. B. ...	18 July, '11
BRIDGES, H. C. ...	23 Mar., '11	MCCLEINTOCK, Maj. A.,	
BELL, C. E. J. ...	16 Apr., '11	D.S.O. ...	12 Aug, '11
BROCKLEBANK, CAPT. J.		MAULE, CAPT. W. J. ...	26 Apr., '11
J., D.S.O. ...	13 June, '11	McKINNEY, DR. H. G. ...	8 May, '11
CAMPBELL, A. B. ...	13 May, '11	MILLIGAN, J. ...	1 May, '11
CARLETON, C. A. S. ...	15 May, '11	ORR, N. C. ...	16 Apr., '11
CHAMBERS, W. G. F. ...	3 July, '11	O'BRIEN, P. ...	23 Apr., '11
DUUS, O. F. ...	23 Apr., '11	c/o The Bank of	
DE PUTRON, H. ...	18 May, '11	Nigeria, Ltd., Mow-	
DICKER, W. F. ...	3 Apr., '11	bray House, Norfolk	
DE GREY, G. ...	21 Apr., '11	Street, W.C.	
ELLIS, DR. M. F. ...	6 June, '11	PUTLAND, G. B. ...	7 May, '11
Royal Societies Club,		POLLOCK, F. R. ...	3 June, '11
63, St. James' St., S.W.		Guards' Club, 70, Pall	
FORBES, J. L. ...	23 Apr., '11	Mall, S.W.	
GOODWIN, A. E. ...	17 July, '11	PRICE, CAPT. J. F. N. ...	6 June, '11
GASKIN, D. ...	2 Apr., '11	PARODI, E. V. ...	18 May, '11
GABBETT, G. F. A. ...	13 Apr., '11	PARKER, CAPT. J. C. ...	9 Apr., '11
GARRATT, J. C. ...	16 Apr., '11	QUINN, J. ...	28 May, '11
HARE, C. E. ...	6 June, '11	RUXTON, CAPT. W. F. ...	13 Apr., '11
HERAPATH, D. K. McK.	25 May, '11	SAUNDERS, C. W. ...	3 Apr., '11
Cavalry Club,		TOMPSON, R. N. ...	22 May, '11
Piccadilly, W.		VISCHER, H. ...	4 July, '11
HAMILTON-BROWN,		Royal Societies Club,	
Capt. W., D.S.O. ...	13 Apr., '11	63, St. James' St., S.W.	
HALL, H. C. ...	21 May, '11	VERTUE, G. N. ...	1 July, '11
INGRAM, DR. A. ...	4 May, '11	WOODHOUSE, C. A. ...	11 May, '11
JERVELAND, C. N. ...	26 Apr., '11	WRIGHTSON, C. ...	3 Apr., '11
JONES, W. A. ...	3 June, '11	WARNOCK, A. ...	26 Apr., '11

NYASALAND.

KIRKPATRICK, F. J. ...	27 May, '11	ROSS, A. C. J. ...	22 Apr., '11
PHELPS, W. G. ...	5 May, '11	WIGHTMAN, A. E. ...	27 May, '11
PASK, DR. E. H. A. ...	9 May, '11		

EAST AFRICA.

BARTH, J. W.	27 June, '11	HOEY, A. E.	13 May, '11
BARRETT, Capt. W. E. H.	1 July, '11	LOGAN, E. R.	27 Apr., '11
BENTLEY, J. C.	4 June, '11	RAND-OVERY, C... ..	29 July, '11
CORBETT, N. E. F.	1 July, '11	SPAN, Capt. F. H.	14 May, '11
CHELL, Dr. G. R. H.	<i>Steamer leaving</i> 26 May, '11	SANDIFORD, C., C.B.	4 June, '11
CLAIDEN, A. C.	30 Apr., '11	SMITH, Capt. G.	1 May, '11
DICK, Capt. R. N.	1 July, '11	SANDBACK-BAKER, G.	1 July, '11
United Service Club, Pall Mall, S.W.		c/o National Bank of India Ltd., 26 Bishopsgate, E.C.	
GOWER, I. L. O.	4 June, '11	TALBOT-SMITH, L.	<i>Steamer leaving</i> 28 Apr., '11
GRAY, H. W.	4 June, '11	WEST, W. T.	29 July, '11
HELLYER, M.	1 July, '11	WEEKS, R.	1 July, '11
HARCOURT, L. A.	<i>Steamer leaving</i> 28 Apr., '11	WATSON, A. M... ..	1 July, '11
		WILSON, H. S.	27 May, '11

UGANDA.

BOVELL, Capt. C. W. K.	30 Apr., '11	HANNINGTON, P. T.	4 June, '11
COOMBS, T.	27 May, '11	LARDNER, Capt. E. G. D.	30 Apr., '11
GRAHAM, Capt. C.	5 May, '11	Army and Navy Club, Pall Mall, S.W.	
HOGO, A. F.	1 June, '11	TUFNELL, Capt. H. M.	4 May, '11
HUTCHINSON, Comm. H., R.N.R.	18 June, '11	WAITE, S.	<i>Steamer leaving</i> 28 Apr., '11
Sports Club, St. James' Square, S.W.		WYNDHAM, Lieut.-Col. L. C. E.	30 June, '11
HADDON, E. B.	10 May, '11		

SOMALILAND.

BIRD, Capt. H. J. G.	12 Apr., '11	DODDS, J. H.	27 May, '11
BYATT, H. A.		HUNT, Capt. F. W.	2 July, '11

BECHUANALAND.

EDWARDS, E. V.... ..	16 May, '11	NEALE, H. B.	15 July, '11
----------------------	-------------	---------------------	--------------

BASUTOLAND.

MARCH, B. O.	8 May, '11
---------------------	------------

BRITISH HONDURAS.

REES-DAVIES, C	30 June, '11
-----------------------	--------------

FIJI.

THOMPSON, J. V... ..	5 June, '11	WILSON, Dr. B. M.	30 June, '11
----------------------	-------------	--------------------------	--------------

CYPRUS.

DURHAM-HALL, Capt.	NICOLLS, E. H. D.	24 Apr., '11
W. W. 12 Apr., '11		

ANTIGUA.

MACKISON, W. M.	29 Oct., '11
-----------------	--------------

DOMINICA.

SHANKLAND, W. C.	30 June, '11
------------------	--------------

LEEWARD ISLANDS.

GRANT, H. E. W., Grosvenor Club, Piccadilly, W.	17 July, '11
---	--------------

MONTSERRAT.

DAVIDSON HUSTON, Col. W. B.	13 July, '11
-----------------------------	--------------

BARBADOS.

SMITH, F. S.	27 May, '11
--------------	-------------

ST. HELENA.

TUCKER, L.	13 June, '11
------------	--------------

JAMAICA.

LOPEY, A. E. 13 June, '11	TAYLOR, C. C. 5 May, '11
SEATON, D. T. 13 July, '11	

TRINIDAD.

GUISEPPI, Dr. P. E. H.... 23 July, '11	TULLOCH, Dr. J. P. ... 18 June, '11
PERCY, Dr. G. R. ... 19 May, '11	Sports Club, St. James' Square, S.W.

BRITISH GUIANA.

BUGLE, C. W. H. ... 18 Sept., '11	WISE, Dr. K. S. ... 28 Aug., '11
BAKER, A. H. ... 23 June, '11	Royal Societies Club,
IRVING, Dr. M. H. C. ... 10 May, '11	63, St. James' St., S.W.
LONGLEY, Rev. T. ... 9 June, '11	WIDDUP, C. P. ... 30 July, '11

MAURITIUS.

BOLTON, Dr. J. ...	31 May, '11	D'AVRAY, A. E....	28 May, '11
CEBELIEU, Rev. J. C.	12 Dec., '11		

STRAITS SETTLEMENTS.

ADAMS, J. ...	22 June, '11	HAIGH, W. N. ...	20 Sept., '11
ARTHUR, J. S. W. ...	23 July, '11	HAWKINS, T. G....	9 June, '11
BUCKELL, C. P. ...	9 Aug., '11	KIRKE, R. J. ...	20 May, '11
CATOR, B. A. ...	26 Dec., '11	LIVESAY, Dr. S. M.	10 Aug., '11
CONLAN, E. ...	25 Oct., '11	LORNIE, J. ...	14 May, '11
COLEMAN, A. J....	20 Apr., '11	MELLO, A. DE ...	13 June, '11
CHANCELLOR, Capt. A. R.	13 July, '11	MUCKART, G. P. ...	30 Nov., '11
CLARK, H. T. ...	10 July, '11	MARSHALL, G. J. ...	25 Aug., '11
COLMAN, E. E. ...	10 June, '11	PAGE, R. J. ...	15 Aug., '11
DENT, F. ...	31 Aug., '11	ROSS, F. H. ...	13 Oct., '11
ELLIS, F. T. ...	10 June, '11	RYAN, W. ...	2 Aug., '11
GARDINER, E. A. ...	19 Sept., '11	WHITEHEAD, C. B.	4 Oct. '11
GOMES, Miss L. H. ...	9 Aug., '11	WALLEY, T. ...	15 Aug., '11

TANJONG PAGAR DOCK.

MUNRO, D. ...	31 May, '11	WATT, J. ...	31 July, '11
NIBLOCK, F. ...	12 May, '11	YULE, K. G. ...	31 Oct., '11

HONG KONG.

BAKER, J. E. ...	7 Nov., '11	KING, T. H. ...	25 Oct., '11
BRETT, C. W. T. ...	17 Oct., '11	KEMP, J. H. ...	17 Aug., '11
BROWNE, F. ...	8 Nov., '11	C/o Messrs. Grindlay	
BELL, Dr. J. ...	22 July, '11	& Co., 54, Parliament	
Thatched House Club,		St., S.W.	
St. James' St., S.W.		MORRIS, A. ...	3 Feb., '12
BOYD, S. R. ...	15 Aug., '11	MORRIS, Mrs. L. ...	3 Feb., '12
BIRD, Miss M. J. ...	15 Aug., '11	McIVER, M. ...	28 June, '11
BULLIN, J. A. ...	31 May, '11	MARTIN, G. P. DE	1 Aug., '11
DEALY, T. K. ...	10 Nov., '11	TAYLOR, Comm. B. R. H.,	31 Jan., '12
FLOYD, A. ...	6 Oct., '11	R.N.	
GOMPERTZ, H. H. J. ...	11 May, '11	TUTCHER, Mrs. E. ...	15 Aug., '11
HUTCHINSON, R. O. ...	4 July, '11	WALKER, A. T. ...	30 Aug., '11
HUDSON, R. ...	14 Aug., '11	WRIGHT, A. E. ...	15 Aug., '11
JACOBS, Miss L. M. ...	22 Oct., '11		

PERAK.

BERKELEY, H. ...	25 July, '11	POTTER, H. G. D. ...	8 May, '11
BRIDGES, Dr. D. ...	22 Feb., '12	PIZER, H. ...	9 Sept., '11
CROPLEY, J. H. P. ...	15 June, '11	RIGBY, J. ...	2 Aug., '11
DICKSON, E. A. ...	3 May, '11	SYKES, F. ...	10 May, '11
DARLASSON, F. W. ...	12 Jan., '12	SLATER, A. J. ...	12 May, '11
DOUGLAS, F. W. ...	22 Aug., '11	SHORT, P. G. ...	20 Nov., '11
HENRY, Miss K. ...	7 Mar., '12	STONOR, O. F. G. ...	25 Sept., '11
JACKSON, J. E. ...	17 Oct., '11	WARD, J. ...	9 Jan., '12

PAHANG.

HILL, V. ...	11 Aug., '11
--------------	--------------

SELANGOR.

BELFIELD, H. C., C.M.G. ...	11 Feb., '12	MACDERMOTT, Maj. A. T. ...	7 Mar., '12
DE BASAGOITI, W. P. ...	16 Nov., '11		

NEGRI SEMBILAN.

ALLEN, P. T. ...	8 Apr., '12	STEELE, H. E. ...	10 Oct., '11
JONES, H. W. J. ...	19 Aug., '11		
Sports Club, St. James'			
Square, S.W.			

FEDERATED MALAY STATES.

ALLIN, C. H. ...	18 Aug., '11	GOLDTHORPE, J. W. ...	28 Nov., '11
BROWN, L. C. ...	13 Nov., '11	HEMMANT, G. ...	16 Oct., '11
BARNARD, H. C....	23 Dec., '11	McKENZIE, J. ...	29 Nov., '11
BUCKWELL, R. L. ...	30 June, '11	LISHMAN, G. F....	1 July, '11
BRESLAND, C. W. ...	21 June, '11	MAGILL, G. S. ...	
CORNWELL, A. E. ...	24 Mar., '12	MAUNDRELL, E. B. ...	20 May, '11
DUNSTER, E. ...	13 June, '11	PRYDE, W. ...	9 June, '11
ELLERTON, H. B. ...	17 May, '11	RICHARDS, D. S....	12 Aug., '11
Isthmian Club,		RICHARDS, A. F. ...	4 Sept. '11
Piccadilly, W.		VANE, H. G. B....	29 May, '11
FITZGERALD, W. T. ...	Steamer due 4 May, '11	VODDEN, F. R. ...	24 July, '11
FURNIVAL, H. ...	16 May, '11	WILSON, A. ...	4 Nov., '11
GOODYEAR, C. M. ...	9 Mar., '12	WILDE, J. E. ...	14 Apr., '12

CEYLON.

BOWES, J. S. ...	30 June, '11	MEADEN, C. B. P. ...	11 June, '11
BROWNING, G. F. R. ...	11 May, '11	NATHANIELSZ, A. H. ...	9 June, '11
CODRINGTON, H. W. ...	3 Aug., '11	OELMUS, Dr. T. ...	24 Jan., '12
CLARKE, A. H. F. ...	13 May, '11	PETCH, T. ...	10 Oct., '11
CARTWRIGHT, H. T. ...	31 May, '11	RIDOUT, J. B. M. ...	5 Oct., '11
CROSSMAN, A. L. ...	27 May, '11	SUETER, E. B. F. ...	11 Sept., '11
DE GRANVILLE, B. G. ...	31 May, '11	SMITH, F. J. ...	22 Dec., '11
D'ARENBERG, L. A. B. ...	12 June, '11	SAXTON, G. S. ...	3 July, '11
GREEN, C. ...	28 Apr., '11	SOUTHORN, W. T. ...	29 Oct., '11
GROOCCOCK, H. L. ...	21 Aug., '11	STRICKLAND, R. B. ...	17 Oct., '11
HELLINGS, R. B. ...	9 Jan., '12	WICKMAN, A. C. H. ...	1 Sept., '11
JINADASA, Dr. M. J. ...	19 Aug., '11	WILKINS, R. W. P. ...	10 Aug., '11
LOURENSZ, Dr. C. B. ...	28 Apr., '11		

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies

AND
R. V. VERNON, of the Colonial Office.

VOL. IV.

JULY, 1910.

No. 1.

CONTENTS.

EDITORIAL NOTES

Australian General Election.—Canadian Immigration.—Press Cablegrams.—Chambers of Commerce.

CROWN COLONIES AND INDIAN IMMIGRATION.

THE NATIONALISATION OF RAILWAYS

AGRICULTURAL BANKS

COTTON GROWING IN JUBALAND

BUSINESS NOTES

Tropical Products.—Rubber.—Cotton.—Timber.—Oilfields.—Corrosion of Metals.

RAILWAY NOTES

Ceylon.—West Africa.—Uganda.—Ticket Printing Machine.

MEDICAL NOTES

REVIEWS AND NOTICES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

CEYLON.

BOWES, J. S.	30 <i>July</i> , '11	MEAGEN, C. B. P.	11 <i>Aug.</i> , '11
BROWNING, G. F. R.	11 <i>May</i> , '11	NATHANIELSZ, A. H.	9 <i>June</i> , '11
CODRINGTON, H. W.	3 <i>Aug.</i> , '11	OLLIVS, Dr. T.	21 <i>June</i> , '12
CLARKE, A. H. F.	13 <i>May</i> , '11	PETCH, T.	10 <i>Oct.</i> , '11
CARTWRIGHT, H. T.	31 <i>May</i> , '11	RIGOTT, J. B. M.	5 <i>Oct.</i> , '11
CROSSMAN, A. L.	27 <i>May</i> , '11	SCOTER, E. B. F.	11 <i>Sept.</i> , '11
DE GRANVILLE, B. G.	31 <i>May</i> , '11	SMITH, F. J.	22 <i>Dec.</i> , '11
D'ARENBERG, L. A. B.	12 <i>June</i> , '11	SANTON, G. S.	3 <i>July</i> , '11
GREEN, C.	28 <i>April</i> , '11	SOUTHORN, W. T.	19 <i>Oct.</i> , '11
GROCCOCK, H. L.	21 <i>May</i> , '11	SPICKERLAND, R. B.	17 <i>Oct.</i> , '11
HELLINGS, R. B.	9 <i>June</i> , '12	WICKHAM, A. C. H.	1 <i>Sept.</i> , '11
JINADASA, Dr. M. J.	10 <i>June</i> , '11	WILKINS, R. W. P.	10 <i>May</i> , '11
LOURENSZ, Dr. C. B.	28 <i>April</i> , '11		

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies
AND

R. V. VERNON, of the Colonial Office.

VOL. IV.

JULY, 1910.

No. 1.

CONTENTS.

EDITORIAL NOTES

Australian General Election.—Canadian Immigration.—Press Cablegrams.—Chambers of Commerce.

CROWN COLONIES AND INDIAN IMMIGRATION.

THE NATIONALISATION OF RAILWAYS

AGRICULTURAL BANKS

COTTON GROWING IN JUBALAND

BUSINESS NOTES

Tropical Products.—Rubber.—Cotton.—Timber.—Oilfields.—Corrosion of Metals.

RAILWAY NOTES

Ceylon.—West Africa.—Uganda.—Ticket Printing Machine.

MEDICAL NOTES

REVIEWS AND NOTICES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Perfect Sanitation, Fireproof Floors, Telephones, Night Porters.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/6 to 8/-.**

TABLE D'HÔTE DINNER, SIX COURSES, 3/-.

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

**BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/- to 6/6.**

Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
BOOCRAFT, LONDON."

| Thackeray Hotel,
"THACKERAY, LONDON. |

Esmond Hotel,
AGROUP, LONDON



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post. on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

NEAR THE BRITISH MUSEUM.

KINGSLEY HOTEL

HART STREET, BLOOMSBURY SQUARE, LONDON.

OPPOSITE THE BRITISH MUSEUM.

THACKERAY HOTEL

GREAT RUSSELL STREET, LONDON.

These well-appointed and commodious TEMPERANCE HOTELS will, it is believed, meet the requirements, at moderate charges, of those who desire all the conveniences and advantages of the larger modern licensed Hotels. The Hotels have—

Passenger Lifts,

Bathrooms on every Floor,

*Lounges and Spacious Dining, Drawing, Writing,
Reading, Billiard, and Smoking Rooms.*

Perfect Sanitation, Fireproof Floors, Telephones, Night Porters.

BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/6 to 8/-.

TABLE D'HÔTE DINNER, SIX COURSES, 3/-.

FULL TARIFF AND TESTIMONIALS ON APPLICATION.

ALSO UNDER THE SAME MANAGEMENT,

ESMOND HOTEL

1, MONTAGUE STREET, RUSSELL SQUARE, LONDON.

This TEMPERANCE HOTEL adjoins the British Museum, and is exceptionally quiet and economical. Night Porter.

BEDROOM, ATTENDANCE AND TABLE D'HÔTE
BREAKFAST, single, from 5/- to 6/6.

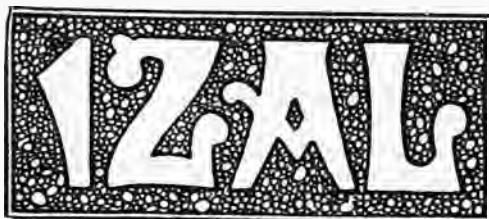
Full Tariff and Testimonials on application.

TELEGRAPHIC ADDRESSES:—

Kingsley Hotel,
Bloomfield, London.

Thackeray Hotel,
Thackeray, London.

Esmond Hotel,
Aldgate, London.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.



DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

ALBION

UTILITY MOTORS

OFFICIAL CARS.

MAIL WAGONS.

CHAR-A-BANCS.



Special Features:

ALBION PATENT MAGNETS.
ALBION PATENT CARBURETTOR.
ALBION PATENT CHAIN CASE.
ALBION PATENT LUBRICATOR.
MURRAY PATENT GOVERNOR.

ALBION Motor Vehicles are manufactured throughout at our works under our own patents. We do *not* adopt the dangerous practice of purchasing the principal parts complete from different manufacturing firms, and then assembling them only. The selection of the best material is therefore always under our direct control, thus ensuring that regularity and reliability in the complete vehicle which otherwise is difficult to obtain.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21-22, Upper Rathbone Place, W.

Codes: A.B.C., 5th Edition,
and Leibers.

Telegrams: "Automobile, Glasgow."
"Karalbo, London."

R.M.S.P.

**THE ROYAL MAIL
STEAM PACKET COMPANY.**
(ROYAL CHARTER, DATED 1839.)

The Line for Luxurious Travel.

From
SOUTHAMPTON
& CHERBOURG
to

WEST INDIES

(PACIFIC),

NEW YORK,

via The Azores.

BRAZIL

&

RIVER PLATE,

via Spain,
Portugal,
& Madeira.



From LONDON to

MOROCCO,

Canary Islands,

MADEIRA.

23 DAYS, from
£21.

From GRIMSBY &
LEITH to

NORWAY

Fjords, North

Cape &

Christiana,

July & August

from

£1 A DAY.

For further particulars apply for Illustrated Handbooks "A.J."

London: 18, Moorgate Street, E.C. & 32, Cockspur Street, S.W.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plate and
Sheffield Cutlery.

A Service for 12 persons **£12 10s. to £21.**

(Others £3 to £100.)

"EMPIRE" & STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble
plated on pure Nickel Silver. The
patterns are reproductions from fine
old Silver models, and have all the
beauty of line and form of the Silver
of 150 years ago; apart from the Hall
Mark no difference is visible.

At the 1862 Exhibition,
"Empire" Plate was awarded Prize
Medals for Excellence of Manufacture,
and it still retains that pre-eminence
for which it was noted fifty years ago,
whilst the prices are, quality con-
sidered, strictly moderate, either for
Cash, or on "The Times" System
of Monthly Payments.

PRICE
LISTS
FREE.

No. 1, of Watches, Clocks and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles
for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

MERRYWEATHERS'

Patent Improved

Vacuum Cesspool Exhauster



Merryweathers' Exhauster in Use.

Arranged for
Hand, Horse
or
Motor Draught.

ADVANTAGES :—*Absolutely Sanitary.*

Can be employed in daytime without causing a nuisance. The pump creates a vacuum in the cylinder, the suction pipe is lowered into the cesspool and the contents immediately transferred to the cylinder without passing through the pump. The gases exhausted are burnt in the stove.

Extract from Medical Officer's Report :—

"Very pleased with its efficient and simple method of working, and believe that it will be adopted in other urban districts where extended systems of sewerage are not able to be carried out."

Write for Illustrated Lists 690 M.

MERRYWEATHER & SONS,

Greenwich Road, S.E., LONDON.

*Ask for new Catalogue of Hose for
Flushing and Watering Purposes.*

“ETERNIT”

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. | Impervious to sub-
Non-Combustible. | heat, frost and rain.

SPECIALITY:

“ETERNIT” Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

“ETERNIT” (Asbestos- Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath,
plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by ½ in. thick and upwards. Manufactured
under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: “ETRASHEET. LONDON.”

Telephone: 13174 CENTRAL.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp
Equipment, Medical Stores, Wines, Spirits, and
Mineral Waters, &c., for Exploring and Mining
Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and
made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { “COOMASSIE,” LIVERPOOL.
“APPEASABLE,” LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909.

REINFORCED CONCRETE KAHN TRUSSED BAR SYSTEM

The Kahn Trussed Bar is the only bar with rigid stirrups forming one unit with the tension member. It is designed with a view to providing the maximum protection against failure by shear, and is particularly suitable for Colonial use.



Scottish Provident Building, Lombard Street, E.C.

**For Bridges, Reservoirs, Aqueducts,
Gas Tanks, Retort Foundations,
Public Buildings, Factories, Hotels,
Hospitals, Staircases, Roofs, etc.**

Enquiries Invited

Handbook Free

The TRUSSED CONCRETE STEEL CO., Ltd.
56, CAXTON HOUSE, WESTMINSTER.

THE WORKINGTON IRON AND STEEL COMPANY, LIMITED, WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

**STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.**

**PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.**

TORBAY PAINT.

*THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.*

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

**THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.**

A Typewriter is judged
by the work it does.
Most Typewriters write,
but

. . . THE . . .
YÖST

Does Beautiful Work.

Full particulars on application.

THE YÖST TYPEWRITER CO., LTD.,

Head Office:
50, Holborn Viaduct, London, E.C.

BRANCHES EVERYWHERE.

GOODLASS, WALL & CO. LTD., LIVERPOOL.



PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.

CLAYTON MACHINES — FOR — FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM:

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel.: GERR. 3232.

Code:—A.B.C. 4th and 5th Editions.

Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

HOMAN'S Solar Chronometers and Solar Clocks.

(Fully protected by Patents.)

**THE ONLY TIMEPIECE OF
ITS KIND IN THE WORLD.**



All the instruments are supplied with bowls 12 inches in diameter, and engraved brass scales. They are **complete in every respect**, so that they can be set up by anyone.

The price includes carriage to any part of the world.

Turned Gunmetal Solar Chronometer, Ornamental Gunmetal Base	£	7	s.	10	d.
The same in Sheet Copper, Plain Base, as in illustration	-	-	2	10	0
The same in Cast Iron, Ornamental Base	-	-	2	10	0
The same in Coppered Steel, Plain Base, as in illustration	-	-	1	10	0

(Although every precaution is taken to make the instrument of coppered steel durable, it is safer to order one of the others when it will be continually exposed to the weather.)

All the above instruments show Standard Mean Time correctly and accurately.

The Solar Clocks are of the same price and the same finish as the above. They **show Standard Solar Time**. A table showing how much this is faster or slower than Mean Time is attached to each instrument.

The Solar Clocks have no movable parts, and they are therefore stronger and preferable to the Solar Chronometers in positions where they are liable to be tampered with.

Plate glass, copper framed covers with letter locks for any of the above instruments are supplied for 10s. each extra.

The instruments are intended to be fixed either on a horizontal surface, such as a pedestal, or vertically on a wall. When not otherwise specified they will be supplied for attaching to a horizontal surface.

A **Solar Chronometer**, or a **Solar Clock** in Cast Iron, Bowl 30 inches in diameter, with engraved Brass Scales, can be supplied for £10, carriage paid to nearest port. It is specially designed as a **Standard Timepiece for villages and small towns**. It can be set up **without skilled labour**, and forms an **invaluable Standard Clock**, always giving the right time to the nearest minute, whenever the sun shines, between 6 a.m. and 6 p.m.

HOMAN'S SOLAR CHRONOMETERS, 20, Renfrew St., Glasgow, Scotland

EDUCATIONAL ANNOUNCEMENTS.

KING'S COLLEGE SCHOOL,
WIMBLETON COMMON, LONDON, S.W.
(Conducted by the Council of King's
College, London.)

TERMS in 1910, beginning January
19th, April 27th, September 21st. For
Prospectus (Boarders and Day Boys), apply to
the HEAD-MASTER.

UNIVERSITY COLLEGE OF WALES,
ABERYSTWYTH.
(A constituent College of the University
of Wales.)

President: LOAN RENDEL.
Principal: T. F. ROBERTS, M.A., LL.D.
PREPARES FOR DEGREES IN
Arts, Science, Law, Music, and
Agriculture. Hostel accommodation for over
200 Women Students. Scholarships and
Exhibitions given. Apply to the Registrar,
University College, Aberystwyth.

BROMSGROVE SCHOOL,
WORCESTERSHIRE.

AT LEAST SIX SCHOLARSHIPS
AND EXHIBITIONS are offered
annually in July. Value from £80 to £20.
There are also a certain number of reserved
places at reduced terms, primarily for sons of
Clergymen. Apply, the Head Master,
F. J. R. HENDY, M.A.

PARSONS MEAD, ASHTEAD, SURREY.

GOOD HOME - SCHOOL for the
Daughters of Gentlemen. Beautiful
Grounds of six acres. Excellent Teachers
for all subjects. Training for Home Life with
special attention to Literature, Music and Art.
References kindly permitted to the Countess
of Pembroke, the Lady Robert Cecil,
Mrs. Utterson and others.

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent
Staff, including B.A., M.Sc., F.C.V.,
A.R.C.O., etc. Preparation for all examina-
tions. Foreign boys received. Gymnasium
and Swimming Clubs, Cadet Company, Games,
etc. Capt. J. C. UNDERWOOD, A.C.F.,
F.R.G.S., Head Master. (Registered teacher.)

SCHOOLS FOR BOYS AND GIRLS.

PROSPECTUSES OF THE LEADING
English and Continental Schools, with
every information and advice, supplied to
Parents and Guardians **FREE OF CHARGE**.
Please state pupils' ages, locality preferred,
and approximate school fees to be paid.—
UNIVERSITY EDUCATIONAL AGENCY,
122, Regent Street, W. (Est. 1868.)

CROWN PRESERVED COAL CO., L^{TD}.

Admiralty

Contractors.

Awards:

LONDON 1862
PARIS 1876
LIVERPOOL 1886
JAMAICA 1891



Awards:

ROYAL NAVAL 1891 & 1905
CHICAGO 1893
BORDEAUX 1895
MEXICAN 1908

Established 1860.

PATENT FUEL MANUFACTURERS AND SHIPPERS.

Works—
CARDIFF AND PORT TALBOT.

Telegraphic Address:—"Crown, Cardiff."
Telephone:—Nat. No. 241.

CROSSLEY & CO. (Established 1845.) ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages
of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the
Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of News-
papers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper
publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To and from Bermuda there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf, Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER, DEMPSTER & CO., LIMITED,

COLONIAL HOUSE, LIVERPOOL,

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE
FROM
Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO
CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.
LONDON AND SOUTHAMPTON
TO
CAPE COLONY, NATAL, DELAGOA BAY, BEIRA,
EAST AFRICAN PORTS, and MAURITIUS,
calling at Madeira, Las Palmas, Teneriffe, Ascension,
St. Helena, and Lobito Bay.

WEEKLY SAILINGS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.

AGENCY
40, TRINITY SQUARE
LONDON E.C.

“DECAUVILLE”
LOCOMOTIVES
WAGONS

PARIS

613



PLEASE ASK FOR OUR NEW CATALOGUE

THE Canadian Annual Review of Public Affairs.

AN HISTORICAL, STATISTICAL, AND DESCRIPTIVE RECORD OF
THE AFFAIRS AND PROGRESS OF CANADA DURING EACH YEAR.

By J. Castell Hopkins, F.S.S.

600 PAGES.

9th Year of Issue.

Issued in 1910.

40 ILLUSTRATIONS.

Cloth 14s. 7d.

Morocco 18s. 9d.

- "The Canadian Annual Review has become a national institution."—*Toronto World*.
- "A potent influence in welding the Provinces of Canada together."—*Toronto Globe*.
- "Judicial, encyclopædic and not too diffuse."—*Canadian Magazine*.
- "An exhaustive account of the Dominion."—*Melbourne Argus*.
- "The amount of detailed information contained in it is simply marvellous."—*Librarian, Royal Colonial Institute*.
- "An always valuable work."—*The Standard, London*.
- "The best résumé of every event of importance connected with Imperial questions."—*Britannia*.
- "Shows a refinement of technical detail, the powerful evidence of a broadminded common sense."—*British Empire Review*.

PUBLISHED BY—

THE ANNUAL REVIEW PUBLISHING CO., LIMITED,
2, College Street, Toronto, CANADA.

A VALUABLE MEDIUM FOR DEVELOPING BUSINESS

between the United Kingdom and India is the

"HOME AND COLONIAL MAIL."
(WEEKLY)

For INDIA, CHINA, JAPAN, and the COLONIES.

ESTABLISHED over twenty-five years ago, this Journal occupies a unique position as a Commercial Newspaper, representative of the important planting and mercantile interests of India, Ceylon and the Far East.

It is filed in the offices of Tea Garden and Produce Agents in London and Calcutta, and is read by all interested in commerce, planting, and produce everywhere. Complete information is given about Tea, Rubber, and other produce, together with the machinery used.

Lists of Tea and Rubber Companies registered in London, Reports of Meetings and statistical information about produce, etc., appear every week.

Annual Subscription post free to India and the Far East, £1 7s.

Advertisement Rates on application to the Manager,

HOME AND COLONIAL MAIL,
Temple Chambers, Temple Avenue, E.C.

Telegraphic Address: "Brookleigh," London.

—TO REACH—

Town Clerks, Borough Surveyors, Clerks to Guardians, Masters of Workhouses, Stewards of Asylums, Clerks and Surveyors to Urban and Rural District Councils, Clerks to Education Authorities

—YOU MUST ADVERTISE—

IN THE

LOCAL GOVERNMENT JOURNAL

AND

OFFICIALS' GAZETTE,

**The Medium between
Contractors and Public Authorities.**

Established 1872.

SATURDAY, price TWOPENCE.

S. E. ROGERS, 27a, Farringdon Street, LONDON, E.C.

BANK OF NIGERIA LIMITED.

Directors.

GEORGE MILLER, Esq.

CLIFFORD B. EDGAR, Esq., J.P.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—O. WILMOT, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bahr-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

BANK OF BRITISH WEST AFRICA, LIMITED.

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

Authorised Capital - £1,000,000.

Called-Up Capital - £200,000.

Subscribed Capital - £500,000.

Reserve Fund - £75,000.

Head Office: 14, CASTLE STREET, LIVERPOOL.

Telegraphic and Cable Address:—"BULLION," LIVERPOOL.

London Office: 17, LEADENHALL STREET, E.C.

Telegraphic and Cable Address:—"ARREGLO," LONDON.

Hamburg Office: GLOBUSHOF, TROSTBRUCKE.

Telegraphic and Cable Address:—"BULLION," HAMBURG.

Branches:

GAMBIA—Bathurst.

SIERRA LEONE—Freetown.

GOLD COAST AND ASHANTI—Axim, Sekondi, Cape Coast, Accra, Tarkwa, Coomassie.

NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

Agencies:

MADEIRA, TENERIFFE, GRAND CANARY, DAKAR, BO, MONROVIA, LANOU, OBUASSI, SALTPOND, WINNEBAH, BONNY, EKWANCA, OPOBO, WARRI, ABONNEMA, FERNANDO PO, &c.

Current and Deposit Accounts accepted in London, Liverpool and Branches. Salaries and Dividends collected, Securities accepted for safe custody. Stocks and Shares bought and sold. Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

NORTH BRITISH & MERCANTILE INSURANCE COMPANY.

INCORPORATED 1809.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have

EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

—♦—
**IMPORTANT ARRANGEMENT
FOR**

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Funds nearly £20,000,000.

Annual Income, £4,800,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

JULY, 1910.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d
Yearly Subscriptions post free 7s.

NO TRAINING
OR KNOWLEDGE
OF MECHANISM
REQUIRED TO
DRIVE LACRE
VEHICLES.



MOTOR
VEHICLES FOR
ALL PURPOSES
AND
SUITABLE FOR
ALL TRADES.

MOTOR VANS & LORRIES.

PUBLIC SERVICE VEHICLES, Etc.

1910 TYPE LACRES.

WE MANUFACTURE 18 DISTINCT MODELS

(ALL SPECIALLY DESIGNED BY US FOR 1910.)

ALL REQUIREMENTS CATERED FOR.

2-CYLINDER & 4-CYLINDER MOTORS.—12/15 h.p., 18 h.p., 30 h.p., and 38 h.p.

**COMMERCIAL VEHICLES TO CARRY LOADS FROM
10 cwts. to 5 tons.**

TAXI-CABS. CHAR-A-BANCs. MOTOR BUSES.

Minimum Number and Variety of Parts. Every Part Standardised, Catalogued and Coded.

NO EXPERIMENTS. ALL DESIGNS ON APPROVED LINES.

SIMPLICITY THE KEYNOTE OF DESIGN.



One of the "Lacre" "Foot-Proof" Chassis,
18 H.P.

THE
PIONEERS
OF THE
MOTOR
VAN
TRADE.



The Simple Mechanism of a "Lacre" 30-H.P.
Chassis.

**Lacre Vehicles
may be
had to run on
Paraffin
if required.**



**We make
a Speciality of
supplying Vehicles
to run on Paraffin.**

*Photograph of our Modern Factory at Letchworth, built last Autumn
for the production of the new type Lacre.*

THE LACRE MOTOR CAR CO. Ltd.,

Registered Offices, etc.—

1, 2, 3, 4 & 5, POLAND STREET, LONDON, ENGLAND.

Works:
LETCWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED."
LONDON and LETCWORTH, ENGLAND.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11/12, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of Baggage for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds

Very suitable for Ambulance purposes : can be used as a STRETCHER.

If you want to get . . .

into Business Relationship

with

Architects, Builders & Contractors

IN GREAT BRITAIN,

Your Best Medium is an Advertisement in

The ARCHITECT

& Contract Reporter.

The Leading Organ of the Architectural Profession.

The charge for a Page is . . . £8 8 0

The charge for a Half Page is . . . £4 10 0

SEND US A TRIAL ORDER.

“THE ARCHITECT,”

Price 4d. Weekly,

P. A. GILBERT WOOD,

**6-11, Imperial Buildings, Ludgate Circus,
London, England.**

Stanley Gibbons Ltd.,

DEALERS IN POSTAGE STAMPS
AND PHILATELIC PUBLISHERS,

391, STRAND, LONDON.

- ¶ Our stock of stamps is unsurpassed in the world.
- ¶ We are desirous of hearing from you if you are either a beginner or an advanced collector. We can supply your wants in every case. Selections sent to all responsible applicants, in the case of collectors who have had no previous business relations with us, references are respectfully desired.
- ¶ If you have anything to sell, single rare stamps, collections, or Government Stocks, kindly communicate with us, we are cash buyers for anything of interest.
- ¶ Our lists of Sets and Packets, Publications and Accessories, will be sent free on application.
- ¶ Priced Catalogue of stamps in two parts, British Empire, and Foreign Countries, post free, 2s. 10d. each.

"GIBBONS STAMP WEEKLY"
SPECIMEN COPY GRATIS.

STANLEY GIBBONS LTD.,
391, STRAND, LONDON, ENGLAND.

**THE LARGEST AND OLDEST FIRM OF STAMP DEALERS
IN THE WORLD.** **ESTABLISHED 1856.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

	s.	d.
United Kingdom - - -	6	6
Canada - - - - -	8	8
Other Colonies and Abroad -	13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

	s.	d.
United Kingdom - - - - -	6	6
Canada - - - - -	8	8
Other Colonies and Abroad - - - - -	13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSACHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY AND FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

HEAD OFFICES:

53, Victoria Street, Westminster, London, S.W.

WORKS: Chippenham, Wilts.

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies

AND

R. V. VERNON, of the Colonial Office.

VOL. IV.

OCTOBER, 1910.

No. 2.

CONTENTS.

EDITORIAL NOTES

Canadian Views of the British General Election—South African Elections—Australian Policy—The Hague Award—Imperial Conference—Canada and the West Indies, &c.

UNCONSTITUTIONAL GOVERNMENT ACTS

SOME FIJIAN CRICKET, by Mr. A. Brewster-Joske.

REVIEWS AND NOTICES

BUSINESS NOTES

Colonial Products—Motor Transport—Purification of Water—Reinforced Concrete—Corrosion of Metals, &c.

RAILWAY NOTES

C.S.A.—Uganda—West Africa.

MEDICAL NOTES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

SUPPORT BRITISH INDUSTRIES.

ASBESTOS CEMENT TILES & SHEETS.

“ POILITE ” ROOFING TILES.

“ POILITE ” ASBESTOS CEMENT SHEETS.

**“ POILITE ” is
only supplied in
ONE THICKNESS
and one quality,
viz.,**

THE BEST.

**“ POILITE ” there-
fore gives the
best results.**



**Specify
“ POILITE.”
AVOID substitutes
of foreign
origin—below
standard quality
or less than
standard thick-
ness $3\frac{1}{2}$ to 4 m/m.
(9/64 ins.)**

**Architects, Engineers and Government Depart-
ments are respectfully informed that “ POILITE ” is
manufactured in accordance with the patent specification
of Mr. L. Hatschek, and is in all respects similar
to the material sold under the name
Eternit.**

**The only Asbestos Cement Roofing
Tile Works in England are the Poilite Works at
Greenwich, owned by Bell's United Asbestos Co., Ltd.
Inclusive tenders for the supply (and fixing of Tiles) sub-
mitted on receipt of Engineers Architects' scaled plans.**



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

SUPPORT BRITISH INDUSTRIES.

ASBESTOS CEMENT TILES & SHEETS.

"POILITE" ROOFING TILES.

"POILITE" ASBESTOS CEMENT SHEETS.

**"POILITE" is
only supplied in
ONE THICKNESS
and one quality,
viz.,**

THE BEST.

**"POILITE" there-
fore gives the
best results.**



**Specify
"POILITE."
AVOID substitutes
of foreign
origin—below
standard quality
or less than
standard thick-
ness $3\frac{1}{2}$ to 4 mm.
($\frac{9}{32}$ ins.)**

**Architects, Engineers and Government Depart-
ments are respectfully informed that "POILITE" is
manufactured in accordance with the patent specification
of Mr. L. Hatschek, and is in all respects similar
to the material sold under the name
Eternit.**

**The only Asbestos Cement Roofing
Tile Works in England are the Poilite Works at
Greenwich, owned by Bell's United Asbestos Co., Ltd.
Inclusive tenders for the supply (and fixing of Tiles) sub-
mitted on receipt of Engineers Architects' scaled plans.**



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS
and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.

PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.

ALBION

UTILITY MOTORS

16 H.P.—32 H.P.
2 Cylinders.—4 Cylinders.



Alternative Tipping
or Passenger Waggon
recently supplied to
Southern Nigerian
Government.

OFFICIAL CARS.
MAIL WAGGONS.
VANS (with Canopies).

CHAR-A-BANCS.
TIPPING WAGGONS.
LORRIES.

**Send for particulars of the new
32 H.P. (4 Cylinder) Albion.**

The load capacity of Albion vehicles is *exclusive* of weight of bodies. We strongly recommend the fitting of Faransure Tyres where the Vehicles are for use abroad, owing to the ease with which New Rubbers can be fixed by the drivers without any assistance.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21-22, Upper Rathbone Place, W.

Codes: A.B.C., 5th Edition,
and Leibers.

Telegrams: "Automobile, Glasgow."
"Karlalbo, London."

BENSON'S



"EMPIRE" & STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY, AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver models, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

At the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments.

"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

R.M.S.P.

THE ROYAL MAIL
STEAM PACKET COMPANY.
(ROYAL CHARTER, DATED 1839.)

The Line for Luxurious Travel.

From
SOUTHAMPTON
& CHERBOURG
to

WEST INDIES
SPANISH MAIN,
PACIFIC,
NEW YORK,
via The Azores.

BRAZIL
&
RIVER PLATE,
via Spain,
Portugal,
& Madeira.



From LONDON to
GIBRALTAR,
MOROCCO,
Canary Islands,
MADEIRA,
23 Days Tour,
from £21.

From
SOUTHAMPTON
to
THE AZORES,
19 Days Tour
for £15
(including Hotel
Accommodation).

Cruises to the West Indies during October to March from \$1 a day.

For further particulars apply for Illustrated Handbooks "A.J."

London: 18, Moorgate Street, E.C. & 32, Cockspur Street, S.W.

MERRYWEATHERS'

Patent Improved

Vacuum Cesspool Exhauster



Merryweathers' Exhauster in Use.

Arranged for
Hand, Horse
or
Motor Draught.

ADVANTAGES :—*Absolutely Sanitary.*

Can be employed in daytime without causing a nuisance. The pump creates a vacuum in the cylinder, the suction pipe is lowered into the cesspool and the contents immediately transferred to the cylinder without passing through the pump. The gases exhausted are burnt in the stove.

Extract from Medical Officer's Report :—

"Very pleased with its efficient and simple method of working, and believe that it will be adopted in other urban districts where extended systems of sewerage are not able to be carried out."

Write for Illustrated Lists 690 M.

MERRYWEATHER & SONS,

Greenwich Road, S.E., LONDON.

*Ask for new Catalogue of Hose for
Flushing and Watering Purposes.*

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

GOODLASS, WALL & CO. LTD.,

LIVERPOOL.



— — — — —

PAINT, COLOUR, and
VARNISH
MANUFACTURERS.

— — — — —

CONTRACTORS TO :—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.



If Concrete Beams Were Transparent

and you could see the internal strains on concrete and steel, you would not consider using a loose or semi-loose stirrup system of reinforcement. You would see clearly how the loose stirrups tend to slip along the main bar as they strive to transfer their shearing stresses into the main tension member.

You would also see many of the stirrups out of place, some omitted entirely, and the reinforcement not at all in the place called for in the designs.

You would then insist on the *rigid connection of Shear Members* and not depend on the questionable adhesion of concrete which may be lacking as the result of a severe fire, of the shock of moving loads, or of careless or unintelligent labour.

You would recognize the economy of a system which combines many separate bars in a complete unit and does away with expensive assembling on site.

Why not specify KAHN TRUSSED BARS outright, or wait until you have received our Scheme before letting your contract?

Write for our Handbook or for catalogues, specifications, and any information you need.

The TRUSSED CONCRETE STEEL CO., LTD.,
56, CAXTON HOUSE, WESTMINSTER.

THORNYCROFT

MARINE MOTORS and OIL MOTOR BOATS.

Shallow draft Tunnel or
Stern Wheel Tugs.

Passenger or Cargo Boats.

Motor Launches from
20 ft. upwards.



65 ft. Motor Canoe, 14 in. draft, for Pahang River,
Straits Settlements.

MOTOR ELECTRIC LIGHTING or PUMPING SETS.

STEAM SCREW or STERN- WHEEL VESSELS, of all sizes and types.

MOTOR VEHICLES for Colonial Service,

using oil or petrol.



2-ton Transport Wagon for Southern Nigeria.

TRANSPORT WAGONS. MAIL CARS. OFFICIAL CARS. CHARS-A-BANC.

With special features
for the Colonies.

Catalogues or full particulars from

JOHN I. THORNYCROFT & CO., LIMITED,

CANTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams: THORNYCROFT, LONDON.

(Codes, A B C 5th, &c.)

A Typewriter is judged
by the work it does.
Most Typewriters write,
but

. . . THE . . .

YÖST

Does Beautiful Work.

Full particulars on application.

THE YÖST TYPEWRITER CO., LTD.,

Head Office:

50, Holborn Viaduct, London, E.C.

BRANCHES EVERYWHERE.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { "COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909.

"ETERNIT"

(ASBESTOS-CEMENT)

SLATES & TILES.

Weight per yard of finished roof, 22 lbs.

Tensile Strength: 5,781 lbs. Crushing Force: 8,281 lbs.
per Square Inch.

(Hatschek's Original Patent.)

ON THE ADMIRALTY AND WAR OFFICE LISTS.

Smooth on both sides.
66½ lighter weight per Square than Bangor
Slates.
30 per cent. greater mechanical and tensile
strength.
Non-Conducting. Impervious to sun-
Non-Combustible. heat, frost and rain.

SPECIALITY:

"ETERNIT" Terra-Cotta Tiles which
neither break nor crumble, and at half the
cost of Red Clay Tiles and double the
strength. Stronger than any other Asbestos
Slate.

"ETERNIT" (Asbestos-Cement) SHEET FOR WALLS AND CEILINGS.

Fireproof; easily and rapidly fixed with carpenters' tools. Does not rot or shrink, and supersedes lath, plaster and matching. Size 8 ft. by 4 ft.—4 ft. by 4 ft. by $\frac{1}{8}$ in. thick and upwards. Manufactured under the British Patent Rights.

Sole Concessionaries and Contractors to H.M. Government:

G. R. SPEAKER & CO., 29, Mincing Lane, London.

Telegrams: "ETRASHEET, LONDON."

Telephone: 13174 CENTRAL.

NO DISINFECTANT

is so EMINENTLY SUITABLE for the use of
THE TROPICAL SANITARIAN

as



"SANITAS-OKOL" has been largely adopted by Government Departments and Public Health Authorities throughout the Empire, and has been found the most suitable Disinfectant in every way. It can be used in all proportions and with all qualities of water, salt or fresh.

It has a high Guaranteed efficiency as a germicide, is non-toxic and non-corrosive, and retains, to a very marked extent, its efficiency in the presence of organic matter.

It is suited equally well for use by private persons as by Public Officials.

In addition to its germicidal character, it has marked value as a larvæcide and insecticide for use as a preventive measure against insect pests such as Flies, Fleas, Mosquitoes, and other disease carriers.

Special quotations given to Colonial Officials for large quantities.

SAMPLES AND FULL DETAILS FROM

SOLE MAKERS:

SANITAS CO., LONDON, E.



DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1898.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.

ROYAL DOULTON POTTERIES, LONDON, S.E.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

JAMAICA AND BERMUDA.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

The Imperial Direct West India Mail Service Co., Ltd.

maintain a regular fortnightly service (under Contract with His Majesty's Government) between Avonmouth, Bristol and Jamaica (Kingston).

To and from Bermuda there is also a regular service every six weeks by the R.M.S. "Port Kingston."

These Steamers have been specially built for the service and have magnificent accommodation for First and Second-Class Passengers at moderate rates.

THE LARGE MODERN HOTEL "CONSTANT SPRING" provides excellent accommodation at reasonable rates.

The Island of Jamaica possesses great natural beauty, and its warm healthy climate is recommended by the medical faculty. Polo-playing, Yachting, Golf, Tennis, Riding and Driving, are particularly good, and there is excellent Shooting and Fishing.

Handbooks, Pamphlets, and all particulars from—

ELDER DEMPSTER & CO., LIMITED,

COLONIAL HOUSE, LIVERPOOL,
4 ST. MARY AXE, LONDON, E.C., CANADA HOUSE, BRISTOL,
MANCHESTER, CARDIFF, &c., &c.

EDUCATIONAL ANNOUNCEMENTS.

**BROMSGROVE SCHOOL,
WORCESTERSHIRE.**

AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £20. There are also a certain number of reserved places at reduced terms, primarily for sons of Clergymen. Apply, the Head Master, F. J. R. HENDY, M.A.

**UNIVERSITY COLLEGE OF WALES,
ABERYSTWYTH.**

(A constituent College of the University of Wales.)

President: LOAN RENDEL.

Principal: T. F. ROBERTS, M.A., LL.D.

PREPARES FOR DEGREES IN Arts, Science, Law, Music, and Agriculture. Hostel accommodation for over 200 Women Students. Scholarships and Exhibitions given. Apply to the Registrar, University College, Aberystwyth.

**KING'S COLLEGE SCHOOL,
WIMBLEDON COMMON, LONDON, S.W.**

(CONDUCTED BY THE COUNCIL OF KING'S COLLEGE, LONDON.)

TERMS in 1910, beginning January 19th, April 27th, September 21st. For Prospectus (Boarders and Day Boys), apply to the HEAD-MASTER.

SCHOOLS FOR BOYS AND GIRLS.

PROSPECTUSES OF THE LEADING

English and Continental Schools, with every information and advice, supplied to Parents and Guardians FREE OF CHARGE. Please state pupils' ages, locality preferred, and approximate school fees to be paid.—UNIVERSITY EDUCATIONAL AGENCY, 122, Regent Street, W. (Est. 1858.)

PARSONS MEAD, ASHTEAD, SURREY.

GOOD HOME-SCHOOL for the Daughters of Gentlemen. Beautiful Grounds of six acres. Excellent Teachers for all subjects. Training for Home Life with special attention to Literature, Music and Art. References kindly permitted to the Countess of Pembroke, the Lady Robert Cecil, Mrs. Utterson and others.

SOUTHPORT MODERN SCHOOL.

HEALTHY SEA-SIDE PLACE. Excellent Staff, including B.A., M.Sc., F.C.V., A.R.C.O., etc. Preparation for all examinations. Foreign boys received. Gymnasium and Swimming Clubs, Cadet Company, Games, etc. CAPT. J. C. UNDERWOOD, A.C.P., F.R.G.S., Head Master. (Registered teacher.)

Telegrams: "Crown, Cardiff."

ESTABLISHED 1860.

**THE
CROWN PRESERVED COAL CO.,
CARDIFF.**

**MANUFACTURERS
AND SHIPPERS OF**

CROWN PATENT FUEL

USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.



TRADE MARK.



AWARDS.

London...1862 | Liverpool...1886 | Royal Naval 1891 & 1905 | Bordeaux...1895
Paris...1875 | Jamaica...1891 | Chicago...1893 | Mexican...1908

Works: CARDIFF and PORT TALBOT.

CROSSLEY & CO. (Established 1845.)
ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices:—57, COLEMAN STREET, LONDON, E.C.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents :—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

UNION-CASTLE LINE.

Royal Mail Service

TO

SOUTH AND EAST AFRICA.

LONDON AND SOUTHAMPTON

TO

**CAPE COLONY, NATAL, DELAGOA BAY, BEIRA,
EAST AFRICAN PORTS, and MAURITIUS,
calling at Madeira, Las Palmas, Teneriffe, Ascension,
St. Helena, and Lobito Bay.**

WEEKLY SAILINGS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

**Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.**

Apply to—

**DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.**

AGENCY
40, TRINITY SQUARE
LONDON E.C.

“DECAUVILLE” PARIS

LOCOMOTIVES
WAGONS

613

PLEASE ASK FOR OUR NEW CATALOGUE



“St. Martin’s-le-Grand” THE POST OFFICE MAGAZINE.

21st Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Lagos (Southern Nigeria), and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET,

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	- £1,000,000.	Called-Up Capital	- £200,000.
Subscribed Capital	- £500,000.	Reserve	- £80,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. Wm. F. Moore, Esq.
Geo. W. Neville, Esq. O. Harrison Williams, Esq.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown.
GOLD COAST and **ASHANTI**—Axim, Secondee, Cape Coast Castle, Accra, Tarkwah, Coomassie.
LIBERIA—Monrovia. **NIGERIA**—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonnema, Biama, Bonny, Bo, Dakar, Ekwanga, Fernando Po, Grand Bassam, Hangha, Lahou.
Loanda, Madeira, Matadi, Obuassi, Opobo, Pendembu, Saltpond, Segbwema, Teneriffe, Warri, Winnebuh.

BANKERS.

Bank of England. **London Joint Stock Bank, Limited.** **Parr's Bank, Limited.**

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Receipts accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

GEORGE MILLER, Esq.

CLIFFORD B. EDGAR, Esq., J.P.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—J. CADMAN, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. **FRENCH IVORY COAST**—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Ekwanga, Opobo, Sapelli, Warri, &c., &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bama-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

DO **YOU WISH**
TO DO **BUSINESS**

WITH

PUBLIC BODIES?

IF SO, ADVERTISE IN THE

Local Government Journal

AND

OFFICIALS' GAZETTE.

Established 38 Years.

The Medium
between Contractors & Public Authorities.

SATURDAY, Price TWOPENCE.

STANLEY E. ROGERS,

27a, FARRINGTON STREET, LONDON, E.C.

A VALUABLE MEDIUM FOR
DEVELOPING BUSINESS

between the United Kingdom and India is the

“ HOME AND COLONIAL MAIL ”

(WEEKLY)

For INDIA, CHINA, JAPAN, and the COLONIES.

ESTABLISHED over twenty-five years ago, this Journal occupies a unique position as a Commercial Newspaper, representative of the important planting and mercantile interests of India, Ceylon and the Far East.

It is filed in the offices of Tea Garden and Produce Agents in London and Calcutta, and is read by all interested in commerce, planting, and produce everywhere. Complete information is given about Tea, Rubber, and other produce, together with the machinery used.

Lists of Tea and Rubber Companies registered in London, Reports of Meetings and statistical information about produce, etc., appear every week.

Annual Subscription post free to India and the Far East, £1 7s.

Advertisement Rates on application to the Manager,

HOME AND COLONIAL MAIL,
Temple Chambers, Temple Avenue, E.C.

Telegraphic Address: "Brookleigh," London.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,

GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

NORTH BRITISH & MERCANTILE INSURANCE COMPANY.

INCORPORATED 1809.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Funds nearly £20,000,000.

Annual Income, £4,500,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH,

West End - - - 7, Waterloo Place, S. W.

THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1910.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

NO TRAINING
OR KNOWLEDGE
OF MECHANISM
REQUIRED TO
DRIVE LACRE
VEHICLES.



MOTOR
VEHICLES FOR
ALL PURPOSES
AND
SUITABLE FOR
ALL TRADES.

MOTOR VANS & LORRIES.

PUBLIC SERVICE VEHICLES, Etc.

1910 TYPE LACRES.

WE MANUFACTURE **18** DISTINCT MODELS
ALL SPECIALLY DESIGNED BY US FOR 1910 AND CONSTRUCTED AT OUR
MODEL FACTORY, LETCHWORTH, HERTS.

12/15 h.p., 18 h.p., 30 h.p., and 38 h.p.

COMMERCIAL VEHICLES TO CARRY LOADS FROM
10 cwts. to 5 tons.

LACRE OVERSEAS.

Extract from "Sydney Morning Herald."

"A clear demonstration of the advantages of motor traction against the horse vehicle was shown last week, when a 'Lacre' motor lorry pulled out a load of bricks from the suburban brick yard, the horses and drays standing idle on account of the heavy rains of Monday and Tuesday. The bricks weighed 33 cwts. and there were four able-bodied men on the lorry, but once the engine started it pulled the load out and ran ten miles and back, twenty miles in all, in 1 1/2 hours. It is stated the ordinary brick cartier's outfit would take a full day to do the same journey, and a ton would be the full load."

THE ABOVE-MENTIONED VEHICLE IS A TYPICAL EXAMPLE OF THE PRODUCTIONS
FROM OUR MODEL FACTORY AT LETCHWORTH.

THE DEMONSTRATION LED TO AN ORDER FOR 10 5-TON LACRES.



One of the "Lacre" "Fool-Proof" Chassis,
18 H.P.

PLEASE
NOTE
CHANCE
OF
ADDRESS



The Simple Mechanism of a "Lacre" 30-H.P.
Chassis.

THE LACRE MOTOR CAR CO. Ltd.

Registered Office, etc.—

78, YORK ROAD, KING'S CROSS, LONDON, ENGLAND.

Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Office Repair Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11/12, HAYMARKET,
LONDON, S.W.**

**AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of Baggage for shipment.**

**Complete Equipments purchased and deferred payments
arranged on special terms.**

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

**“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.**

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

Very suitable for Ambulance purposes: can be used as a STRETCHER.

If you want to get . . .

into Business Relationship

with

Architects, Builders & Contractors

IN GREAT BRITAIN,

Your Best Medium is an Advertisement in

The ARCHITECT
& Contract Reporter.

The Leading Organ of the Architectural Profession.

The charge for a Page is . . . £8 8 0

The charge for a Half Page is . . . £4 10 0

SEND US A TRIAL ORDER.

“THE ARCHITECT,”

Price 4d. Weekly,

P. A. GILBERT WOOD,

6-11, Imperial Buildings, Ludgate Circus,

London, England.

Stanley Gibbons Ltd.,

DEALERS IN POSTAGE STAMPS
AND PHILATELIC PUBLISHERS,

391, STRAND, LONDON.



- ¶ Our stock of stamps is unsurpassed in the world.
- ¶ We are desirous of hearing from you if you are either a beginner or an advanced collector. We can supply your wants in every case. Selections sent to all responsible applicants, in the case of collectors who have had no previous business relations with us, references are respectfully desired.
- ¶ If you have anything to sell, single rare stamps, collections, or Government Stocks, kindly communicate with us, we are cash buyers for anything of interest.
- ¶ Our lists of Sets and Packets, Publications and Accessories, will be sent free on application.
- ¶ Priced Catalogue of stamps in two parts, British Empire, and Foreign Countries, post free, 2s. 10d. each. Abroad 3s. 1d.

"GIBBONS STAMP WEEKLY"
SPECIMEN COPY GRATIS.

STANLEY GIBBONS LTD.,
391, STRAND, LONDON, ENGLAND.

**THE LARGEST AND OLDEST FIRM OF STAMP DEALERS
IN THE WORLD. ESTABLISHED 1856.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

			s.	d.
United Kingdom	-	-	6	6
Canada	-	-	8	8
Other Colonies and Abroad	-		13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.
BLACK SHEETS.
WIRE NETTING.
CONSTRUCTIONAL WORK.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

	s.	d.
United Kingdom - - -	6	6
Canada - - - - -	8	8
Other Colonies and Abroad -	13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)
ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. IV.

JANUARY, 1911.

No. 3.

CONTENTS.

EDITORIAL NOTES

The "Referendum"—"All-red" Cable—South African Politics—
Industrial Labour in Straits Settlements, &c.

IMPERIAL FEDERATION.

KEDAH, PERLIS AND KELANTAN.

BARO-KANO RAILWAY CONSTRUCTION.

MUNICIPAL GOVERNMENT IN THE STRAITS
SETTLEMENTS.

REVIEWS AND NOTICES

BUSINESS NOTES

Oil—Tropical Products.

RAILWAY NOTES

MEDICAL NOTES

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

SUPPORT BRITISH INDUSTRIES.

**ASBESTOS
CEMENT TILES & SHEETS.**

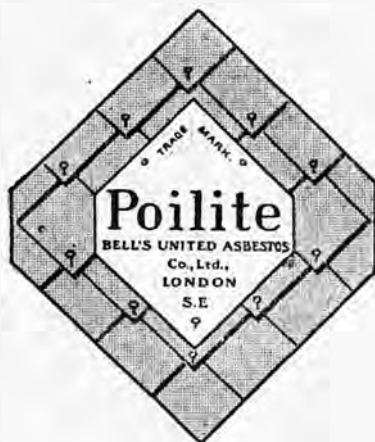
**"POILITE"
ROOFING TILES.**

**"POILITE"
ASBESTOS CEMENT SHEETS.**

"POILITE" is
only supplied in
ONE THICKNESS
and one quality,
viz.,

THE BEST.

"POILITE" there-
fore gives the
best results.



Specify
"POILITE."
AVOID substitutes
of foreign
origin—below
standard quality
or less than
standard thick-
ness $3\frac{1}{2}$ to 4 m/m.
(9/64 ins.)

Architects, Engineers and Government Depart-
ments are respectfully informed that "POILITE" is
manufactured in accordance with the patent specification
of Mr. L. Hatschek, and is in all respects similar
to the material sold under the name
Eternit.

The only Asbestos Cement Roofing
Tile Works in England are the Poilite Works at
Greenwich, owned by Bell's United Asbestos Co., Ltd.
Inclusive tenders for the supply (and fixing of Tiles) sub-
mitted on receipt of Engineers Architects' scaled plans.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

SUPPORT BRITISH INDUSTRIES.

**ASBESTOS
CEMENT TILES & SHEETS.**

**"POILITE"
ROOFING TILES.**

**"POILITE"
ASBESTOS CEMENT SHEETS.**

"POILITE" is
only supplied in
ONE THICKNESS
and one quality,
viz.,

THE BEST.

"POILITE" there-
fore gives the
best results.



Specify
"POILITE."
AVOID substitutes
of foreign
origin—below
standard quality
or less than
standard thick-
ness $3\frac{1}{2}$ to 4 mm.
($9/32$ in.)

Architects, Engineers and Government Depart-
ments are respectfully informed that "POILITE" is
manufactured in accordance with the patent specification
of Mr. L. Hatschek, and is in all respects similar
to the material sold under the name
Eternit.

The only Asbestos Cement Roofing
Tile Works in England are the Poilite Works at
Greenwich, owned by Bell's United Asbestos Co., Ltd.
Inclusive tenders for the supply (and fixing of Tiles) sub-
mitted on receipt of Engineers Architects' sealed plans.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

**THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
WORKINGTON, Cumberland, ENGLAND.**

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

**BESSEMER STEEL RAILS
and FISH PLATES.**

9-lbs. to 130-lbs. PER YARD.

**STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.**

**PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.**

TORBAY PAINT.

*THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.*

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,

**26, 27 & 28, BILLITER STREET,
LONDON, E.C.**

ALBION

UTILITY MOTORS

16 H.P.—32 H.P.
15 cwt. to 3 ton loads.

OFFICIAL CARS.
MAIL WAGGONS.
CHAR-A-BANCS.



VANS.
TIPPING WAGGONS.
LORRIES.

**Send for particulars of the new
32 H.P. (4 Cylinder) Albion.**

Extract from letter received from :

General Post Office, Wellington, New Zealand, 7th June, 1910.

"Since the (Albion) Lorry has been brought into use (October, 1909) only one Mail connection has been missed ; the expenditure on repairs has been 9/-

Trial has shown that the 'Albion' has been very reliable."

(Sgd.) D. ROBERTSON, Secretary.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21-22, Upper Rathbone Place, W.

Codes : A.B.C., 5th Edition,
and Leibers.

Telegrams :
"Automobile, Glasgow."

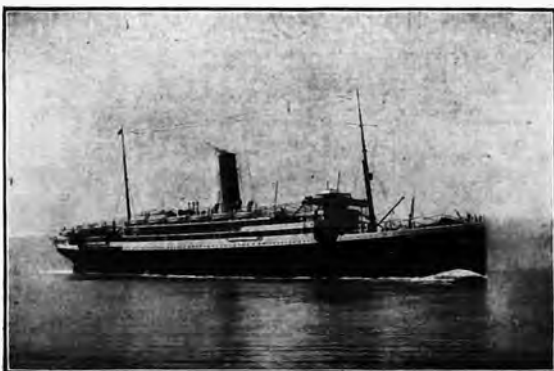
R.M.S.P.

**THE ROYAL MAIL
STEAM PACKET COMPANY.**
(ROYAL CHARTER, DATED 1839.)

The Line for Luxurious Travel.

From
SOUTHAMPTON
& CHERBOURG
to
WEST INDIES
SPANISH MAIN,
PACIFIC,
NEW YORK,
via The Azores.

BRAZIL
&
RIVER PLATE,
via Spain,
Portugal,
& Madeira.



From LONDON to
GIBRALTAR,
MOROCCO,
Canary Islands,
MADEIRA,
22 Days Tour,
from £22.

From
SOUTHAMPTON
to
THE AZORES,
19 Days Tour
for £15

Cruises to the West Indies during January to March from \$1 a day.

For further particulars apply for Illustrated Handbooks "A.J."

London: 18, Moorgate Street, E.C. & 32, Cockspur Street, S.W.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plate and
Sheffield Cutlery.

A Service for 12 persons £12 10s. to £21.
(Others £3 to £100.)

"EMPIRE" or STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble
plated on pure Nickel Silver. The
patterns are reproductions from fine
old Silver models, and have all the
beauty of line and form of the Silver
of 150 years ago; apart from the Hall
Mark no difference is visible.

As far back as the 1862 Exhibition,
"Empire" Plate was awarded Prize
Medals for Excellence of Manufacture,
and it still retains that pre-eminence
for which it was noted fifty years ago,
whilst the prices are, quality con-
sidered, strictly moderate, either for
Cash, or on "The Times" System
of Monthly Payments.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles
for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

MERRYWEATHERS'

Patent Improved

Vacuum Cesspool Exhauster



Merryweathers' Exhauster in Use.

Arranged for
Hand, Horse
or
Motor Draught.

ADVANTAGES :—*Absolutely Sanitary.*

Can be employed in daytime without causing a nuisance. The pump creates a vacuum in the cylinder, the suction pipe is lowered into the cesspool and the contents immediately transferred to the cylinder without passing through the pump. The gases exhausted are burnt in the stove.

Extract from Medical Officer's Report :—

"Very pleased with its efficient and simple method of working, and believe that it will be adopted in other urban districts where extended systems of sewerage are not able to be carried out."

Write for Illustrated Lists 690 M.

MERRYWEATHER & SONS,

Greenwich Road, S.E., LONDON.

*Ask for new Catalogue of Hose for
Flushing and Watering Purposes.*

GOODLASS, WALL & CO. LTD., LIVERPOOL.



— — —
**PAINT, COLOUR, and
VARNISH
MANUFACTURERS.**
— — —

CONTRACTORS TO:—

The Lords Commissioners of the Admiralty.

The War Office.

The Crown Agents for the Colonies.

The India Office and Principal Indian Railways.
&c. &c.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTIICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

**CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.**

THORNYCROFT

MARINE MOTORS and OIL MOTOR BOATS.

Shallow draft Tunnel or
Stern Wheel Tugs.

Passenger or Cargo Boats.

Motor Launches from
20 ft. upwards.

**MOTOR
ELECTRIC
LIGHTING
or PUMPING
SETS.**



42-ft. x 14-ins. draft Launch for the Amazon, speed 12 miles.

**STEAM SCREW or STERN-
WHEEL VESSELS,** of all sizes and types.

**MOTOR VEHICLES for Colonial
Service,**

using oil or petrol.



2-ton Transport Wagon for Southern Nigeria.

**TRANSPORT
WAGONS.**

MAIL CARS.

OFFICIAL CARS.

CHARS-A-BANC.

With special features
for the Colonies.

Catalogues or full particulars from

JOHN I. THORNYCROFT & CO., LIMITED,

CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams: THORNYCROFT, LONDON.

(Codes, A B C 5th, &c.)

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
LONG BURNING
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS, L^{TD.}, STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."

A.B.C. Code, 5th Edition.

AGENCY
40, TRINITY SQUARE
LONDON E.C.

"DECAUVILLE"
LOCOMOTIVES
WAGONS

PARIS

613

PLEASE ASK FOR OUR NEW CATALOGUE

NO DISINFECTANT

is so EMINENTLY SUITABLE for the use of
THE TROPICAL SANITARIAN

as



"SANITAS-OKOL" has been largely adopted by Government Departments and Public Health Authorities throughout the Empire, and has been found the most suitable Disinfectant in every way. It can be used in all proportions and with all qualities of water, salt or fresh.

It has a high Guaranteed efficiency as a germicide, is non-toxic and non-corrosive, and retains, to a very marked extent, its efficiency in the presence of organic matter.

It is suited equally well for use by private persons as by Public Officials.

In addition to its germicidal character, it has marked value as a larvæcide and insecticide for use as a preventive measure against insect pests such as Flies, Fleas, Mosquitoes, and other disease carriers.

Special quotations given to Colonial Officials for large quantities.

SAMPLES AND FULL DETAILS FROM

SOLE MAKERS:

SANITAS CO., LONDON, E.

THE STANDARD ASBESTOS CEMENT TILE.



For Enduring Roofing Material
and Workmanship,

ARCHITECTS, ENGINEERS
AND SURVEYORS

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining
WALLS AND CEILINGS.

G. R. SPEAKER & CO.,
Contractors and Engineers,
29, MINCING LANE, E.C.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL.**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Axim, Sekondi, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steamship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

**LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.**

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

PACIFIC CABLE.

**The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.**

3/- a Word from the United Kingdom.

**Telegrams "Via Pacific" are accepted at any Postal Telegraph
Office, or at the Offices of any of the Atlantic Cable
Companies, which register addresses free. No charge
for the words "Via Pacific."**

Queen Anne's Chambers, Westminster.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniele, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

UNION-CASTLE LINE.

Royal Mail Service

TO

SOUTH AND EAST AFRICA.

**Direct Service to East Africa via Marseilles, Naples
and the Suez Canal.**

**Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.**

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

**Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.**

Apply to—

**DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.**

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

ADVERTISEMENTS.

Telegrams: "Crown, Cardiff."

THE

ESTABLISHED 1860.

CROWN PRESERVED COAL CO., CARDIFF. Limited.

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL



TRADE MARK.



USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.

AWARDS.

London...1862	Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895
Paris .....1875	Jamaica ... 1891	Chicago .....1893	Mexican ...1908

Works: CARDIFF and PORT TALBOT.

STAMPS—Wanted to Buy.

I am open to buy British, Colonial and Foreign Postage Stamps, unused and used. Entire sheets and loose lots. Large collections and stocks for Immediate Cash to any amount. Approval selections solicited from all Colonies; cash remitted per return mail. For large transactions Banker's payments made.

Bankers: LONDON COUNTY AND WESTMINSTER BANK, CRICKLEWOOD.

Cables: HORSEHAIR, LONDON.

Codes: A B C (8th Edition) and LIEBER'S.

LEONARD BRAND, 59, Teignmouth Road, Cricklewood (England).

“St. Martin’s-le-Grand” THE POST OFFICE MAGAZINE.

21st Year of Publication. Published Quarterly.

DEVOTED TO

POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.

Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

ADVERTISEMENTS.

NORTH BRITISH & MERCANTILE INSURANCE COMPANY.

INCORPORATED 1809.

FIRE

**ONE HUNDRED
YEARS' RECORD**

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Funds nearly £20,000,000.

Annual Income, £4,500,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End - - - 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1911.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A LACRE.



MOTOR VANS & LORRIES.

PUBLIC SERVICE VEHICLES, Etc.

LACRE COMMERCIAL
MOTOR TRACTION.

LACRE VEHICLES ARE MANUFACTURED IN ALL SIZES TO MEET
ALL REQUIREMENTS, COMPRISING

18 DISTINCT MODELS. 12 H.P. to 50 H.P.

FOR LOADS OF

10 CWT. TO 5 TONS.

THEY ARE MADE AT THE COMPANY'S MODEL FACTORY AT THE
GARDEN CITY, LETCHWORTH, ENGLAND.

SPARE PARTS ARE STOCKED BY ALL THE COMPANY'S DEPOTS AND AGENTS.

PARAFFIN CARBURETTORS FITTED IF REQUIRED.

THE LACRE COMPANY ARE ON THE OFFICIAL LIST
OF THE CROWN AGENTS FOR THE COLONIES.

EVERY VEHICLE TURNED OUT FROM OUR FACTORY IS GIVING COMPLETE SATISFACTION.



One of the "Lacre" "Fool-Proof" Chassis,
18 H.P.

The
Pioneers
of the
Motor
Van
Trade.



The Simple Mechanism of a "Lacre" 30-H.P.
Chassis.

THE LACRE MOTOR CAR CO. Ltd.

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, ENGLAND.

Registered Offices and Works; LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON AND LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11/12, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.

BAGGAGE, &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

***Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.***

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT
ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

Very suitable for Ambulance purposes: can be used as a STRETCHER.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

			s.	d.
United Kingdom	-	-	6	6
Canada	-	-	8	8
Other Colonies and Abroad	-		13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

			s.	d.
United Kingdom	-	-	6	6
Canada	-	-	8	8
Other Colonies and Abroad	-	13	0	

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.
ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies

AND

R. V. VERNON, of the Colonial Office.

VOL. IV.

APRIL, 1911.

No. 4.

CONTENTS.

EDITORIAL NOTES

The Imperial Conference—Canadian Reciprocity Agreement—
Australian Constitution, &c.

263

THE ADMINISTRATION OF WEST AFRICA

281

EARLY DAYS IN CEYLON

289

IN THE TIME OF KING THAKOMBAU

295

REVIEWS AND NOTICES

302

BUSINESS NOTES

Tropical Products—Oil—Tin—Cotton—Fibres—Wireless Telegraphy

306

RAILWAY AND HARBOUR WORKS

325

MEDICAL NOTES

334

COLONIAL STAMPS

337

RECENT APPOINTMENTS

340

COLONIAL OFFICERS ON LEAVE OF ABSENCE

342

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



Stock sizes 24 in. x 24 in., 15 in. x 15 in.,
11 in. x 11 in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at $13\frac{1}{2}$ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{5}{8}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



Stock sizes 24 in. x 36 in., 18 in. x 36 in.,
12 in. x 18 in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{1}{8}$ in. thick, for
fixing at 13 $\frac{1}{2}$ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{8}$ in. thick.

VENERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
WORKINGTON, Cumberland, ENGLAND.

London Office: 14, SHERBORNE LANE, KING WILLIAM STREET, E.C.

Manufacturers of

BESSEMER STEEL RAILS
and FISH PLATES.

9-lbs. to 130-lbs. PER YARD.

STEEL SLEEPERS,
STEEL TRAM RAILS,
PORTABLE RAILWAYS.

PIG-IRON, SPIEGEL, FERRO-MANGANESE,
BRICKS, COAL, &c.

ALBION

UTILITY MOTORS

16 H.P. & 32 H.P.
15 cwt. to 3 ton loads.

OFFICIAL CARS.
MAIL WAGGONS.
CHAR-À-BANCS.



VANS.
TIPPING WAGGONS.
LORRIES.

**Send for particulars of the new
32 H.P. (4 Cylinder) Albion.**

Extract from letter received from :

General Post Office, Wellington, New Zealand, 7th June, 1910.

" Since the (Albion) Lorry has been brought into use (October, 1909) only one Mail connection has been missed ; the expenditure on repairs has been 9/-

Trial has shown that the ' Albion ' has been very reliable."

(Sgd.) D. ROBERTSON, Secretary.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot : 21-22, Upper Rathbone Place, W.

Codes : A.B.C., 5th Edition,
and Liebers.

Telegrams :
" Automobile, Glasgow."

S.B.B

BENSON'S



"EMPIRE" or STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY, AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver models, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

As far back as the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments.

"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons **£12 10s. to £21.**
(Others £3 to £100.)

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
LONG BURNING
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

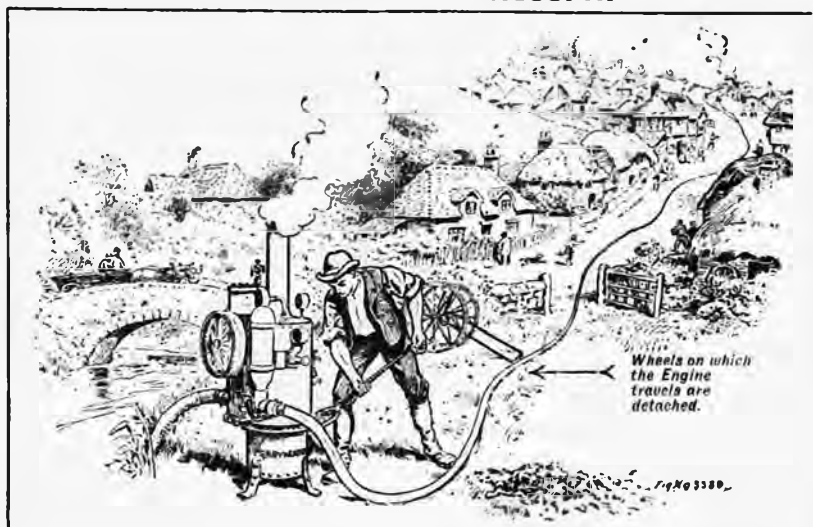
CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS L^{TD.}, STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."
A.B.C. Code, 5th Edition.

MERRYWEATHERS' Fire & Pumping Engine

"VALIANT" Pattern.



**"VALIANT" PUMPING THROUGH 1,000 FT. OF HOSE WITH A RISE
IN THE GROUND OF 80 FT.**

INVALUABLE FOR:—

Fire Protection. Water Supply. Irrigation.

One man only required to work it.

Weight, 6½ cwt., 4 men can carry it over rough roads.

Simple. Light. Strong.

AN ENGINEER writes:—

"The 'Valiant' has done excellent service in three large fires recently; and it has also been used as a pumping engine to drain foundations in connection with our works extensions, in which capacity it proved most useful."

WRITE FOR PAMPHLET, No. 738 M.C.O.

**MERRYWEATHER & SONS,
FIRE ENGINE & HOSE WORKS, GREENWICH, S.E.,
LONDON.**

ESTABLISHED OVER 200 YEARS.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL.**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909.

THE STANDARD ASBESTOS CEMENT TILE.



For Enduring Roofing Material
and Workmanship,

**ARCHITECTS, ENGINEERS
AND SURVEYORS**

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining
WALLS AND CEILINGS.

G. R. SPEAKER & CO.,

Contractors and Engineers,

29, MINCING LANE, E.C.

THORNYCROFT

OIL MOTORS

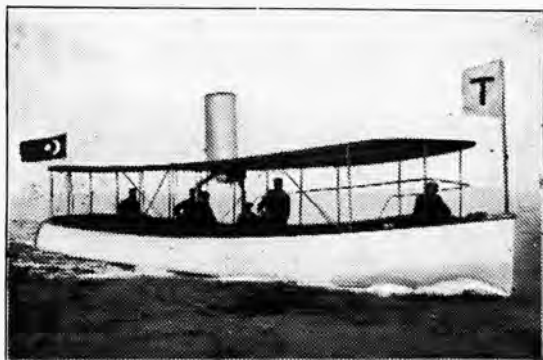
FOR
Marine, Electric Lighting,
or Pumping Work.

MOTOR VESSELS (IN WOOD OR STEEL)

For Passenger, Cargo, or
Towing purposes.

PLEASURE LAUNCHES

For River or Sea use.



Motor Launch for Passenger and Cargo Service at Baghdad.

**Shallow Draught Steam Screw, Stern or Paddle Wheel
Vessels of all descriptions.**

MOTOR VEHICLES & CARS.

♣
Specially
designed
and
constructed
for
Colonial
Service.
♣



30-h.p. 2-ton Transport Wagon for Southern Nigeria.

♣
Transport
Wagons,
Mail Cars,
Official
Cars,
Chairs-a-
banc,
etc., etc.
♣

Full particulars and quotations from
JOHN I. THORNYCROFT & CO., LIMITED,
CANTON HOUSE, WESTMINSTER, LONDON, S.W.
Telegrams: THORNYCROFT, LONDON. (Codes: A B C 5th, &c.)

AGENCY
40, TRINITY SQUARE
LONDON E.C.

“DECAUVILLE”
PARIS

LOCOMOTIVES
WAGONS

613

PLEASE ASK FOR OUR NEW CATALOGUE



VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)

Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

**For Locomotive, Marine and Stationary
Engine Lubrication.**

For Railway Carriage and Wagon Lubrication.

**For Motor Carriage and Motor Boat
Lubrication.**

**For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.**

**Special Oils and Greases for Tropical use
and onerous conditions.**

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

NO DISINFECTANT

is so EMINENTLY SUITABLE for the use of
THE TROPICAL SANITARIAN

as



"SANITAS-OKOL" has been largely adopted by Government Departments and Public Health Authorities throughout the Empire, and has been found the most suitable Disinfectant in every way. It can be used in all proportions and with all qualities of water, salt or fresh.

It has a high Guaranteed efficiency as a germicide, is non-toxic and non-corrosive, and retains, to a very marked extent, its efficiency in the presence of organic matter.

It is suited equally well for use by private persons as by Public Officials.

In addition to its germicidal character, it has marked value as a larvæcide and insecticide for use as a preventive measure against insect pests such as Flies, Fleas, Mosquitoes, and other disease carriers.

Special quotations given to Colonial Officials for large quantities.

SAMPLES AND FULL DETAILS FROM

SOLE MAKERS:

SANITAS CO., LONDON, E.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232. Code :—A.B.C. 4th and 5th Editions.
Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

DOULTON'S

GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring $12\frac{1}{2}$ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

"KARRIER" CARS.

15 CWT. TO 5 TON LOADS. 16 H.P.—40 H.P.
VANS, LORRIES, TIPPING WAGONS.
OFFICIAL CARS, MAIL CARS, CHAR-À-BANCS.

Two Types: Type "A" as illustrated, with driver's seat over the engine, gives maximum platform area with least overall length. Type "B" with driver's seat behind the engine in usual manner.



Standard 3 Ton Lorry

Special Features:

HILL CLIMBING, RELIABILITY, SIMPLICITY, STRENGTH,
ACCESSIBILITY, WINDING GEAR.

**Specially designed and constructed for
STEEP HILLS and ROUGH ROADS.**

Paraffin Carburettors fitted if required.

CLAYTON & CO. HUDDERSFIELD LIMITED,
Union Works, Huddersfield, England.

Telegrams: Eagle, Huddersfield.

London Office:
68, Victoria Street,
Westminster, S.W.

Code: A.B.C. 5th Edition.

R.M.S.P.

**THE ROYAL MAIL
STEAM PACKET COMPANY.**

(ROYAL CHARTER, DATED 1839.)

The Line for Luxurious Travel.

From
SOUTHAMPTON
& CHERBOURG
to
WEST INDIES
COLOMBIA,
COLON,
ANTILLA,
NEW YORK,
via The Azores.

—
BRAZIL
&
RIVER PLATE,
via Spain,
Portugal,
& Madeira.



From LONDON to
GIHRALTAR,
MOROCCO,
Canary Islands.
MADEIRA,
23 Days' Tour,
from £22.

—
From
SOUTHAMPTON
to
THE AZORES,
19 Days from
£15.

Cruises to Norway during July & August from Grimsby & Leith.
Tours of 13 days and upwards from £1 a day.

For further particulars apply for Illustrated Handbooks "A.J."

London: 18, Moorgate Street, E.C. & 32, Cockspur Street, S.W.

UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.

**Direct Service to East Africa via Marseilles, Naples
and the Suez Canal.**

**Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.**

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

**DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.**

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim,) and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST. MARY AXE, LONDON, E.C.,

CANADA HOUSE, BRISTOL,

MANCHESTER, CARDIFF, &c., &c.

GOODLASS' "TRIUMPH" WASHABLE WATER PAINT



Is the very last word in Water Paint
and Superior to all.

Its Chief Points are:—

**MAXIMUM COVERING POWER,
DURABILITY AND PERMANENCY,
EASY WORKING, AND
MODERATION IN PRICE.**

OVER 60 STANDARD TINTS; ANY SHADE SUPPLIED TO ORDER.

Send for samples and prices to

GOODLASS, WALL & CO., L^{td.}
LIVERPOOL.

Telegrams: "Crown, Cardiff."

ESTABLISHED 1860.

THE
CROWN PRESERVED COAL CO.,
CARDIFF. Limited.

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL

USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.



TRADE MARK.



AWARDS.

London...1862 | Liverpool...1886 | Royal Naval 1891 & 1905 | Bordeaux...1895
Paris...1875 | Jamaica...1891 | Chicago...1893 | Mexican...1908

Works: CARDIFF and PORT TALBOT.

EDUCATIONAL ANNOUNCEMENTS.

PARSONS MEAD, ASHTEAD, SURREY.

GOOD HOME-SCHOOL for the Daughters of Gentlemen. Beautiful Grounds of six acres. Excellent Teachers for all subjects. Training for Home Life with special attention to Literature, Music and Art. References kindly permitted to the Countess of Pembroke, the Lady Robert Cecil, Mrs. Utterton and others.

SCHOOLS FOR BOYS AND GIRLS.

PROSPECTUSES OF THE LEADING English and Continental Schools, with every information and advice, supplied to Parents and Guardians **FREE OF CHARGE.** Please state pupils' ages, locality preferred, and approximate school fees to be paid.—**UNIVERSITY EDUCATIONAL AGENCY,** 122, Regent Street, W. (Est. 1868.)

UNIVERSITY COLLEGE OF WALES.

ABERYSTWYTH.

(A constituent College of the University of Wales.)

President: LOAN RENDEL.

Principal: T. F. ROBERTS, M.A., LL.D.

PREPARES FOR DEGREES IN Arts, Science, Law, Music, and Agriculture. Hostel accommodation for over 200 Women Students. Scholarships and Exhibitions given. Apply to the Registrar, University College, Aberystwyth.

BROMSGROVE SCHOOL,
WORCESTERSHIRE.

AT LEAST SIX SCHOLARSHIPS AND EXHIBITIONS are offered annually in July. Value from £80 to £20. There are also a certain number of reserved places at reduced terms, primarily for sons of Clergymen. Apply, the Head Master, F. J. R. HENDY, M.A.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE
FROM
Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO
CIVIL SERVANTS.

Full Particulars from the Agents :—

The Rhodesia Trading Co., Ltd., SALISBURY ; The African Lakes Corporation, Ltd., ZOMBA ; F. T. Heya, PRETORIA ; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG ; Fichardt & Daniels, BLOEMFONTEIN ; Thomson, Watson & Co., CAPE TOWN ; and John T. Rennie & Sons, DURBAN.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

“St. Martin’s=le=Grand”

THE POST OFFICE MAGAZINE.

21st Year of Publication.  **Published Quarterly.**

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

CROSSLEY & CO.

(Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices: 57, COLEMAN STREET, LONDON, E.C.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

NORTH BRITISH & MERCANTILE INSURANCE COMPANY.

INCORPORATED 1809.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT
FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Funds nearly £20,000,000.

Annual Income, £4,500,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

APRIL, 1911.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

f

NO SKILL REQUIRED TO DRIVE A LACRE.

12 H.P.
TO
50 H.P.



10 CWT.
TO
5 TONS.

LACRE COMMERCIAL

**MOTOR :: ::
TRACTION.**

Lacre Vehicles are Manufactured in all sizes to meet all requirements, comprising:

18 DISTINCT MODELS. 12 H.P. to 50 H.P.
FOR LOADS OF
10 CWT. TO 5 TONS.

THE CURRENT TYPES ARE MADE AT THE COMPANY'S MODEL FACTORY AT LETCHWORTH. SPARE PARTS ARE STOCKED BY ALL THE COMPANIES DEPOTS AND AGENTS.

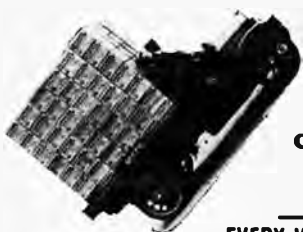
RECENT
ORDERS RECEIVED FROM
NEW SOUTH WALES, VICTORIA,
QUEENSLAND, SOUTH AUSTRALIA
WESTERN AUSTRALIA, NEW
ZEALAND, RUSSIA, JAPAN,
TASMANIA, SIAM, CANADA,
GERMANY, ETC.



THE LACRE COMPANY'S MODEL FACTORY
AT LETCHWORTH.

NOTE.

THE LACRE COMPANY
ARE ON THE OFFICIAL
LIST OF THE
CROWN AGENTS FOR
THE COLONIES.



The Pioneers of the
Motor Van Trade.

**PARAFFIN
CARBURETTORS
FITTED
IF REQUIRED.**



**EVERY VEHICLE TURNED OUT FROM OUR
FACTORY IS GIVING COMPLETE SATISFACTION.**

THE LACRE MOTOR CAR CO. Ltd.

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, ENGLAND.

Registered Offices and Works; LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,
DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.

BAGGAGE, &c., STORED. **NEWSPAPERS AND PERIODICALS DESPATCHED.**

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT.
ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER.***

h

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				s.	d.
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

FORTNUM & MASON,

Piccadilly, London, W.

FORTNUM & MASON

remind their numerous customers in the Army and Civil Service of their special Chop Boxes and Stores. These have doubtless been seen at all the large Centres overseas on their journeys into the interior.



THEIR GROCERIES and PROVISIONS

are world famous.

THEIR PRICES

are in line with those of all houses of repute.

FORTNUM & MASON'S WINE DEPARTMENT

is thoroughly up-to-date.

	12 years old.	10 years old.	9 years old.	6 years old.
Whisky in bond	32/-	29/-	26/-	20/.
	Per 1 dozen case.			

FORTNUM & MASON'S EQUIPMENT DEPARTMENT,



Showing construction of bottle.

started in 1908, has everything of the most modern—Strong and Reliable. Especial attention is invited to the "FORTMASON" Water-bottle, the invention of a Soudan Government Official to whom all the exigencies of the Saffarieh are well known. The feature of the bottle is the shoulder, which unscrews to admit a hand for the purpose of thoroughly cleaning the inside.

Please write for Export Catalogue or call on—

FORTNUM & MASON, Ltd., 181-4, Piccadilly, W.

Telephone: 41 Gerrard.

Telegraphic Address: "Fortnum, London."

BANK OF BRITISH WEST AFRICA, LIMITED. *(Established 1894.)*

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address—"BULLION, HAMBURG."

Authorised Capital	- £1,000,000.	Called-Up Capital	- £200,000.
Subscribed Capital	- £500,000.	Reserve	- £80,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. Wm. F. Moore, Esq.
Gen. W. Neville, Esq. O. Harrison Williams, Esq.

Chief Manager: Leslie Couper.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). GAMBIA—Bathurst. SIERRA LEONE—Freetown.
GOLD COAST and ASHANTI—Axim, Seccondee, Saltpond, Cape Coast Castle, Winnebah, Accra,
Tarquah, Commassie.

LIBERIA—Monrovia. NIGERIA—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches—"BANKING."

AGENCIES.

Abidjean, Abonema, Mama, Bonny, Ilo, Dakar, Ekwanga, Fernando Po, Grand Bassam, Hangua, Koko,
Lahou, Loanda, Madeira, Matadi, Oluassi, Opobo, Pendemba, Prestea, Seghwema, Teneriffe, Warri.

New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody. Stocks and Shares bought and sold. Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

GEORGE MILLER, Esq.

CLIFFORD B. EDGAR, Esq., J.P.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—J. CADMAN, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, and Calabar.

NORTHERN NIGERIA—Lokoja and Jebba. FRENCH IVORY COAST—Grand Bassam.

Agencies in Nigeria.

NORTHERN—Zungeru and Ibi. &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Ekwanga, Opobo.

Sapelli, Warri, &c. &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Bahr-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

Telegraphic and Cable Address **BULLION HAMBURG**

101344-101345

Chief Manager : Leslie Cooper.

232 N. S. M. H.

Telegraphic and Cable Address at all Branches **BANKING**

8488-11-5

New York Agency, 71 Wall Street.

SAMPLES

Bank of England, London Joint Stock Bank, Limited, Parr's Bank, Limited

Copyright in a Deposit Account Statement is Licensed. Information, Information, Information, and Information, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2

BANK OF NIGERIA

Directors

GEOFFREY MILLER, *Esq.*

J. LATHAM AND B. EBO-ABE, ESQ., J.D.

HALEY, J. 1991. FISHES OF THE WORLD, 3rd ed., Wiley, New York.

ALEXANDER MILLER, Esq.

MAZZINI-STURMEL 159

H. G. ZHANG, 1962

Manager and Secretary, J. C. ADAMS, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches:

SOUTHERN NIGERIA Lagos, Burutu, Forcados, Onitsha, and Calabar.

NORTHERN NIGERIA Lokoja and Jebba. **FRENCH IVORY COAST** Grand Bassam.

Agencies in Algeria

NORTHERN Zungeru and lot &c

SOUTHERN Akassa Asaba Benin Bonny Brass Bguma Degama Egwanga Opobo
Sapelli Warri, &c &c

Also Agencies at SIERRA LEONE, and the principal ports on the COLD COAST.

Bills negotiated or sent for collection. Current and Demand Accounts received at London and
Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares
bought and sold, and Coupons collected. Banking business of every description transacted.

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, Etc.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY AND FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

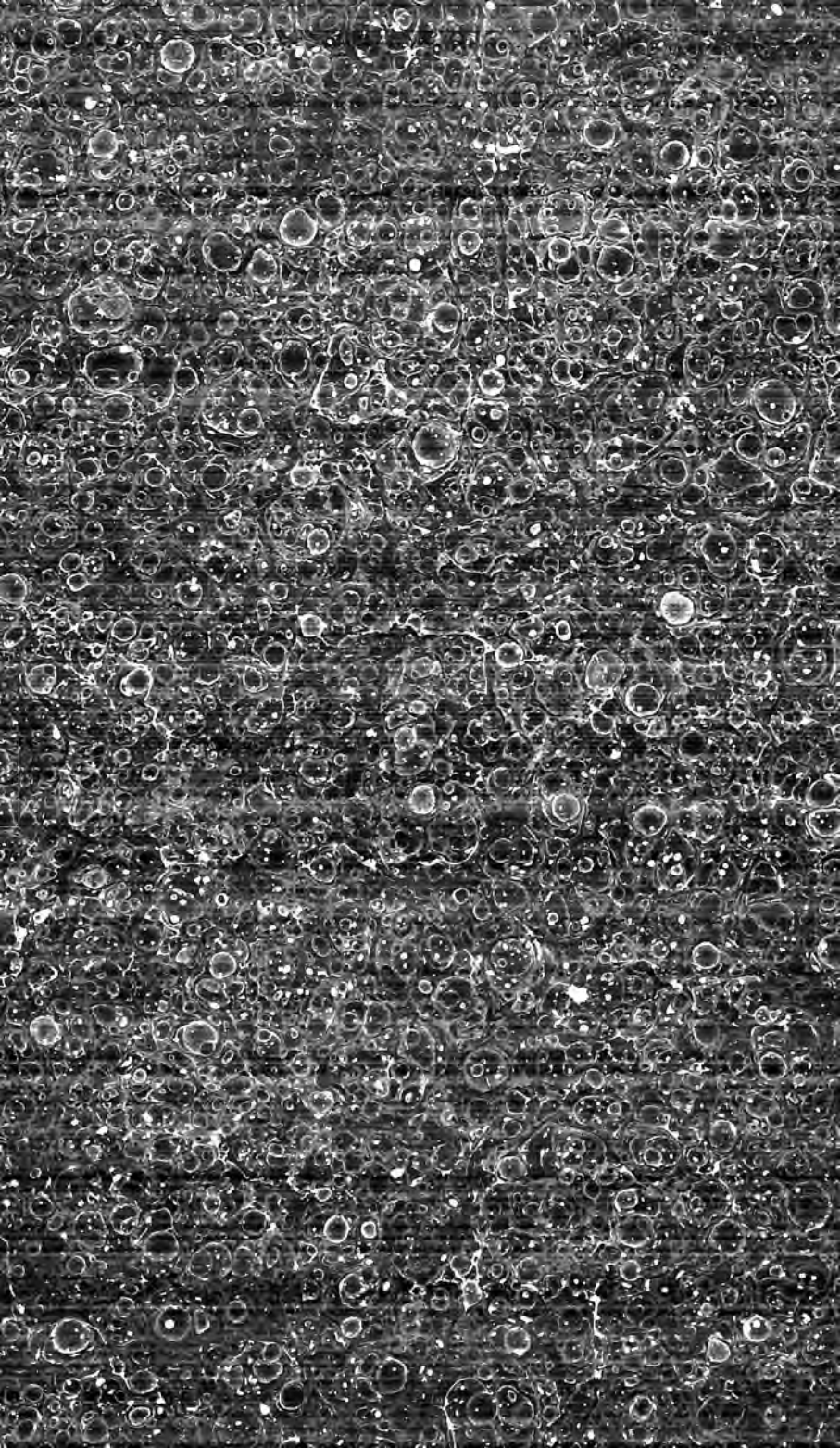
HEAD OFFICES:

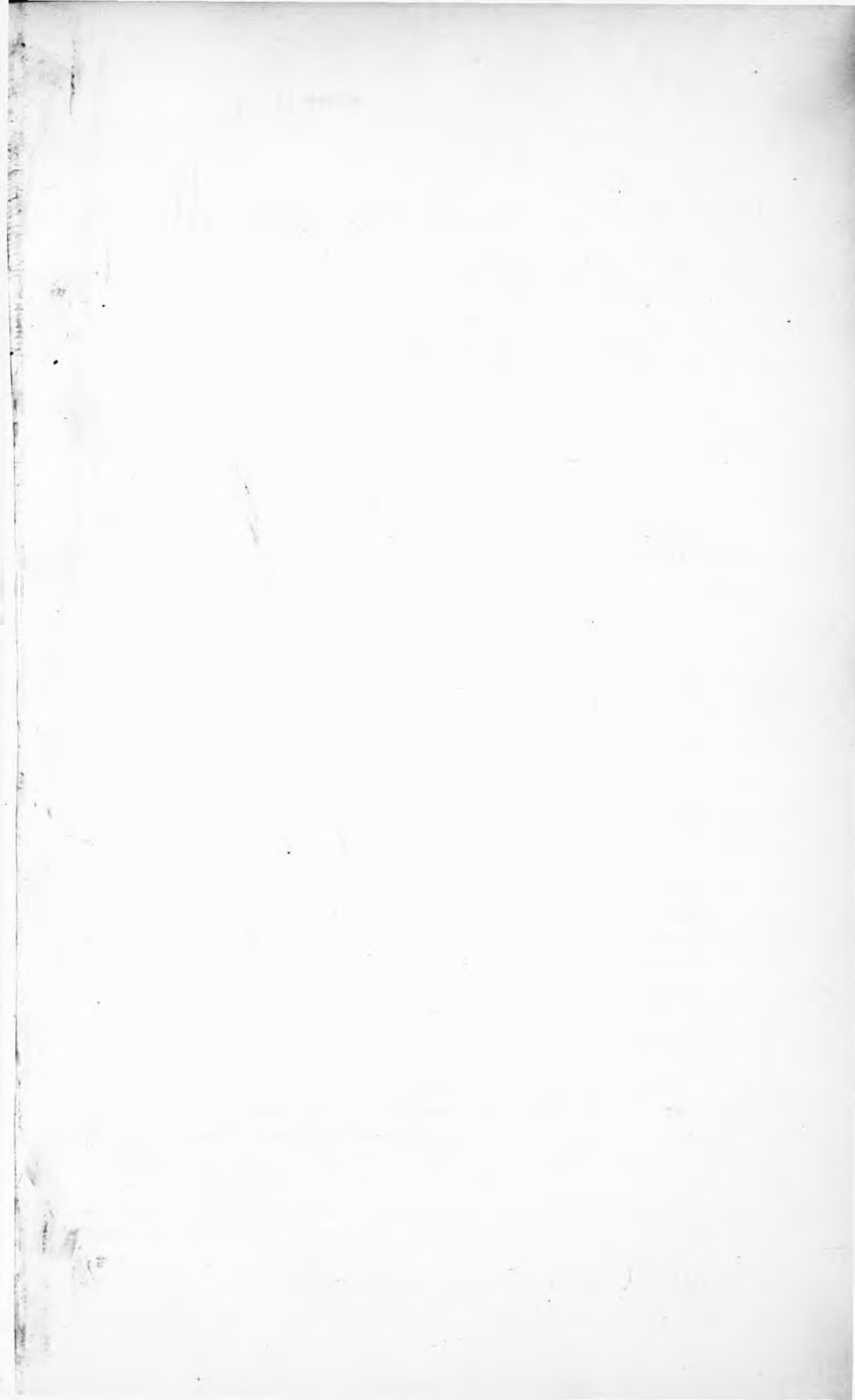
**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.









Crawford 1984

THE COLONIAL OFFICE JOURNAL.

VOL. V.

JULY, 1911.

No. 1.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

The British public has recently been told by many insistent critics that the British Empire has reached a crisis, and that some strong measures must forthwith be taken to prevent an early disruption. It is reassuring to find that the proceedings of the Imperial Conference bear absolutely no trace of these apprehensions. Never has the spirit of co-operation been so strong, but a clear reluctance was shown to adopt any ideas or machinery which might tend to interfere with existing relations to a serious extent. The result is to show that the political leaders in the Dominions are well satisfied with the character of the present connection, which has been built up naturally and in accordance with the political instincts of the race. Perhaps the most important feature of the proceedings is the increased importance which is attached to joint deliberation of military and diplomatic questions. Obviously the principle of local self-government cannot be followed in foreign affairs. If any one of our five nations could bring about a war without the consent of the others, the Empire would be exposed to disruption. The Conference has largely provided against the possibility of such a disaster by ensuring the participation of all the nations in important discussions. This arrangement not only goes far to preserve co-operation, but reduces the risk

of complications by making all the parties directly responsible. It can hardly be doubted that one early result will be to strengthen the defences of the Empire at all joints. No one can read the proceedings without being quite aware of the fact that the British Empire is at the present day the least militant or aggressive of all the historical world-powers. But it is also clear that there is a unanimous opinion that the connection is a valuable one and worth defending if need be. The Dominions are all anxious to provide for self-defence. This is the great thing, as certainly it is a difficult task to utilise and combine the local schemes so that the resources so created shall be effective on a great occasion for the common work, but the first requirement is the public spirit which is ready to make sacrifices for defensive ends, and this is being admirably displayed all round. There is no doubt an element of wastefulness in the fact that the navies of the Dominions will normally be on their own coasts and not concentrated on the lines which a naval strategist would select for the defence of the Empire as an organic unit. But human nature has to be reckoned with, and it is impossible to foster public spirit in such matters unless each community has something to own and see for its money. Much can be done, while respecting this feeling, to prepare the way for effective co-operation in any hour of need.

The proceedings of the Imperial Conference have not provided much "copy" for the newspapers, but it need not be assumed that they have been the less valuable on that account. There has been no full-dress debate on a current controversial topic in any way comparable to the preference discussion of 1907, and perhaps the most remarkable feature of the meetings has been the cordial manner in which the delegates of the overseas dominions have recognised the efforts of the home government to systematize and improve the working of the Conference, and to make imperial co-operation more constant and more regular. The suggestions for a reorganization of the Colonial Office were dropped after a very amicable discussion which made clear the general consensus of opinion that natural development along existing lines, and not drastic reconstruction, best meets the needs of the situation.

Each new Conference sees a change in the methods of conducting imperial affairs, brought about naturally, and almost without conscious intention, by the mere force of facts. It has always hitherto been the British method to allow such changes to come about normally, as in a living organism, and not to

anticipate developments, the exact course of which cannot be foreseen, by devising artificial machinery beforehand. The most important innovation at the 1911 Conference has been the attendance of the delegates at the Committee of Imperial Defence. The proceedings on these occasions have not been divulged, but it is known that the home government took the dominion statesmen into their confidence in the most complete manner, and their action in so doing was very warmly appreciated.

The result of the voting on the two referenda recently submitted to the Commonwealth electorate has been the defeat of the government proposals by a very large majority. A hostile vote was recorded in every State with the exception of Western Australia, where a small majority endorsed the new measures. This result must be regarded as remarkable in view of the sweeping success of the Labour party at the polls throughout Australia so recently as April, 1910. It is not easy to determine its exact significance nor its probable consequences to the position of parties in the Commonwealth. Mr. Fisher and his colleagues had left to attend the Imperial Conference before the vote was taken. In their absence it is impossible for the attitude of Ministers to be properly determined or announced, and there is necessarily something in the nature of a truce in federal politics for the time being. Mr. Holman, the acting Premier of New South Wales, and one of the labour leaders who failed to see eye to eye with the Commonwealth Ministry in this matter, has suggested an agreement among the States to transfer to the Commonwealth Government certain powers in industrial matters, which would necessarily be less wide than those which that Government has unsuccessfully sought to obtain. On the other hand, Mr. Hughes, who is acting for Mr. Fisher in the latter's absence, is reported to have announced that the recent proposals will again be submitted to the electorate concurrently with a general election, and to have obtained Mr. Fisher's endorsement of this policy. A final decision can hardly be expected until the return of Mr. Fisher and the reassembling of the Commonwealth Parliament.

Observers at home are perhaps more interested in what has occurred as an object-lesson in the working of the Referendum as a constitutional expedient than in the merits of the concrete questions at issue. At first sight the smallness of the poll—approximately fifty per cent.—is disconcerting. But it must be remembered that small polls are the rule in Australia. At the

General Election of 1910, the most keenly contested in the history of the Commonwealth, the percentage of electors voting was only 62. In 1906, it had been only 51. With the elimination of the personal element so strongly to the fore at a General Election a reduction in the percentage of voters is probably inevitable. But so far as a moral can be drawn, it would appear that a referendum, conducted—as this has been for the first time in the political history of the Commonwealth—apart from a General Election, hardly affords that clear, unambiguous and decisive verdict which its advocates have claimed as its principal merit. It requires keen partisanship, or great self-confidence, to express an opinion as to the actual wishes of the Commonwealth on the subject of the powers of the federal government in the matter of industrial legislation. If Mr. Fisher and Mr. Hughes really hold the intention attributed to them, they, at any rate, would seem to take the view that the old-fashioned General Election, with its alleged confusion of issues, is after all the best way of ascertaining the wishes of the sovereign people.

The question of promoting "closer settlement" upon the land in South Africa has been under the consideration of a Select Committee of the Union Senate, which has presented an interesting report, in the course of which it is expressly recommended that "the ranks of the settlers should be augmented by arrivals from oversea." Should the government hereafter be disposed to act on this recommendation, it may be conjectured that some controversy will be aroused in South Africa. The sub-continent is not free from the problem of the "landless man," and it will, no doubt, be urged that if money is to be spent on "closer settlement," the South African born has a prior claim on the consideration of the Government to the would-be emigrant from overseas. This argument has had a powerful influence on the policy of the Australian States—particularly Victoria and New South Wales—in the matter of immigration, and it seems likely to carry almost equal weight in South Africa. During the discussion on the Report, General Botha showed himself sympathetic but characteristically cautious, and laid stress on the necessity of recruiting immigrants from the country and not from the towns, saying that both Sir Wilfrid Laurier and Mr. Deakin had warned him on the subject. Those who see a danger in rural depopulation at home will thus find small comfort in General Botha's attitude. Its similarity to that of the Australian authorities may be shown by the following quotation from the

second Report on the Dominions Department of the Colonial Office:—

“The United Kingdom has no surplus of agricultural labour, the type of labour which the Dominions especially desire to attract. It is the town-dweller who is most often disposed, and most often encouraged, to emigrate. But Australia has no wish to add from external sources to her urban population, and she doubts, not without reason, the capacity of the adult town-dweller to succeed in agricultural pursuits.”

Australia has begun to experiment in the immigration of town-bred youths, who undergo a special agricultural training after their arrival. New Zealand is adopting a similar policy, and the prospects of success are said to be encouraging. To quote further from the Report above-mentioned:—

“There is much to be said in favour of the policy of catching the town-dweller young, and training him in the Dominions for agricultural work before he has had time to form the habit and acquire the temperament which unfit him for agricultural labour. In this way the needs of the Dominions can be met, and no exception can be taken to the transplantation from the United Kingdom of certain youthful members of the community for whom the industrial openings at home are few and unfavourable.”

It would certainly seem that on these lines the interests of the United Kingdom and the Dominions can best be reconciled, and Canada's experience of the results of child immigration has been admittedly very favourable. But in South Africa the problem is complicated by the supply of coloured labour which all but precludes the white man from accepting the position of a wage-earner on the land.

The London Chamber of Commerce has passed a resolution in favour of the reservation of Crown Lands in the Crown Colonies in return for any expenditure from Imperial funds for administration or development. The idea is that in return for his money the taxpayer at home shall have an asset in the shape of land in the Colony which may ultimately reimburse him. On the face of it this seems reasonable. It is fair to regard an Imperial grant, whether to provide for the construction of a railway or to carry on necessary administration, as an advance which is to be repaid when the finances of the possession allow, and it is logical that

some tangible security shall, if possible, be given in the meantime. As we recently remarked, the practice of making Imperial grants as a sort of investment is a recent one. Grants had been made in previous years to relieve cases of distress, but these were given to establish colonies to prevent bankruptcy or great hardship. But the grants which are being made to East and West Africa are given largely in the commercial spirit, to develop the territories for industrial purposes, and in such a case it would be reasonable to take a security for repayment if it is to be had. Rhodesia is administered by the Chartered Company on this principle, the theory being that the expenses incurred in administering the territory constitute a debt against the settlers, which will have to be discharged or taken over if Constitutional Government is set up. The difficulty is not in the theory of the matter, but in the practice. Sir Algernon Firth's idea was that, as a railway increases the price of land in its neighbourhood, the inhabitants of such land should make concessions to those who build the railway. But it would be extremely difficult to attempt to appraise the benefit given by the railway or to say to what distance it extended. The Government would have to settle these matters in some rough and ready way, and then to take possession of the land desired compulsorily. The benefits given by the railway might, however, to a large extent go to land at such a distance as would exempt it from such a contribution. In the case of "betterment" caused by public roads, the improvement is definitely located in the buildings lining the thoroughfare, and is capable of a fair measure of valuation, though even so the principle makes in particular progress in this country. In West Africa, which is the country chiefly aimed at, there is the further difficulty that land is held in tribal ownership, and it is not desirable that the Government should become a sort of landlord and displace the native chiefs. No railways have been, or are being, built on the lines recommended by the London Chamber of Commerce, for in those cases where grants of adjoining land have been made to companies, such land has been substantially unoccupied and uncultivated, and, therefore, has reasonably been deemed the property of the Crown. At the same time something could be done in the desired direction. The Governments might use their influence to obtain, if necessary by purchase, but for small sums, land in the immediate neighbourhood of stations, which may eventually be in demand for buildings. Undoubtedly, the building of railways encourages the purchase of concessions from the natives, but it must be remembered that the Governments take toll from such concerns, not only by railway rates and import duties, but by royalties, and in this way get a

direct share in the appreciation caused by the railways. It is true that this is not the same thing as a direct holding of land in trust for the British taxpayer, but, if the Imperial grants are to be regarded as advances to be repaid when the local finances admit, the best chance of repayment would be a healthy balance to the good in the Government accounts.

Sir H. Hesketh Bell, in his report for 1909, observes that while the progress of administration in Northern Nigeria may be considered to have made remarkable strides during the past decade, the development of external trade has been disappointingly slow. Most of the natives of the Protectorate appear to possess the instincts of commerce to a remarkable degree, and the amount of traffic done in the local markets is extraordinary. The great markets of the principal centres are full of wares of all sorts, and on every highway one meets a constant stream of petty traders carrying, from east to west and from north to south, the products peculiar to their districts. But everything is of local make or production. With the sole exception of Manchester cotton goods, hardly an article of European origin is to be seen. Here and there one may find a woman sitting behind a few boxes of matches, a tin of cigarettes, or a small pile of lump sugar, but otherwise nearly everything that is bought or sold is the actual produce of the country. Northern Nigeria seems to provide within its borders everything that enters into the daily life of the people. The consequence is that the imports and exports of the territory, when the vast extent and great population of the country are taken into consideration, are really almost trifling. During 1909-10, the estimated value of the imports into Northern Nigeria, excluding Government goods, railway material, and specie was only £331,000, while the exports barely exceeded a total value of £400,000. The fact that the Protectorate possesses no sea-board and that nearly all its external trade is conducted through Southern Nigeria, renders it very difficult to obtain accurate statistics as to the real volume of foreign commerce, but even by adding a liberal percentage to the figures given above, the value of the total trade of Northern Nigeria, with all its millions of inhabitants, does not equal that of even a small West Indian Colony.

Such external trade as there is is almost entirely in the hands of two or three rich and important firms, who have limited their operations mainly to a few stations in the vicinity of the Niger and Benue rivers. They have no cause to complain of the results of their traffic, and no one would begrudge them the

success which they have deserved by their energy and enterprise. Most of their business is done, however, on the pernicious barter system, and Sir Hesketh Bell is inclined to attribute largely to that fact the virtual stagnation of external trade in the Protectorate. It may confidently be hoped that the completion of the construction of the Baro-Kano Railway, and the linking up of the populous centres of the Hausa States with the seaboard, will rapidly alter existing conditions, and that, with the influx of traders and capital from the south, the natives of the Protectorate will quickly find it to their advantage to develop the latent resources of their country and to take advantage of the wealth of sylvan produce which lies ready to their hands.

Oil palms abound on the banks of the great rivers, the shea-butter nut tree is found in enormous numbers over thousands of square miles, valuable gums and various kinds of rubber exist in great quantities in districts which will soon be within touch of the railway. Fibre-producing plants and ground-nuts can be grown in Northern Nigeria to an extent that can hardly be paralleled in any other tropical country, while the cultivation of cotton on a large scale has been carried on throughout the territory from time immemorial. As soon as the attention of English capitalists has been properly directed to the potentialities of trade in this Protectorate, a very great extension of industry and enterprise can confidently be expected.

Contrary to what is the case in most other parts of British Africa, the English trader can, so far, have it all his own way in Northern Nigeria. Such trade as there is is almost entirely in the hands of British firms, and it is earnestly to be hoped that the start which they already possess will enable them to maintain their advantage against the foreign competitors, who are certain, sooner or later, to turn their attention to this Protectorate.

The commercial progress of Northern Nigeria has been all along rather disappointing. The small results were due largely to the monopolies of the carrying trade. Such monopolies with their attendant restrictions are fairly sure to arise wherever the natural difficulties are considerable, and require a well organised service. The construction of the railway and the improvement of the harbour at Lagos are designed to lessen these difficulties and to make general trade practicable. But

before the advantages of the new communications can be utilised on a substantial scale, the country opened up has to undertake new production for export business. It cannot buy until it can sell. This is always the case, and we do not think that the great amount of the existing production and traffic is a bad sign for the future. It denotes a state of industry and civilization which is more promising than a start of sloth and ignorance. Natives of this sort will readily spend British money when they get it, and their wants will, as in other localities, expand with their incomes. The railway will be the turning point, and we trust that British traders will now follow the flag and exploit the undoubted resources of Nigeria.

The announcement of the Chancellor of the Exchequer that a loan of £250,000 had been granted to East Africa is very welcome. The purposes for which it is intended have been in mind for a long time. The light railway to cover the thirty miles between Nairobi and the Thika River will be a great convenience to a fertile and promising district and should materially help to increase the exports which it is so much desired to develop in the interests of the Uganda railway. The deep water jetty at Kilindini is urgently needed. The water supply at Mombasa is, of course, a necessity, if sanitary obligations are to be considered at all. When this port has been provided, and the works at Accra and Lagos, now in progress, are completed, a very substantial advance will have been made in sanitary matters in tropical Africa.

The British Cotton Growing Association has turned the corner financially, showing a net profit in 1910 of £1,385 as against a deficit of £14,421 in the previous year. The Government had promised a grant-in-aid of £10,000 a year for three years towards the cost of experimental work, on condition that £150,000 more capital was raised; this money was raised, and the work was pushed on quickly. Two new centres have been opened in West Africa, and others are under consideration. Direct operations have been commenced in Nyasaland and Rhodesia; the work in these countries will be extended as rapidly as possible. Considerable additional financial assistance has been given to the British East African Corporation and to the East African Cotton Syndicate. Two very large schemes are under consideration in connection with the Soudan and the Juba River in East Africa, and there is a possibility of the Association entering into direct operations in Sind. It will, therefore, be seen that great possibilities present them-

selves of large and immediate developments. But it is to be regretted that the whole of the nominal capital of £500,000 has not been subscribed. A very much larger sum than that will be required to provide Lancashire with a substantial amount of cotton. The progress made, however, must not be measured only by the quantity grown. An experienced staff has been collected together, and knowledge has been gained which will be invaluable in future work. Now that additional funds have been provided, and with the assistance of the Government Grant, the work is being pushed on in every direction as rapidly as possible; and the Council confidently expect that in a few years from now a really appreciable quantity of cotton will be produced under the auspices of the Association.

In the meantime, however, Lancashire cannot wait, and it appears that the Fine Cotton Spinners and Doublers' Association have considered the question of acquiring the control of 30,000 acres of the choicest land in the Mississippi delta. This is for the purpose of obtaining fine long stapled cotton, the supplies of which have fallen short of the demand, so that the price has gone up greatly. It has been complained that this cotton should have been planted within the British Empire, and it has been argued that this course would have given buyers greater protection against "corners" and market manipulation. But the step is not directed against corners but against the high prices which result naturally from short supplies. Nor, indeed, is British territory, in these days of world-wide combination, any adequate protection against corners. Lancashire's policy is plainly to secure a bigger supply, and the new field is expected to yield from 15,000 to 20,000 bales a year of exceptionally fine cotton. The incident shows the reality of a strong demand, and it rests with the colonies to secure as much of it as they can.

The Wallis Islands, under the protection of France, have experienced the excitement of a sort of *coup d'état*—a rare event in Polynesia. The Catholic missionaries have long been installed there and have made themselves the real masters of the place. A magnificent cathedral, in the original style of the 13th century, has been built, the natives having been compelled to work on this for nominal wages. Recently, however, the French official representative persuaded the king that his subjects were being shamefully exploited, and an order was given for the expulsion of the head of the missionaries. This

step caused a rising of the inhabitants, who invaded the palace and deposed the king. They had it all their own way, and there was no fighting, and they selected a new king who was known to be in favour of the missionaries. The matter was referred to the Governor of New Caledonia, who settled it by acknowledging the new king and withdrawing the French representative. The decision is not altogether to the taste of some of the French papers. The French resident is very much at the mercy of the mission, which can cut off all supplies of food. He is, therefore, usually induced to adopt a passive attitude. The missionaries own two-thirds of the land, and in effect make the laws.

The colonial policy of another country is always interesting, and attention may be given to a discussion which is taking place in France on the economic relations with her colonies. A law of 1892 divided the colonies for the purposes of the French tariff into two groups. The first consisted of the old Colonies, which were subjected to the "demi-droit" of the French ("Métropolitain") tariff. The second comprised the newly acquired possessions which were not developed enough to permit of their being taxed in this way. The intention was to transfer the latter to the former class as and when their development permitted. But experience of some twenty years has been such as to throw doubt on the wisdom of this policy. The second group has developed exceedingly well, while the first group shows every sign of arrested growth and diminishing power of purchase.

A close study of the psychology of the West African negro is shown in the notes by Mr. R. F. Hunter, Director of Education in Sierra Leone, submitted to the Imperial Education Conference. The communistic sense is deeply implanted in him, and this explains many features of his social organisation, his religion and his laws. One result is that, while individually he is lacking in energy and foresight, collectively he is capable of hard work, because as one of a crowd he readily falls in with whatever is being done. "These people have a vivid idea of co-operation in production. Africans must have their leader in every action of life; even 17 bearers must have their head-boy, and the produce of labour must be divided according to the work done." "They are possessed of a strong communistic sense; each individual has his or her place in the general economy; the affairs of the community are discussed by the community, but in the circumstances the chief or the Head-man has large powers in influenc-

ing public opinion. Education does develop the individual, and to a certain extent undermines the communistic system. There are advantages in the latter, but education will tend to destroy objectionable features in it, like, for instance, a species of domestic servitude." A curious result of this characteristic is that it affects the conception of truth.

"The sense of co-operation even in the educated African seems to contend with what the European may designate the moral sense. I have observed classes of children from 7 to 16, set to work out a sum in arithmetic, at first working individually and then, unless the teacher interfered, consulting with each other over the result; on inquiry, in many cases, I have discovered that the majority of those who had attained the right solution preferred to abide by the verdict of the majority of the class rather than trust in themselves. It is not so much a matter of copying as a trust in the good sense of the many. This idea manifests itself in its most emphatic form in the tribal system." Any suggestion from a recognised authority may entirely displace personal knowledge. "If you meet children with their parents, on your evening's walk, after the day's work, in the village, and you ask them if they had been to school that day, the parents, usually the mother, ask the child 'you done go school to-day,' the answer in 80 cases out of 100 is 'I done go,' whether the child has gone or not. The question 'you done go' is equal to 'you went, didn't you,' and the physical authority of the parent imposes on the child an erroneous conception of truth."

This attitude of mind can no doubt be traced, partly to the difficulties and dangers of primitive life which made co-operation an absolute necessity, and partly to the empirical character of native education, which is confined to manual labour and sexual matters as explained by the elders. Clearly, the recognition of these mental habits is useful in administration. Education is most effective if it is shown at an early stage to be productive of material results, and labour can best be organised by encouraging co-operation with a fair division of the proceeds.

The proceedings of the Conference also include a thoughtful memorandum by the Governor of Hong-Kong on the inculcation of a high moral standard in Eastern Universities, without the compulsory teaching of the Christian religion. In such institutions the instruction must be entirely secular, and the problem is to secure the moral tone which characterises the educated Englishman who has been brought up in an environ-

ment of Christianity, even if he has renounced it as a religion. Sir F. Lugard attaches great weight to the importance of having competent English teachers. This is the point in which Hong-Kong, and the Crown Colonies generally, differ from India. In the absence of dogmatic teaching, it is personal influence which tells, and in India the proportion of British to native teachers is insignificant. It is useless in these circumstances to expect that English habits of thought in moral matters will spread. The difference in results, as between India and the Crown Colonies, is clear. The Oxford and Cambridge Colleges have taken steps to restrict the number of Indian students whom they will admit in future, and presumably they had their reasons. But no one who has had experience of native students from the Crown Colonies can say that they are distinguishable as regards their ideas or habits from English students of the same class. It may be dangerous to generalise from the comparatively small number of Chinese, Malay, and Cingalese students who come to this country, but so far as they go the results indicate that they reach a high standard in these respects, even under the exceptional strain of removal from family influences.

It may be added that it is easier to get young men to go out as teachers to the Crown Colonies, except West Africa, than it is to India. The Conference have noted that there are signs that the young men of the present day are not so anxious to make that dependency the scene of their lives as were those of a previous generation. In the Colonies there is a larger British element, and there is the chance of an appointment in the administrative service.

A judgment of interest to Civil Servants has been delivered by the Judicial Committee in the case of *Williams v. Giddy*, an appeal from New South Wales. Under a Colonial Act the plaintiff was "entitled to a gratuity not exceeding one month's pay for each year of service from the date of his permanent employment." On his retirement the Public Service Board awarded him a gratuity of this amount, but for a shorter period than his service, and upon being pressed to allow the whole period they did so, but for the additional period they allowed for each year, not one month's pay, but one penny. The award was contemptuous on the face of it, and seemed to import some fault in the retiring official, but there was nothing of the kind. Of course, where such an act simply fixes a certain sum as a maximum, it is plainly the intention that the Government should have a discretion as to what sum should be adopted, and in the Colonial Court there was a difference of opinion as to whether the Government, in the exercise of their discretion, were entitled

to make the sum one penny. But the Judicial Committee were clear and emphatic. Lord Macnaghten said:—

“The real question seems to be this: Did the Government, or rather did the Public Service Board, in whose province the matter lay, exercise any discretion at all as regards the Plaintiff's claim in respect of service subsequent to the 23rd of December, 1895? They have awarded seven pennies for seven years' employment, or to be quite accurate, they have awarded one farthing for every quarter of a year spent in the service of the Government, and they have thrown in an extra farthing to make even money. Well, this is not the first occasion on which seven years' faithful service has met with a recompense at once unexpected and undesired. That is probably the best that can be said for the action of the Board. But was it reasonable? Was it fair? Few would deem it a generous or handsome tribute to the work of an old and faithful servant even with the extra farthing thrown in. Plain folk would call it a mockery—a sham—a pretence. Nobody, of course, can dispute that the Government or the Board had a discretion in the matter. But it was not an arbitrary discretion as Pring, J., seems to think. It was a discretion to be exercised reasonably, fairly, and justly. The learned Counsel for the Appellant, who were not apparently in the secrets of the Government, seemed to think that the Board would have stood better in Court if they had not resorted to the artifice of a pretended exercise of discretion. It was suggested that the Board may have thought that the Plaintiff had got enough already, and that perhaps on the former occasion they took into consideration years of service beyond the limit which they thought applicable. But, if so, they did unintentionally the very thing they were told by the Act not to do. They can hardly be heard to say that they have erred intentionally in order to conceal or compensate an unintentional error. Whatever their motive may have been, whether they were resolved, right or wrong, to stick to a determination once officially announced, and to let the Service understand that nothing was to be gained by asking for a reconsideration of an erroneous decision, or whether they had some better reason which has not yet been disclosed or discovered, it seems to their Lordships to be quite plain that an illusory award such as this—an award intended to be unreal and unsubstantial—though made under guise of exercising discretion, is at best a colourable performance, and tantamount to a refusal by the Board to exercise the discretion entrusted to them by Parliament.”

The moral is that an Act must be followed substantially. The judgment illustrates the growing tendency of the Courts to decide cases on broad grounds and in accordance with common sense.

BALLADE OF OTTAWA CITY.

Ottawa stands by her Grande Riviere,
As a queen in the mirror regarding her face,
With a beauty so proud, so stately an air,
That the waters must curb their impetuous pace,
For the pleasure of slowly reflecting her grace,
From the dancing cascade of the Chaudiere Fall,
Past pinnacled palaces high in their place
To the shades of the bowers of Rideau Hall.

In the hush of the dawn she awakes to her care
(As the sun from his chamber steps forth on his race),
For the forests, lakes, prairies and mountains so fair,
Of her people bespreading a continent's space;
And her thought travels on in its circuit to trace
The vision and scope of her national call;
An Empire united in world-wide embrace,
With its heart in the bowers of Rideau Hall.

When the curves of the hills their glory declare,
In the flush of a sunset that nought can efface,
The soul of her past we once again share,
That thrilling romance at her history's base,
Of the brave with a tomahawk scalping apace,
In defence of his squaw and papoose in a shawl,
And with arrow and spear slaying beasts of the chase,
In their lair by the bowers of Rideau Hall.

Envoi.

Earl, by your favour, for six days' space,
I was guest in the bowers by river and fall,
For the pleasure of slowly reflecting their grace;
'Tis the hour for adieux to Rideau Hall.

H. W. J.

LAND AND LABOUR LAWS IN NEW ZEALAND.

State Socialism in New Zealand, by J. E. Le Rossignol, Professor of Economics in the University of Denver, and W. D. Stewart, Barrister-at-Law, Dunedin (George G. Harrap and Co., 5/- net).

New Zealand Official Year Book, 1910 (Eyre and Spottiswoode).

In social and economic legislation, New Zealand has in recent years set the pace. It has enormously influenced this country. The policy pursued is not that of socialism as that many-sided term is usually understood. It does not aim at securing property for the State, but at giving larger opportunities to all of acquiring property for themselves. The land legislation, though often denounced as socialistic, has actually produced results quite opposed to the socialistic idea by putting great numbers of people in possession of their own land. The movement has not been against capital. There has been no serious agitation for an increase of the income tax. The mischief attacked was the concentration of the land in a few hands. It is rather curious that a young country should be troubled, to a much greater extent than old countries, with the land problem. This problem is largely due to the climatic conditions. In a large part of Europe and of North America the severity of the winter operates against large holdings. A man has only a short season for agriculture, and in winter he must house and feed his stock. In Australasia, owing to the mildness of the climate and the character of the soil, sheep raising was more profitable than agriculture, and sheep-raising is most successful when carried out on a big scale. The result was that the small agriculturist was shut out. The Year Book puts the matter thus:—

“ In the earlier years of the settlement of New Zealand there

were opportunities for men of capital and judgment to acquire large estates, and while there were plenty of good Crown lands to select from this was of great advantage when money was needed for administration and roads and bridges. These large estates employed hired labour, and most of them did little towards cultivating their lands, and consequently progress beyond the pastoral stage ceased in the districts in which they were situated. As the best lands in the course of years passed from the Crown, the country became a series of agricultural communities interspersed with large properties occupied by a manager and a few shepherds, and the people urged that they and their sons should be allowed to occupy these large estates instead of being compelled to go into inaccessible back country without roads or railways."

The consequence was that large areas were originally granted under lease for pastoral purposes. Then the holders proceeded to agitate for perpetual leases or the freehold. The result goes to suggest that the retention of state ownership of land with the grant of leases, is not altogether advantageous. It creates a class which will use its strong political influence to obtain further concessions. The objects of the State are more conveniently obtained by the taxation of land values, which can be arranged to discourage very large holdings if that is desired. The legislation of New Zealand has recently been on this line. The Act of 1908 comprised an ordinary land tax, a graduated income tax, a tax on absentee owners, and the total exemption of small properties and owners. The ordinary tax is assessed on the unimproved value (which, as this country has now learnt or is trying to learn, is not the original value, but the original value plus "community" value) and is 1d. in the pound, while the graduated tax begins at $\frac{1}{8}$ of a penny and increases till, in the case of estates over £200,000, it reaches 2½ per cent. It is clear that such a tax will effectively break up the big estates. If the owner is an absentee, the graduated tax is doubled. The result will be that the country, instead of remaining a thinly populated sheep-run, will become a closely settled agricultural community, and the drastic measures which have been taken to bring this about can, of course, be better defended in the case of a country where the ownership of the Crown is more recent than where it has been obliterated by centuries.

The rating of unimproved values for the purposes of local taxation in New Zealand is left to the option of the local authorities. Where it is adopted the valuation roll is supplied to them by the Valuer-General. The system, of course, favours those holders who own improvements which are relatively greater in value than the unimproved value, as they get a reduction of

their taxes. The opposite class suffers, but as land values have almost everywhere gone up, there is not much ground for complaint. The system operates to shift such industries as suburban dairies and market gardens further afield, and this causes hardship in some cases. The Imperial Government took considerable interest in the example when a similar system was being considered, and in 1906 it requested information as to its working. The district replies varied considerably, but on the whole they were in favour of the system. Certainly, in many parts building has been greatly stimulated by suburban land being broken up and brought on the market, and this operated to reduce rents. Land values have risen greatly notwithstanding the tax. The authors of *State Socialism in New Zealand*, however, are not disposed to admit that the policy is a proved success. "The benefits of rating on unimproved values," they observe, "are not so obvious as to command unanimous approval or to persuade all the rating districts to adopt it without delay. The opposition to the system appears to be growing stronger as the people are coming to recognise its relation to the propaganda for the single-tax. The small farmers like to shift the burden of taxation from their own shoulders to those of their wealthy neighbours, but they do not enjoy the game when they are on the losing side. They are strong supporters of freehold tenure, and will not readily consent to have their property confiscated by any radical extension of the principle of the single-tax.

"The growing political power of the labouring class, for whose benefit much of the recent legislation of New Zealand has been enacted, may ultimately bring about the nationalization of land, but surely not until the Dominion has become an industrial nation, rather than a pastoral and agricultural community as it is to-day. Up to the present time the effects of rating on unimproved values have been insignificant. The most notable feature of the system is the shifting of the burden of local taxation from one class of taxpayers to another. It is an interesting phase of the tendency which prevails in both New Zealand and Australia towards an equalization of wealth by means of a legal transfer of the property of the wealthier classes to the pockets of their poorer neighbours. How far this process will go it is impossible to foretell, but that its ultimate results will be beneficial to the majority of the people is by no means certain."

These remarks do not, we think, sufficiently take into account the historical origin of titles to land and the manner in which the early grantees took advantage of the Crown. The original regulations were apparently designed with a view to the creation of small holdings. But the object was defeated by various

devices. How this was done is admirably explained by the authors in another place.

"In the South Island the wide fertile plains of Canterbury offered a tempting field for pastoral life. On these plains occurred the most classic examples of land grabbing that New Zealand has seen. And yet, the early land regulations seem to have been expressly designed to prevent the creation of large estates. The public lands of Canterbury were originally opened for sale at £3 an acre, later at £2. The purchaser selected and applied for his land, and, on payment of the price, received a license to occupy. The land was then surveyed and a Crown grant was issued. The price was high as compared with the price of land in other parts of the Colony, and was expressly designed to insure close settlement, in accordance with the Wakefield policy.

"How then was it possible to acquire large holdings? The explanation lies in the fact that until land was purchased from the Crown it could be rented for pasturage purposes at a nominal rental of £1 per 100 acres. A tenant pasturing sheep under these licenses held the land subject to the right of any settler to select and pay the Government for any part of it, whereupon the sheep farmer's license ceased as to that part. His occupancy was intended to be temporary, and subordinate to the claims of the farmer when the farmer should arrive.

"But the wishes of the sheepfarmer by no means coincided with the intentions of the founders of the province. It was not long before a limited number of squatters held immense areas—indeed, all the best lands of the province—under licenses to depasture. They next directed their efforts toward retaining possession without purchasing the land. In this they succeeded to a large extent, as is shown by the great holdings in Canterbury, which have descended to the present generation like the lands of the great county families in England.

"The methods adopted were as various as they were ingenious. For example, for each shepherd's hut they received by law what was called a pre-emptive right over 50 acres besides a homestead pre-emptive right over 250 acres. For every 38 1-2 chains of wire fencing erected they received a pre-emptive right over 50 acres. The squatter was thus granted the first right to buy the areas in question, but without being compelled to do so for a number of years, so that by running sub-division fences up all the watered valleys and across all open flats nearly the whole ranch could be secured against purchase by outsiders.

"'Gridironing' consisted in buying a series of 20-acre sections so surveyed as to leave 19 acres unbought between each two sections bought; and as no one could buy less than 20 acres

without going to auction, the alternating 19-acre sections were left to be occupied by the runholder.

“ ‘Spotting’ consisted in buying small sections of from 20 to 100 acres so as to include all the available creeks, rendering the adjoining ridges secure from purchase owing to lack of water. A close watch was kept on strangers, and if it was supposed that they desired to purchase any piece of land, the runholder sent post haste to the land office and forestalled them. One writer has said that ‘a man wanting a bit of land had to take as many precautions as he would in Scotland to stalk a stag in a well-preserved deer forest.’ A settler was looked on as an intruder and a mean fellow, if he outwitted the runholder and secured a piece of land which the latter was supposed to occupy merely pending closer settlement. When a ‘cockatoo,’ as the small settler was called, managed to secure land, the runholder took care to leave a narrow strip of land between their holdings so that the whole cost of fencing must be borne by the ‘cockatoo.’

“ For a long time the political power was in the hands of the large landholders, who made the laws and spent the public funds on roads which fronted their lands. In some ways they encouraged immigration, but were unwilling to cut up their estates and sell the land to small farmers, even at a high price. They had the English idea of building up a great landed estate and founding a family.”

When these memories are fresh and recent, it is surely not surprising if counter measures are devised, and there is no need to conclude that the majority of the community have declared war on capital. As a matter of fact, the taxation policy has had little effect in the direction of equalising the distribution of wealth, as is shown by the Year-Book's return of the value of the estates of deceased persons. A bad system creates discontent; reforms remove it. A large class is growing up of small but prosperous farmers, whose influence is now on the side of the sanctity of private property.

The other features of New Zealand policy, which are spoken of as having a Socialistic character, might indeed be defended on the ground that they are calculated to fend off Socialism. The case of the railways is in point. Probably they have not until the last year or two paid the charges. But development, and not profit, was the object. The big landowners were the loudest advocates of State Railways and low rates. More prudence and restraint is shown in these days when the balance of power has shifted to a larger class. It is admitted that the railways could be sold for at least what they have cost, and the State ownership has undoubtedly contributed enormously to the present prosperity.

The Arbitration Act has been severely criticised as unduly hampering employers. On the other hand it is regarded by the more radical workers as an instrument of capitalism to keep the working class down. There are means of evading the Act, and they have been used successfully by bodies which have gone on strike. But on the whole the policy has been successful. It is the more conservative among the working classes who support it. They have a great stake in the country through the systems of insurance and pensions, and the provisions for permanency of employment and fair wages, and they realise that they have lost more by strikes than by arbitration. Employers, too, are more and more disposed to abide by the Act, and there is every prospect that, despite occasional failures, it will be a great instrument for good. As time proceeds the decisions lead to a more static condition, and the risk of outbreaks becomes smaller.

No complaint can be made of the advances to settlers and to workers. Both systems have done much good and are economically on a sound basis. The life insurance has admittedly been on fair lines; the fire insurance rates have, perhaps, been too low, and the private Companies bitterly resented them, but the premium income is rapidly increasing, and lately there has been a profit. In one article—coal—the State has itself carried on an industry. The object was to reduce the price when it was exceptionally high, but the State's price was not intended to discourage private enterprise, and has not had that effect to any serious extent.

The final chapter in Messrs. Le Rossignol and Stewart's book is devoted to a general survey and estimate of results, and is more favourable than was presaged by the preceding chapters.

"As to State insurance, State ownership of coal mines, and other forms of State trading, while their utility is questionable, they cannot be shown to have done much harm; and if in the future they are conducted on sound financial principles they will not drive private enterprise from the field, but will do only a part of the business and operate as a check upon the fixing of extortionate prices by private combinations of capitalists. The only danger is that the Government, under pressure of public opinion, may sell products and services at less than cost, ruin private business and establish monopolies in these and other fields of production. But the Government cannot afford to carry on business at a loss, and there is no general demand for the further extension of governmental functions; for many people think that it would be well to wait until the success of the various State experiments is assured before trying any more."

There are no indications that the State contemplates any in-

cursions into the realm of trading. Insurance is hardly within the term, and the coal-mining was undertaken in very exceptional circumstances. There is no prospect of the State endeavouring to exploit those assets which are usually left to private enterprise.

We would add that *State Socialism in New Zealand* is clearly written, and is full of evidence of care and thoroughness. The last example of legislative enterprise, the "National Provident Fund Act, 1910," which anticipated Mr. Lloyd George's recent scheme, does not come within its purview.

THE ENCOURAGEMENT OF AGRICULTURE.

In our July number, last year, we referred to the proposal to establish Agricultural Banks in Ceylon and to the Indian practice, and the subject is being discussed in many other places where agricultural developments are kept back by want of capital. It is a universal fact that men are willing enough to farm if they can get a little help, but if they have to pay a high rate of interest they must struggle hard to make a living. The security which they can offer is, however, usually sound, and justifies special methods. There are now many established cases in which the agricultural credit system has been financially successful and has greatly stimulated production. In Australasia there has been considerable experience, the policy being a general one. The limits of the advance vary from £800 in Queensland, to £5,000 in South Australia, and the interest charged from $4\frac{1}{2}$ to 5 per cent. The security is a first mortgage, and the advance is restricted to a proportion of the improved value which varies from one-half to three-fifths. Repayment is to be made in 25 to 42 years. The Banks or Boards making the advances are practically Government Departments, but the form varies; thus in Victoria the management is vested in the Sinking Fund Commissioners; in New Zealand there is a Government Advance Department, and in other States there is a State Bank with statutory powers of raising money. The first matter to look at in considering the results of the policy is the extent to which the repayments due have been made. In this respect the Australasian experience has been very gratifying, the failures being extremely few and unimportant, and even in the rare cases where farms have had to be seized and sold, no appreciable loss has been incurred. But obviously the success of this method depends mainly upon the prosperity of the agriculture of the country. In Australasia this has been very great, as is shown by the great increase in the exports of agricultural produce.

The thriving settler has no great difficulty in paying interest and instalments. It would be rash finance to lend money on the large scale adopted in Australasia on agricultural undertakings of a dubious character. The State must make sure that it has good security, and this depends not merely on the ratio of the amount lent to the nominal value of the land, but on the prospects of the undertaking. It is also essential that the farmers as a class should be honest, and should appreciate the character of the transaction. In some cases advances are made on a stereotyped plan and without much enquiry into personal considerations; thus in Western Australia the Government Agricultural Bank advances up to £400 without any security except the land, upon which the settler has paid 3d. an acre. But the necessary conditions are amply satisfied in Australasia. Then in New Zealand, by the 31st March, 1910, the capital advanced (in a period of five years) was £9,343,660, of which £3,680,686 had been repaid, and the overdue payments were only £4,659 for instalments, and £18,189 for interest. The cost of management was 0.15 per cent., and in the year ended 31st March, 1910, the net profits were £41,833. The weak point in the Government system is that political influences may be brought to bear on the management, even though the officials are nominated by the Governor. Then it is said that in Queensland the Labour Party are not satisfied with the operation of the Agricultural Land Bank, charging the Trustees with a want of sympathy with farmers. Naturally the party that lends and the party that borrows look at the matter with different eyes. But amongst an intelligent population things are not likely to go far wrong. There is no doubt that the system has stimulated agricultural production remarkably. It is the universal opinion in Australia that the great developments of recent years have been mainly due to it. As constituting a Government investment, it goes hand in hand with Government works helping agriculture. Vast areas in Australia will grow almost anything if given water, and this prime requisite is being provided and sold to landholders by Government, at prices which make irrigation in Australia probably the cheapest in the world.

The continental or "Raiffeisen" method has the same object, but is on a quite different principle. Raiffeisen was mayor of a Rhine province where the peasant proprietors were largely the prey of Jewish usurers. He induced nearly all of them to form an unlimited liability society for the purpose of borrowing money on the joint credit and lending it at reasonable rates. The strength of this system consists in the unlimited liability. Capitalists and bankers are willing to lend money on this security, knowing that every precaution is taken to ensure

that money advanced shall be properly employed. The safety of the system depends on close supervision of the borrowers. Each association consists of a small number of members, resident in the same district, and knowing one another personally. In the early cases the borrower had to find someone to go bail for him, but this is not an essential characteristic. The association is so strictly local that the members know one another's circumstances, and keep a watch on one another's proceedings. The direct interest which each has in the fund and the administration is found in practice to strengthen individual energy and encourage a healthy condition. Both the social and the economic results are good, and the small peasant who has lived in isolation and ignorance is raised to a position in which he takes a large interest in public affairs and becomes accustomed to the responsibilities of practical administration. Financially the system works well. The association has no inducement to go beyond its legitimate business or to seek for new outlets. When the work of the district is accomplished it is usually wound up. This method is well adapted to districts where small culture is practised, but it requires the presence of a few educated men who will explain the idea, obtain support from the banks, and keep the accounts. But the very local and limited nature of the undertaking makes it unnecessary to have such skilled management as has been found necessary for ordinary co-operative societies. So the cost of administration is trifling.

Another method is in existence in which each member must take shares and his liability is limited to them. This seems more in accordance with commercial principles, and has the advantage of raising an initial capital. But it loses the backbone of the Raiffeisen system. If you abandon the features of unlimited liability you abandon the necessity for care and watchfulness. The lending of money is not watched when each member's liability is limited to a trifling sum as it is when the liability is unlimited. The element of family interest in the concern is gone. The reason why many continental associations have shares is that the German Government insisted on it, but the associations usually make them practically nominal.

It will be seen that the Raiffeisen system is only suited to small areas and small proprietors. It would be impracticable in those Colonies where the population is widely scattered and composed of different races. In such places the close knowledge and feeling of fellowship, which are essential conditions, are not to be found. But there are numerous places where they are to be found, at any rate, with proper encouragement, and without imparting an official character to the undertakings, Government officials could do much to initiate and supervise them.

The Raiffeisen system has been closely followed in India, with the addition of an initial Government advance and of an official audit, and the results are extremely satisfactory. The Government advance is imperative where there are no banks in the field, and the logical result is the Government audit, but the advance should be limited and designed only to encourage the formation of the association.

The case of the advances made under the Hurricane Loans Laws of Jamaica (1903) is very useful as showing the results of a system which was introduced for a special occasion but which might be the foundation of a wider application. There local committees were formed whose function was to advise whether repayment could be made and to see that the money was properly applied. It was found that persons of good standing were willing to serve on these bodies, and the work was well and carefully done. Theoretically, the plan was not so good as the Raiffeisen. It involved the Government in some financial liability; it did not make repayment so secure; it excluded the poor men who were known only to their fellows. It was necessary under the circumstances, as there was no time to build up the co-operative system, and the results were distinctly encouraging for a plan of a permanent character more akin to the Raiffeisen. In British Guiana, on the other hand, the scheme proposed last year by a Committee of the Combined Court was entirely of the Government order. The Committee felt the difficulty of securing co-operation and raising capital, and accordingly recommended the formation of a Bank as a Government institution. They suggested that loans should only be granted on approved security, though they realised that some persons desiring assistance might find it difficult to furnish it, and that the services of the Village Councils and Local Authorities might be utilised for obtaining information for the assistance of the Board of Management. The large areas and mixed population of the Colony, no doubt, make the Raiffeisen system impracticable, and the liability to both floods and severe drought put purely local schemes out of court. In Grenada, on the other hand, a recent committee recommended the system of Government advances to local societies in preference to the establishment of a Government Bank. "We have given," they said, "the proposals put forward on this subject the most careful consideration, for we believe the formation of a people's land bank would be productive of a great amount of good, and would lessen if not do away with many oppressive burdens on landowners with insufficient capital. The experience of the Government in the sale of land for unpaid taxes, in which instances frequently occur of valuable lands remaining unsold,

or being sold for insignificant sums, convinces us that it would be extremely undesirable for the Government to undertake to run a Land Bank. We see no reason, however, why the Government should not advance funds to local credit societies established on the principle of mutual unlimited liability of the members. It is this principle which is the secret of success in all the people's land banks in all the countries of the world where they have been established and are flourishing. This safeguard against the improper advancing of money is in our opinion as essential in Grenada as in any other country. The absolute security thus afforded to investors attracts money at a lower rate of interest than can be secured by almost any other organisation, and the members of the bank thus obtain the maximum benefit from their co-operation."

A more advanced form of Government encouragement is the purchase of estates and a scheme of land settlement under which the purchase price is spread over a number of years. This policy is suitable, generally speaking, to the great population of the West Indies, and at a critical period, intensified by a destructive hurricane, it was acted on in 1897 in St. Vincent. An Imperial grant-in-aid of £15,000 was expended on the acquisition of land, and plots were sold on payment of 25 per cent. of the valuation, the remaining instalments being spread over 12 years. The scheme has been a financial success, and is being extended. This plan is especially suitable when, as in the West Indies, the Government can give instructions as to the products and work of cultivation, as in this way it can ensure that the land is suitably worked.

The operations of an Agricultural Bank may extend beyond advances to settlers, and embraces schemes for the general benefit. Then supplies of necessities may be bought more cheaply by a central body, and in Barbados it is now proposed that the Agricultural Bank should raise the money acquired for a Central Factory and undertake its management. These branches of business are or may easily become somewhat speculative, and are outside the ordinary character of such a bank; in this country and on the Continent they are undertaken by separate co-operative bodies; but in undeveloped countries where co-operation is not easily arranged, such extensions of operation may be quite legitimate. It is now proposed in India to provide, by an amendment of the law, facilities for co-operative purchasing and production.

In this country the Board of Agriculture has a scheme for the establishment of Agricultural Credit Banks, which, it is understood, will receive the support of the ordinary banks, and will not require a Government guarantee in the first instance.

THE RHIO AND LINGGA ARCHIPELAGO.

The information that the Sultan of Lingga-Rhio and Dependencies, together with his heir presumptive, has been deprived of his rank and honours must have been received with great interest in the Straits Settlements and especially at Singapore, where a brisk trade is done in the products of the neighbouring islands and, consequently, the putting of the Lingga-Rhio house in order is a matter for congratulation. The story of this new *roi en exil* revives the memory of centuries of strife between the Portuguese, the Dutch, the English, the Malays and, last not least, the Bugis, an incessant battle for supremacy in that island-studded sea of contention until the Dutch settled permanently at Tanjong Pinang and Sir Thomas Stamford Raffles founded the rival city, which was to become, and has become, one of the world's chief emporia. It is here that British and Dutch Malaya meet, a week-end at Rhio giving a pleasant diversion to the inhabitants of Singapore, and *vice versa*, nothing being more marked than the contrast between the hustle and bustle of Tanjong Pagar, Johnston's Pier, Collier Quay and Commercial Square on the one side of the Straits, and the drowsy *aloon aloon* on the other.

The Residency Rhio and Dependencies comprises, besides a slice of Sumatra, more than a thousand islands and islets, most of them still *terra incognita*, scattered *banjaknja segantang lada*, to quote the Malay saying: as many as there are grains of pepper in a *gantang* (a measure of about $8\frac{1}{2}$ liter), over a surface of water 900 kilometers long by 840 kilometers wide. The population consists, at a rough estimate, of some 200 Europeans, 22,000 Chinese, a few Arabs, some 400 Cingalese, 80,000 Bugis and Malays. Many of the islands are not inhabited at all, others exclusively by Chinese, by Malays or Bugis, who generally keep close to the beach and whose more capacious dwellings are distinguished not only by sculptured ornament, but often, illustrative of their origin, by the roofbeam cut in the form of a ship's prow, or by vanes shaped

like their coasting vessels or fishing boats. Politically, Rhio with its dependencies is divided into the Government domain and the two vassal-states, Rhio-Lingga, and Indragiri, the latter on the main land of Sumatra. Under direct Government control are the territories Reteh, Gaoong, Igal, Mandah, Kataman and Danei of Indragiri, the island Bajan and the settlement at Tanjong Pinang. The island Loos belongs to the missionary society of Rotterdam which, however, has abandoned it. For purposes of administration we have the division in Lingga under an assistant-resident at Buton; Tanjong Pinang under a contrôleur; Basam under a contrôleur at Boyan; Karimon under a contrôleur at Tanjong Balei; Pulau Tudjuh under a Chinese lieutenant at Siantan; Indragiri under a contrôleur at Rengat. Lingga includes, besides Lingga proper, the island Singkep and the surrounding islets which produce principally gambir and pepper, mostly, if not all, exported to Singapore. The edible birds' nests of Saya are of high repute among Chinese gourmets. Salaya is known of old for its weapons, its cunning workers in iron, one of the mineral assets of the archipelago, with gold (found in Jamaya), antimony (found in Sirhasan), etc. Singkep yields tin in abundance and, thanks to the Singkep Tinmaatschappy, which, like the Billiton Company in the island of that name, exploits the wealth of this island in private enterprise, while the tin mines of Banka are a Government concern, it has been thoroughly explored; in fact, it is the only one of the Rhio and Lingga groups so far mapped out with something approaching to accurate topography.

The struggle for the mastery of those fine islands covers a very interesting, but too little known, chapter in the history of the relations between East and West, and is intimately connected with the past and the present of the Straits Settlements and the Federated States of the Malay Peninsula. In the early years of the 16th century the Portuguese cast longing eyes on Malacca, which became an apple of hot discord between them and the Dutch, the Malay potentates also being perfectly aware of its strategical value as the key to the waterway dividing their dominions in Sumatra and on the continent. The Portuguese took it in 1511; the Dutch took it from the Portuguese in 1641, with the assistance of the Sultan of Johor, a descendant of Sultan Mahmood who, when the Portuguese became too troublesome for him even in Bentan, had removed his capital to the South, out of their reach. After 1680 we find the Sultans of Johor rather restless, occasionally residing at Rhio, in consequence probably of their wars with Jambi. And Rhio was the residence of the usurper Abdul

Jalil Rajat Shah in the beginning of the 18th century, when the Bugis appeared on the scene, members of the widely spread Malay family, but quite distinct from the Malacca Malays. Sailing from their home in South Celebes to seek spoil and adventure in distant lands, they devastated the coasts of the Sunda islands as the Normans before them had plundered and made the red cock crow along the coasts of western Europe down to the Mediterranean and equatorial Africa. The full history of those intrepid "tigers of the sea" is still to be written, and the more pity that the late Dr. B. F. Matthes, our highest authority on their language, on the habits and customs of their descendants, whose country he knew so well, never put his hand to a work of the kind. Buccaneers *de primo cartello*, they established themselves in the Rhio-Lingga Archipelago as conquerors and developed a statesmanship of no mean order. They deposed Abdul Jalil Rajat Shah in favour of his son Suleiman, whom they gave a Viceroy of their own nationality, Daeng Cambodja, real ruler of the Sultanate.

The vicissitudes of Buginese power, with the Dutch East India Company intervening on the *divide et impera* principle, now inclined to uphold the authority of the Sultan and then again to back his masterful seneschal, might fill many a page of thrilling intrigue, terror and bloodshed. To be brief: Raja Ali, son and successor of Daeng Cambodja, sought and obtained the Company's protection against Raja Haji, another Bugi of noble birth who, after leading his gang of freebooters in several expeditions to the Malay Peninsula and the West Coast of Borneo, had assumed the viceregal dignity without worrying much about the consent of the then Sultan Mahmood, like his father a puppet in the hands of successive Buginese *maires du palais*. A force, sent out from Batavia, succeeded in defeating him, June, 1784, near Telok Katapang; he was killed in the engagement and Raja Ali reinstated. When van Braam, the commander of the victorious flotilla, began to treat directly with the Sultan, Raja Ali, however, turned against him and, the Dutch flag being hoisted at Rhio, this opposition resulted in the breaking of Buginese influence by the stipulation that the office of Viceroy should never more be occupied by a Bugi. Conquered Johor was henceforth considered a vassal-state of the Company, which erected a fortress at Tanjong Pinang and appointed a Resident to advise the Sultan in all matters of foreign policy—the fear of increasing British activity in that corner of the world may also have entered into the counsels at Batavia which prompted this settlement. Raja Ali, who had fled, offered his quasi-sovereign to free him from Dutch tutelage and in 1787 Tanjong Pinang was attacked by men of Solok in

his service. The garrison capitulated and withdrew, but in 1788 the Company's soldiers landed again in Rhio which they found deserted, both by the Sultan, who moved from island to island, and by his allies from Solok. After new feats of arms and new three-cornered negotiations between the Company and the leaders of Malay and Buginese interests, Sultan Mahmood was restored to the throne with his residence at Lingga, and Raja Ali to the viceregal rank and honours with his residence at Penjengat, just opposite Tanjong Pinang. When the Malay Archipelago returned to Dutch rule in virtue of the Treaty of London of 1814, Mahmood's son, Abd'arrahan Shah, was Sultan and Raja Ali's son Jafar was Viceroy. When the Dutch government renounced its claims to the Malay Peninsula in virtue of the Treaty of London of 1824, the former had consequently to renounce his claims to the part of his realm situated on the main land and since then, leaving Johor out, he and his successors have called themselves Sultans of only Lingga and Rhio and Dependencies, subject to orders from Batavia and Buitenzorg where their Viceroys or *raja's muda* were chosen from among the Buginese nobility, preferably scions of the house of Daeng Cambodja.

Things went well until Sultan Mahmood Muhtafar created difficulties at the death, in 1844, of the then Viceroy. He wished to abolish the charge, but his obstructive attitude tended on the contrary to the reduction of his own prerogatives by the ruling, when the appointment of a successor took place, in 1845, that the Sultanate should be governed from Penjengat, not from Lingga, which was another victory scored by the Buginese party. More trouble followed by Mahmood Muhtafar's meddling in the affairs of the Malay Peninsula, against the agreement of 1824, and British complaints thereanent led to his deposition in 1857. Repairing to Sumatra, he put himself in relation with Panglima Besar Suloong, chief of the Solok pirates, after whose dispersion he sought refuge with and died among his Malacca friends in 1864. These events induced the Dutch Government to revise the old contract with their vassal at Lingga, and on that concluded with Sultan Suleiman, who succeeded Sultan Mahmood Muhtafar, all the following ones have been founded, though revised again and again to suit new conditions, in always narrower limitation of the native rulers' ancient rights, as customary in agreements with independent and semi-independent or dependent princes and princelings. The Viceroy Muhamad Yosoof, meanwhile, had shown himself more and more restive in his subordinate position, intriguing for a separation between the Lingga and the Rhio group, of which latter he aspired to become the sole master, discarding

even the fiction of a supreme lord at a distance. Plots and counter-plots took an unexpected turn at the demise of Sultan Suleiman in 1883, no eligible heir being available. The oldest son of the Viceroy, Muhamad Yoosoof, was made Sultan and invested on February 18th, 1885, under the name of Abdul Rahman Maadlam Shah. This preferment of a Bugi to the Sultanate, regardless of the claims of the descendants of Abdul Jalil Rajat Shah, the *anaks raja* of Singkep and other claimants, regardless also, it must be said, of treaties and promises, terminated the Malacca Malay dynasty to the intense discontent of the Malays *par excellence*. Persevering Buginese diplomacy had at last attained its goal and the anomalous situation of Muhamad Yoosoof at Penjengat, acting as *jang di pertuan muda* for his son, the Sultan at Lingga, came to an end in 1899 by the former's death. Ali Kelana, a younger son of the last incumbent, renounced his claims to the viceregal dignity and Sultan Abdul Rahman Maadlam Shah was invited to remove to his late father's *astana*, nearer the watchful eye of the Dutch Resident.

During the long negotiations which preceded the substitution of the old contract of 1857 by a new one, a strong party, composed of the native nobility, had caused a good deal of obstruction. Their interest was bound up with the vicious conditions which the Government tried to ameliorate. Sultan Abdul Rahman Maadham Shah, succumbing to their influence, wavered continually in sanctioning the implied reforms, in several instances went back on his word, given at his investiture, and neglected on occasions of gala to hoist the Dutch flag, forgetful of his obligations. Severely reprimanded, first by the Resident and afterwards by the Governor General at the audience granted to him when he had asked permission to travel to Java for a personal explanation, he consented at last, May 18th, 1905, to sign the new contract. This agreement, however, was not based on the principle of distinction between the personal income of the Sultan and the assets of the Sultanate, in other words, on the institution of a civil list apart from the revenue reserved for public works and, generally, for improvements planned to benefit the Sultan's subjects, in accordance with the contracts signed by or in preparation for the independent and semi-independent princes of the East Coast of Sumatra. The Sultan's desire to have his favourite youngest son, Tengku Umar, designed as Tengku Besar or heir presumptive, was used to make him approve of the proposed changes, at least to give them his consideration. But the party in opposition to the Government began to get the upper hand in the counsels at Penjengat, where they found a willing instru-

ment in Tengku Umar, while the Sultan himself revealed his recalcitrant disposition by neglecting again to carry the Dutch flag in April, 1910, when travelling in his motor-boat, and to hoist it, in May, 1910, when entertaining the Raja of Trengganu at Daik. Admonished by the Resident de Bruyn Kops, he not only apologised, but promised to sign the amended agreement, and actually did so, October, 1910, in the presence of the Resident and other Dutch officials, assembled for the purpose with the native dignitaries of the Sultanate. Yet, two months later, December, 1910, when steaming from Tolop to Penjengat, the Dutch flag was absent once more from the masthead of the *Sri Daik*, on board of which he made the voyage. The Resident having requested him to order the Amirs of Reteh, Gaoong and Mandah to appear on a certain day at Renget, he ordered them, on the contrary, to repair to Penjengat, etc., etc., a long list of delinquencies and acts of contumacy, which showed that, instead of obeying the Dutch Government as a faithful vassal, he rather made himself the tool of Raja Ali, Raja Hitam and Raja Abdulrahman Ketjil, ring-leaders of the faction hostile to reform, reason why the Governor-General of the Dutch East Indies saw fit, by resolution of February 3rd, 1911, No. 1, to depose him from his rank as Sultan of Lingga-Rhio and Dependencies, at the same time abrogating the resolution of May 17th, 1908, No. 5, by which Tengku Umar, his third legitimate son, had been acknowledged as his future successor, under the title of Tengku Besar.

When the resolution and the warships, sent from Batavia to enforce its contents, arrived at Rhio, the Sultan happened to be at Lingga, while his son Umar, the Tengku Besar, was at Penjengat. Both, having been summoned to Tanjong Pinang, failed to appear; the former excused himself on the ground of bad weather and a contrary wind, the latter on the ground of illness. Meanwhile, troops were despatched from Tanjong Pinang to occupy Penjengat, and a contrôleur, accompanied by a detachment of thirty men, went to Lingga, carrying a letter from the Resident to acquaint the Sultan formally with his deposition. Everything remained quiet, peace was nowhere disturbed, and when his Highness at last repaired to Penjengat, the Resident having crossed from Tanjong Pinang to meet him, he received oral confirmation of the message from Batavia, delivered the insignia of office and left shortly after with his whole family for Singapore. There he complained in a letter to the *Straits Times* that the Dutch Government had tried to impose upon him in the matter of still another new contract, the one laid before him for his signature on December 26th, containing stipulations, he alleged, quite different from

those he agreed to, being calculated to deprive him of all his power. Asking for less onerous terms, the only answer had been his deposition, which he ascribed to the desire of defrauding him of his revenue from the tin mines in his dominions and valuable agricultural concessions. Concerning the succession, the Government at Batavia wished to substitute one of his grandsons for his son Tengku Umar as heir apparent, but he refused to confide the child to the care of the Dutch officials.

However this may be, the change from Malay to Buginese sway in the name as well as in the deed, has evidently not resulted in the expected improvement either in the mutual relations between the Dutch Government and the Sultanate or in the status of the native population, demoralised by centuries of spoliation, harried and oppressed by their chieftains, Buginese and Malay, among whom, except those already named, the expelled Tengku Mahmood made himself conspicuous, like Tengku Ali, a brother of the Sultan, who resided at Singapore where he, the Datu of Siantan, the *raja's* of Pulau Tudju, etc., spent with a free hand what money their agents exacted from their serfs in the islands. Every step taken to rescue these people from the bondage of Sultans and Viceroy, each with a numerous train of unscrupulous relatives, *anaks raja* and other dependents, to bring them under direct control of the Government, is a step towards the betterment of their lot, towards the development of the resources of the Rhio and Lingga Archipelago, towards the increase of shipping and trade. The tardy act of the Dutch Government, punishing Sultan Abdul Rahman Maadlam Shah for his violation of the agreements entered into and his defiance of Dutch authority, depriving him and his heir presumptive of their respective ranks and honours, means something more than the satisfaction of Malacca Malay versus Buginese pride. It means, apart from the natural inclination of the Malays of bluest blood to regard the failure of Buginese overlordship as a visitation for the iniquity of sacrificing Malay rights to Buginese presumption, that a wide region is gradually reclaimed from mismanagement and lifted to a higher plane of progress and prosperity, which must redound to the good, not only of the Dutch East Indies, but also of the neighbouring colonies.

J. F. SCHELTEMA.

BRITISH GUIANA UNDER DUTCH RULE.*

The preparation of the British case in the arbitration proceedings, first with Venezuela, and afterwards with Brazil, by which the present frontier of British Guiana were determined, involved a vast amount of historical research most painstaking in character, and most fruitful in results. English, Spanish and Dutch records were ransacked and much previously unknown material was brought to light. But the mighty volumes in which the results of all this labour are enshrined are not within the reach of the ordinary reader. Even the student who has access to one of the few libraries in which they are to be found may well be appalled at the vast mass of material presented to him. Mr. Harris and Mr. de Villiers, to whose labours the satisfactory outcome from the British point of view of the two arbitrations above mentioned was very largely due, have done well to present to a wider, though still somewhat restricted, circle of readers this sample of the historical discoveries which were incidental to their official labours.

Laurens Storm Van's Gravesande well deserves a place of honour among the worthies of the British Empire, for their number is not to be restricted to those who actually served the British Crown. Canada still takes pride in Champlain, Frontenac and Montcalm; South Africa in Van Riebeck, Piet Retief and Brand. British Guiana may well rejoice in the reawakening of the memory of a son who served her well and truly under the Dutch flag. Born in 1704, at 's Hertogenbosch in Holland, he went out to Essequibo in 1737 in the service of the Dutch West India Company as secretary and book-keeper, though his previous service had been in the army. Five years later he became Commander, a position corresponding to that of Governor at the present day, and which was subsequently

* *Storm Van's Gravesande: The Rise of British Guiana*.—Compiled from his despatches by C. A. Harris, C.B., C.M.G., and J. A. J. de Villiers, of the British Museum. Two Volumes. Printed for the Hakluyt Society.

enhanced in dignity by the change of the title to that of Director-General. He continued to hold this office until 1772, and during that period only visited Europe once, being absent from the Colony for some two years altogether. On surrendering office, he retired to his plantation of Soestdijk in Demerara, and died there in his seventy-first year in 1775. For thirty-eight years he was thus closely identified with the life of the Colony, which was to fall into British hands for the first time some six years after his death, though the present occupation dates only from 1803 and the formal title only from 1814. The selection from his despatches here printed gives a complete picture of the life of the Colony, and brings the writer himself very near to us, and the editors have done well to include in the introduction a sketch both of its earlier and of its later history, the latter including a convenient account of the stages by which its frontiers were determined and delimited. British Guiana to-day retains abundant traces of the period of Dutch rule. The law is still Roman-Dutch. The "regulations of Their late High Mightinesses the States of Holland" may still have to be quoted in its Courts. Its constitution, unique in the British Empire, continues with but little modification the old Dutch system. Its architecture and town-planning, its methods of drainage and irrigation, the names of its plantations, all recall the old Dutch days. By way of contrast, it is interesting to find how largely English capital and energy was interested in it already in Storm's time. Many plantations were in English hands. Demerara, an off-shoot from the older Colony of Essequibo, seems to have been almost predominantly English from the first. A large part in its development was played by one Gedney Clarke, of Barbados, who, from the scale of his operations, must have been a veritable prince among planters. In 1764, when a revolt of the slaves had for the time being reduced the neighbouring Colony of Berbice to ruin, it was Clarke's promptitude in sending help from Barbados which was, to use Storm's own words, "after God, the salvation of Demerara." But Storm's feelings towards his English fellow-colonists were, to say the least of it, mixed. He found them to be inveterate smugglers of slaves, and disposed to treat with little respect constituted authority which had a very inadequate backing of force. Still, he found it necessary to have English planters in the Court of Policy, and defended the practice by referring to "Dutch families like the Bentincks, the Keppels and others even in the House of Lords." The Director-General had many and various troubles to contend with in his long term of office. Besides the serious rising of slaves in the neighbouring Colony of Berbice, to which refer-

ence has already been made, there were spasmodic outbreaks in Essequibo and Demerara, one of the most serious occurring at the very end of his time. They were due in part, at least, to the habitual cruelty of some of the planters, against which Storm, a humane man, set his face as firmly as circumstances allowed. With the Indians, his relations were almost uniformly friendly, and he employed them as useful allies not only against deserting slaves, but also on occasion against the Spaniards whose repeated encroachments, actual and threatened, were a constant cause of alarm. But the worst difficulty with which he had to contend was that caused by the niggardly policy of the Dutch West India Company which constantly kept the Colony in a half-starved condition, and left him to support unaided the burden of a strange multiplicity of offices. Their interest in the Colony was that of traders and merchants, and even so, they allowed a shortsighted policy to frustrate the opportunities for profitable development. For many years Storm appealed in vain for his discharge, and his later despatches are pathetic in their reiterated demands for relief from the burden of labour which physical infirmities rendered intolerable. "A starving beggar," he writes, "cannot long for a crust of bread as I long for the arrival of my successor." With advancing old age, Storm, always a ready writer, developed a habit of what can only be described as garrulity. The eighteenth century was a period of leisurely and long-winded composition, but even in that period Storm's despatches with their odd medley of Latin and French quotations are a curiosity. Once, at least, the Directors took him to task for dealing with so many topics in a single communication, and asked for separate despatches on each subject in accordance with the best practice in our modern days of the Colonial Regulations. But the old Director-General was incorrigible. "Your Honours' suggestion," he replies, "that I should split up my letters into several smaller ones is a very useful one, and might, if carried out, prove most convenient, but kindly consider, Your Honours, how difficult it would be for me (especially now, at the end of my term of office) suddenly to alter my custom. *Recens imbeuta servat odorem testa diu*. Secondly, if I were to write a separate letter concerning each specific subject, Your Honours would have a great deal more to read than at present, since, in order to avoid being voluminous, I express myself as briefly as possible, whilst in the other event I should certainly write more fully and circumstantially, for when I once begin to argue in my letters I cannot stop myself and must adduce all that is pertinent to the subject." We are not told how the Directors took this, but we may conjecture that they gave it up. The

following is a good example of his leisurely style. "The New Year having commenced I have the honour to wish Your Honours every possible happiness, blessing and good fortune in the course of the same, and in a long series of following ones. I hope that the Omnipotent Creator and Ruler of the Universe may shower in full measure upon Your Honours' persons, families and government His dearest blessings, both temporal and spiritual. May He grant Your Honours unfailing health, perfect peace and prosperity in all Your Honours' undertakings, in a word, all that can be desired by us mortals here in this sublunary and hereafter in His Eternal Realm." Not so does the modern Governor address the Secretary of State, though we do not doubt that his sentiments are equally amicable. But for all his valour with the pen, Storm was essentially a man of action, and in every time of crisis he rose to the needs of the occasion. In particular, he showed a proud front to the Spaniards, and deserved a better backing than he got from his masters. Storm was a whole hearted adherent of the old doctrine of Colonial policy. "That the interests of the Colonies must be subordinate to those of the mother country is so self-evident a principle that I do not think it is possible for anyone to doubt it." But he reminds the Dutch West India Company (who stood in need of the admonition) that the obligation is not all on one side. "If there be a duty, and an unshirkable duty, on the part of children towards their parents, there is also a duty incumbent upon parents towards their children—they are compelled, whilst the latter are young, to feed and cherish them, and when grown up to seek and to further their welfare." Had Storm lived to-day, he would have been an advocate of the "interchange of officials." He is fond of repeating that "in order to have West Indian understanding one must have been in the West Indies." At times he can be delightfully philosophical. "This Colony resembling Noah's ark, in which were clean and unclean beasts, by its mixture of all tongues, races and nationalities, patience and forbearance, so far as circumstances permit, are the best qualities to cultivate." Storm lives for us in these pages as an honourable and disinterested man, gifted with a many-sided ability and carrying out, with very slender resources, a variety of tasks beyond the reasonable capacity of any single official. We are grateful to Messrs. Harris and de Villiers for having introduced him to our acquaintance and we cannot leave the book without a word of praise for the excellent English style in which the despatches are rendered.

REVIEWS AND NOTICES.

The American Colonies--1583-1763. By A. WYATT TILBY, 2nd edition. (*Constable & Co.* 4s. 6d. net.)

In the Middle Ages the national characteristic of the English was considered by their neighbours to be independence of character. The quality was by no means always admired by the leaders of thought and action. Froissart said plainly that the English were the worst nation in the world, because they asserted liberties which made them insolent towards those whom Providence had placed over them. No doubt the wanderer on the continent and on the seas showed a spirit of freedom which easily allied itself to turbulence and aggression. The first Colonies were pervaded by the national disposition. The New England Settlements never were Colonies in the usual sense of the word. They represented not an extension of England, but a revolt from it. Almost from the first they protested their independence. They conducted their own affairs, and their nominal rulers, however much they resented it, were on the whole helpless. Other colonising countries repressed these local ambitions. They had a ready-made system and carried it everywhere. England alone had no system and took little pains to enforce her authority. The irony of the matter is that the countries which studied systems failed, while the one country which neglected system succeeded. It would be unjust, however, to our ancestors to ascribe this neglect to want of interest or intelligence. Local administration had been ingrained in this country for centuries, and it was continued in the Colonies in the ordinary course. The difference which this made in the popular feeling, as compared with that in foreign settlements, was very marked. Thus the Dutch settlers of New Netherlands saw with envy the freedom of the English, and when the opportunity came they went over to them without striking a blow.

The history of the first century and a-half of the American Colonies turns largely on this practical test of systems, and on

the vicissitudes of European politics. It is admirably presented from this point of view by Mr. Wyatt Tilby, who gives a clear but compact explanation of the European politics and movements which affected North America. Occasionally an anticipating reflection on the current results is more open to criticism. Thus exception may fairly be taken to the statement that the remainder of the history of the West Indies, after the great wars, "offers little but gloom—a gloom that is the more depressing with the brightness of their past, and the ideal beauty of their situation." This mournful dictum does not recognise the recent economic improvement, which is to a great extent substantially based on the growth of a peasant proprietorate. Of Mr. Tilby's style in his proper field, the following may be given as an example:—

"Each of the southern colonies had sprung from a different impulse. Virginia was the child of the Elizabethans. Maryland was the forerunner of an age of toleration. The Carolinas represented in miniature the greedy and the philosophic forces that mingled grotesquely at the Restoration. Georgia, again, was the firstfruits of the philanthropic eighteenth century. The four differed fundamentally from each other at their foundation and for many years after; yet did the chain of circumstance envelop them, and a common want produce a common interest. Tobacco was the product of the two first; rice and cotton of the two last. For all, negro labour was cheaper and better than white: and negro labour accordingly was procured.

"A further tie that bound them together was a common danger that now threatened from without. The French were blocking the way inland: the Spaniards prevented expansion southwards, and indeed claimed the very soil on which they stood. The great colonial wars were at hand, which taught all the English dependencies in America to sink their differences for a time, and stand together. And in these wars vanished almost the last of the distinctions which had been so carefully planned: the southern colonies already formed the nucleus of the 'solid south' that nearly wrecked the United States a century later."

The Tragedy of Quebec. The Expulsion of its Protestant farmers. By ROBERT SELLAR. Third Edition. (*Toronto: Ontario Press, Limited.*)

This volume is a powerful, and even bitter, statement of the case against the Roman Catholic Church in Canada. Mr. Sellar embarks on an elaborate study of Canadian history, with much reference to the original documents, with the object of showing that there has been a continuous encroachment by the Catholic Church upon the rights of the civil power. That church appears

to him to have succeeded in obtaining under British rule privileges and authority greater than any which it enjoyed under the French Kings. He sees a steady retrogression from the original Terms of Surrender which conceded to Catholicism nothing more than toleration, and provided for the establishment of English law. By the Quebec Act a fatal mistake was, he thinks, made in conferring upon the church the power to levy tithes and other dues, and preserving French law. But even the Quebec Act limited the scope of these provisions to the seigniories. It was the Act of 1841, which, by placing the balance of power in the hands of the Quebec members, rendered possible the extension of the parish system, with its anomalous attendant of clerical taxation, beyond the seigniories, led to the recognition of French as an official language, and forced a system of separate schools upon Ontario. Mr. Sellar sees the undeviating policy of a church, persistently followed generation after generation, achieving by direct and indirect means a succession of victories over vacillating governors and divided politicians. He sees Quebec converted into a priestly stronghold, and clerical ambition extending its scope into the other provinces. It should be made clear that his attack is directed not against a race, but against a religion, or rather against a church. "A French Quebec," he writes, "free in thought and action, would be no menace to the Dominion; a Papal Quebec is, for it stands for a power that is not working for the common good, but for a church; which is not seeking to exalt our country by strengthening its unity, binding man to man in the bonds of common interests and of a common brotherhood, but schemes to keep them asunder, to set race against race, and by every art and means within its reach, to obtain more influence, more power for an organization of ecclesiastics who draw their inspiration from a foreign country and a foreign court." It is a curious incident in history that the church which has been so ruthlessly shorn of its powers in France, should retain, in France's old Colony under the British flag, a position of acknowledged predominance. We are compelled to regard Mr. Sellar's book as a somewhat exaggerated presentation of the facts. His view of history is too one-sided to be complete. But he writes earnestly and with conviction, and throws much interesting light on aspects of Canadian life which are little known in England.

The Golden Land; the true story of British Settlers in Canada. By A. E. COPPING. (*Hodder and Stroughton.* 6s.)

A number of books have been issued recently to explain the attractions of Canada, and how the immigrant can profit by

the vicissitudes of European politics. It is admirably presented from this point of view by Mr. Wyatt Tilby, who gives a clear but compact explanation of the European politics and movements which affected North America. Occasionally an anticipating reflection on the current results is more open to criticism. Thus exception may fairly be taken to the statement that the remainder of the history of the West Indies, after the great wars, "offers little but gloom—a gloom that is the more depressing with the brightness of their past, and the ideal beauty of their situation." This mournful dictum does not recognise the recent economic improvement, which is to a great extent substantially based on the growth of a peasant proprietorate. Of Mr. Tilby's style in his proper field, the following may be given as an example:—

"Each of the southern colonies had sprung from a different impulse. Virginia was the child of the Elizabethans. Maryland was the forerunner of an age of toleration. The Carolinas represented in miniature the greedy and the philosophic forces that mingled grotesquely at the Restoration. Georgia, again, was the firstfruits of the philanthropic eighteenth century. The four differed fundamentally from each other at their foundation and for many years after; yet did the chain of circumstance envelop them, and a common want produce a common interest. Tobacco was the product of the two first; rice and cotton of the two last. For all, negro labour was cheaper and better than white: and negro labour accordingly was procured.

"A further tie that bound them together was a common danger that now threatened from without. The French were blocking the way inland: the Spaniards prevented expansion southwards, and indeed claimed the very soil on which they stood. The great colonial wars were at hand, which taught all the English dependencies in America to sink their differences for a time, and stand together. And in these wars vanished almost the last of the distinctions which had been so carefully planned: the southern colonies already formed the nucleus of the 'solid south' that nearly wrecked the United States a century later."

The Tragedy of Quebec. The Expulsion of its Protestant farmers. By ROBERT SELLAR. Third Edition. (*Toronto: Ontario Press, Limited.*)

This volume is a powerful, and even bitter, statement of the case against the Roman Catholic Church in Canada. Mr. Sellar embarks on an elaborate study of Canadian history, with much reference to the original documents, with the object of showing that there has been a continuous encroachment by the Catholic Church upon the rights of the civil power. That church appears

to him to have succeeded in obtaining under British rule privileges and authority greater than any which it enjoyed under the French Kings. He sees a steady retrogression from the original Terms of Surrender which conceded to Catholicism nothing more than toleration, and provided for the establishment of English law. By the Quebec Act a fatal mistake was, he thinks, made in conferring upon the church the power to levy tithes and other dues, and preserving French law. But even the Quebec Act limited the scope of these provisions to the seigniories. It was the Act of 1841, which, by placing the balance of power in the hands of the Quebec members, rendered possible the extension of the parish system, with its anomalous attendant of clerical taxation, beyond the seigniories, led to the recognition of French as an official language, and forced a system of separate schools upon Ontario. Mr. Sellar sees the undeviating policy of a church, persistently followed generation after generation, achieving by direct and indirect means a succession of victories over vacillating governors and divided politicians. He sees Quebec converted into a priestly stronghold, and clerical ambition extending its scope into the other provinces. It should be made clear that his attack is directed not against a race, but against a religion, or rather against a church. "A French Quebec," he writes, "free in thought and action, would be no menace to the Dominion; a Papal Quebec is, for it stands for a power that is not working for the common good, but for a church; which is not seeking to exalt our country by strengthening its unity, binding man to man in the bonds of common interests and of a common brotherhood, but schemes to keep them asunder, to set race against race, and by every art and means within its reach, to obtain more influence, more power for an organization of ecclesiastics who draw their inspiration from a foreign country and a foreign court." It is a curious incident in history that the church which has been so ruthlessly shorn of its powers in France, should retain, in France's old Colony under the British flag, a position of acknowledged predominance. We are compelled to regard Mr. Sellar's book as a somewhat exaggerated presentation of the facts. His view of history is too one-sided to be complete. But he writes earnestly and with conviction, and throws much interesting light on aspects of Canadian life which are little known in England.

The Golden Land; the true story of British Settlers in Canada. By A. E. COPPING. (*Hodder and Stroughton.* 6s.)

A number of books have been issued recently to explain the attractions of Canada, and how the immigrant can profit by

them, and in all of them prospects and possibilities are set out in most alluring manner. One of the best is "The Golden Land," written by an experienced journalist, who can describe things with a practical hand, and can also, as is the characteristic of his tribe, put himself in the position of the persons for whom he is writing, and find out what they most want to know. The details of the steerage passage and the railway journey are faithfully reproduced, and would unquestionably enable emigrants to avoid much inconvenience. The figures by which indigent newcomers are converted into prosperous farmers are given with much detail. A man who has, as he should, even if he has capital to begin with, worked on a farm for at least one season, can start with a capital of £100, which sum he could save in two seasons' work.

"All he would have to buy at first would be three oxen, costing about £50, a plough (£15) and a disc harrow (£7). He could, if he liked, pay by instalments for the plough and harrow, and later on for fencing wire. Of course he would build his own shack and stable, the only expense being a pound or so for tools and nails and getting the timber sawn. Then there is the cost of living. They mostly find it worth while to get a few fowls and a cow. You can buy a fine three-year cow, after her first calf, for £5 or £6—in fact, the poorest people about here keep three or four cows. It means a lot of hard work to break the land, and three months' residence on the quarter-section is, of course, compulsory. But the right sort of man would still find time to work for his neighbours and earn a bit of money that way."

"What would he have to buy in the second year?" I asked.

"The chief thing would be seed. For he could make do with his oxen for ploughing. If he worked hard the first year, he ought to have forty acres ready. He must make his first payment for a seeder, which costs £16. Sowing is done from the 15th to the 30th of April—sometimes you can go into May. By the middle of August he must get a binder (£30); and his first crop ought to be a thousand bushels, which would bring him in £160, less £12 for threshing. Meanwhile he will have been breaking more land, to be ready for a larger acreage in the third year. So now he must sell his oxen, which will be too slow for the ground he has to cover; and when the weather opens he must buy three horses. They will cost about £90; but it's no use shirking that expense—you must have proper power. He has got to get through somehow until harvest, when he will receive about £300. From that time, you may say, he has turned the corner, for the debts on machinery will soon be paid off, and every year will see an increase in his acreage and live stock.

Once he has got his quarter-section fairly going—well, he can buy more land, start a business, and go ahead as much as he likes, the same as anybody else.”

“And his homestead will have acquired a substantial value?” I suggested.

“It will be worth,” Donald explained, “anything from £800 upwards, according to the sort of house on it. And do you know,” he added, “that an unbroken quarter-section which costs nothing is a much dearer investment than a quarter-section under cultivation that costs £800? In the one case you have to face the early years of development, the terrible hard work, and the small returns; in the other case you get full harvests from the start—I have even known the first year’s crop to cover the total cost of the land. My advice even to the man who arrives with only a few hundred pounds is—buy; don’t take up a free homestead.”

That these figures have a substantial basis is testified to by the number of farmers who have made a comfortable position. No doubt the life is hard and rather lonely, and we do not hear much in this kind of literature of the cost of living or the difficulties. The conditions, however, make for economy, and there is no doubt that Canada is giving a magnificent opportunity to great numbers of people who see no opening in this country. The Salvation Army, by dint of trying to find better occupation for the submerged classes, has become the greatest emigration force in the world, and it is an edifying fact that it secures a much higher ratio of repayments of assisted passages than do the various Committees. The wide organisation and personal supervision account for this. Several charitable bodies sent out men in shiploads, but with so little selection or subsequent attention that the failures were numerous and lamentable, and an indignant public opinion led to the restrictions of 1908. Now the standard is higher all round, and we are not likely to hear much more of the complaint of undesirables. A pleasing feature is the remarkable success of the boy emigrant from Great Britain. 95 per cent. prove quite satisfactory, a much higher proportion than in the case of any other class—fine proof that there is something yet in the Mother-Country.

Empire Builders in Australia; Early Days in New South Wales, Victoria and South Australia. By EDITH RALPH.
(*T. Fisher Unwin.* 5s.)

The settlement of Australia practically began with the loss of the North American colonies, and no doubt its progress would have been greatly retarded if that event had not taken place.

Up to the date of the War of Independence the desperate men who were plentifully produced in this country by severe laws could be sent to work in Virginia. The result of the war ended this expedient, and England looked elsewhere. The Government decided, largely on the advice of Sir Joseph Banks, who gave evidence before a committee, to try Australia as a dumping place for the criminal. This was only eighteen years after the landing of Captain Cooke in Botany Bay in 1770. No less than eleven ships were despatched together with the first batch of convicts, a number which seems to show that there had been a considerable accumulation of undesirables.

Unfortunately the authorities brought with them the heavy punishments and penalties which were in vogue at home, and for several years the progress was slow and the outlook unpromising. But gradually, in spite of harsh Government and bad characters, the wide country did its work. Emancipists and free settlers steadily did the rough work, while at home the war with France was raging. In one respect the character of the settlement was very different from that of the North American colonies. There was nothing political or religious about it. In those days Australia was in the diocese of Calcutta, and General Darling, in 1825, was the first Governor who attended divine service regularly. The first clergyman certainly laboured under difficulties. An example of them is shown in the following extract, which, however, incidentally explains the origin of one of Australia's successful industries.

"A naval captain, with strong ideas on the subject of discipline, Governor Hunter looked upon this little church, though built entirely at the parson's own cost, as another means of preserving order among the convicts, and commanded that they should attend service. They obeyed, but very unwillingly. It seemed like an infringement of their rights to order a part of Sunday to be thus occupied. The Governor and officials holding aloof from the services, the convicts simply regarded them as another badge of servitude and therefore another grievance. The discontent grew. Sunday after Sunday the congregation assembled with black looks and lowering brows in the poor little church; till at last the malicious thought occurred to one of them, that if there were no church there could be no prayers.

"One summer day, when the unsheltered beams and rough branches composing the little sanctuary were hot from the burning rays of the semi-tropical sun, a light was applied to one corner by a sacrilegious hand, and in an hour only a heap of ashes was left to mark the spot where it had stood for four years, the convicts chuckling as they passed the smouldering embers.

"But their triumph was short. Governor Hunter, furious at

what he considered a breach of discipline, determined to inflict a new and appropriate punishment; for lashes or imprisonment were inadequate here. It chanced that a Government store, built of stone, was in course of erection; this should be finished immediately as a church; it would do for a store some day, the Governor reflected; and the convicts should now attend service *twice* a day, instead of once, as formerly! So the services were more hated than ever. Moreover, the building was so damp and chilly in the winter that Mr. Johnson's health at last broke down, and in 1800 he was forced to return home.

"To the very last his work was opposed in every possible way. Soldiers would noisily play cards close to the church door during service. The time allotted to this was also made so short that the poor chaplain could scarcely get in a few words of instruction or exhortation. Orders would be given that service should commence at 6 a.m., and only last three-quarters of an hour. Accordingly Mr. Johnson left out the hymn, he sadly complains, that he might preach a short sermon; which, however, he had scarcely begun when, it being 6.45, the drums beat outside loudly, and, with one accord, the whole congregation rose and left. Moreover, he and the colleague who had assisted him for the last few years were insulted in the streets, as well as hindered in the performance of their duties. What wonder, that in frail health and with treatment such as this, Mr. Johnson felt that his days of usefulness in the colony were over.

"For some time he had not been entirely dependent on his small stipend, as land had early been allotted to him in a favourable spot, on the main road leading to Parramatta, where the suburbs of Camperdown and Petersham now stand; and here he cultivated orange trees with great success and profit, as, being the only oranges to be had, they fetched as much as 6d. to 9d. each.

"On the way out, Governor Phillip's fleet had made a stay of a month at the port of Rio Janeiro, and large quantities of oranges were brought on board. The astute chaplain was the only one of all those enjoying them who thought of saving the pips, thinking it possible that the climate of Australia might be favourable to their growth. To the same hand, therefore, Australia owes the introduction of one of her most successful cultivated fruits, as well as her first church."

There was, however, at any rate, one religious movement to Australia, but it was from a foreign country, and was the outcome of the dissensions between the two Protestant bodies in Germany, the Lutheran and Reformed Churches. The King of Prussia had commanded both to use the same liturgy, that of the Reformed Churches, and this led to the emigration of many

Lutherans to South Australia. Evidences of the settlement are still clear.

“The first German settlement was about two miles north of Adelaide, in the valley of the Torrens; but as other vessels, bringing large numbers of their co-religionists, arrived, their borders were extended. The third ship, the *Zebra*, with one hundred and ninety-nine emigrants, was commanded by Captain Hahn, who, on arrival, endeavoured to procure more land from the authorities, pleading the cause of his countrymen with such success that 150 acres of the Mount Barker district were appropriated to their use, besides other assistance being given them. The name of the village of Hahndorf bears testimony to the gratitude felt by the Germans for the good captain, who had thus interposed on their behalf. The pointed gables of the houses on either side of the village street, the German appearance of the inhabitants, and the names on the sign-boards, make one feel, in driving through Hahndorf to-day, as though suddenly transported to the Fatherland. This thought is dispelled, however, the moment the village is left behind, and one passes again into the Bush with its gum trees and wattles, that ‘Bush’ that no other land but Australia could produce.”

Another curious instance of transplantation was that of the willow trees of which a traveller visiting the tomb of Napoleon at St. Helena took cuttings, and when planted in Australia they were particularly successful. The continent was remarkably deficient when discovered in useful fruits, trees and grain, but it is no less remarkable in the prodigality with which imported varieties are grown. In one private garden near Adelaide no less than twenty-three kinds of fruit are successfully grown.

From the point of view of constitutional history Australia was slow to make progress, and one does not find in its early records the assertiveness of the North American settlers and the continual disputes with the home Government. This, no doubt, was largely due to the greater distance and infrequency of communication. When, however, the movement for representative institutions set in it went on fast. A council was elected for New South Wales in 1843. For some years Victoria, or, as it was then known, Port Phillip, was supposed to be represented on it, but as Sydney was 500 miles away they could not send their own representatives, and had to elect residents of Sydney. In 1848, they resorted to a felicitous expedient. By an enormous majority they elected Earl Grey, the Secretary of State for the Colonies. It is said that the Earl was greatly bantered over this selection, and, at any rate, it brought about what petitions had failed to accomplish. Victoria got its representative Government. The following year gold was discovered.

Much as many years later the gold boom in Western Australia followed the grant of responsible Government. Soon afterwards a similar constitution was granted to Southern Australia. It is stated that on the arrival of the vessel bearing the charter a deputation came down to receive it with fitting honour. It was, however, not to be found. The disappointed deputation had to return without it. Later on, it was found in the captain's soiled linen bag, where, doubtless, it had been stowed away for safe custody.

The story of the pioneering days has often been told, but the present volume gives an exceptionally interesting account of them. The early explorations and the hardships of the settlers are graphically set out, and the manners and modes of life of the blacks are described with a detail which bespeak personal observation.

The First Decade of the Australian Commonwealth. A Chronicle of Contemporary Politics. 1901-1910. By HENRY GYLES TURNER, Melbourne. (*Mason, Firth & McCutcheon.* 9s.)

There are probably as many ways of writing history as there are of composing tribal lays, and there is something to be said in favour of most of them. But there are, in particular, two strongly contrasted methods, which have the merit of being complementary to one another. There is the method of the chronicler, who sets down facts in an orderly sequence as they occurred; and there is the method of the historical philosopher, who analyses the stream of events, not into facts, but into tendencies, providing his readers with a series of essays on different aspects of his subject rather than with an exhaustive chronological narrative. From writers of the latter type, Australia has received at least her due share of attention. She has been officially reported upon for the benefit of the British Government, and the United States Government. She has been described and appraised by the peripatetic journalist. Her industrial experiments—so inseparably connected with her politics—have been weighed in the balances and either found wanting, or found to be all that could be desired, according to the political and economic complexion of the observer at the scales. The writing of contemporary history is always a difficult task, and in the case of a new country, still to some extent in the experimental stage of politics, the difficulty of forming a right estimate of "movements" which have not yet reached their goal, and "tendencies" still imperfectly developed is almost insuperable. Mr. Turner has, we think, been well advised not to add a further volume to this particular section of literature. Instead of doing

so, he has compiled in narrative form an account of the political history of the first ten years of the Commonwealth, and, in so doing, has produced a book which will not cease to be valuable even should time refute many of the judgments expressed in its pages. Mr. Turner's subject is Parliamentary history, and he sticks to it with a tenacity which must have involved a considerable degree of self-denial. For he is not one of those who see in Parliamentary history the sole matter of importance in the life of a nation. Those who have spent a strenuous lifetime in the political arena often undervalue the importance of what takes place beyond its circumference. But Mr. Turner is not a politician. He has never attended a Parliamentary debate. He "counts a few Federal Members among his personal friends, but he has sedulously avoided discussing political questions with them." Sustained by a sense of duty and a consciousness of disinterested sincerity, he has wandered through the wilderness of Parliamentary oratory from one distant oasis of practical achievement to another. But he lets the reader know that the journey has been a toilsome one. As he enumerates, from time to time, the columns of "Hansard" devoted to some particular topic, one is irresistibly reminded of the saying, "As hills of sand to the steps of the aged, so is one of many words to a quiet man." There is something almost Olympian in his attitude of detachment. In his preface he frankly admits his want of sympathy with the Labour Party, and it is clearly apparent throughout his narrative, and particularly in his account—very complete and useful—of the session of 1910. We fancy that had this volume appeared after, instead of before, the federal referenda of last April, it would have contained something like a pæan of triumph on the result. But if Mr. Turner is an enemy—or at least an exacting critic—of the Labour Party, it is impossible to label him as a partisan of any other political section, and if he has any particular *bête noire* among prominent Australian politicians, it is not to be sought in the Labour ranks. He distributes reproof impartially and with considerable liberality, and any member of the Australian Parliament who reads the volume is likely to put it down with feelings akin to those of the schoolboy who has enjoyed the privilege of hearing a lecture from his headmaster. The first ten years of the history of the Commonwealth have been a troubled time. Seven different Ministries have held office during that period, and cross-currents and personal issues have made the course of politics unusually obscure. "Tetchy and Wayward was thy infancy" is the motto which Mr. Turner borrows from *Richard III.* for his title-page. Upon the whole, we are inclined to think that he is somewhat unduly severe in his judgments. Australians—

who show a likeness to Englishmen in this respect, as in so many others—are inclined to resent criticism from outside, but are ready to lavish it on themselves and on one another. Though there are failures, false starts and delays to be recounted, and in spite of the “loquacity of Members on unimportant issues and irrelevant matter,” recorded, with a touch of pathos, in the synopsis of contents, this volume embodies a record of much solid Parliamentary achievement, a not unworthy product of the Constitution, which Mr. Chamberlain described as “a model of legislative competence.” Mr. Turner has rendered a service to his countrymen in urging them to do still better in future. His book is invaluable as a work of reference, and is at the same time thoroughly readable. The verb “to concuss” in the sense of “to coerce” is new to us, but Mr. Turner has a particular predilection for it. Perhaps it is a local product.

British Dominions: Their present Commercial and Industrial Position. Edited by W. J. ASHLEY. (*Longmans, Green & Co.* 6s. 6d. net.)

This volume contains nine lectures delivered by men of note last winter, under the auspices of the University of Birmingham. Mr. Ashley observes in the preface that, while there has struggled into being a central representative organ of the Empire in the shape of the Imperial Conference with its secretariat, it is not distinctly realised that, on a more everyday level than this “conspicuous but discontinuous” body, there has been coming into existence the outlines of something like a permanent imperial organisation for trade affairs. He refers to the appointment of trade commissioners by the Board of Trade as an Imperial Intelligence Service, to the Imperial Institute as an Imperial Scientific Research Centre, to the Advisory Committee on Commercial Intelligence as an Imperial Advisory Board on Commercial Affairs, to the Pacific Cable Board as a model of a Federal Executive, and to the Congress of Chamber of Commerce as a sort of non-official Commercial Parliament of the Empire. The Right Hon. Alfred Lyttelton contributes a very philosophical address on the Empire generally. From the early colonial history he draws the following conclusions:—

“1. The British are found at their best and summon their highest resources at times of emergency, under the pressure of danger and in the necessity of self-defence. They appear averse to thinking out deliberate and systematic schemes of policy, and shrink from the arduous and painful processes of organisation for remote ends.

so, he has compiled in narrative form an account of the political history of the first ten years of the Commonwealth, and, in so doing, has produced a book which will not cease to be valuable even should time refute many of the judgments expressed in its pages. Mr. Turner's subject is Parliamentary history, and he sticks to it with a tenacity which must have involved a considerable degree of self-denial. For he is not one of those who see in Parliamentary history the sole matter of importance in the life of a nation. Those who have spent a strenuous lifetime in the political arena often undervalue the importance of what takes place beyond its circumference. But Mr. Turner is not a politician. He has never attended a Parliamentary debate. He "counts a few Federal Members among his personal friends, but he has sedulously avoided discussing political questions with them." Sustained by a sense of duty and a consciousness of disinterested sincerity, he has wandered through the wilderness of Parliamentary oratory from one distant oasis of practical achievement to another. But he lets the reader know that the journey has been a toilsome one. As he enumerates, from time to time, the columns of "Hansard" devoted to some particular topic, one is irresistibly reminded of the saying, "As hills of sand to the steps of the aged, so is one of many words to a quiet man." There is something almost Olympian in his attitude of detachment. In his preface he frankly admits his want of sympathy with the Labour Party, and it is clearly apparent throughout his narrative, and particularly in his account—very complete and useful—of the session of 1910. We fancy that had this volume appeared after, instead of before, the federal referenda of last April, it would have contained something like a pæan of triumph on the result. But if Mr. Turner is an enemy—or at least an exacting critic—of the Labour Party, it is impossible to label him as a partisan of any other political section, and if he has any particular *bête noire* among prominent Australian politicians, it is not to be sought in the Labour ranks. He distributes reproof impartially and with considerable liberality, and any member of the Australian Parliament who reads the volume is likely to put it down with feelings akin to those of the schoolboy who has enjoyed the privilege of hearing a lecture from his headmaster. The first ten years of the history of the Commonwealth have been a troubled time. Seven different Ministries have held office during that period, and cross-currents and personal issues have made the course of politics unusually obscure. "Tetchy and Wayward was thy infancy" is the motto which Mr. Turner borrows from *Richard III.* for his title-page. Upon the whole, we are inclined to think that he is somewhat unduly severe in his judgments. Australians—

who show a likeness to Englishmen in this respect, as in so many others—are inclined to resent criticism from outside, but are ready to lavish it on themselves and on one another. Though there are failures, false starts and delays to be recounted, and in spite of the “loquacity of Members on unimportant issues and irrelevant matter,” recorded, with a touch of pathos, in the synopsis of contents, this volume embodies a record of much solid Parliamentary achievement, a not unworthy product of the Constitution, which Mr. Chamberlain described as “a model of legislative competence.” Mr. Turner has rendered a service to his countrymen in urging them to do still better in future. His book is invaluable as a work of reference, and is at the same time thoroughly readable. The verb “to concuss” in the sense of “to coerce” is new to us, but Mr. Turner has a particular predilection for it. Perhaps it is a local product.

British Dominions : Their present Commercial and Industrial Position. Edited by W. J. ASHLEY. (*Longmans, Green & Co.* 6s. 6d. net.)

This volume contains nine lectures delivered by men of note last winter, under the auspices of the University of Birmingham. Mr. Ashley observes in the preface that, while there has struggled into being a central representative organ of the Empire in the shape of the Imperial Conference with its secretariat, it is not distinctly realised that, on a more everyday level than this “conspicuous but discontinuous” body, there has been coming into existence the outlines of something like a permanent imperial organisation for trade affairs. He refers to the appointment of trade commissioners by the Board of Trade as an Imperial Intelligence Service, to the Imperial Institute as an Imperial Scientific Research Centre, to the Advisory Committee on Commercial Intelligence as an Imperial Advisory Board on Commercial Affairs, to the Pacific Cable Board as a model of a Federal Executive, and to the Congress of Chamber of Commerce as a sort of non-official Commercial Parliament of the Empire. The Right Hon. Alfred Lyttelton contributes a very philosophical address on the Empire generally. From the early colonial history he draws the following conclusions:—

“1. The British are found at their best and summon their highest resources at times of emergency, under the pressure of danger and in the necessity of self-defence. They appear averse to thinking out deliberate and systematic schemes of policy, and shrink from the arduous and painful processes of organisation for remote ends.

"2. In their successes they had the wisdom to be moderate, and displayed good sense and even generosity in the terms imposed on the vanquished, were willing not to exact the uttermost farthing, clearly distinguished the faults of foreign rulers from those of their subjects, were careful not to excite the permanent enmity of peoples, or to press on those who had been the involuntary victims of ambition and self-aggrandisement.

"3. The development of the Empire was necessarily trans-oceanic, and its existence and stability has depended and will depend on the control of sea communication and on naval supremacy."

Mr. Lyttelton thus points out the absence of system on which Mr. Wyatt Tilby descants in his history of the American colonies. It may, however, be suggested that it was not due to any intellectual shortcoming. The Anglo-Saxon genius has not shown any inability to frame political constitutions or to undertake political campaigns when suitable occasions have offered. But the early Colonies were adventures which in their very nature forbade cut and dried schemes. Of present times it is excellently observed that "In the British Empire there appears little danger of uniformity or stagnation. Each Dominion, far from being a replica of the Motherland, is a centre of separate vitality, working out under free institutions her own problems and her own aspirations. In such work, and in pressing forward together schemes in which all parties are roughly agreed, wholesome emulation is stirred."

Sir George Reid explains the resources of Australia, and Sir Albert Spicer, fresh from his visit to that country, sets out the commercial aspect; he makes a suggestion that the boys who are employed in great numbers by such departments as the Post Office, and who are dismissed when they are becoming men, should be sent out to Australia and settled on the land. Mr. W. P. Reeves has a very readable address on New Zealand, in the course of which he sums up very fairly the results of the labour arbitration legislation. Sir W. Hely-Hutchinson graphically describes South Africa, especially in its physical aspects, and Mr. H. Birchenough discusses the economical questions. Sir Daniel Morris furnishes an account of the West Indies, which contains a statement of the origin and purposes of the Imperial Department of Agriculture. Mr. W. L. Griffith, speaking of Canada, considers that there is every reasonable ground for anticipating that its expansion will be more rapid than was that of the United States, and that at the end of the present century its population will be greater than that of the United Kingdom. Sir Edmund Watkin, on the other hand, sounds a note of alarm. He thinks that farmers are impoverishing the land, and that

out West the speculation in real estate has gone much too far. He considers that Canadians are not nearly so contented now in the days of prosperity as in the days of struggle and of small results, and that there is an unusual agitation by one interest against another. Moralists tell us that increase of wealth brings about a decay of public spirit, and no doubt as commercial interests wax big they fight more and more for their own land; but Canada is not the only example of these fundamental tendencies.

The volume as a whole sets out a great amount of information and comment in an exceptionally readable and up-to-date form.

Rubber and Balata in British Guiana. By J. B. HARRISON, C.M.G., and F. A. STOCKDALE, F.L.S. (*Department of Science and Agriculture of British Guiana.* 6d.)

Great numbers of rubber seeds have been recently imported from the east, and there are now some fields of young rubber which have made exceptionally good growth. There is a very large area of suitable land available, and considering that the situation is so near the home of the *Hevea Brasiliensis*, the prospects are very promising. A sample from Demerara River has obtained the top London price. This booklet contains the terms for 99 years Crown leases of land. No rent is charged for ten years, and afterwards the rent is 10d. an acre rising to 2s. 1d. The cost of cultivation varies slightly in different districts, but on flat lands, which have to be thoroughly drained and empoldered, the cost, including application and survey fees, superintendence and purchase of plants, might be estimated to be from \$65-70 (approx. £13-14) per acre during the first year, with an annual expenditure of from \$25-30 (approx. £5-6) per acre in subsequent years.

The first year's expenses may be estimated as follows for cultivation of about 100 acres:—

	Per Acre.
Fees	\$ 3 50
*Buildings and Boats	13 50
*Superintendence	14 00
Felling and Burning Forest	9 00
*Drainage	19 50
Plants and Planting	5 50
Miscellaneous	5 00
	<hr/>
	\$ 70 00
	<hr/>

The expenses after the first year could be estimated as follows:

*Superintendence	\$ 12 00
Weeding and Supplying	7 50
Attention to Drains	3 50
Miscellaneous	2 00
	<hr/>
	\$ 25 00

The labour available for rubber cultivation consists of black labourers and East Indians that have completed their indentures with the sugar estates or were born in the Colony, while in some districts Aboriginal Indians are available. For felling the forest the Aboriginal Indians are preferred if they can be obtained, the black labourers are well suited for the work of empoldering and digging drains, while the East Indians, when properly housed, easily settle down to continuous work. Most of the initial work of clearing, draining, etc., is done by task work, while planting and attention to cultivation is usually carried out by labourers earning a daily wage. The prices paid for task work in the different districts vary slightly, as also do the wages paid for daily labour. Near to town or any of the village settlements the rate of pay varies from 1s. 4d. to 2s. per diem, while in the more remote districts the wages range from 2s. to 2s. 8d. per diem, as the costs of living are somewhat higher.

None of the rubber estates have so far complained of a scarcity of labour for their operations, and it is thought that sufficient labour will be available to meet the advances that may be made in the rubber industry during the next few years. A Commission has recently been appointed to consider the labour question in this Colony, and their report should shortly be available. With the advance of the industry, it is thought by many that indentured labour from the East will have to be obtained, on terms similar to those pertaining to the East Indians indentured on sugar estates."

The demand for balata is steadily rising, and the export from the colony is rapidly increasing. The collection now ranks as the third industry. The use of balata for belting is spreading, as it is practically unaffected by atmospheric changes and chemical fumes.

Grenada: Report on Economic Industries, &c. (*Printed at the Government Printing Office*).

This is the report of a Committee appointed to consider the high prices of foodstuffs in the colony. Complaints of difficulty

in getting employment, and the encouragement of industries. The Committee evidently did its work carefully. The cost of living has gone up, a phenomenon which is observable in most other places. But in Grenada the rise is accentuated by a falling off in the local production of food and vegetables. This is largely due to the absorption of the most fertile land by the cultivation of cocoa. This is a profitable industry, but in a small island and with an increasing population the results are bad for food supplies. Not much more can be done in such a case than to instruct the peasants in the production of vegetables, and steps for this purpose are recommended. The Tenants' Compensation Act, which is closely modelled on English legislation, has been found not to work well, and apparently tends to deter landlords from accepting tenants. Some provisions to simplify the procedure and regularise the compensation payable are suggested.

The Committee did not think that the complaints of unemployment were borne out. There has been much emigration lately to Brazil, where higher wages are paid, but this sort of emigration is an uncommon feature in the West Indies. Probably the emigrants work a good deal harder in the new country than they did in the old, as is the way of emigrants generally, and justify higher wages. The Committee considered that a rather higher rate of wages should be paid on the cocoa estates, and probably economic causes will eventually bring this about.

Voluminous evidence was given on proposals to establish industries, but for the most part it was highly unpractical. The peasants are too scattered for the sugar factory system, and the Tortola system, a provision of a small primitive mill built by Government near holdings, is mentioned with approval. It is expected that, with giving facilities, there would be an early revival of cotton-growing. An income tax is proposed, to take the place gradually of the export tax and the import duty on certain articles of food consumed chiefly by the working classes. In this matter the Grenada Committee have not taken the views which were quoted in our last number as having been expressed in British Guiana against such a policy of setting up an income tax in place of one on food. An export tax is, however, really a land tax, when the products in question are mostly exported, for then the exports are in accordance with the productiveness or value of the land and are the most convenient means of assessing it for the purpose of taxation.

Lyra Nigeriæ.—By ADAMU. (E. C. ADAMS). (*T. Fisher Unwin.* 3s. 6d. net.)

These verses epitomise the ordinary life and common feelings of the white resident in West Africa. There is a great straining

for the heights of Parnassus. The author's object is to reproduce the usual experiences and to point the usual moral, and he does this with a freshness and frankness that make his productions entertaining from beginning to end. Verse after the style of the Ingoldsby Legends, as modernised by Rudyard Kipling, is a convenient vehicle for straight talking, and for freely banning or blessing things where prose would have to be discreet. This, for instance, is the N.C.O.'s view of Northern Nigeria:—

“It's a cock-eyed, back-ended, fair muddled-up show,
In a real topsy-turvy condition,
And you won't find another land like it on earth,
If you look from Peru to Perdition.

“There you have to go short of the things you most need,
'Cos the Government ain't got no money;
But if you saw the things what the Government buy,
It 'ud make you laugh, it's too funny.

“There the land don't grow nothing of any account,
Not for food nor for clothing nor liquor;
Yet it's one of our proudest possessions on earth;
What we're there for at all is a nicker.

“And those wonderful cities and palaces too!
It's a lie, it's a big giddy fable;
There isn't a house in the whole of the land,
What's fit for a dead donkey's stable.

“There the least bit of brass is a threepenny bit,
And they'll charge you ten quid if you're willing,
Though the whole of the stuff in the market, most times,
Don't add up to the worth of a shilling.”

No doubt a province in the making is trying to the Army Sergeant, who is not even grateful for the “simple furniture” in such case made and provided. The waste of energy on the part of the higher official is exemplified as follows:—

“They all had one opinion about him, and with Coast frankness told it him straight to his face,
And then made him a District Superintendent of the Police,
away in some unpronounceable place.
There he had a gaol and a police barracks about which he could worry and fuss,
The gaol was as big as a pig-sty and the barracks about the size of a twopenny 'bus.

- “ He fussed about writing reports about his ‘ department ’ and other people’s as well,
 Till the other people found out about it, and requested him to mind his own business and go to Hell!
 But he would not even do that, he worked with much energy, that there was no doubt of,
 Till he’d have worried those police and those prisoners right out of their wits, if they’d any wits to go out of.
- “ And he went on buzzing about day and night, like a bug on the end of a pin,
 Till one midnight there was a shower of rain and the back wall of the gaol fell in.
 The police had a consultation, and one grey-haired philosopher said,
 ‘ When them fool man sees this, he go talk we all dead.
 Besides he no catch any savvy, he go beat we and kick we for sure,
 So I just go back to my own country, for I no fit to stay any more.’
- “ One prisoner remarked bitterly, it was hardly worth while being in prison with such a damn fool as the boss of it,
 And if they all gave up the job and retired, they wouldn’t feel the loss of it.
 So to end up with they agreed *nem. con.*, and all walked away in a mob.
 They have not come back yet, perhaps they will, but they won’t find Theophilus; he’s out of a job.”

The general *leit-motif* of the pieces is made up of mosquitoes, strikes, fever, and general rottenness, but homage is paid to the strange attraction of the coast, which makes the retired official almost regret that he has left it.

Malta : A Neglected Outpost of Malta.—Some plain speaking by AUGUSTO BARTOLO, LL.D. (*Malta*).

Mr. Bartolo’s grievance is that the English newspapers, the Imperial Press Conference, and the Festival of Empire, have taken very little notice of Malta, and that generally a lamentable ignorance is shown in this country of a possession which played a great part in the war which secured for Great Britain the command of the seas. We are afraid there is much truth in this. But a great many of our smaller possessions might say the same thing. You cannot expect the average citizen, or the papers

which are written for him, to give much notice to places overseas, unless he is putting money there, or seeing his relations off to them, or interested in some trade connection. Even the Dominions have occasion to complain of incorrect references. But it would be a mistake to infer that the daily pre-occupations of the public make it insensible of the value of such a possession as Malta.

Imperial Telegraphic Communication. By C. BRIGHT, F.R.S.E.
(*P. S. King & Co.*)

This is a collection of various articles written by Mr. Bright, who has shown a great and continuous interest in the subject since the days when the Pacific Cable project was being considered. Some of the matter has been put out-of-date by the accomplishment of that project, but the completion of one Government cable naturally lead to the discussion of others. Mr. Bright (L. 169) gives a useful account of the agreements or amalgamation of the Trans-Atlantic Companies, a movement which may seriously influence the question of further Imperial developments, and discusses various plans for strengthening cable communication within the Empire. At present the subject lies on the knees of the gods, and the views of the Governments interested will be better known after the Imperial Conference.

William Ford Stanley: His Life and Work. (*Crosby, Lockwood & Co.*)

The Stanley instruments are lower throughout the Empire, and the life of the remarkable man who founded the business is full of interest to those who value technical education. He was himself a natural mechanic and appreciated the gift in others. He saw that the system of apprenticeship was dying out in many trades where foreign competition was keen. This was largely due to the sudden introduction of free trade, as on the continent there were certain industries which were better organised or conducted with more scientific knowledge. The remedy was more technical education, and of this Stanley was a strong advocate and able exponent. His description of a proper course of instruction for boys who are intended to become workmen is well worth the attention of educational authorities, who have seldom, if ever, been brought up on such lines or for such a purpose themselves.

The Coronation issue of the "Financial Review of Reviews" contains articles on Australia, Canada, and India by Sir G. H. Reid, the Duke of Argyll and Lord Lamington. Sir G. H. Reid observes that the character of the Australian people makes for stability rather than revolution. No doubt some of the measures which have been taken to deal with new conditions have an appearance to the ordinary Britisher of doubtful experiments, but they are all the result of close study of the circumstances, and no one can accuse the Australian of political levity. The Duke of Argyll points out the wonderful variety of Canadian enterprises which are certain to have prosperous issues.

MEDICAL NOTES.

Jamaica and Malaria.

The Special Commission, appointed to investigate and take measures to remedy the conditions that give rise to malaria in the island, applied itself to an extensive programme, in the forefront of which came instruction by lantern lectures and demonstrations on the causes of outbreaks. Sanitary improvement is so largely dependent on education and public spirit that it is highly important to bring home to all classes the nature of the disease, and "visual instruction" is an excellent method for the purpose. Up to the present the Parochial Boards have for the most part failed to grapple with the problem systematically, but useful work has been done in Kingston, and no doubt the attention which is being given to the subject will have a salutary influence. Some swamps are so large that they could not be effectively dealt with except by systematic filling, and this would best be done by a sand-dredger, but the cost of such a vessel is apparently considered prohibitive.

Dr. K. S. Wise, Government Bacteriologist in British Guiana, has prepared an elaborate report on the results of the Nastin treatment for leprosy at the Public Leper Asylum in the Colony. The treatment was commenced in December, 1908, by Professor Deycke, the originator and discoverer of the drug, and since his departure in May, 1909, has been continuously carried out on similar lines by the Medical Superintendent and the Government Bacteriologist. In his covering despatch, the Governor writes as follows:—

"It will be seen that Dr. Wise expresses himself very cautiously, and considers that a larger and wider experience of the treatment is necessary before a definite conclusion can be arrived at.

"It is, however, a fact that since the Nastin treatment has been introduced four lepers have been discharged as cured, and I am in a position to say that at the present time there are fifty-six cases in which no leprosy bacilli can be found, and of this number it is hoped that 75 per cent. will be fit to be discharged within the next three months. Never before in the history of the Leper Asylum of British Guiana has leprosy been successfully fought, and the results which have now been obtained will doubtless lead to further research, and to a further and more complete conquest of this most terrible of all diseases."

In view of the far-reaching importance of this report, it has been presented to Parliament (Ed. 5,583; price 1/2), and circulated to all Colonies in which the disease exists.

We have received Nos. 25 and 26 of the Bulletin of the Sleeping Sickness Bureau, containing further technical articles on various forms of trypanosomiasis in human beings and animals, and complete information with regard to all recent developments in connection with the disease. We have also received Vol. V., No. 1, of Annual of Tropical Medicine and Parasitology, issued by the Liverpool School of Tropical Medicine.

BUSINESS NOTES.

Cotton.

Early in the year the demand for Sea Island cotton fell off. There has been an unusually large accumulation of stock in the United States, and proposals have been made to reduce the output. It is not, therefore, a time for extending growing in the West Indies, and every effort should be devoted to increase the yield per acre.

The British Cotton Growing Association have had an "undoubted check" in parts of West Africa, and have decided to abandon the position on the Gold Coast and to try the Northern Territories. In the latter district there will at any rate be a clearer field for the industry; the trouble elsewhere is that at present other products are more valuable, both for bulk, and away from the immediate neighbourhood of railways this counts for a good deal with the natives. In Nyasaland the position and prospects are very satisfactory, and a great increase of sowing is taking place in Uganda; given a favourable season, the output will show a very big advance. In Northern Uganda the prospects in the Muri and Bassa provinces have been favourably reported on, and it has been decided to erect a small granary at Ihi. It must not yet be concluded that Northern Nigeria generally is suitable for cotton growing; opinions have been expressed that the climate is too dry.

The Fine Cotton Spinners and Doublers' Association, which is credited with a proposal to acquire a cotton-growing area in the United States, has actually, it is understood, planted some 400 to 500 acres with cotton in trenches as an experiment, and the prospects seem favourable.

Cotton growing.

The following calculation of cost and profit has been made in South Africa:—

The cost per acre should be approximately:—

Preparing and breaking	...	...	£0	7	0
Harrowing	...	...	0	2	0
Planting	...	...	0	1	0
Cultivating	...	...	0	5	0
Harrowing and hand hoeing	...	...	0	7	0
Picking 1,000 lb.	...	...	0	10	0
Cartage to gin	...	...	0	1	0
Wear and tear of implements	...	...	0	1	0
Sundries	...	...	0	3	0

£1 17 0

One acre should produce 1,000 lb. seed

cotton with at least 30 per cent. of

lint, i.e., 300 lb. @ 8d. per lb. £10 0 0

Total cost of production per acre ... 1 17 0

Profit per acre ... 8 3 0

300 lb. lint @ 8d. per lb. ... £10 0 0

Cost of production ... 1 17 0

Showing a profit per acre of ... £8 3 0

The cost of production, as thus shown, is, it is believed, much the same as in the United States. But it does not include any allowance for railway and steamship charges. The South African farmer would usually have to pay about 2d. per lb. to transport to England, and in this matter he is at a disadvantage as compared with the American planter, to say nothing of his having no home market. It is satisfactory to find, however, that South Africa can and does produce a better article than American upland varieties.

The principal item in the cost is that of picking. In South Africa suitable labour for this work is hard to get. What is wanted is a good machine, and nothing would benefit growers, and as a result Lancashire, more than such an invention. One has been now put forward in the United States, and should solve the problem, if the following description in the "Hopkinsville Kentuckian" is correct:—

"Washington, 24th July. Patents were issued to-day to Crawford Elliot, the inventor of the book typewriter, on a cotton picker or harvester which he has perfected as the result

of nearly seven years' constant effort. The basic patent granted covers forty different claims. The machine has been tested for two years in the cotton fields, and with it one man and a team of mules will do the work of forty hand pickers. Only the ripe cotton is picked, and this is done without injury to the green cotton or the flowers. The successful cotton picker has at last arrived and will enable the planters to greatly increase the present acreage under cultivation.

"The principle of the machine is a double row of bristle brushes about one and a half inches in diameter and fourteen inches long, spinning rapidly in such a manner that the revolving brushes are introduced into the plants close to the ground and drawn up in a verticle line through the plants, the brushes penetrating the bushes from both sides of the row. The ripe cotton adheres to the brushes, while the rest of the plant is not in any way affected, the brushes travelling to a receptacle where they are stripped of the cotton, and the operation is repeated.

"It has been thoroughly tested and demonstrated that it will do the work at a quarter of the cost of hand labour, which means the saving of 150,000,000 dollars a year to the cotton growers.

"The invention, which has been purchased by the National Cotton Harvester Company, of Chicago, means much to the growth and expansion of the cotton industry, and it will undoubtedly add immensely to the wealth of the cotton growing States."

Rubber.

The Annual Report on the Forestry and Agricultural Department of Southern Nigeria (No. 30 of 1910) contains some useful information about the tapping of *Funtumia Elastica*. It is found that the best method is to open shallow channels in the tree, just deep enough to allow the latex to flow, and then to make incisions in them with a pincher. Trees so treated can be tapped three times a year without the yield falling off. There is no occasion for the natives to employ expensive chemicals in the preparation of rubber, as good thin biscuit can be made equally well by boiling small quantities of the latex, and washing and pressing it.

If it appears that pricking does not damage the trees, this treatment could be applied to them at an early age, though the rubber will not be so good as from mature trees. The chief drawback to the process is that the rubber is in the form of balls or "scrap," but this can be altered by using a washing-machine. Rubber so collected has been found to contain an unusually large

proportion of proteid and resin, and therefore fetches a low price. Recent experiments tend to show that the best way to remove resins and prevent a dark colour developing is to coagulate the latex with boiling water.

The latest discovery of a rubber field is that disclosed by Sir Salter Pyne, C.S.I. It is a forest extending over some five or six hundred square miles, in the valley of the Tugela in Natal, where the British Army found it to impede operations. The number of trees said to be ready for tapping is enormous and the rubber obtained is of very good quality. In these trees, however, the resin predominates, taking up over 53 per cent. of the extraction, while the rubber is only 11 per cent. The rubber, therefore, will be a by-product, though vast quantities are available. It is probable that the latex will be treated in London. Natal, however, does not possess the persistent rainfall which makes rubber trees grow so quickly in such places as Malaya.

Lately it has been difficult to obtain rubber seed from the East owing to the great demand for planting. The seeds are best when taken from untapped trees, but should not be from very young trees. The cost of collection is lower in the Straits Settlements than in Ceylon, but it is difficult to ensure that a fair proportion of the seeds are suitable.

The seeds should be collected as soon as possible after they have fallen, but not freshly gathered from the trees, as they are not then ripe enough. They should be packed in closely-fitting tins in dry charred rice dust, but the tins should not be hermetically sealed, as the seeds require some oxygen to retain their vitality; if no oxygen gets in, the seeds will after a time be pickled in the products of their decomposition. The packing should not be so close that the seeds almost touch one another.

Tobacco Growing.

Tobacco has been grown in South Africa for many years, but it is only lately that an article of a superior kind has been attempted. Considerable attention is now being given to the industry, and the following directions have been given by the Government experts:—

The Seed Beds.—The best way of making the seed bed is to select a warm, sheltered spot with soil not liable to dry out and preferably with a northerly or easterly aspect. The ground should be trenched, unless it already happens to be a piece of well-watered garden soil. Mark out beds 3 feet wide and any length, separated by paths a foot in width. Remove the soil to

a depth of 10 inches, and lay at the bottom 4 inches of pure hot manure, which must be tramped down well, then fill in the trench with a proportion of one-third soil to two-thirds of old rotted manure, well mixed together. A very fine seed bed is then prepared with the rake, after which it must be thoroughly wetted and the seed sown on the wet ground very thinly at the rate of about one ounce to sixty square yards of seed bed. To do this, the seed is well mixed with sand or ashes, about $\frac{1}{2}$ oz. of seed to a soup-plate of sand, and sown half in one direction and half in another, to secure uniform distribution. The seed is covered by riddling over it a quarter of an inch or less of sand or a mixture of old manure—sifted—and sand. To protect the plants from insect pests, weeds, etc., the proposed seed beds should be burnt by making a fire of branches or rubbish on top of them till the soil is scorched to a depth of 3 inches; the resulting ashes must be mixed with the soil previous to sowing the seed. The sprouting plants must be protected from frost and wind. This is best done by surrounding the beds with planks and covering them with muslin or butter cloth.

Treatment in Seed Beds.—The beds are kept moist until the seeds sprout, which may take from ten to fifteen days according to the weather. The beds are then watered every day, before sunrise, with a watering can having a fine rose, held low so as not to wash the plants out of the ground. When the plants stand about $\frac{1}{2}$ inch high, either a little guano water, say about one handful of guano to every three gallons of water, or fine sifted old manure, should be given at least once a week, the remaining days pure water. Should sifted manure be applied, it must be watered at once so as to prevent any damage to the foliage by burning. After the plants are well grown, the covering must be removed at least a fortnight before planting, and watering must cease one week before planting so that the plants may be hardened for their change.

The rate of growth during the first month is very slow, but thereafter at the rate of about $1\frac{1}{2}$ inches per week. A common fault is to sow the seed too thickly. If the plants are dense, it is imperative that they be thinned out—but not before they stand an inch high—otherwise the plants grow thin and lanky and about 25 per cent. to 30 per cent. die off in transplanting. The most important branch in tobacco culture is the raising of good and healthy plants without which a good crop of tobacco need not be expected.

Planting Out.—It is customary in Turkey, when the plants attain a height of 5 inches above the level of the bed and after watering has ceased for a week, to test a plant by twisting it round the finger, and should it not be brittle, the plant is con-

sidered fit for transplanting, but if it shows signs of being brittle it must be watered again, after which it must remain a few days without water. When the plants are fit for transplanting, they may be watered the previous evening, so as to facilitate the pulling the following morning. The plants are conveyed in flat boxes or baskets to the field, great care being taken to prevent the roots from drying in transit. It is better to transplant on cloudy days, otherwise the best time is late in the afternoon. As regards distance, it is found best to have the rows 3 feet apart and the plant 8 or 9 inches in the rows, which rows should run in the direction of the prevailing winds. This distance apart has the advantage of permitting cultivation with horse hoe, free circulation of the air, and it also produces straight stems, with a large number of leaves of small but equal size.

Treatment during Growth.—A fortnight after planting, hoeing by hand is necessary, and when the plants are well established and the rows discernible, the horse hoe may be passed through to keep down weeds and maintain a surface mulch. Cease cultivating as soon as priming, viz., the removal of lower waste leaves, is completed.

As the tobacco is liable to suffer from the attack of surface caterpillars (cut-worms), etc., trapping with poison should be resorted to as a remedy. The poison may consist of cabbage leaves, lucerne or green barley steeped in arsenite of soda, and scattered over the land towards evening a few days previous to planting.

Mildew is another cause of damage to tobacco, mainly due to climatic influences, but it may be checked somewhat by avoiding damp sheltered and close situations, and by allowing free circulation of the air. In the event of mildew, it is advisable to remove the diseased leaves from the field and destroy them, particular attention being paid that no such leaves are threaded with good ones, as such a procedure would ruin the quality of the tobacco.

Tobacco planted early in the season in wide rows, running in the direction of the prevailing winds, is not so liable to mildew.

If the seed is sown at the right time, and the flower heads are left undisturbed, very little trouble will be caused by suckers, but if planted out of season and in damp places, these grow vigorously, and reduce the strength of the tobacco very materially. All suckers should be nipped out when between 1 and 2 inches long.

The flowers are on no account to be removed as is done with ordinary tobacco.

Priming.—When the plant commences to bloom, and the lower leaves to turn yellow, four to six of these should be picked,

removed from the field and destroyed; in fact, in Turkey eight or ten of the lower leaves are destroyed, although in the Colony to remove so great a number seems unnecessary. Compared with the upper, the lower leaves are weaker, smoother, flatter and thinner. About ten days or a fortnight after the priming—according to the weather—the crop leaves proper commence to ripen.

Signs of Ripening.—The indications of ripeness are:—

(1) The lowest and the oldest leaves show a yellowish tinge in place of the previous vivid green, and this is most obvious towards the tip of each leaf.

(2) A limp feeling instead of the crispness of an unripe leaf.

(3) Translucency in place of the previous opacity when held up to the light.

With Cavvalla and other varieties, when grown on rich soil, yellowish spots appear on the leaves, and when these are distinct, the leaf is ripe. These signs of maturity are much more easily seen before sunrise or in cloudy weather, as bright sunshine misleads the eye.

Gathering the Leaf.—Each man takes a single row of plants and the leaves are plucked with the right hand, using the thumb above and the two fingers beneath the leaf stalk, the main stem being held firm by the left hand. The leaf is gathered in the early hours of the morning, which not only allows of easier discrimination between ripe and green, but at this time the leaf breaks from the stem sharply without causing injury to the plant. In picking, err rather on the side of over-ripeness than risk taking green leaves. For the foregoing reasons the leaf is harvested from bright daybreak up till 8 a.m. in summer, and until about 11 a.m. on dull and cloudy days. Never under any circumstances gather tobacco after rain till all signs of moisture has disappeared, as the leaf is apt to turn mouldy if this is done, besides losing its oil and gum.

Unripe leaves always retain a greenish tinge, which is very objectionable; overripe leaves lose colour and strength. One or more ripe leaves are plucked from each plant, in no case over four at one picking. The leaves are gathered from the lowest leaf upward in succession. The leaves gathered are placed evenly one above the other, and all facing the same way, in boxes or baskets. Methodical handling at this stage facilitates subsequent treatment. The remainder of the day will be occupied in manipulating the leaves gathered during the morning hours. If left over the day, fermentation is likely to set in. This has happened occasionally (owing to pressure of other work) when the leaves turned black and had to be thrown away.

Threading the Leaf.—The baskets or boxes, when full, are

conveyed to a cool shed where the leaves are graded into two or more grades, according to size. Damaged leaves are set aside. If the leaves are properly sorted at this stage and graded according to size, much time is saved at later stages and a more uniform colour is secured. This matter cannot be too strongly emphasised. Ultimate price depends very much on attention to this one simple detail. Past experiments show that those who neglected this matter were put to much labour and trouble at pressing time. The aim must be to keep the leaves as flat as possible, and if they vary in size the edges become folded and crinkled and a ragged, shrivelled effect is the result. The assorted leaves are now picked up one by one and threaded on to the tobacco needles at a point about one-half inch from the base. The leaves are then passed on to a thread of strong twine about 8 feet long, care being taken to keep all the butts of the leaves at the same level. All leaves must face the same way and be packed close together. A rod is laid along the string of threaded leaves, either end of which is attached to the corresponding end of the rod whilst securing bands, keeping the thread to the rod, are tied on at intervals of about a foot apart. Finally a label is attached to each rod, giving the date of picking and grade of the leaves.

First Step in Curing.—The rods with their burdens of leaves are taken to the curing shed and supported at their ends on wooden rails and the rods should be kept about 6 inches apart on the rails. The aim is to let the leaves wither slowly and turn to a pale yellow colour without mouldering or decaying. Under ordinary circumstances this process will occupy from three to four days, including the day of picking, if the leaves were properly ripe before picking. If there is too much draught, the edges of the leaves dry and shrivel instead of becoming faded and limp.

The curing house proper may consist of any convenient out-house, clean and cool, and, if possible, with a temperature not higher than 70 degrees. An empty wine cellar or coachhouse will serve the purpose, the essential being freedom from heat, hot wind, dust, rain and light. Lofts under corrugated iron roofs, stables where animals are kept, verandahs or lean-to sheds exposed at side and front, are to be avoided.

Second Step in Curing.—The greatest care must be taken to prevent the tobacco from touching or rubbing and the rods from slipping along the wire, to prevent this the ends should be secured with strong string. The first day the rods are kept two inches apart, the tobacco being close but not touching, and in the event of a scorching hot day, should be covered by bags or canvas sheets, though for the first day only. The second day the rods

are kept about four inches apart, and the third and subsequent days six inches. The object of varying the widths is to expose the tobacco gradually and prevent sudden or too rapid drying and to attain a good colour. The leaves gradually change from a pale yellow to a warm yellow brown colour, and become dry to the touch. This process takes usually from 12 to 15 days, subject to the weather.

In the event of rain threatening, all rods hanging outside must immediately be brought under cover and hung up singly, but not touching, nor must they be taken out again until the weather is perfectly clear. It sometimes occurs that the weather continues threatening for two or three days and the fresh tobacco may become mouldy. As a preventive, a heating oil stove may be allowed to burn in the curing shed to reduce the dampness in the atmosphere.

The tobacco in the curing camp must be covered without fail every night, dew or no dew, otherwise loss will result.

Third Step in Curing.—When the mid-rib of the leaf is brittle and perfectly dry, the rods are removed from the trellis and laid on the grass or on clean sacking, each one singly, and allowed to remain thus for the whole day and covered at night with bagging to keep out the dew. After removing the sacking the next morning, the rods must be turned, exposing the other surface of leaves to the sun. This is repeated for two days, and on the third morning the tobacco is removed to the shed and stacked.

It sometimes happens that the leaves having been picked a trifle green, or from some other cause, do not colour properly. In such cases they are damped with pure water applied as a very fine mist spray through a spray pump at sunrise. One day the one side is sprayed, the next day the other. This is repeated only once on each side of the leaf. Spraying is not necessary in every case if the proper colour is acquired without it.

Fertilising.—Tobacco seed being very small (about 300,000 to the ounce) the reserve material for the nourishment of the seedling is very soon exhausted, and the seedling is forced to feed itself much sooner from the soil than with most plants. Therefore, seed beds must be made in such a way that the seedlings will easily find plenty of available food. If they should not be sufficiently rich in plant food, fertilisers must be added, in addition to the humus which has been previously added in some form and which will keep the beds better provided with moisture.

If the beds have not received any kraal manure or tobacco stems or stalks, a complete fertilizer, containing, say, 10 per cent. of potash, 4 per cent. of nitrogen, and 10 per cent. of phosphoric acid, all in an available form, may be used.

Sterilizing.—On the Experiment Stations at Rustenburg and Barberton, seed beds were sterilized in a way which gave excellent results, and can therefore be recommended to tobacco planters. This method is as follows:—After the soil has been properly prepared and is in readiness for receiving the seed, boil some water in old paraffin tins or any other utensils at hand, and pour the boiling water as quickly as possible on to the beds so as not to let the water cool off too much, and allow it to soak in to a depth of about six inches. Repeat the treatment once or twice on one or two consecutive days. Sow the seed after the beds have dried up a little. This method of treating seed beds has resulted in our experiencing no trouble from fungus diseases or insect pests, notwithstanding the fact that on some of the beds fresh stable manure had been used. The application of boiling water on the bed not only seems to practically sterilize the surface soil, destroying disease germs and insects that may be present, but also destroys the weed seeds present, which would otherwise produce weeds and interfere with the growth of the young tobacco seedlings.

This method of applying water on the beds is a cheaper and simpler method than steaming the beds and far better than the method of burning them, adopted in some parts of America.

Tobacco Seed Beds Sterilization.

There seems to be a general agreement now that tobacco seed beds should be sterilized. It has been proved that a faster and healthier growth of seedlings is secured on properly sterilized soil, the reason for this being that after the soil has been heated it is drier and can be worked into a better seed bed. Subjecting the soil to excessive heat helps to break down chemical compounds in the soil and liberates plant food. If the soil is sterilized by burning wood or trash on it, plant food, such as potash salts, is left in the ashes of the burnt material, and when these ashes are mixed with the soil, all the plant food they contain, being in a water soluble form, is readily available for the young plants. Another good reason for sterilizing seed beds is to destroy the germs of the weed and grass seeds usually lodged in the surface soil. If weeds are allowed to grow in the beds, the young seedlings will certainly suffer.

There are four methods of sterilizing with heat that have been applied with varying degrees of success. They are:—

(1) Open fire method: This is accomplished by simply burning wood or other waste material on top of the soil, thus providing sufficient heat to destroy weed seeds to a depth of 2 or 3 inches.

(2) Roasting process: This is accomplished by digging up the soil and throwing it into a large receptacle and heating it until the soil attains a high temperature, approximately 212 degrees Fahrenheit; the soil is then replaced in the hole. A machine is manufactured and sold in America, under the name of the "Wyatt Tobacco Bed Burner," which is a patent movable device especially designed for this sterilizing work. The machine is made throughout of heavy sheet-iron, with adjustable wheel carriage so that two men can move it. The soil pan over the surface is 3 feet wide, 9 feet long, and 4 inches deep. The soil is thrown into this pan, where it is roasted for about an hour. During the process, the soil is turned over with a long-handled shovel two or three times. A fire of wood brush or mealie stalks is kept going under the front end of the furnace. A block of soil 3 feet wide, 9 feet long, and 3 inches deep alongside the machine is shovelled up and put into the pan and baked as indicated above, then it is thrown back into the hole from whence it came and another similar block from the other side is treated in a like manner; by this time the block of soil covered by the machine is also sterilized. Thus it will be seen that at each setting of the machine a space of 9 square feet is sterilized. Under ordinary circumstances two men can sterilize 40 or 50 square yards in one day. If a dry soil is being treated less time will be required for each operation, and consequently more ground can be covered in a day, while, on the other hand, when dealing with a very wet soil, a longer time will be required for each operation.

(3) Steaming process: This is accomplished by first preparing the seed bed, and then by means of a steam engine, and a specially constructed air-tight steam box of any convenient size, the steam is led by a pipe into the box, which is inverted over a portion of the bed. The steam pressure should be up to at least 120 lb. to begin with, and the steaming should continue, over each portion of the bed for about fifteen minutes; the bed should then be allowed to dry properly before the seeds are sown.

(4) Hot water method: This is accomplished by first preparing the seed bed, then pouring boiling water on it till the soil is wet three or four inches deep. Wait three or four days and repeat the operation. After this do not sow the seeds till the bed has dried out properly, and the surface has been worked into condition.

In recent experiments, the open fire method of sterilizing gave the best results. The roasting process came second, and was almost as good as the open fire method. The steaming process came third, and was not quite as good as the roasting process. The hot water method gave the poorest results of all, and was but little better than the check or untreated plot.

Fibres.

Frequent inquiries are being made as to fibre plants, and banana and plantain fibres have been considered. Plantain fibre is suitable for cordage and canvas, but is not so strong as Manila hemp. It is whiter, finer and stronger than ordinary banana fibre. It grows well in British Guiana. Banana fibre from British Guiana and Trinidad has fetched as much as £25 per ton, but usually it is worth only £12 to £15, and that only when there is a shortage of manila and sisal hemp.

Banana and plantain fibre can be prepared by any of the ordinary scraping machines now in use; the chief difficulty appears to be found in dealing with the large percentage of water in the stem. One hundred stems can be crushed in twenty minutes with one horse, allowing five minutes for rest.

After crushing, the fibre is boiled to separate the gluten and colouring matter. Carbonate of soda and quicklime are used as chemical agents. To prepare three tons of fibre per day requires four boilers of 800 gallons capacity each, and to give five boilings in a day, which gives 1,650 lb. fibre, net, for each boiler, or 6,650 lb. for the four boilers. About 300 lb. of soda are required, and a proportionate amount of quicklime. The different grades of fibre are pressed separately, and are kept separate in the process of boiling. The lighter fibres require about six hours to bleach, while the darkest require fully eighteen hours.

Fifty years ago there was an extensive industry in the preparation of banana and plantain fibre in the island of Jamaica. A capital of £5,000 was required for carrying on the cultivation of the plantain on an extensive scale, eighteen tons of fibre being produced on $5\frac{1}{2}$ acres at a cost of about £175, or a little under £10 per ton. Apparently the low prices obtained for the fibre made the industry unremunerative, for it seems to have ceased to exist many years ago.

The Sisal hemp plantations, which are extensive in British East Africa, are now nearing the productive stage, and a substantial export may be looked for shortly.

Concrete Buildings.

A report has been issued by a departmental committee of the Board of Education on the building of schools, in which local authorities are urged to consider the use of "Novel materials or methods." These comprise:—

(1) *Steel Frame Buildings:*

- (a) with thin solid curtain walls of concrete;
- (b) with hollow curtain walls of concrete slabs;

- (c) with curtain walls of brick, hollow or solid;
- (d) with curtain walls of patent materials;
- (e) with hollow curtain walls of expanded metal faced with cement and plaster.
- (2) *Reinforced Brickwork.*
- (3) *"Ferro" Concrete Buildings.*
- (4) *Brick Buildings with solid 9-in. walls.*
- (5) *Brick Buildings with thin hollow walls.*
- (6) *Timber Frame Buildings with slab casing.*
- (7) *Wooden Buildings.*

Evidence was given to show that the steel frame buildings are very cheap as compared with brick. Concrete walls should be hollow, to obviate the condensation which takes place on the inside owing to the non-absorbent character of the material. Method (e) is being extensively employed for cottages in Suffolk on Captain Pretymann's estate.

A steel framework is constructed, strengthened by cross-wiring, and this frame is filled in with expanded metal lathing on both sides; the outer side is faced with a layer of cement and rough-cast $1\frac{1}{2}$ in. thick, and the interior with $\frac{3}{4}$ in. of plaster, a cavity $6\frac{1}{2}$ in. wide being left between the two sides; the lower part of the wall is built in brick up to plinth level, or, in the case of a school, to the under side of the window sills. The result appears to be satisfactory. An advantage common to all forms of steel framework is the economy in foundations rendered possible by the lighter building; and on an insecure foundation a wall contained in a steel frame is certainly safer than a plain brick wall. On the other hand, all the forms of filling proposed require to be made weather-proof by a facing of cement rough-cast or a similar material.

As regards ferro-concrete, Mr. W. N. Twelvetrees gave evidence that the material (a) lends itself to any style of architecture; (b) can be employed for the construction of every detail from foundations to roofs, the building being monolithic throughout; (c) can be used for the construction of a skeleton frame supporting and transmitting all loads to the ground; the panels of the walls and roofs can be filled in with ordinary materials, which, having no load to carry in the walls, may be much thinner than the usual type; (d) makes a building of exceptional strength and capable of acting as a single unit, and thus unaffected by any subsidence or local weakness under the foundations; (e) is one of the best fire-resisting materials known; (f) is suitable on hygienic grounds, being impenetrable by vermin, harbouring no germs, and checking exhalations and moisture; being non-porous and non-conductive, it conduces to equable temperature; (g) concrete increases in strength with age and is free

from decay and corrosion, thus needing no maintenance or repairs beyond cleaning and painting for decorative purposes. On the last point, he drew attention to the fact that the durability of steel and concrete used separately had never been questioned by architects, and, therefore, their durability when used in combination ought to be accepted.

On buildings of two storeys there would be a saving of about 5 per cent. all round on first cost and on higher buildings an additional 5 per cent. per storey up to a maximum of 15 or 20 per cent. In any case there would be a saving in maintenance, as no repair would be required. Witness would prefer to make a reinforced concrete skeleton, like a steel skeleton, and fill in the walls with concrete hollow blocks, bricks, or hollow bricks. There would be a saving of 10 to 20 per cent. over a steel skeleton, and the same over ordinary brick construction.

Taking the items of construction separately, witness said that in foundations reinforced concrete offered great economies for unstable soil, while even in fairly solid soil reinforced concrete column bases required far less material than ordinary footings extending beneath the whole length of the walls, and thus effected a saving. He quoted a case of a building at Newcastle-on-Tyne where a reinforced concrete raft had been put under the building, and had resulted in a saving of 50 per cent. on the original design of a concrete foundation of piers going down to the solid. Similarly, at the General Post Office column foundations in reinforced concrete had been used and saved about 50 per cent. on ordinary concrete blocks.

In regard to columns, he estimated that reinforced concrete would give a saving of about 25 per cent. over steel columns to carry the same loads and could be used to carry a strain where a brick column would be of prohibitive cost, as the safe compressive strength of concrete properly reinforced averages ten times that of brick masonry. The concrete column would also be better than protected steel for resisting fire. He agreed, however, that from the point of view of the Board of Education steel columns from a good maker would require less supervision during erection than reinforced concrete columns, unless the latter were executed by thoroughly reliable and experienced contractors.

Witness thought that the only economy in the construction of walls arising from the use of reinforced concrete would be due to the possibility of replacing thick masonry by thin curtain walls, as these would not have to carry any load. Interior walls could be put up very cheaply of special slabs or by plastering cement mortar on expanded metal or other types of lathing.

As regards floors, he admitted that reinforced concrete was

dearer than timber, but considered it would usually come out cheaper than steel joists with plain concrete or tile panels; he had particulars of three cases where the saving was $11\frac{1}{2}$, $12\frac{1}{2}$, and 15 per cent. respectively. The reinforced concrete was also less susceptible to heat, and so safer in case of fire, than steel joists.

For the purpose of staircases there was no saving in the use of reinforced concrete, but the material was better. When exposed to fire, it did not splinter and crack like stone, it did not burn like wood, and it did not buckle like steel.

He thought that for flat roofs there was an economy in the use of reinforced concrete; there would be no saving in a sloping roof, but the material might be employed with advantage, as it would make a roof impervious to moisture and immune from injury by fire.

The Science Standing Committee of the Concrete Institute have arrived at the following conclusions on the rusting of steel in concrete:—

Reinforced concrete will last as long as plain concrete in any situation provided that special precautions are taken during its construction. The precautions to be taken are as follows:—

Concrete.—The materials (cement, sand and stone) must be of good quality. They must be most carefully and thoroughly mixed and scientifically proportioned, so as to be practically waterproof and airproof. The mixture must be fairly wet, and must be well punned into position so as to minimise voids. The aggregate should be as non-porous as possible, and any aggregate which is known to have a chemical action on steel should be avoided. The aggregate should all pass through a $\frac{3}{4}$ -in. mesh. The concrete covering should in no case be less than $\frac{1}{2}$ in., and it is suggested that if round or square bars be used the covering should not be less than the diameter of the bar. In structures exposed to the action of water or damp air, the thickness of covering should be increased at least 50 per cent., or the size of the aggregate should be reduced so as to ensure a dense skin. In the case of structures exposed to very severe conditions, the concrete might be covered with some impervious coating as an extra precaution.

Steel.—The reinforcement should be so arranged that there shall be sufficient space between one piece and its neighbour to allow the concrete to pass, and to completely surround every part of the steel. All steel should be firmly supported during the ramming of the concrete, so as to avoid displacement. It should not be oiled or painted, and thick rust should be scraped and brushed off before placing.

General.—The scantling of the various members of the

structure should be sufficient to prevent excessive deflection. If electric mains are laid down, very great care must be taken that no current is allowed to pass through the reinforced concrete. Fresh water should be used in mixing, and aggregates charged with salt should be washed.

Concrete Machines at the Building Trades Exhibition.

Mixers are of two main types, one where the materials are measured by hand and a definite quantity of concrete is supplied, the other where the discharge is continuous. They may have a rotating closed box or an open pan and an open trough with paddles. In the Ransome the rotating box is a short cylinder with blades to mix the materials, and a shoot carries the discharge. The Ransome hand-mixing machine has an open box with paddles, which are set at such an angle that the materials are always delivered to the centre of the drum, and jamming of stones between paddles and drums is avoided by providing springs to the paddles. Another convenient type was shown by Messrs. F. Johnson and Co.

Several block-making machines were exhibited. In the Winget, one movement of a lever opens or closes the mould, and the blocks are rapidly turned out (U.K. Winget Concrete Machine Co.). There were also machines for concrete bricks and tiles. A large sphere of usefulness is opened up by the extension and improvements of these appliances.

The Electrical Industry.

This did well last year and is likely to do well this year. The metal filament lamp has had much to do with the extension of the use of electricity. It is still, however, rather expensive to hold its own where the voltage is not sufficiently steady for the metal lamp. It has been found in Japan that the best lighting results for factory purposes are obtained by fixing flame arc lamps with reflectors. The inverted arc lamp is being more and more adopted. Paraffin electric lighting sets are coming into use on tropical estates, being easily worked by coloured labour.

Condensing Plant for Electric Light Stations.

The use in the boilers of the condensed steam requires considerable care to prevent the access of oil into the boilers, and, though by the use of a surface condenser it is possible to avoid the provision of an elaborate water-softening plant, it is still

necessary to provide a purifying plant to precipitate the oil which gets into the water. In marine engines the use of oil in the cylinders is small, but it is different with high-speed engines.

Wireless Telegraphy.

It is proposed to establish communication between Colombo and Madras. The plant, with a guaranteed range of 450 miles, would cost about £3,700, and the other expenses would bring the total to about £5,000.

The competition of the Companies will no doubt be restricted by the result of the patent action lately won by the Marconi Company, which appears to give them the control of all "spark" wireless telegraphy for the next few years. The smaller concerns will now be between Scylla and Charybdis: on the one side the judgment protects the Marconi patent on a broad interpretation, while on the other the regulations of the International Radio-Telegraph Convention requires a method of syntonie transmission embodying recent practice in syntonisation of the circuits.

Oil Fuel for Steamers.

By certain recent systems oil fuel is efficiently burnt without the use of steam or air jets, as is at present the common practice in the mercantile marine. The liquid fuel is injected into the furnaces under pressure by special oil fuel pumps, and on its way to the burners is passed through filters and heaters in which it is filtered and heated to the proper temperature; it is then forced into the furnace in the shape of a conical spray of fine particles, which burst into flames 6 to 8 inches from the nozzle. The lower and upper portion of the boiler are heated uniformly, and as there is no inrush of cold air, as there are no furnace doors to open, there is none of the strain caused by coal stoking.

New Light-house at St. Lucia.

This is to be erected at Cape Moule-a-Chique. There will be a 3rd order revolving light, 90 ft. T. H. lantern with mild steel framing, copper roof and ventilator, mercury float pedestal, and Chance 55 m/m incandescent vapour installation with container as for 88 m/m installation. The price of all the materials constructed in this country is about £1,700.

The report on the mineral survey of Southern Nigeria is rather disappointing, or at any rate not exhilarating. The survey was commenced in 1903, and it was clearly desirable to make a general examination of the mineral resources of such a large and unexplored country. Nothing much of commercial value has been found, but in such cases the samples taken can only represent a small proportion of the possibilities, and experience shows that accident may bring to light treasures which the official survey has not hit upon. There are some places where gold is worked by natives, but not with such results as to interest the city at present.

It is to be hoped that the West Indies will make good use of the Canadian National Exhibition, which will be held in Toronto from August 26th to September 11th. As previously, Messrs. Pickford and Black will, it is understood, carry exhibits free to St. John. The rapid increase of population and prosperity in the Dominion is adding greatly to its value as a market for West Indian produce, and a good opportunity of advertising should be made the most of. Some day perhaps the West Indian colonies will have a commissioner in Canada, as South Africa has in England, to advise growers and arrange for sales.

RAILWAY AND HARBOUR WORKS.

To Northern Nigeria via Lagos.

A through rail service will be inaugurated in the current year from the Port of Lagos, the capital of Southern Nigeria, to Minna (the junction with the Baro-Kano Railway), the time occupied in transit being about 30 hours. The weekly mail train, which will connect with both the outward and homeward mail steamers at Lagos, will consist of saloon carriages provided with every modern convenience, including comfortable sleeping accommodation, lavatories, and bathrooms, and fitted throughout with electric light and fans. A restaurant car will be a special feature in connection with this train.

The route is *via*

LAGOS LINE

Abeokuta (60 miles)
 Ibadan (123 miles)
 Oshogbo (186 miles)
 Ilorin (246 miles)
 Jebba (306 miles)
 Zungeru (429 miles)
 Minna (467 miles)
 Rigachikun (585 miles)

the present nearest point of the Nigerian railway system to the Tin Mines of Bauchi.

At Lagos, passengers and their luggage, etc., are conveyed to and from the Ocean Liner by a tender which lands them conveniently at the Customs wharf. Arrangements will be made to convey them from the Landing Stage to Iddo Station, the present terminus of the Lagos Railway, where they may at once entrain. The saving in time by this route will be from 8 to 10 days on each journey, in comparison to the Niger River route *via* Forcados.

On the 8th of April the first train steamed into Kano, nearly 360 miles from the base. The cost will only moderately exceed Sir P. Girouard's estimate of £3,000 a mile, though as the line has only been built as a "pioneer" line a good deal of work remains to be done to complete it thoroughly. The line from Lagos is rapidly approaching Lungeru and when it is open the journey from Lagos to Kano will be done in little more than three days. The branch line from Zaria to the Bauchi highlands will not only open up the tin fields but will provide an exhilarating retreat for invalids from the low-lying coast and river regions.

The rapid completion of the Baro-Kano railway has been a feat on which all who have taken part in it may well be congratulated. The interest will now soon shift to questions of traffic. Experiences will settle the vexed question whether the Lagos railway or the river Niger will secure the best part of the traffic to Northern Nigeria. From Buruteu to Lokoja is only 350 miles, and of this only about seven miles require dredging to secure a six-foot channel all the year round. This would admit vessels of 9,000 tons gross burden. On the other hand, the Lagos merchants hold the key of the position, and there is a much freer market there than in Northern Nigeria.

It is unfortunate that in the Zaria country there is a long stretch where there are very few people and where appreciable returns cannot be expected for some years. But from Zaria northwards there is an enormous and intelligent farming population. From Kano eleven great main roads restart to every quarter of the compass, and not less than 1,000,000 acres are under continual cultivation within thirty miles of the town. It is necessary to take into account a certain sort of inertia in a people which is accustomed to live on something like a penny a day, but there is no question that they are capable of hard work and all experience shows that the approval of European civilization rapidly enlarges the ideas and stimulates the demands of West African races.

The original estimate of the cost of the Baro-Kano railway was £1,230,000, which included £30,000 for a river dredger and barges. The excess is now put at £100,000, chiefly due to under-estimating the amount of bridgework, and a further £100,000 will be provided for various items of improvement and equipment. The Treasury expressed a doubt whether their future expenditure was justified before the traffic had made some progress, but the expenditure is to be spread over three years, and will be devoted to improvements which can be justified on their individual merits. £10,000 is suggested for draining the foreshore at Baro,

it being considered that this work will be directly remunerative as providing suitable sites for trading firms.

The inspection of the Baro-Kano railway by Major Waghorn has been postponed till November on account of the difficulties caused by the rainy season.

Lagos Railway.

By the end of January the North Channel Bridge over the Niger was practically complete. The north approach bank to South Channel Bridge was approaching the full width in places. The completion of the foundation of bridges and culverts in Division II. was delayed by the want of stone, owing to the limited amount of rolling stock. The substructure on Kaduna Bridge proper was completed. The works are now making good progress.

Lagos Harbour Works.

The Eastern wall has made steady progress, extending at the end of last year 4,072 feet seawards from the centre of the Harbour Works Wharf. It was expected that the Western wall wharf would be finished next September, but the loss of materials in the "Axim" will cause a serious delay, and the commencement of the West wall cannot be made before next year. The connexion between wharf and foreshore will be, as on the Eastern side, by means of a causeway of tipped stone.

The channel across the bar has in each year towards the end of the rainy season become more difficult and hazardous since the dredging and harbour operations were started, and the draught has had to be temporarily reduced. The steamer "Harold" stranded last September in the channel proper, and was refloated by the efforts of the dredger, "Sandgrouse," but the "Sandgrouse" herself got ashore just at the end of the operations and was so injured that she had to be sent home to be repaired. Owing to this and the docking of the second dredger, hardly any dredging was done in the latter half of 1910, and it is fairly evident that the scour produced by the Eastern wall already completed has helped greatly to maintain the channel at nearly its dredged depth. A large tug, with salvage apparatus and fire extinguishing apparatus, is to be provided, which while available in cases of fire in the town near the harbour will be used chiefly to assist the navigation of vessels entering and leaving the harbour.

The length of the Apapa Wharf is now fixed at 343 feet to facilitate the landing of materials for the water works at Iju. The consideration of this matter led to a delay in the commencement of construction. The laying of the rails on the railway was completed and the line opened for light traffic early this year, but the wharf will not be completed till the beginning of next year.

A considerable amount of swamp land on Lagos Island still requires reclamation. Up to the end of 1909, £49,425 had been spent on this much needed sanitary improvement. During 1909-10 the "Sandgrouse" did excellent work, but as the operations proceeded and the site of discharge became more distant the progress was retarded. With the lengthening of the pipe line the time occupied by the discharge became excessive. Lieutenant Child, while on leave, visited Holland to study the methods followed there, and found that the right course was to duplicate or even triplicate the single pump fitted to the vessel. The supply of this additional pumping power was authorised at an estimated cost of £7,000.

During 1910, the sewage and local work preliminary to the preparation of estimates of cost and detailed schemes for the extension of the railway from Iddo across Lagos Island to Wilmot Point, and for the construction of large quays for ocean steamers, were completed.

Good progress has recently been made with the erection of the Customs and West Wall wharfs. The progress of the East wall is comparatively small owing to the high tonnage rates required for lineal foot of the work. At the end of April the length was 4,589 feet from Section I.

Sekondi Harbour Works.

Good progress has been made with the filling in of the reclamation area and the formation of the blockyard. The second yard Goliath crane and the block-setting crane were despatched in March and April, and the construction of the breakwater can be proceeded with; it is anticipated that it will be sufficiently advanced by the end of the year to render practicable the construction of permanent slipways. Several steam launches and a large number of lighters are engaged at the port, and facilities for repair would be welcomed.

It has been decided to build a sea-wall or pitched slope between jetties Nos. 1 and 2, at an estimated cost of £900. The reclamation will provide a valuable piece of ground for railway purposes.

Sekondi Railway.

A serious washout which occurred last autumn on the Sekondi-Coomassie Railway, at 113 miles, is attributed partly to the extensive clearing of trees which has taken place on the headwaters of the rivers Jym and Nyam Lu, in the neighbourhood of the mines at Obuasi, Sansu and Ayenim. The mischievous results of such deforestation are well established. Trees are the natural material for holding the humus together, so that water can be arrested and absorbed, and if they are removed a cause is set up of sterile land and violent watercourses. In this case the local mischief will be met by providing a 30-foot span.

It is proposed to make a new station and loop at Cinnamon Beppo to accommodate the increasing traffic of the place.

Tarkwa, Prestea, Branch and Broomassie Connection.

The Tarkwa line was opened for traffic in January, and is reported to be in good order. The ballast laid is 1,880 cubic yards per mile, a larger quantity than was anticipated, owing to the clay soil. The expenditure has been about £151,000. The Ankolna bridge was built under extraordinary difficulties, the space to work on being small and the river liable to rise unexpectedly. The Broomassie connection was opened at the same time.

Accra Water Works.

Last year was devoted to the laying of a light railway to the scene of operations and preliminary buildings. The railway was pushed through to destination to allow materials to go up, but a good deal of work remained to be done in building culverts in masonry and widening cuttings. The line is 10 miles long, and is being used for general trade. Good progress has been made this year, though there has been a shortage of labour.

Accra Akwapim Railway.

The contractor has sunk a well in Accra Station Yard, with very promising results. At 170 ft. a steady flow set in, yielding 2,500 to 2,800 gallons in 24 hours through a 4 in. bore hole. Analysis has shown that the water is practically quite pure. There seems reason to expect that a great supply would be obtained by increasing the diameter of the hole.

Freetown.

It is proposed to construct a dam for the waterworks 25 ft. high, which would give a storage of 2,000,000. The nature of the ground seems to make a greater height inadvisable. This gives a 28 days' supply approximately. The cost would be about £3,500.

Trinidad Railways.

The island is intersected about its mid-length from north to south by the central range of hills, extending from Point à Pierre, four miles north of San Fernando on the west coast, in about an east-north-easterly direction to El Branch on the east coast, and the Caparo line, built in 1896-98, pierced this range by tunnel, terminating about a mile to the south of it at Tabaquite. This central range throws off roughly north-westerly and south-easterly bearing spurs, two of which on the northern side form the Caparo Valley, while Tabaquite is situated on the crest of one of the most important spurs on the southern side.

The Tabaquite spur beyond that place follows an easterly course and is broken and tortuous, turning back almost on to itself, then it turns generally southward and south-eastward with many windings, and terminates on the northern side of the river Ortoire, south of Rio Claro. Its top is very narrow, practically a knife edge crest, where the line gets on to it between 5 m 70 chs. and 6½ miles, and on this crest, with continuous turns and twists, ascents and descents, has been built the Tabaquite Mayaro Main road, since the opening of the Caparo valley line.

This road joins, a little eastward of the selected Rio Claro terminus, the San Fernando Mayaro Main road about 26 miles eastward from San Fernando and 19 miles from the present railway terminus at Princes Town; its general direction is east and west.

The Tabaquite spur is the watershed between the streams flowing west and south to the Ortoire, and those flowing south and east to the eastern coast, and it throws off along its course on either side a labyrinth of other spurs and valleys, the latter being almost precipitous where they terminate in the main spur. The spurs are, of course, more or less at right angles to the direction it is proposed to follow, are tortuous and very broken, and while too important to be cut through, have slopes not sufficiently bold to be contoured with curves of which use might be made, so rendering the selection of a practicable route for a railway a task of much difficulty, which is increased by the dense forest growth obscuring the country.

The general idea proposed in 1898 was to follow the Tabaquite spur to Rio Claro, thence east to Mayaro, the only place of any importance on the east coast at that time; but that would have left the large blocks of valuable agricultural country between Rio Claro and Sangre Grande to the north a distance of about 30 miles, and the whole south-eastern corner of the island to the south without other than road communication with the outer world. Later the present scheme was proposed, *i.e.*, to extend eventually the Rio Claro Line to Guayaguayare to open up the south-eastern corner of the island, and this is likely to be greatly advanced by the present development of oil mining there, and later to run a second line eastward from Tabaquite approximately mid-way between Rio Claro and Sangre Grande, to open up that country, and to terminate at Mayaro on the east coast. The better way of reaching Guayaguayare from Tabaquite would have been to follow the valleys of the "Palmiste" and "Poole" rivers into the valley of the "Ortoire" and thence to Guayaguayare, but that would have left Mayaro for the present 18 to 19 miles from the terminus, whereas the proposed terminus at Rio Claro will be only 12 miles distant.

To return to the Rio Claro extension proposals, owing to the broken nature of the spur eastward of Tabaquite, it is necessary to avoid that part of it at any rate, and if it could be immediately regained, there is another point near the sixth mile where it must be left on account of its sinuosity; added to this, inequalities of the crest would necessitate heavy earthworks and some heavy walls, and the works would destroy the existing main road, there being insufficient room for both road and railway on the narrow crest.

Another suggested route descends from Tabaquite by the valley of the "Palmiste" stream for approximately 3 m. 60 chs., then turns eastward at a level of approximately 295, and crossing two minor watersheds at the St. John's road and the Brothers Settlement road respectively, holding approximately its level of 295 to 300 above datum joins the main watershed at 5 m. 75 chs. on the line, or 6 m. 30 chs. on the road mileage. It follows the crest to 6 m. 60 chs. (line mileage) where it reaches the source of the "Guayanapa" stream, the valley of which it descends and in which the Rio Claro terminus is situated at 12 m. 70 chs., adjoining the main road from San Fernando to Mayaro. This terminus has been selected.

The Tillage passed through is without exception that of Cacao, for which an orchard cultivation, under superimposed treeshade, is used. This extends for 1 m. 47 chs. from Tabaquite, after which, with the exception of one piece near 4 m. 20 chs. alienated but not under cultivation, this section of five miles passes through Crown Forest.

Barbados.

A scheme is under consideration for improving the coaling facilities by building coaling yards and wharves at Needham's Point on the Southern extremity of Carlisle Bay. The scheme would necessitate a breakwater and quay walls, and a considerable amount of dredging.

Ceylon.

On the Ratnapura Extension railhead was on 1st February at 12 m. 20 chs. The cost of land has been Rs. 714 per acre against Rs. 600 allowed in the estimate, the demand for rubber land having sent up the price.

On the Mannar Extensions the rails in March were of a total length of 18 miles. The masonry contractors gave a good deal of trouble, being petty men who often disappeared leaving work unfinished; better progress is being made by employing masons departmentally, though the cost will probably be slightly increased.

A flying survey has been ordered of a proposed line from Ratnapura to Pelmadulla, *via* the valley of the Wey Ganga. This line would tap the traffic from a very large district of recently opened rubber land at Dela and Niuitagala.

A survey of the main line to Rambukkana is contemplated with a view to altering the grades and curves and doubling the line.

Malaya.

On the Semantan Kuala Tembeling Railway, the service road was completed for 41 miles at the end of last year. At the end of March the rails were linked for six miles.

On the Gemas Kirola Semantan Railway, the first two sections were opened for traffic. By the end of March last the rails had been linked in for the whole length of 76 miles.

South African Railways.

Last year about 500 miles of new lines were opened for traffic, and some 400 were under construction. These were authorised before the Union, at an estimated cost of about £4,000,000. Since the Union, rates have been reduced, but there is still an enormous profit, and, no doubt, further reductions will follow, when the administration has had time to consider the large system which has been taken over.

Superheating.

Superheated steam is apparently a bad conductor of heat, and can, therefore, be used to reduce cylinder condensation. In the Phoenix system the superheater consists of a series of small tubes fitted to a steel casting in the smoke box; steam passes from the Boiler through various sets of tubes, and ultimately into the cylinders. A certain amount of low superheat is thus obtained. The method has the advantage of being capable of removal should it be found desirable at any time to dispense with superheating, at comparatively small cost. It is also applicable to engines fitted with an ordinary slide valve. A further advantage consists in the system being comparatively simple, and not too complicated to require extraordinary technical skill in attention. It has the additional claim of being applicable to boilers of an ordinary locomotive type without costly alteration to the fire and smoke box tube plates.

The disadvantages are:—

(1) Excessive weight in the smoke-box in addition to that of the locomotive. This varies from a ton to a ton and a half, thus considerably interfering with the adjustment of weights on the wheels.

(2) It presents grave difficulties in obtaining access to the boiler tubes and wash out plugs in cases of repair or cleaning in the smoke-box.

(3) The deposit of ashes at the casting to which the lower ends of the tubes is fixed undoubtedly tends to the corrosion of the superheater tubes.

(4) The economy in coal consumption is less than that of the Schmidt system.

(5) As a system, it is still in the nature of an experiment and hence will not compare with the Schmidt which is in use on some thousands of locomotives.

(6) It is questionable if a thicker smoke-box is not required.

(7) Its cost is believed to have been in certain locomotives about £110 to £120 more than the Schmidt.

In the Schmidt system the superheater proper consists of a series of tubes inserted into the ordinary boiler tubes. A steam collector is arranged to stand in the smoke-box either vertically between the nest of tubes or horizontally above the tubes. These collectors are in two parts, one taking the saturated steam from the boiler from whence it passes through the superheater tubes and is delivered, superheated, into the other steam collector, and so to the engine. The ends of the superheater tubes, where they join the steam collectors, have a collar which forms a joint and are held in place by a cast-steel dog, which holds the tube ends

and is secured with a single bolt. Should it be necessary to remove one of the superheater pipes, in order to either expand or stop a leaky boiler tube, this operation can be quickly performed by unscrewing two nuts. The superheater tube can be removed, a stopper placed in the holes where the tube entered the collector casting and the dog screwed up again, or the superheater tube may be replaced. When removing one of these elements, it is only necessary to close the stop valves and blow out the steam contained in the tubes and collectors; the latter being fitted with a valve for this purpose and for drainage. As the superheater tubes are usually cleaned each time the boiler tubes are swept, the efficiency of the superheater remains unimpaired.

The advantages of the Schmidt system are:—

(1) It is a system of some years standing and is in use on a great number of locomotives, in consequence the claims and advantages have been definitely established beyond possible dispute.

(2) The amount of superheating is greater and therefore the economy in coal consumption is correspondingly greater than the Phoenix.

(3) No unsurmountable difficulty is experienced in obtaining access to the boiler tubes and plugs in the smoke-box.

(4) The weight is distributed more evenly over the general arrangement than is the case with the Phoenix.

(5) It is less weight in addition to the ordinary weight of a locomotive than the Phoenix.

(6) Arrangements are made to automatically close or open the dampers which cover the portion of the superheater in the smoke-box.

(7) It presents no grave objection from the standpoint of deposit of ashes and corrosion resulting therefrom.

(8) It is cheaper to instal on a locomotive, if fitted when built, than the Phoenix.

(9) It is stated that the system does not involve any additional cost in maintenance, but this point would appear to be open to question.

The disadvantages of the system are:—

(1) The impossibility of removing the whole system and reverting to the use of ordinary steam, if it is desired to abandon the use of superheaters, without costly and tedious alteration to boilers.

(2) To enable the best possible results (*i.e.* greatest economy) to be obtained, it is necessary to use piston valves in place of ordinary slide valves.

(3) It is a more complicated system than the Phoenix.

(4) A greater number of spare parts than would otherwise be the case have to be stocked in the Colony.

(5) Some degree of experience is necessary with the driver in charge before the full benefit is obtained.

(6) It is questionable if it is not desirable or even compulsory to have all pistons fitted with tail rods.

Regarding the general question of superheating a sequence of its introduction is the necessity for forced lubrication of pistons and valves; the use of metallic packing; larger cylinders than would otherwise be necessary; an improved gland; better cylinder oil; special care in making steam joints; the replacement of copper pipes in the smoke-box (main steam pipes) and possibly in the boiler by steel pipes; and special equipment for cleaning out boiler tubes.

The Schmidt system, also, is admitted to require, and it is doubtful, also, if in this respect the Phoenix is not somewhat similar, a much longer time to raise steam in the boiler than an ordinary locomotive.

Bridge Foundations.

Screw piles are convenient and economical, but it must be remembered that they are only suitable for good foundations, and that the bridge will probably have to be reconstructed when the loads are heavy and the speed high. The sinking of cast-iron cylinders present some difficulties, but built steel cylinders can be substituted, and though these are now expensive they weigh less, and therefore the freight and carriage are less. Very satisfactory results have been obtained by a lining of concrete to assist in sinking the cylinders. With the cylinders should be provided a cast-steel cutting edge, or a built one with a lip upon which the concrete core should be built. This core should commence at the bottom, and it has been found that there is then very little tendency for the cylinders to get out of either position or plumb during the sinking.

Panama Canal.

The effects of the canal on shipping and shipbuilding are being discussed with rapidly increasing interest. The Suez Canal has regulated the types of vessels plying to the East, their sizes having regularly increased in proportion to the deepening and widening of the canal. A further development will be brought about by the Panama, which will have a minimum breadth of 300 ft., as against 213 in the Suez, and a deep of 41 ft., as

against a maximum of 28. On the other hand the length is limited to 1,000 ft. on the Panama, and is unlimited on the Suez. The former will be capable of passing four times the present traffic of the latter. New York will have the great advantage over London of being 2,770 knots nearer to the canal, but the impulse which will be given to ship-building will be a great benefit to this country.

COLONIAL STAMPS.

The attempt to obtain an equally useful and more attractive design for stamps printed from the Universal keyplate, referred to in our last number is being continued. If it is crowned with success and a way can be found by which stamps of the improved design can be supplied without incurring charges for new duty plates a short delay in the supply of the stamps will be, in the opinion of most people, amply compensated.

The portrait of H.M. the King, which will be used, is the same as has been adopted by the Imperial Government.

The following changes have taken place since our last issue :—

ANTIGUA.—6d. arms design on surfaced multiple watermarked paper instead of on Crown CC paper.

BAHAMAS.—6d., on multiple watermark paper for the first time.

GOLD COAST.—2/6, for the first time in the new colours.

JAMAICA.—6d., printed for the first time from the arms keyplate.

4d., in red on yellow paper (still from the Queen Victoria plate).

LEEWARD ISLANDS.—2d., 6d., 1/- and 2/6, printed for the first time, in accordance with the Universal colour scheme.

N. NIGERIA.—3d. and 5/-, printed for the first time, in accordance with the Universal colour scheme.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. A. G. LASCELLES, K.C. (Attorney-General, Ceylon), Chief Justice, Ceylon.
- Mr. T. ANTON BERTRAM (Puisne Judge, Cyprus), Attorney-General, Ceylon.
- Mr. C. C. BOWRING, C.M.G. (Treasurer, East Africa Protectorate), Chief Secretary, East Africa Protectorate.
- Mr. STANLEY FISHER (District Judge, Cyprus), Puisne Judge, Cyprus.
- Mr. T. W. HAYCRAFT (District Judge, Cyprus), Police Magistrate and Coroner, Gibraltar.
- Mr. H. A. NISBET (Magistrate and Registrar of the Supreme Court, Grenada), Registrar of the Supreme Court, Hong-Kong.
- Lieutenant R. M. REYNOLDS, R.N.R. (Deputy Marine Superintendent, Northern Nigeria), Marine Superintendent, East Africa Protectorate.
- Captain F. N. LE MESURIER (late Major and Officer Commanding the Sierra Leone Battalion, West African Frontier Force), District Commissioner, Northern Territories, Gold Coast.
- Mr. M. G. S. SHERRIFF (late of the Foreign Labour Department, Transvaal), Assistant District Commissioner, Northern Territories, Gold Coast.
- Lieutenant C. J. ELKAN (late Assistant Commandant, Northern Territories Constabulary, Gold Coast), Assistant District Commissioner, Northern Territories, Gold Coast.
- Mr. R. L. PAYNE (2nd Clerk, Secretariat, Grenada), Supervisor of Customs (2nd Grade), Southern Nigeria.

Mr. W. J. O'HARA (Postmaster, Nyasaland), Assistant Postmaster-General, Northern Nigeria.

Mr. F. G. W. HADDRELL (retrenched from the South African Constabulary), Supernumerary Sub-Inspector of Police, Leewards.

Mr. H. B. SMEETON (late Trooper, Natal Police), Assistant Inspector of Police, East Africa Protectorate.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ADAMS, C. H.	4 Sept., '11	BURNS, T. B.	
AGNEW, T.		BEDDOWS, J.	8 Aug., '11
BAND, R.	8 July, '11	COUZENS-HARDY, E. W.	
BACKHOUSE, Capt. H. D.	21 July, '11	CLANCEY, C.	8 Sept., '11
BEARD, S. R. H.	1 July, '11	CRANE, Miss S. M. ...	19 July, '11
BRANDFORD-GRIFFITH	due back	CROFT, C.	25 July, '11
Sir W.	13 Sept., '11	CARTER, Dr. W. J. B. ...	5 Sept., '11
BREWER, H. W.	4 Aug., '11	CHAPIN, S. H., D.S.O. ...	9 July, '11
BONIFACE, B.	25 July, '11	DUFF, Dr. D.	22 July, '11
BONHAM-SMITH, R. ...	31 July, '11	DOWDALL, Dr. A. N. ...	18 Sept., '11
Royal Colonial Institute, Northumberland Avenue, W.C.		DOCKRELL, E.	
BERKELEY, H. M. H. ...	29 Sept., '11	FRAZER, A. D.	8 Aug., '11
c/o Messrs. Richardson & Co., 25, Suffolk St., Pall Mall, S.W.		FRASER, Dr. M. W. ...	27 July, '11
BALLANTINE, J. A. ...	14 Sept., '11	GARLAND, Dr. P. J., C.M.G.	
BARKER, E. B.		GRIMSDITCH, W. H. ...	18 Aug., '11
Junior Naval and Military Club, 96, Piccadilly, W.		GIBSON, R.	8 Aug., '11
BEAVEN, R. A. G. ...		GOSLING, S. B.	9 Sept., '11
		GOODY, C. E.	9 Sept., '11
		GRANT, W. A.	
		HUDSON, A., K.C. ...	19 Sept., '11
		HAMILTON, C. S.	
		HALL, R. E.	8 Sept., '11
		HORNSBY, Miss V. ...	

GOLD COAST—*continued.*

HALL, H. A. L. ...	7 Aug., '11	PETTIT, C. W. ...	27 July, '11
HARDING, Col. C., C.M.G.	1 Sept., '11	RICE, Dr. T. E. ...	30 June, '11
White's Club, St.		REEVES, J. ...	29 June, '11
James' St., S.W.		REEVE, Maj., C.E.D.O.	7 Aug., '11
HEARSON, J. G. ...	8 Sept., '11	Army and Navy Club,	
HIGHAM, R. ...	5 July, '11	Pall Mall, S.W.	
JACKSON, F. W. F. ...	29 July, '11	RUSSELL, W. G. ...	18 Sept., '11
JOHNSTON, J. ...	25 July, '11	ROBERTS, F. ...	
KEIGWIN, G. J. W. ...	25 July, '11	STANLEY, H. E. T. ...	
Royal Societies Club,		SHAW, F. ...	14 Aug., '11
St. James St., S.W.		SMEED, C. W. ...	8 Aug., '11
KING, T. E. J. ...	25 July, '11	SMITH, A. ...	25 July, '11
LUNDIE, A. ...		TOBIT, Dr. P. M. ...	25 Aug., '11
LEWIS, H. M. ...	8 Sept., '11	TOWER, W. ...	6 Aug., '11
LEGGE, Capt. P. A. ...		TUDHOPE, W. S. D. ...	8 Aug., '11
LYLE, J. N. ...	4 Aug., '11	UNWIN, H. B. ...	19 Sept., '11
MILLER, J. R. A. ...	5 July, '11	WRIGHT, T. ...	14 Sept., '11
MANSFIELD, E. T. ...	2 Aug., '11	WHYTE, Dr. R. ...	29 Aug., '11
MORCOM, H. C. ...	29 Aug., '11	WRIGHT, H. A. ...	8 Sept., '11
McADAM, J. ...	8 Oct., '11	WATKIN, H. ...	27 Aug., '11
PASK, I. A. J. ...	19 Sept., '11		

SIERRA LEONE.

BILL, Capt. J. F. ...	7 July, '11	HUNTER, Dr. C. B. ...	31 July, '11
BROOK, J. S. ...	29 June, '11	HOLLINS, N. C. ...	29 Aug., '11
BROOKS, G. L. ...	29 Aug., '11	JENKINS, E. D. ...	25 July, '11
COPLAND, C. A. ...	14 Sept., '11	JONES, A. ...	31 July, '11
CULLEN, A. J. ...	10 Aug., '11	KENNAN, Dr. R. H. ...	12 Sept., '11
CRAVEN, J. ...	19 July, '11	MOORE, G. R. ...	18 Sept., '11
DAVSON, Dr. J. B. H. ...	12 Aug., '11	PERRY, J. ...	3 July, '11
c/o London & South		SMYLY, Sir P. ...	25 July, '11
Western Bank, Ltd.,		STEVENS, J. ...	3 July, '11
High Road, Kilburn,		TINLING, J. A. ...	5 July, '11
N.W.		WICKHAM, M. H. C. ...	31 July, '11
EDWIN, J. N. ...	10 Aug., '11	De C. de B.	
FAINTLOUGH, Maj. E. D.	29 Aug., '11	WOOD, Dr. J. Y. ...	1 Aug., '11
C.M.G., D.S.O.		WILLIAMS, H. J., due back	2 Aug., '11
HUNT, R. L. ...	5 July, '11	WAKELING, J. ...	

GAMBIA.

BROWN, J., I.S.O. ...	25 July, '11	O'BRIEN, Lt.-Col. C. R.	10 Aug., '11
MANGEE, E. V. ...	4 Aug., '11	M., C.M.G.	

SOUTHERN NIGERIA.

AUSTIN, E. P.	23 Aug., '11	FALK, E. M.	14 Aug., '11
c/o Sir C. R. McGrigor, Bart, & Co., 25 Charles St., S.W.		Junior Army & Navy Club, Horse Guards Av. S.W.	
ASTON, J.	24 Sept., '11	FINLAY, J. D.	5 Aug., '11
ALEXANDER, W. J. ...	2 Aug., '11	GRANT, M. G.	
BOURNE, V. C.	19 July, '11	GRAHAM, Dr. W. M. ...	7 Sept., '11
BRUCE, Maj. G. E. ...	27 Aug., '11	GUSH, H.	5 July, '11
c/o Messrs. HOLT & Co., 3, Whitehall Pl., S.W.		GRIFFITHS, C. J.	19 Sept., '11
BURELL, W.	27 Aug., '11	GRAY, Dr. R. W.	19 July, '11
BURN, Lt. J., R.N.R. ...	14 Sept., '11	GIBBONS, A.	14 Aug., '11
BENNETT, A. J.	27 July, '11	GREEN, E. C.	19 Sept., '11
BARKER, E.	19 July, '11	GRAY, Dr. G. M.	18 July, '11
BALDWIN, Dr. F. J. A.	19 Sept., '11	GRIFFITHS, E.	8 Sept., '11
BLAKELY, J. F.	3 July, '11	HOLDEN, R.	28 Aug., '11
BODDY, C.	14 Sept., '11	HARRIGAN, C. A.	31 July, '11
COWAN, A.	19 July, '11	HEWSON, C. L. B.	1 Aug., '11
CUMMINS, C. A.	13 July, '11	HARRIS, H. G. E.	25 July, '11
CLAYDON, B.	24 Aug., '11	HOPKINS, W.	23 Aug., '11
COWPER, J.	31 July, '11	HORNBY-PORTER, C. ...	18 Sept., '11
CLOUGH, Dr. J. A. ...	8 Aug., '11	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
COLLIER, L. A. P. ...	4 Aug., '11	HAGAN, J.	
COCHRANE, W. G. ...	31 July, '11	HOMAN, Capt. H. L. ...	23 July, '11
CLINCH, F. A.	19 Sept., '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
CORRY-SMITH, Capt. G. C.	29 Aug., '11	HALL, Lt. L. J., R.N.R.	23 July, '11
Junior United Service Club, Charles St., S.W.		Sports Club, St. James' Square, S.W.	
COLLETT, Dr. J. W. ...		HICKS, W. T.	29 Aug., '11
DE ROSARIO, O.	18 Aug., '11	HAND, J., St. V.	8 Sept., '11
DENNETT, R. E.	24 Sept., '11	HOLE, W. F.	12 Aug., '11
c/o Messrs. H. S. KING & Co., 7, Pall Mall, S.W.		c/o The Bank of Ni- geria, Ltd., Norfolk Street, W.C.	
DORRINGTON, F. M. ...	7 July, '11	INGRAM, B. S. A.	24 Sept., '11
DOUGLAS, H. M.	8 Aug., '11	JOHNS, F.	14 Aug., '11
DAWSON, T. B.	19 July, '11	KINGHORN, J. M. B. ...	8 Aug., '11
DENNY, G. A. E.	19 Sept., '11	KENT, J.	23 Aug., '11
United Empire Club 117, Piccadilly, W.		KNIGHTS, E. G.	29 July, '11
DE GAYE, J. A.	29 Aug., '11	LEIGHTON, E. V.	19 Sept., '11
DEARLE, F.	27 Aug., '11	LESLIE, K. M.	19 Sept., '11
DAVIDSON, C. E.	27 July, '11	LYNCH, F. P.	19 July, '11
DAVIES, D. E.	31 July, '11	LABORDE, A. L. C.	8 Sept., '11
ELSTOB, R. G.	29 Aug., '11	LUBBOCK, E. N.	5 July, '11
EDMETT, E. A.	28 July, '11	LEE, G.	14 July, '11
FARQUHAR, J. H. J. ...	18 Aug., '11	IANGLEY, F. G.	29 Sept., '11
FREELAND, H.	5 July, '11	LEADER, F. W. M.	29 Aug., '11
FLACKE, W. A.	19 July, '11	LAWSON, P. B.	10 Aug., '11
FROST, E. L.	12 July, '11	LEONARD, Dr. T. M. R.	19 July, '11
FISHER, W.	6 Aug., '11	LEESE, C. W.	29 July, '11

SOUTHERN NIGERIA—continued.

LAYBOURNE, J. ...	27 Aug., '11	ROUSSEAU, G. D. ...	14 Sept., '11
MORLEY, H. J. ...	18 Aug., '11	SALTER, J. ...	19 Sept., '11
MAITLAND, T. D. ...	8 Aug., '11	SANDERSON, H. ...	25 July, '11
MOFFETT, W. ...	11 Sept., '11	STEWART, W. ...	23 July, '11
MORGAN, H. ...	7 Aug., '11	SEWARD, R. R. ...	8 Aug., '11
MILLIKEN, A. R. ...	29 Aug., '11	SAMUEL, J. A. ...	19 Sept., '11
MERCER, E. G. ...	29 Aug., '11	SMYTHE, Dr. A. W. S. ...	8 Aug., '11
MACPHERSON, Dr. R. C. ...	14 Sept., '11	SALIER, E. L. ...	29 Aug., '11
McCORKINDALE, D. ...	14 Aug., '11	Junior Naval and Military Club, 96, Piccadilly, W.	
MACGREGOR, D. ...	28 Sept., '11	SASSE, R. H. J. ...	23 Aug., '11
MARCH, H. T. ...	24 Sept., '11	SIM, J. S. ...	24 July, '11
United Empire Club 117, Piccadilly, W.		SIEGER, Dr. W. H. ...	19 July, '11
MYTTON, Capt. A. R. ...	25 July, '11	SELANDER, J. E. ...	16 Oct., '11
Junior United Service Club, Charles St., S.W.		STRACHAN, Dr. H., C.M.G. ...	8 Sept., '11
McFADYEN, T. J. ...	5 July, '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
MONCASTER, F. A. ...	25 July, '11	SMALLBONE, W. ...	14 Aug., '11
MAIR, MAJ. G. T., D.S.O. ...	29 Sept., '11	SMITH, W. ...	19 Sept., '11
McKAY, T. J. ...	6 Sept., '11	STRETCH, C. K. ...	28 Aug., '11
MEIRS, Capt. M. C. C.		STUBBS, W. W. ...	19 Sept., '11
NEEDS, H. E.		STREET, L. D. ...	19 Sept., '11
NOBLE, Rev. L. S. ...	17 Oct., '11	TYNDALL, W. H. ...	31 July, '11
NORRIS, P. M. ...	8 Aug., '11	TURNER-SMITH, E.	
NEWPORT, Dr. H. M. ...	14 Aug., '11	THEXTON, A. ...	25 July, '11
NOBES, A. ...	13 June, '11	TENGELY, G. A. ...	8 Sept., '11
PARRY, Maj., J. L. R. ...	29 Aug., '11	c/o London County & West Bk., Ltd., West- bourne Grove, W.	
PHILLIPS, J. ...	25 July, '11	THATCHER, W. H. ...	12 Aug., '11
PEDDIE, J. L. ...	11 Sept., '11	TALFOURD JONES, F. ...	13 July, '11
PERCIVAL-JONES, Lt. J., R.N.R. ...	18 Aug., '11	UNWIN, DR. A. H. ...	29 Aug., '11
PUNCE, C. ...	19 July, '11	VOCE, F. ...	28 July, '11
PRYCE, H. F. F. ...	19 Sept., '11	WINKFIELD, J. ...	24 Sept., '11
PEACOCK, W. H. ...	23 Aug., '11	WILLIS, A. ...	21 Sept., '11
PHILIPS, J. D. ...	29 Aug., '11	WILSON, DR. A. H. ...	31 July, '11
PHILLIPS, L. H. ...	5 July, '11	WATLING, MAJ. J. ...	29 Aug., '11
RUTT, H. ...	28 July, '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
ROBERTSON, R. B. ...	8 Aug., '11	WOOD, Maj. S. M., due back 5 Nov., '11	
RICHARDSON, Capt. T. C. ...	8 Oct., '11	WHITEHEAD, Capt. J. H. M. ...	25 July, '11
ROACH, Dr. W. F. ...	13 July, '11	WOODBURN, A. ...	
READ, Dr. E. H. ...	8 Sept., '11	WALTON, G. L. ...	7 Aug., '11
RICHARDS, W. H. ...	13 July, '11		
ROBERTS, J. ...	7 July, '11		
RANDELL, Capt. J. T. ...	9 July, '11		
ROJAS, Lt. R. H., R.N.R. ...	25 July, '11		

NORTHERN NIGERIA.

ARNETT, E. J. ...	6 July, '11	BEETON, T. G. ...	29 Aug., '11
BUCKLE, E. ...	24 Aug., '11	BROWN, R. ...	9 Sept., '11
BROWN, G. H. ...	23 Aug., '11	BISHOP, J. ...	14 Sept., '11

NORTHERN NIGERIA—continued.

BYFIELD, B. D. ...	18 Oct., '11	HOBBS, A. H. ...	25 July, '11
BROWN, A. ...	23 Aug., '11	HICKS, H. E. ...	2 Sept., '11
BLAKENET, Maj. J. E. C.	5 July, '11	HORN, T. G. ...	19 July, '11
Junior United Service Club, Charles St., S.W.		HEROPATH, D. K. M. ...	4 Aug., '11
BEIRNE, M. ...	29 Aug., '11	Cavalry Club, Piccadilly, W.	
BIFFEN, E. H. ...	11 Oct., '11	HOPKINSON, Capt., J. ff.	
BUDGEN, T. A. G. ...	28 July, '11	HAUGHTON, T. H. ...	
New Club, Grafton St., S.W.		HAMMOND, Capt. F. D.	
BOYD, J. H. ...	2 Nov., '11	INGHAM, B. N. ...	11 July, '11
BRACKENBURY, Capt. E. A.	4 Sept., '11	JOHNSON, R. K....	
c/o Messrs. Way & Co., 11, Haymarket, S.W.		JOHNSON, Capt. A. E., D.S.O.	24 Sept., '11
BAKER, Capt. E. M. ...		Royal Colonial Institute, Northumberland Avenue, S.W.	
BURNS, W. ...		KKAPP, A. F. P. ...	14 Sept., '11
BAILEY, C. ...		KNOX, Capt. A. W. C....	14 Sept., '11
COLES, Capt. R. G. ...	5 July, '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
CAMPBELL-IRONS, A. ...	4 Aug., '11	LEWER, DR. H. G. ...	5 July, '11
Royal Societies' Club, St. James' St., S.W.		LONSDALE, Capt. P. ...	4 Aug., '11
CLIFTON, R. B. ...	31 July, '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
Grosvenor Club, Piccadilly, W.		LLOYD-WILLIAMS, E. ...	28 Oct., '11
COLE, A. ...	29 Aug., '11	LEY-GREAVES, J. A. ...	due back, 4 Aug., '11
CHAMBERS, W. G. F. ...	3 July, '11	LAING, E. H. B....	3 Oct., '11
COATSWORTH, J. P. ...	28 Aug., '11	LYNCH, J. E. ...	
CHING, C. H. ...	14 Aug., '11	McKAY, R. J. ...	25 July, '11
COLLISSON, P. L. ...	17 Aug., '11	MOISER, Dr. B. ...	25 July, '11
COGAN, F. J. L....	23 July, '11	MORGAN-OWEN, H. ...	8 Aug., '11
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		MONRO, Dr. H. C. ...	28 Aug., '11
CHAMPION, M. ...		MAXWELL, A. W. ...	14 Sept., '11
DE PUTRON, P. ...		MONKHOUSE, E....	14 Aug., '11
DUNNE, Miss S....	25 July, '11	McCLINTOCK, Maj. A., D.S.O. ...	12 Aug., '11
DAWSON, A. E. ...	8 Aug., '11	MONK, G. L. ...	12 Sept., '11
EDGAR, Maj. F....	14 Sept., '11	MASON, G. F. ...	
FRANCIS, A. C. ...	12 Aug., '11	NORMAN, Dr. G. B. ...	4 Sept., '11
FREWEN, H. M....	3 Oct., '11	O'LEARY, F. D. ...	9 Sept., '11
GLENTWORTH, J. ...		ORMSEY, G. ...	9 Aug., '11
GUSH, Dr. H. W. ...	10 Aug., '11	ORTEOUS, Dr. E. J. ...	
GROOM, A. H. ...	3 Oct., '11	PURDON, Lt. A. P., R.N.R.	8 Sept., '11
GORDON-GRAHAFF, A. ...	24 Sept., '11	PHILLIPS, T. B. ...	5 July, '11
GOLDSMITH, H. S. ...	22 Nov., '11	Primrose Club, Park Place, St. James', S.W.	
GOODWIN, A. E....	17 July, '11	POSTANCE, M.A. ...	25 July, '11
HUNSWORTH, W. ...	4 Aug., '11	RAE, K. T. ...	9 Oct., '11
HILL, R. ...	31 July, '11	STRICKLAND, Col. E. P., D.S.O. ...	31 Oct., '11
HODGES, B. ...	25 July, '11	Naval & Military Club, 94, Piccadilly, W.	
HOPKINSON, J. O. ...	20 Aug., '11		
HEBDEN, H. H. ...	29 Aug., '11		
HENDERSON, Capt. E. E. D.	14 July, '11		
HOWSE, C. ...	4 Aug., '11		

NORTHERN NIGERIA—continued.

SHARPE, Maj. W.S., C.M.G. 18 Oct., '11	WHITE, Capt. I. H. G. 3 July, '11
Junior Naval & Military Club, 96, Piccadilly, W.	Junior United Service Club, S.W.
SWANN, Dr. A. J. T. ... 15 July, '11	WARD, Miss M. A. ... 7 Aug., '11
STONE, E. ... 23 Aug., '11	WATSON, Dr. C. F. ... 25 July, '11
SHAMP, E. S. ... 12 Aug., '11	WESTON, F. ... 23 Aug., '11
TWEEDIE, T. ... 11 Aug., '11	WATSON, E. C. ... 19 Sept., '11
TOWNSEND, C. ... 14 Sept., '11	Isthmian Club, Piccadilly, W.
TAYLOR, Capt. S. C. ... 28 Sept., '11	WOOD, W. ... 29 Aug., '11
THOMPSTONE, S.W., C.M.G. 14 Aug., '11	WINGATE, G. R. ... 25 July, '11
THOMSON, W. B. ... 28 Aug., '11	WATSON, Dr. C. E. S. ... 21 July, '11
VISCHER, H. ... 4 July, '11	WATES, E. M. ...
Royal Societies' Club, St. James' St., S.W.	WRIGHT, H. E. ...
WILLIAMS, Lt.-Col. E. E., 3 Aug., '11	WOOLLCOMBE, J. M. ...
D.S.O.	GATES, C. C. ...
Army and Navy Club, Pall Mall, S.W.	

NYASALAND.

ARCHER, J. ... 7 Oct., '11*	McREA, R. A. ... 18 Sept., '11
DAVY, E. W. ... 28 Sept., '11	SHIRCORE, Dr. J. O. ... 18 Sept., '11
HEARSEY, Dr. H. ... 26 Aug., '11	TURNBULL, A. M. D. ... 18 Sept., '11
INGRAM, H. I. ... 9 Sept., '11*	c/o Wilts & Dorset Bank, Ltd., Bath.
JONES-VAUGHAN, H.T. C. 31 Aug., '11	WELLS, J. S. ... 18 Sept., '11
JERMAN, R. ... 18 Aug., '11	WYATT, A. H. L. ... 18 Sept., '11
KIRKPATRICK, F. J. ... 27 Aug., '11	WALLIS, H. R. ... 9 Sept., '11*
MERCIER, G. H. V. ... 16 Oct., '11	Royal Colonial Institute, Northumberland Avenue, W.C.
c/o London, County & Westminster Bank, Ltd., Earl's Court Branch, S.W.	WILKINS, C. ... 18 Nov., '11

EAST AFRICA.

ANDERSON, R. T. H. ... 26 Aug., '11	COLLYER, A. J. M. ... 9 Oct., '11*
ARMITSTEAD, C. A. ... 9 Oct., '11*	DENCH, L. J. E. ... 3 Nov., '11*
BARNES, H. C. E. ... 9 Oct., '11*	DICK, Capt., R.N., steamer leaving United Service Club, Pall Mall, S.W. 21 July, '11
BOYCE, A. E. ... 1 Nov., '11*	DURKAN, J. P. ... 26 Aug., '11
BRUCE, A. ... 26 Sept., '11	DUNDAS, C. C. F. ... 26 Sept., '11
BOWEN, C. ... 26 Sept., '11	GRIMSHAW, Capt. W. H. 26 Sept., '11
BARTH, J. W. steamer leaving 10 July, '11	HEMMANT, E. V. ... 26 Sept., '11
BOWRING, C. C., C.M.G. 8 Dec., '11*	JENKINS, F. M. ... 8 Nov., '11*
BORTH, Capt., R. M. St. J. 28 Oct., '11*	KELSALE, Capt. J. ... 29 Oct., '11*
CRUICKSHANK, A. E. ... 4 Oct., '11*	LEA, L. ... 9 Oct., '11
c/o The Bank of Scotland, Ltd., 164, High Street, Elgin, N.B.	LUCKMAN, Capt. A. O. steamer leaving 15 Sept., '11
CHURCH, A. F. ... 4 Oct., '11*	

* To return to Protectorate by steamer sailing after this date.

EAST AFRICA—continued.

LIGHTBODY, L. J. ...	26 Sept., '11	SPENCER, R. ...	16 Oct., '11
MACNAUGHTEN, L. H. ...		SMALL, Dr. R. ...	2 Nov., '11*
MILLER, A. H. ...	26 Sept., '11	TOWNSEND, A. E. ...	26 Sept., '11
MANNING, A. C. ...	24 Oct., '11*	TYSEN, F. D. ...	6 Aug., '11
MAJOR, F. W. ...	8 Nov., '11*	WARD, C. E. ...	9 Sept., '11*
NIBLOCK-STEWART, J. H. ...	26 Aug., '11*	WEST, W. T. ...	29 July, '11
POWELL, H. ...	26 Aug., '11	WILSON, D. J. ...	
REYNOLDS, C. H. ...	9 Oct., '11*	WOOD, J. C. ...	8 Nov., '11*
ROBERTSON-EUSTACE ...	5 Oct., '11	WOLFF, F. M. ...	8 Nov., '11*
Capt. R. W. B.		WELSTEAD, A. D.	
STEDMAN, H. J. H. ...	26 Sept., '11		

UGANDA.

BROOKS, W. T. ...	15 Oct., '11*	OWEN, Dr. H. B. ...	26 Sept., '11
FYFFE, R. ...	8 Dec., '11*	POSTLETHWAITE, J. R. P. ...	6 Sept., '11
FRASER, Capt. A. D. ...	3 Sept., '11	PERRYMAN, P. W. ...	steamer leaving 14 July, '11
c/o Messrs. HOLT & Co., 3, Whitehall Place, S.W.		RUSSELL, W. A. ...	15 Oct., '11*
HENRY, C. F. H. ...	6 Nov., '11	Savile Club, Picca- dilly, W.	
HUTCHINSON, Com- mander H., R.N.R. ...	18 Aug., '11	STURROCK, F. C. R. ...	8 Nov., '11*
Sports Club, St. James' Square, S.W.		c/o Messrs. GRINDLAY & Co., 54, Parliament St., S.W.	
HART, H. P. ...	26 July, '11	TAYLOR, Dr. J. A. ...	2 Nov., '11*
HILL, Capt. R. B. ...	8 Dec., '11*	TARRANT, H. M. ...	26 Sept., '11*
LEAKEY, E. W. ...	2 Nov., '11*	VAN SOMERON, Dr. R. A. L. ...	6 Nov., '11
LARDNER, Capt., E. G. D. ...	23 July, '11	WIGGINS, Dr. C. A. ...	27 Sept., '11
Army & Navy Club, Pall Mall, S.W.		WILLMOT, A. C. ...	8 Nov., '11
MORRIS, W. V. ...	23 Sept., '11	YOUNGER, W. ...	23 Aug., '11

SOMALILAND.

BYATT, H. A. ...	15 Oct., '11	HUNT, Capt. F. W. ...	9 Oct., '11
Sports Club, St. James' Square, S.W.		c/o Messrs. H. S. KING & Co., 9, Pall Mall, S.W.	
CALLAGHAN, C. R.		MILLARD, T. (junior) ...	21 Sept., '11
DRAKE-BROCKMAN, Dr. R. E. ...	11 Aug., '11	O'BYRNE, H. M. ...	18 Oct., '11
GIBB, A. ...	21 Aug., '11		

BECHUANALAND.

CUZEN, A. ...	12 Sept., '11	MOSELEY, G. B. ...	15 Oct., '11
---------------	---------------	--------------------	--------------

*To return to Protectorate by steamer sailing after this date.

SWAZILAND.

CROUCH, Miss B. 30 Sept. '11

BRITISH HONDURAS.

HARRISON, Dr. J. H. H. 6 Oct., '11 | PERKINS, H. J. ... 20 Oct., '11
 MAXWELL, F. M., K.C.... 17 Sept., '11 |

FIJI.

BAILEY, A. E. ... 23 Dec., '11 | WILSON, Dr. B. M. ... 31 Aug., '11

CYPRUS.

CUNNINGHAM, A. J. 27 July, '11

ANTIGUA.

COOKE, Dr. J. H. ... 14 Oct., '11 | MACKISON, Wm.... 29 Oct., '11

LEEWARD ISLANDS.

GRANT, H. E. W. 77 July, '11 | MARTIN, C. N. ... 10 Apr., '12

MONTSERRAT.

DAVIDSON HOUSTON, Col. W. B. 13 July, '11.

BARBADOS.

CHANDLER, W. K. ... 20 Nov., '11 | SMITH, F. S. ... 27 Aug., '11

BAHAMAS.

ARMSTRONG, F. 22 Oct., '11

ST. VINCENT.

TUDOR, D. T. ... 31 Oct., '11 | WEBSTER, Miss M. E. ... 2 Aug., '11

ST. LUCIA.

SHERIFF, P. M. C....	21 Sept., '11
----------------------	-----	-----	-----	-----	-----	---------------

GRENADA.

BISHOP, Dr. H. ...	...	31 Oct., '11	stitute, Northumber- land Avenue, W.C.	
LEGGE, C. A. ...	...	19 Sept., '11		
c/o Royal Colonial In-			TUDOR, D. T. ...	31 Oct., '11

JAMAICA.

ALLWOOD, S. H....	...	14 Oct., '11	HENDRIKS, T. B. ...	5 Oct., '11
ASTWOOD, E. W. ...	...	26 Oct., '11	INNES, R. E. ...	7 Sept., '11
CASTLE, Dr. C. W. M. ...	...	31 July, '11	OLIVIER, Sir S., K.C.M.G.	31 July, '11
CLARE, W. P. ...	...	3 Oct., '11	SEATON, D. T. ...	Steamer due 17 July, '11
COOPER, E. G. ...	...	29 Aug., '11		
DEERR, G. H. ...	...	22 Sept., '11		

TRINIDAD.

ALSTON, DR. H. M. ...	...	17 Oct., '11	LITTLEPAGE, C. A. ...	24 Oct., '11
BELL, A. G. ...	...	1 Aug., '11	MARRIOTT, F. C. ...	19 Sept., '11
CLARE, DR. H. L. ...	...		PERCY, Dr. G. R. ...	19 Nov., '11
FLOOD, Miss M. T. ...	...	14 July, '11	REID, Dr. C. B. ...	5 Sept., '11
GORDON, W. M....	...	2 Nov., '11	SWAIN, Lt.-Col. G. L. D.	17 Nov., '11
GUISEPPi, Dr. P. E. H.	...	23 July, '11	WRIGHT, C. H. ...	17 July, '11
KNAGGS, S. W., C.M.G.	...	2 Nov., '11		

BRITISH GUIANA.

BAKER, A. H. ...	...	23 July, '11	MILLER, Rev. J. ...	29 Oct., '11
BUGLE, C. W. H. ...	...	18 Sept., '11	PILGRIM, E. O. ...	15 Jan., '12
BOURKE, S. G. T. ...	...	1 Sept., '11	PARK, J. H. W....	18 Sept., '11
c/o Messrs. Woodhead & Co., 44, Charing Cross, S.W.			RAYNER, Sir T. C. ...	3 Oct., '11
CALDER, W. J. ...	...	26 July, '11	RAE, Rev. J. ...	27 Jan., '12
DAVIS, C. G. H....	...	1 Aug., '11	SHANKLAND, W. C. ...	7 Dec., '11
GIBBS, R. P. ...	...	30 Nov., '11	STOCKDALE, F. A. ...	14 Oct., '11
HAWTAYNE, L. E. ...	...	1 Aug., '11	SPAIN, H. G. ...	5 Oct., '11
LONGLEY, Rev. T. ...	...	9 Sept., '11	TINNEY, L. H. J. ...	1 Aug., '11
LAWRENCE, J. D. ...	...	17 Aug., '11	WIDDUP, C. P. ...	30 July, '11
LAW, DE. W. F....	...	3 Dec., '11	WISE, Dr. K. S....	28 Aug., '11
University Club, Dublin.			Royal Societies Club, St. James' St., S.W.	

MAURITIUS.

BOYLE, Sir C., K.C.M.G.		DINNEMATIN, S....	26 Aug., '11
CEBELIEER, Rev. J. C. ...	12 Dec., '11	GREEN, H. Lm ...	29 Sept., '11
D'AVRAY, A. E....	...	POUGNET, G. ...	10 Apr., '12

SEYCHELLES.

DAVIDSON, W. E., C.M.G.	11 Oct., '11
-----------------------------	-----	-----	--------------

STRAITS SETTLEMENTS.

ANDERSON, Sir J., K.C.M.G.		LAUGHER, H. ...	6 Apr., '12
AMBROSE, J. ...	6 Apr., '12	LANGHAM-CARTER, W....	1 Feb., '12
BUXTON, Miss M. A. ...	23 Apr., '12	LIVESEY, Dr. S. M. ...	10 Aug., '11
BUTLER, W. ...	18 Mar., '12	LORINE, J. ...	14 Aug., '11
CATOR, B. A. ...	26 Dec., '11	MARSHALL, G. J. ...	25 Aug., '11
CONLAN, E. ...	25 Oct., '11	MUSCKART, G. P. ...	30 Nov., '11
DENT, F. ...	31 Aug., '11	MCLEAN, G. A. ...	13 Mar., '12
ELLIS, Dr. W. G. ...	9 Jan., '12	McNAIR, Miss M. J. ...	17 Nov., '11
GOMES, Miss L. H. ...	9 Aug., '11	MELLS, A. DE ...	13 Oct., '11
GREEN, C. F. J....	9 Mar., '12	MULCOCK, W. ...	13 Apr., '12
HAIGH, W. M. ...	Steamer due 20 Oct., '11	NATHAN, J. E. ...	28 June, '12
HOWARD, J. A. ...	9 Nov., '11	ROOKE, Miss A. M. D....	24 Oct., '11
HYNDMAN-JONES, Sir W. H.	22 Oct., '11	ROSS, F. H. ...	13 Oct., '11
HARDING, Miss A. A. ...	12 Dec., '11	SUTER, W. C. ...	21 June, '12
HOGAN, E. D. ...	1 Feb., '12	TALMA, E. L. ...	10 July, '12
		WHITEHEAD, C. B. ...	4 Oct., '11
		WALLEY, T. ...	15 Aug., '11

TANJONG PAGAR DOCK.

KENNEDY, J. ...	25 Dec., '11	NICHOLSON, J. R. ...	
MUNRO, D. ...	31 Aug., '11		

WEI HAI WEI.

FORCEY, F. ...	20 Nov., '11	WALTER, R. ...	16 July, '12
----------------	--------------	----------------	--------------

HONG KONG.

APPLETON, F. ...	17 Nov., '11	BRETT, C. W. T. ...	17 Oct., '11
ATTWELL, G. A. ...	14 Jan., '12	BROWNE, F. ...	8 Nov., '11
BIRD, Miss M. J. ...	15 Aug., '11	BAKER, J. E. ...	7 Nov., '11
BELL, Dr. J. ...	8 Oct., '11	BOULGER, P. F. ...	17 Nov., '11
Thatched House Club, St. James' St., S.W.		BADELEY, F. J. ...	10 Dec., '11
		BOYD, S. R. ...	15 Aug., '11

HONG KONG—continued.

CARPENTER, E. W. ...	23 Apr., '12	MORRIS, Mrs. L. ...	3 Feb., '12
DYMOND, A. G. ...	28 Jan., '12	MARTIN, G. P. DE ...	15 Aug., '11
DAVITT, W. ...	17 Nov., '11	PASSMORE, A. G. ...	20 Dec., '11
DAVIS, A. J. ...	17 Nov., '11	PEARCE, Dr. W. W. ...	20 Oct., '11
DEALY, T. K. ...	10 Nov., '11	REED, E. B. ...	23 Apr., '12
FRITH, C. E. ...	4 Jan., '12	REES-DAVIES, W., K.C. ...	7 Nov., '11
GORHAM, Miss A. E. ...	7 Feb., '12	SHEPHERD, G. C. ...	17 Dec., '11
HUDSON, R. ...	14 Aug., '11	SIMMONS, A. W. J. ...	18 Jan., '12
JACKSON, G. ...	17 Nov., '11	TUTCHER, Mrs. E. ...	15 Aug., '11
JACOBS, Miss L. M. ...	22 Oct., '11	TAYLOR, Comm. B. R. H., R.N. ...	31 Jan., '12
KING, T. H. ...	25 Oct., '11	Carlton Club, Pall Mall, S.W. ...	
KEMP, J. H. ...	17 Aug., '11	WRIGHT, A. E. ...	15 Aug., '11
c/o Messrs. Grindlay & Co., 54, Parliament St., S.W. ...		WALKER, A. T. ...	30 Aug., '11
LAST, F. J. W. ...	31 Dec., '11	WOODCOCK, G. A. ...	14 Oct., '11
MESSER, C. McI. ...	18 Mar., '12	WHEAL, F. A. ...	7 Dec., '11
MOORER, H. ...	31 Dec., '11	WOLFE, H. W. ...	17 Dec., '11
MORRIS, A. ...	3 Feb., '12		

PERAK.

BRIDGES, Dr. D....	22 Feb., '12	JACKSON, J. E. ...	Steamer due
BELFIELD, H. C., C.M.G.	11 Feb., '12		26 Oct., '11
CHILE, J. M. ...	30 Mar., '12	PALMER, H. ...	10 July, '12
CROPLEY, J. H. P. ...	15 Sept., '11	PIZZER, H. ...	9 Sept., '11
DOUGLAS, F. W....	22 Aug., '11	RIGBY, J. ...	2 Aug., '11
DARLASSON, F. W. ...	12 Jan., '12	SHORT, P. G. ...	20 Nov., '11
HENRY, Miss K. ...	7 Mar., '12	STONOR, O. F. G. ...	25 Sept., '11
		WARD, J. ...	19 Jan., '12

PAHANG.

HILL, V., ...	11 Aug., '11	SIBBALD, S. K. ...	6 Sept., '11
STYMES, W. L. B. ...	31 Mar., '12		

SELANGOR.

DE BASAGOITI, W. P. ...	16 Nov., '11	MacDERMOTT, Maj. A.T. ...	7 Mar., '12
GARDNER, J. W. ...	26 Mar., '12	STOKOR, E. R. ...	29 May, '12

NEGRI SEMBILAN.

ALLEN, P. T. ...	8 Apr., '12	STEELE, H. E. ...	10 Oct., '11
BAILEY, J. ...	30 Apr., '12		

KEDAH.

HOOPS, Dr. A. L. ... 29 July, '12 | McDONOUGH, J. ... 19 Dec., '11

FEDERATED MALAY STATES.

ALLIN, C. H. ...	18 Aug., '11	MAGILL, G. S. ...	18 Apr., '12
BARNARD, H. C. ...	23 Dec., '11	MARSHALL, H. ...	17 Sept., '11
BROWN, L. C. ...	18 Nov., '11	MORRIS, B. ...	25 June, '12
BELFIELD, F. ...	20 May, '12	MARQUESS, D. J. ...	7 Oct., '11
CUSCADEN, C. P. ...		ORME, Dr. W. B. ...	8 Oct., '11
CURTIS, A. T. ...	29 Apr., '12	PUGH, E. ...	13 Apr., '12
CORNWELL, A. E. ...	24 Mar., '12	RICHARDS, A. F. ...	4 Sept., '11
DENMAN, Dr. R. ...		RICHARDS, D. S. ...	12 Aug., '11
FREER, Dr. G. D. ...	17 Dec., '11	STREET, F. ...	31 Oct., '11
FRASER, Dr. H. ...	26 Dec., '11	SHAW, H. R. ...	2 June, '12
FORBES, G. C. ...	15 Nov., '11	STEVENSON, A. M. ...	9 June, '12
GOLDTHORPE, J. W. ...	28 Nov., '11	WILSON, A. ...	4 Nov., '11
GOODYEAR, C. M. ...	9 Mar., '12	WILDE, J. E. ...	14 Apr., '12
HEMMANT, G. ...	16 Oct., '11	WALKER, H. J. N. ...	28 May, '12
HANSON, W. H. ...	15 June, '12	WYATT, E. W. N. ...	21 June, '12
McKENZIE, J. ...	29 Nov., '11		

CEYLON.

BALFOUR, J. A. ...	7 Nov., '11	GREGSON, W. B. ...	18 Apr., '12
BARTLAM, A. ...	14 Oct., '11	c/o Messrs. T. COOK &	
BYRDE, W. L. ...	30 Oct., '11	Sons, Ludgate Circus,	
BINGHAM, P. M. ...	23 Oct., '11	E.C.	
CLARK, H. O. ...	16 Aug., '11	GROOCCOCK, H. L. ...	21 Aug., '11
COLVIN, J. ...	16 Oct., '11	HELLINGS, R. B. ...	9 Jan., '12
CHALMERS, Dr. A. J. ...	27 Aug., '11	HARWARD, C. C. ...	26 Mar., '12
National Club, White-		HARVIE, A. ...	2 Oct., '11
hall Gdns, S.W.		HEATON, J. ...	16 Apr., '12
COWLEY, F. S. A. ...	18 Sept., '11	INGLES, W. C. S. ...	12 Oct., '11
CODRINGTON, H. W. ...	Steamer due	JOSEPH, H. P. ...	30 Sept., '11
	5 Aug., '11	JINADASA, Dr. M. J. ...	19 Aug., '11
CLARKE, A. H. F. ...	13 Aug., '11	JACKSON, W. H. ...	11 Apr., '12
DE SILVA, H. ...	2 Oct., '11	KINDERSLEY, W. L. ...	13 Nov., '11
DICKMAN, A. C. H. ...	1 Sept., '11	MARRIOTT, E. J. ...	5 Oct., '11
DAVEY, W. C. D. ...	24 Nov., '11	McMILLAN, D. ...	5 Oct., '11
DE SILVA, J. G. ...	26 Aug., '11	MARTIN, H. A. ...	16 Apr., '12
DUTTON, B. J. ...	25 Apr., '12	OHLMUS, Dr. T. ...	24 Jan., '12
DOWBIGGIN, H. L. ...	2 Nov., '11	PETCH, T. ...	29 Oct., '11
DE SILVA, M. ...		RIDOUT, J. B. N. ...	5 Oct., '11
EBELL, Dr. J. H. ...	30 Apr., '12	RANKINE, G. N. ...	6 Oct., '11
ELDERKIN, G. W. ...	Steamer leaving	STORKE, B. P. ...	16 Apr., '12
	18 Aug., '11	STEWART, T. ...	4 Sept., '11
Fox, F. ...	16 Sept., '11	SAXTON, G. S. ...	3 Oct., '11
c/o Clydesdale Bank,		SOUTHORN, W. T. ...	29 Oct., '11
Ltd., Dollar, N.B.		STRICKLAND, R. B. ...	17 Oct., '11
FOX, H. O. ...	28 Oct., '11	SMITH, F. J. ...	22 Dec., '11
GEDDES, A. ...	2 Oct., '11	SUETER, E. B. F. ...	11 Sept., '11
		WILKINS, R. W. P. ...	10 Aug., '11

THE COLONIAL OFFICE JOURNAL.

VOL. V.

OCTOBER, 1911.

No. 2.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE Imperial Conference has left the constitution and the organization of the Colonial Office, to use the words of the Secretary of State at the Corona Club dinner, untouched and unchanged. It will be remembered that after the Conference of 1907 Lord Elgin altered the arrangements of the office so that there should be a separate division dealing with the self-governing Dominions. This, however, did not carry out Mr. Deakin's views, as he contemplated an organization entirely separated from the Colonial Office, and for a time it seemed quite possible that a complete bifurcation would have to be effected. The offer to do so was, in fact, made by Mr. Harcourt, and it was one of the signs of generous and appreciative feeling that the Conference decided not to accept it. That such a step is not necessary is implied in the high praise which was given to the multifarious work prepared by the Secretariat for the information of the Conference. The argument for a complete separation was based on the idea that a staff which dealt with the Dominions in contiguity with a staff which controlled the Crown Colonies would be influenced by the more or less autocratic methods of the latter. But it was hardly probable that a department which has so much occasion to study constitutional positions would make the mistake of confusing the status of the self-governing communities with that of the Crown Colonies, and we have no hesitation in expressing the opinion that it has never been done. No doubt in the last quarter of a century a change has come over the political relations of the

Mother Country and the Dominions. It should be remembered when we speak of autonomy and self-government that the constitution acts reserved considerable powers to the home Government. A gradual development has made these reservations almost nominal. Not again, for instance, would the Crown here veto such measures as the New South Wales Deceased Wife's Sister Bill, as it did in the eighties. A national growth has taken place and there is no possibility of a return to obsolete relations.

We greatly regret that Sir C. P. Lucas is compelled to give up official work before the usual age of retirement. All considerations have to give way before failing eyesight, and we can only hope that with the removal of the severe strain imposed on him he will be able to continue the literary studies in connection with colonial subjects by which he has been distinguished. Sir C. P. Lucas had a long connection with the East and the West Indies, and we have no doubt that his retirement will be much regretted by his many friends in those parts. In the high position which he has recently filled he has been concerned with the Dominions, and if any proof were wanting that an official thoroughly versed in Crown Colony methods could apply himself to the dealings with the Dominions with a full sense of respect for their position and sympathy with their policies we could point to this instance. Certainly his visit to Australia had no little to do with the greater confidence in the Colonial Office which was shown at the recent Conference.

The most valuable fruit of the Imperial Conference will probably appear to most people to be the arrangement arrived at between the Admiralty and the representatives of Canada and Australia. The memorandum states that the naval services and forces of those Dominions will be exclusively under the control of their respective governments, but provision is made in several ways to facilitate the co-operation of the Dominion and Admiralty ships, and it is declared that in time of war, when the naval service of a Dominion, or any part thereof, has been put at the disposal of the Imperial Government by the Dominion authorities, the ships will form an integral part of the British fleet, and will remain under the control of the British Admiralty during the continuance of the war. The autonomous position of the Dominions can only be preserved by the retention of the right to decide whether the ships are to be placed at the disposal of the Imperial Government, but as to this the British public may well take satisfaction from the fact that it was the suggestion that British naval supremacy was threatened that spurred on the

Dominions to action. For the present the great thing is to secure the ships and the men.

The interest now taken by the Dominions in questions of defence is a comparatively new feature. Within our own generation the general tone was one of indifference. The energies of the Colonies were absorbed by the heavy work of development. At the early Conferences the presence for consideration of the subject came entirely from the home Government. The change is due mainly to a great alteration in the relative position of the British Empire. Not many years ago it practically stood alone in the world. No other Power had entered into the field, and in Great Britain itself there was no little doubt whether its position was not "half blunder, half crime," and no little disposition to withdraw from it if opportunity permitted. But when other Powers, as a result of accumulating wealth and expansion of industries, set to work to appropriate territory whenever it could be conveniently taken, Great Britain had either to fall ignominiously out of the race or to protect herself by sharing in the expansion. Inevitably, though to a great extent reluctantly, she took the second course, with the consequence that the area of its possessions was vastly increased and with it the burden of responsibility. The international rivalry which has thus arisen has come to the doors of the Dominions. The politics of the Empire are no longer concerned chiefly with European complications which had no interest for the overseas settlements, and they turn largely on considerations which affect the whole organizations. The new rôle which the United States have undertaken as a colonizing power, the quick rise of Japan, and the opening up of vast possibilities in China, have further widened the international community of affairs.

A good deal of criticism has been excited by the articles of the South African *Volkstem* on the possibility of South Africa remaining neutral in the event of Great Britain being engaged in war, and the bare mention of such a contingency is enough to cause much indignant comment. It is only fair, however, to the *Volkstem* to recognise that the suggestion was that South Africa might remain neutral in the interest of the British Empire. The argument appears to be that South Africa could not herself resist invasion, and that the trouble of defending her would only add to Great Britain's burdens. This involves a familiar fallacy. The defence of South Africa, and of all other parts of the Empire, will not be conducted by a multitudinous number of operations on their various coasts, but by centralized operations which will take place where the enemy's ships are in force. The strength of the British fleet is determined with a view to this purpose; it depends, not on

the local requirements of the Empire, but on the amount of force which might be brought against it. No substantial relief, therefore, would be gained by not being compelled to defend South Africa. No invasion of that country is possible until a safe highway is established for transports, and that is out of the question so long as the British navy holds its own in European waters. There is, therefore, no occasion for South Africa to desire neutrality out of consideration for this country's burdens. There is another and perhaps still stronger objection to the suggestion, and that is that the option would rest, not with the Dominion, but with the enemy. On such an occasion clearly "*nemo exuere patriam potest*," unless the adversary agrees. That he would do so is extremely improbable. On the hypothesis that South Africa is helpless, he has no inducement to recognise her neutrality; but he has a good deal of reason for treating her as a belligerent. It may be noted that General Botha has expressly deprecated the doctrine put forward by the *Volksstem*.

The "All-Red" route idea came into prominence at the Ottawa Conference of 1894, and was received with favour by the Australian as well as the Canadian representatives. But since then the circumstances have gone against it so far as Australia is concerned. At the Ottawa Conference there was a solid expectation that Canada and Australia would enter into reciprocal commercial arrangements if they were made free to do so. The technical difficulties—the German and Belgium treaties—were removed eventually, but the commercial treaty did not materialise, and there has, therefore, been less to say for the proposed steamship service. The second point is that in 1894 the advocates of the idea were able to show that the service via Canada would be quicker than that via the Suez Canal, but this claim was altogether upset last year when the new Australian mail contract put the advantage with the latter route. The result is that Australia now shows no enthusiasm for the project, which it can hardly be denied would be expensive. It is out of the question to expect that there will be any substantial through freight between the United Kingdom and Australia by this way. The double transshipment and the railway rates make this impossible. Even on the west side of Canada it is cheaper to send such goods as tinned salmon to this country round the Horn than across the Dominion. So far as freight goes, therefore, the Pacific section must rest on its own merits. The present monthly service between Canada on the one side and New Zealand and Fiji on the other takes about three weeks, and the question is whether it is worth while to give a larger subsidy in order to cut this down to, say, two weeks.

The doings of the Pacific Cable Board have at present a special interest in view of the proposals for extending the sphere of government operations for the purpose of communications, and it is satisfactory to find the improvement in the financial position continues. The revenue for 1910-11 was £138,677, and the amount available towards the double purpose of meeting the interest and sinking fund and providing a replacement fund is £11,378 more than was available last year. The contribution of the contributing parties is thus reduced to £48,210. No interruption occurred during the year—a good proof of the reliability of the service. The results of the arrangement of the land line across Canada have been entirely satisfactory. The average time of transmission between the United Kingdom and Sydney has been reduced by 15 minutes, and there has been a marked improvement in accuracy. It is proposed to arrange for “deferred” messages “in clear” at half rates, and the Board has worked hard, in the face of serious difficulties and delays arising out of the Berne Convention, to bring this important change into effect. Its example will, no doubt, have far-reaching effects. The following extract from the Chairman's annual report refers to the matter, though it passes over the complicated negotiations which have been necessary.

“The subject is one that has for long engaged the attention of the Board, and in May, 1910, they drew up a scheme for giving effect to this principle in the case of traffic passing over the Pacific Cable. The Postmaster-General, on being communicated with as regards the adoption of the principle in the service between the United Kingdom and Australasia, considered that the advantages of the proposal were such as to make it desirable to secure its adoption throughout the cable service of the Empire, and, so far as might be possible, in the extra European services between the British Dominions and external States. In order to facilitate this it was thought advisable to secure beforehand the co-operation of the cable administrations throughout the world. For this purpose the Postmaster-General discussed the proposals with the British and American Cable Companies, and after obtaining their approval of them, entered into negotiations with foreign Governments. As a result, such a measure of general agreement has been reached that there is every prospect that within the next few months it will be possible for messages in plain language to be sent at half the existing rates of charge, subject only to the condition that the transmission of them must await, for a period not exceeding 24 hours, an interval during which the cable is not in use for traffic at the ordinary rates. It is hoped that the concession will confer an appreciable boon upon the general public who may desire to communicate with friends at a distance, without incurring on the one side the great expense of a cable

message at full rates, or on the other the long delay involved by use of the post."

The Government cable across the Atlantic which was advocated at the Imperial Conference would complete the service from the United Kingdom to Australasia, and would give the owners complete command over the through rates and management. The Pacific cable is only a section, and undoubtedly there is a sort of logic in the idea that the Government service should be carried from end to end. From the point of view of public opinion the project would be greatly strengthened if, as seems likely to be the case, the existing cables come entirely under American control. There are, however, considerations on the other side. At present all the trans-Atlantic Companies, including the French and German, are interested in obtaining traffic for the Pacific cable. They are its natural allies, as against the Eastern route, and their numerous offices receive and collect messages for it. In this way (to say nothing of the special terms given) a great amount of business is done for the Pacific cable at no cost to it. The Board has not a single collecting station of its own in this country. It is obvious, however, that if the governments invaded the Atlantic domain by putting down a line of their own, they would cease to be the ally and would become the competitor of the companies, and all the help they are now getting would go by the board. Secondly, the amount of business which the Pacific cable would secure for the Atlantic section would be a mere fraction of the quantity required to make the latter pay, and it would be extremely difficult to supplement it with any substantial business in Canada or the United States in face of the very strong combinations between the cable and land organisations. The new line in fact would find those fields occupied. One thing is certain, and that is, that no telegraphic project of this kind will be financially successful in these days unless it is framed on a large scale and secures a wide field of custom. Perhaps some day the subject will be considered in connection with the needs of the West Indies.

It is announced that a scientific expedition has started in Australia to investigate the possibilities of the Northern Territory for the white race.

"Our observations," said Professor Baldwin Spencer in an interview, "will be preliminary to those of the larger expedition which we hope will go over the ground afterwards. We shall be making collections the whole time, including microscopical preparations of the blood of different animals, so as to investigate human and stock diseases.

"Our principal object is to show the relationship of whites to life in the Northern Territory.

"Our observations on this expedition will probably give us some idea as to what further work could with advantage be carried out on a larger scale later on. It has been proposed, if the second expedition goes out, that its work shall be undertaken by members of scientific staffs of the various Australian universities. Some of the work would be done in winter, and some—the medical work—in the summer months, when the climate is most uncongenial to human beings. Whether this second expedition shall go out or not depends on the results of the present expedition. Of course, we are extremely anxious that the Commonwealth should complete its scientific investigation before the conditions of the Territory are affected by the presence of a large number of white men."

The object of the Government is to occupy the territory as far as possible with white settlers, and no coloured labour will be permitted. The climate is said to be healthy, though the coast is more or less malarious, and in this respect it is probably similar to East Africa and Uganda. It may be noted that, warned by previous embarrassments, the Government grants no freeholds, but only leases both here and in Papua, and this policy does not seem to deter applicants.

Australia is particularly interested in the question whether the white man can work and thrive in a tropical climate. She possesses a huge territory of that character which, by a kind of geographical accident, is intimately associated with the comparatively temperate regions to the South, and though the Australian has no great desire to settle in it he is under the apprehension that if he does not someone else will. The result is a strong desire to see it proved that the white race can accommodate itself to the conditions of the tropics. There is little actual experience of value, as where Europeans have survived for a long period in hot countries there has been race-mixture. On the other hand it is not fair to infer from the lack of instances of survival that it is impossible, because the sanitation of tropical countries is nearly always vastly inferior to that of temperate regions. In the old-established Colony of Java the insurance companies have found that the expectation of life is as good for a European man, and better for a woman, than it is in Europe. This, however, appears to be the only instance of the kind, and there is a great amount of race-mixture. From a medical point of view, it appears that the old idea that the metabolism of the body of an individual will adapt itself to tropical conditions is without foundation. The body undergoes no essential changes. There is no malady which is special to any one race, and natives and Europeans show the same

symptoms in illness and are affected in the same way by drugs. There are, of course, certain effects of tropical heat which eventually will make racial distinctions. Such heat brings about the saturation of the skin with perspiration which the moisture prevents from evaporating, so that the epidermis thickens and grows opaque. The result of this loss of translucency is that the complexion becomes paler and afterwards darker. The moisture also encourages the growth of fat. The skin is closely related to the nervous system and it is undeniable that neurasthenia is common in hot countries. There is in fact too much sunshine, and insomnia and irritability result, as may be seen even in this country when there is an abnormal spell of heat. The natives suffer from this when taken out of their national life into the hustle of civilization; education in fact puts them on much the same level as Europeans. The observations, so far as they go, seem to tend towards two conclusions, neither of them encouraging. The first is that, if the European can survive the new conditions, it would be at the cost of his original characteristics. He would either be swept away by nature as out of place, or suffer conversion to the type which nature has produced in the country. In a negro region he would ultimately become black, too; all rays and all protoplasm are essentially identical and developments in any given conditions must be the same. The second is that it is vain to expect that natives can assimilate the habits and characteristics of Europeans. The general result of the education of the best specimens, is that while quick to learn and excellent at examinations, they lack the nervous stability of the European. All this merely emphasizes what the history of the world shows, that the most vigorous races are developed by temperate climates. The greatest hope that Europeans may be fitted to live in the tropics rests with medical science. Panama is the most striking instance of what can be done, the death rate of white workers having been brought down to less than 4 per 1,000. But medical treatment does not stop the course of natural forces, and race evolution is beyond control. The moral seems to be that, as Europeans cannot be acclimatised individually and cannot be adapted racially without loss of characteristics, the natives of tropical countries are necessary for their development.

The "Universal Races Congress," various as its discussions were, threw no light on this question. The main object was to testify to the growth of a wider sympathetic feeling between natives of different characters, and in this the Congress was quite successful. Greater contact at all points is making this improved understanding at once more desirable and more easy, and the illustrations provided by the meeting were interesting and instructive. But it remains obscure what effect all this will have on racial developments. There have

been numerous instances of fusion between Europeans and natives, and there are some idealists who look to the extension of this practice to break down the barriers and bring about the fraternity of the world. Unfortunately for this hope the signs at present are the other way. In the early European settlements overseas fusion was inevitable. The settlers were practically cut off from home and had to make the best of things. Nor were they, generally speaking, of the sort to pride themselves particularly on race distinctions. The mixture therefore in Portuguese, Spanish, Dutch and British Settlements came about naturally. It may be urged that the uplifting of native races as they reap the benefits of civilization will make the process even more easy in future than it has been in the past. But there are some solid facts against this. The vastly improved facilities for crossing the seas tend to bind the settler to his own kin. The improved sanitation and better supplies of everything make European family life more possible. More perhaps than anything else, the advance of education among the white races has widened the barrier and set up a feeling of racial superiority which is now one of the most active social forces of the time. The citations which we make in another place from a Rhodesian report show that this feeling has attained a strength in a representative community of British settlers which has no parallel in history. It is there proposed, certainly with some reluctance but with a belief that the public good demands it, that all race-mixture, whether under the sanctions of marriage or not, should be prohibited. The "Colour-bar" provision of the Union of South Africa Act is of recent memory. This provoked protest in this country because it brought the matter of racial antagonism into the sphere of politics. The social matter is a different affair, and there is little prospect at present that the world will merge its differences by inter-marriage.

Public opinion is so largely dependent on press news that any improvement in the supplies of information between this country and the Dominions should be heartily welcomed. When there is a vast choice of material there is nothing easier than to pick out matter which by itself creates a totally wrong impression of the facts or of public feeling. The London news reaches Canada almost entirely through United States Agencies, and what Canada has got in this way was the selection made in New York to suit the New England and Northern States. Against this there has been a revolt, and it has now been arranged that the editing and distribution of this news service in Canada shall be controlled by Canadians.

The importance of Basutoland to South African industry is

shown by the large number of passes issued last year, the number having risen from 68,900 in the previous year to 82,000. As there are 348,000 natives in the territory it may be presumed that a greater supply is available if the attractions are strong enough. 32,000 men were despatched to the mines in the Transvaal and Orange Free State, and many of the others who started as free lances eventually drifted there. The Government Secretary in the annual report states that a regrettable feature of the year has been the number of tribal fights in which Basutoland natives have been embroiled at the mining centres. These disturbances have formed the subject of much discussion in the Basutoland Council, where all members promised to use their influence with the young men going out to work to prevent their participation in such disturbances while at the mines. In their own territory the natives occasionally show a turbulent spirit, but the cases are not important. These small quarrels, wrong though they are and much to be condemned, must not be taken to have any political significance, or to be in any way referable to what is called "unrest among the Basuto." They have in every case been dealt with judicially, and the young chiefs and their followers responsible for the disturbances have been imprisoned and fined.

The Mozambique Company have commenced the publication of a mining journal, published in Portuguese and English. It is announced in the first number that Professor Wyndham Dunstan will shortly begin a topographical and geological survey of the territory. The present mining district is near the Rhodesian border and is believed to be highly mineralized. The Company is showing considerable energy and endeavouring to attract exploiters. A deep water pier is to be constructed at Beira, and other developments are in contemplation. All such improvements will benefit Rhodesia and East Africa.

It is reported from Lourenço Marques that Captain Galvas has visited Quelimane to examine the possibilities of a harbour there. If the result of the investigation is satisfactory, it is expected that a railway would be constructed to Port Herald, and the matter is therefore of great importance to Nyasaland. At present there is no satisfactory wharf for ocean-going steamers at Quelimane, and the local trade has to be taken by small vessels to Beira or Lourenço Marques. There is so much activity in the Portuguese Colony that it is very probable that this state of things will be remedied if possible, and the creation of an up-to-date harbour would make a vast difference to the territories in the interior. The Secretary of State has stated in the House of Commons that matters of a confidential

character are in progress and that important developments for the assistance of the Protectorate are not very distant.

The prosperity of Southern Nigeria looms large in Mr. Birtwistle's trade report for 1910. "Following the full year of 1909, when the commercial imports and exports exceeded those of any previous twelve months, another wonderfully good year's business, showing an increase of more than two millions sterling over 1909, is to be recorded. This marked advance, which is equal to 29% more than the preceding year, may be mainly attributed to the very high values which palm produce commanded in the European markets during 1910, these high prices as a natural sequence increasing the purchasing power of the people, which is reflected in increased imports." The improvements in transport by rail, river and road have also contributed to the result. With palm produce and cocoa doing so well, there is little chance for cotton, which showed a marked decline. It pays the natives better at present to work the trees, and the work is lighter, especially as the women and children prepare the oil and crack the kernels, but as the trees are worked out or if the high prices fall there will be a greater inducement to cultivate. At present palm produce supplies five-sixths of the value of exports.

We are all proud of the progress of our West African possessions, and the high officials who are called upon to give post-prandial statements of cheerful facts and reassuring figures have an easy task. But it appears that France is even more enthusiastic over West Africa than we are. A writer in the *Grande Revue* elaborately argues that, when the future historians ask what is the particular claim to glory of republican France, the answer will be "l'Afrique Occidentale." The latest proof is that the imports and exports of the five French Colonies amounted in 1910 to 278,288,000 francs, an increase of 100 millions in three years.

It is a well established belief in this country that the French do not make good colonists, but this, according to a recent article in *Les Annales Coloniales* is a legend "stupide et fausse." The argument is that the old French Colonies are too small, and too much exposed to disastrous cyclones to give the settler a chance, and that the magnificent advance of the newly acquired territories in Indo-China and West Africa shows that the Frenchman can do the work of development as well as anyone. There is undoubtedly abundant proof of the ability of France to make good use of Colonies where

there is a native population. But the belief which the French journal attacks is not based on any idea that suitable ability is lacking, but on the fact that, partly from reluctance to emigrate and partly because the population does not materially increase, France is not and is not likely to become the source of great settlements. As regards methods of administration, *Les Annales* maintains the equality of France. It admits that Martinique or Guadeloupe do not show the prosperity or comfort of Jamaica or Trinidad, but, to compare them with places more of their size, it considers them better off than St. Lucia, St. Vincent, or Dominica. Since the earthquake of 1902 Martinique has made a remarkable recovery, and affords another instance of the rapidity with which the effects of such disasters pass away in tropical countries. It is now proposed to issue a loan of six million francs, on the credit of the Colony alone, one half for water and sanitary work, and the other for the improvement of the port of Fort-de-France in anticipation of the opening of the Panama Canal.

Lieutenant-General Sir R. Baden Powell has given in the *Pall Mall Magazine*, no doubt for the edification of the rising generation, an account of a hardening process to which young Zulus are subjected. He writes:—"This is the way that the Zulu tribes, including the Matabele and Swazis, and followed by the Masai and other warlike clans, carry out the idea. When a boy wants to be recognised as a grown up man he does not do it as in civilized countries by taking to smoking cigarettes, he has to prove himself a capable all-round fellow. He is stripped and painted white all over, and he is given a shield and an assegai, or short spear, and is then turned out of the village to go and shift for himself until his white paint has worn off. This takes a month or two. In the meantime he has to keep out of the way, because if seen by the others they will kill him. He has therefore to hide away in the bush, to defend himself against wild beasts, to hunt his own food with his assegai or by trapping, he has to make his own clothing and shelter, to make a light for his fire, and so on for over a month without help of any kind. When his paint wears off he can return home—that is, if he is still alive, which sometimes he isn't. He is then received with great welcome, and is installed as a warrior, having proved that he is able to look after himself. I wish we had some such training for our boys." We are afraid that considerable modification of the custom would be necessary before it could be adopted in this country. We venture to suggest that the admirable treatment described is proving too much nowadays even for the South African native. The painted boy is, we imagine, becoming a rarity in these times of domestic service and other industrial pursuits.

The clash of opposing interests resounds through the recent correspondence on the subject of the preservation of game in East and Central Africa. On the one side are the people who advocate the preservation of the wild fauna, and to them belong the sportsmen who are attracted by the well-advertised opportunities of the country; on the other are the farmers and others who find their operations impeded by the presence of game reserves. The latter hold that big game and civilization are incompatible, and complain that the present licensing system gives considerable protection to many of the most obnoxious species. When a territory is in a primitive state, it is a proper field for the hunter, and it is no doubt natural to regard the big game as a valuable asset, and to give them a sort of sanctuary where they can only be shot at under special licences which bring in a revenue. In Uganda you pay £50 for a "sportsman's licence," and a special licence to hunt an elephant costs £10. The revenue derived from game licences in 1909-10 was £3,872, mostly at the expense of elephants. But as settlement advances, the comparative importance of this revenue decreases, and the reserves become a real hindrance to the cultivation of the land. The time has now come, alike in East Africa, Uganda, and Nyasaland, when this aspect of the matter becomes important. Another consideration is adding greatly to the strength of the agitation against big game. It is the belief that they harbour the tsetse fly, the source of human trypanosomiasis. How this may be put may be seen from the argument of Dr. Prentice, a missionary medical officer of considerable local experience. "The situation assumes a more serious aspect than ever. *The tsetse fly must be cleared out if either this country is to be saved for the people or the people saved to the country.* In all my travels in North Eastern Rhodesia and in Nyasaland I have never seen tsetse whose presence could not be accounted for by the presence of game. Had I seen certain districts only at certain seasons of the year, I might have been misled as others have been misled. Further, though I need not now state all the arguments for and against my view, my honest conviction is that the presence and increase of game is entirely responsible for the presence and increase of tsetse, and that our game regulations are mainly, if not wholly, responsible for the increase of game. I hold that those who are responsible for the game laws are responsible for the presence of tsetse, and that the victims of trypanosomiasis are martyrs to the foolish policy of game protection."

There is no doubt that in some parts there has been a gradual invasion by tsetse, but it is not proved that this is due to game, or that tsetse are dependent on game. But it seems probable that there is some connection between the numbers of tsetse and the numbers of game, and that, even if the game do not bring tsetse, they form

reservoirs of disease-causing trypanosomes which the tsetse transmit to stock. The whole question will be investigated by a Commission appointed by the Secretary of State to carry out an enquiry for a period of three years. Its proceedings will be of interest to South Africa and Rhodesia, where the policy of fighting ticks by clearing spaces of game has been much discussed.

The Commission of Enquiry into the riots which took place in Mauritius in January came to the conclusion that the colour or racial question had not been shown to be a predisposing cause of the trouble in itself, but that there existed amongst the lower classes a certain feeling of discontent, and of distrust of their superiors in the social scale, to whom they attributed a practical monopoly of political power and patronage. Certain leaders arose who voiced the hitherto inarticulate views of the lower classes, and transformed them into a political party with a sufficiently strong voting power to make itself felt in the Council of Government.

On the other hand the "Oligarch" party, embracing the Whites of French descent and their adherents, justly proud of the distinguished part their families had played in building up this Colony, realising that its present prosperity depended in a very large measure on themselves, and accustomed as they were to pride of place and position, resented the advent of the new party so largely recruited from the lower and coloured classes, and the methods adopted by it for pushing its views.

The Commission considered that the present elective system is a cause of trouble, and that the Press was responsible for inflammatory party passions. On these points they state that they "are agreed that the present elective system in Mauritius is not suited to its heterogeneous population with its various races, idiosyncrasies, and interests, and generally excitable dispositions, and that its introduction 25 years ago was a grave mistake, encouraging, as it did, sections of the population to interest themselves in politics for which they are even now unfitted.

"We realise, however, that the existing system could not be abolished without most careful consideration, more especially at the present juncture, when it might be taken as an act of partiality in favour of one or other of the rival parties.

"All parties are agreed that the unbridled recrimination and inflammatory articles of the party Press on both sides have been responsible for much of the bitterness which led to the recent riots, and we are thoroughly in accord with this opinion. Each party naturally urges that the Press of their opponents was the worse offender, and that their own was more or less forced to adopt similar methods. But we are of opinion that there was little to choose between them.

"We understand that under the present laws of the Colony it is very difficult to deal with the Press except in clear cases of sedition. If this be so, the sooner the laws of the Colony are amended and strengthened the better for the future maintenance of peace and good order in the community."

Last year the small State of Brunei emerged, as the Acting British President puts it, "from its former comatose condition into a sphere of active expansion," by being administered under British protection. Trade increased enormously and the prospects are bright. Large areas of State land have been granted on generous terms, as it did not seem likely that British capital would be attracted to Brunei. Native cultivation is also encouraged and rubber seeds and germinated coconuts supplied at cost price in large numbers. Certain difficulties in settling land claims seem to indicate that the community is by no means unsophisticated. "A further difficulty was to be found in the fact that many of the claimants did not know where the land which they claimed was situated.

"Again, in some cases, one claimant had sold the same land to different purchasers, all of whom had 'purchased' suitable 'chops' to cover their incomplete rights.

"Many claimants were loth to accompany the Assistant Resident over their claims. As some of these claims covered from two to four thousand acres of entirely uncultivated land, the hesitation displayed was not unnatural.

"The last difficulty lay in the enormous prices which claimants set upon their 'land' even when they were totally and confessedly unaware where such land was to be found. Volubly expressed claims to huge plantations of rotan segar, to young and vigorous rubber, to green islands of coconuts, faded (in the light of actual visit to the spots indicated) to inconsequent whines when deep swamp and virgin jungle were found to represent the valuable properties of the claimants' dreams.

"A contingent difficulty which also occurred lay in the fact that several well-substantiated claims were found to lie inside the large areas provisionally approved for European applicants. The indignation of the latter at being informed that the Government had every intention of protecting well-proven and prior native rights formed one of the least pleasant contretemps which occurred between the Government and the applicants concerned."

However, cultivation has now commenced and is likely to be developed greatly. A tribute is paid by the Acting Assistant Resident to the natives capacity for work, as is done in the Southern Rhodesian report which we quote in another place. "The idea that the natives of Brunei are idle, hopelessly and constitutionally idle, is

entirely incorrect. Their energy in the cutch factory, the value placed on their services as workers in the coal mines of Labuan and Sarawak, even when pitted against the stolid unsparing energy of the Chinese coolie, has amply disproved this."

In Rhodesia, the year 1910 was one of unexampled progress in all directions. The Chamber of Mines reports that capital has come in in increasing quantities, development at depth has proved the permanence and continuity of the values of many mines; while the individual working movement has borne fruit in the number of properties formerly worked by tributors and individual workers, which, after prosperous careers, have been acquired by Companies, and are now being developed on a larger scale than the small worker would himself have found possible.

The small workers, when they have finished their ore or disposed of their interests, go on to further prospecting and no doubt there is great advantage in this combination of the individual enterprises of the prospectors who find the metal and of the capital which works it in a scientific manner. A lurid picture is drawn in "Off the Main Track" of the hardships of the early prospector and of the severity with which he was exploited by the companies, but presumably he would not be so active as he certainly is in Rhodesia if those things were true at this date. The gold industry is now producing over 2½ millions sterling a year, and there is every prospect that this output will be greatly increased. A sure proof of progress is given by the railway returns, which have about doubled in the past three years.

In British Guiana the estate owners are allowed to indent for 4,000 immigrants yearly, but for the last five years the average indent has been for 2,200 only. This points to the conclusion that the cost is found to be too high, but on the other hand there is a risk in increasing the liability of the colony for returning immigrants. The colony does not offer the same inducements to the time-expired coolie to settle down as such places as Trinidad and Fiji do. The subject of the labour supply has been considered by a Commission appointed by the Court of Policy. The information given to it led to the belief that there is a shortness of suitable labour for the development of the agricultural resources of the colony and for the maintenance, at the same time, of the established agricultural industries, fresh ventures of the kind being necessarily accomplished at the expense of those already in existence. But with respect to the supply of labour for industries other than those connected with the cultiva-

tion of the soil, the evidence did not appear sufficient to warrant so definite a conclusion; and it is just possible, in the Committee's opinion, that a re-organization of the present supply may tend to the lessening of the complaints which have been made as to the unreliability of the average labourer in the balata "bush" or the gold-fields. The rates of wages paid to the "free" labourers in the various agricultural industries range from 24c. to 64c. (rations, in some instances, being given in addition) for a day of from 7 to 11 hours, the average being about 40c. for 9 hours' continuous work. In the gold-fields and for similar work, 48c. per day, with rations and lodging, appears to be the usual remuneration. Under the circumstances the Committee did not think that there is reason to anticipate any objection to the introduction of fresh labour on that account. On the sugar plantations ranges of an approved construction have been erected by the resident labourers, but on the other estates or lands under cultivation the arrangements do not appear satisfactory. In the event of immigrants being applied for by the proprietors of these estates or lands, it would be necessary for them to provide proper accommodation in this respect before the allotment could be made. In connection with the balata industry it has been pointed out that, in consequence of the scene of operations being transferred from one district to another at short notice, the provision of substantial dwellings is not practicable, and as the same reason would prevent effective supervision by the Government over the labourers it appears sufficient to warrant the refusal of immigrants under indenture in such cases. This objection applies, in a lesser degree, to the timber industry also.

It is recognised that the labour of the East Indian can be more profitably employed in connection with the cultivation of the soil, and it is suggested that applications for his services might be entertained from persons engaged in such industries as that of sugar, rice, rubber, limes, cocoa, coffee, sisal, etc., alone. If Javanese were introduced they would be found equally useful in the timber and balata bush, rubber plantations, or on the sugar estates.

From the general tenor of the evidence taken, it appears to be the opinion that the practice now in existence of acclimatizing and training the immigrant under a system of indenture is that most suitable in the peculiar conditions of the country and its climate, the only divergence of opinion expressed by the witnesses being with regard to the duration of the indenture, several recommending a short contract of two or three years. It is doubtful, however, whether the advocates of this curtailment would, in any case, take advantage of the opportunity afforded to them of obtaining immigrants under indenture, and the shorter period

during which the immigrant's services would be reserved exclusively to the employer might and no doubt would be regarded as a grievance. The introduction of the immigrants under indenture appeared to the Committee the only means by which continuous work during the year could be guaranteed to these people.

The question as to the manner in which the labourers introduced should be treated when sick is that on which the greatest diversity of opinion has been found to exist. In the balata "bush" the sudden change from one district to another of the people employed in bleeding the trees renders it impracticable to build permanent hospitals, or to provide the necessary medical attendance, and the requirements of the law could not, therefore, be complied with.

With regard to other industries the law forbids the allotment of immigrants to any plantation on which there is not hospital accommodation for all the immigrants resident thereon in the proportion of ten beds for fifty, fifteen for one hundred and five for each additional hundred. This restriction has hitherto prevented the promoters of industries other than sugar from availing themselves of the benefits derived from the employment of immigrants under indenture, and it is to be feared that the large expense entailed in keeping the hospital itself up to the requirements of the Medical Authorities has restrained some of the sugar planters themselves from making applications. It is true that under the provisions of section 75 sub-section (2) of the Immigration Ordinance a joint hospital for two or more estates can be authorised, but the distance of the dwelling yard on one estate from that on another is so great that hitherto there has been no permission asked for in this connection, except when two neighbouring plantations, intended to be worked as one, has been owned by the same proprietor. In the Trinidad Ordinance, however, the Governor has authority to permit the allotment of immigrants to an estate on which there is no hospital if he is satisfied that adequate provision exists for the reception of such immigrants in a public hospital situate at a convenient distance from where the immigrants are located should such immigrants require medical treatment.

The class of labourer most suited for the present needs of the colony is generally acknowledged as being the East Indian, and it has been suggested that trial should also be made of the Javanese. Should, however, the efforts to obtain a sufficient number of recruits from India and Java be fruitless, then several of the witnesses recommended that recourse be had to the West Indian Islands.

Of the East Indian little need be said, his good qualities being known and generally appreciated. But one fact should be borne in mind and that is that the colony being, at the present, and likely to be for many years to come, mainly dependent on agriculture, every immigrant should be selected with a view to his subsequently

becoming a settler on the land. It is the East Indian's qualifications in this respect which have led to the general recommendation for his introduction into the colony.

Of the Javanese the information obtained is but scanty. From the last report at hand of the Immigration Agent General of Suriname it appears that he earns about the same wage as the East Indian, the average number of days he is absent from work is about one half—16 as against 28—the death-rate is equally favourable, the percentage to population being 1·20 against 2·70. His expenditure would appear to be greater, judging from the fact that his average savings are *fl.* 67·83 against *fl.* 97·62 of the British Indian. An unsatisfactory feature in his case, however, is the comparatively large number of proceedings taken against him for breaches of the labour laws, the percentage of cases to population being 15·94 as compared with 10·55 against the East Indians. His physique is said to be much better than that of members of the other race, and this, with his greater power to resist disease, may be taken to show that his services might be utilised in the forest after the term of his indenture has expired. The regulations under which he is indentured in Suriname are much the same as those for the East Indian in this colony, except that he is entitled to return to Java at the end of five years instead of ten.

The Indian Government have reserved to themselves the power to declare emigration illegal to any country where, *inter alia*, the mortality among the emigrants is excessive; or where proper measures have not been taken for the protection of emigrants immediately on their arrival in the country or during their residence therein, and to secure this protection to the people, more particularly while under indenture, the provisions of the Immigration Ordinance have been enacted. It is very unlikely therefore that the Indian Authorities would permit emigration from India except under conditions which would render that protection effective. Nor is it probable that the Government of Holland, which, in connection with the emigration of Javanese to Suriname, has practically adopted our regulations with respect to East Indians, would relax the stringency of these regulations in favour of a British colony.

The problem therefore as to how the labour supply can be augmented remains unsolved. The immigrants must be protected, and this can only be done on the larger estates. The development of the forests and mines must wait upon the increase of the settled population.

The Bahamas annual report (1910-11) expresses a regret that the Royal Commissioners on Trade Relations between Canada and the West Indies were unable to visit the Bahamas, and that the detailed

information which was supplied by the Colony did not find a place in the appendices to the report; and further that the Colony is dismissed with only a brief reference in the report. It is with some significance that the next paragraph goes on to mention the development of a movement in favour of the incorporation of the Bahamas in the Dominion of Canada. "During the last season two well-known unofficial Canadian gentlemen organised public meetings in Nassau, and succeeded by their eloquence and enthusiasm in carrying the meetings with them, and ultimately in inducing the House of Assembly to pass by a large majority a vote desiring the appointment of Bahamian and Canadian Commissions to jointly discuss the question. The subject is under the consideration of His Majesty's Government.

A stimulus to trade with Canada will no doubt result from the anticipated visit to Nassau, as part of a tour to the West Indies, of a large number of Canadian business men next winter."

Tenders are being invited for a fortnightly mail service between the United Kingdom and Jamaica, and a service with Bermuda may be offered. The vessels must be British, not less than 4,500 tons, capable of attaining a speed of 15 knots and will be required to maintain an average of 13. They must have accommodation for 60 first-class passengers and for perishable produce. It is to be hoped that a satisfactory result will be arrived at.

The complete census which was taken in Dominica in April, under great difficulties, brings out the fact that there is a good deal of overcrowding. In Roseau a large proportion of families occupy houses of one or two rooms, and among insanitary conditions. This may seem curious in a country with large sparsely populated areas, but, as the towns of the middle ages in Europe showed, there is no relation between urban and surrounding country spaces. Another fact is that the percentage of illegitimate births is 57·3. The Registrar-General comments on this as kindly as possible.

"While not wishing to conceal the fact that immorality does exist here to a considerable extent, still it should be stated that the above condition is due far more to social custom than to immorality as it is known in places more advanced in civilization." Whether it is the "social custom" of the country or not, it is invariably associated with over-crowding.

The Weihaiwei report for 1910 shows that the campaign against opium smoking is being actively prosecuted, but an ugly sign is that

as this mischief is put down drunkenness increases. It can only be hoped that the more European vice is the less injurious.

"During the past year, the importation, sale, and smoking of opium were discouraged in every possible way. In 1909 the number of licensed smokers was reduced from 220 to 110, and during 1910 the number has been still further reduced to 50. During 1909 the admissions to the Refuge established by the Government for those desirous of abandoning the opium habit amounted to 31, whilst during last year they rose to 70, the ages of those admitted ranging from 24 to 74. The Police were very active in discovering the illicit smoking and sale of opium, there having been during the year 135 convictions for breaches of the Opium Ordinance. This activity on the part of the Police was naturally unpopular amongst those who have been accustomed to smoke opium, and led to the publication in certain Chinese newspapers, printed in Manohuria, Chefoo and Shanghai, of serious libellous charges against this Government and its Police, who were accused of extortion and maltreatment of the Chinese, especially the female population. Steps were taken to bring to justice those responsible for the publication of the libels, with the result that in some cases a fine was imposed, in others the publication of the paper was suspended for a certain period, whilst all the newspapers published an apology, retracting the libellous and unfounded statements to which they had given currency.

"No opium was imported under licence during the year, and only one shop was licensed to sell opium. It may be impossible to prevent entirely the smuggling of opium into this Territory across the border or along the coast, but as every step possible is being taken to discourage the use of opium, and as public opinion among the Chinese of Weihaiwei is, if anything, more than ever firmly set against the opium habit, there seems every reason to hope that opium smoking will become even a rarer habit than it is at present. But the diminution in the use of opium seems to be leading to an excessive use of alcohol, and though drunkenness cannot yet be said to be a prevalent vice cases of intoxication are undoubtedly more numerous than in previous years."

AUSTRALIA'S ATTRACTIONS FOR IMMIGRANTS.

IN attempting to present "Australia's Attractions for Immigrants," it seemed to me that the most simple and useful course to pursue would be to answer as briefly as possible such questions as might reasonably be expected from a prospective immigrant. As such an enquirer I should be glad to have reliable information as to position, area, natural features, climate, population, production, commerce, politics, railways, telegraphs, wild (*i.e.*, dangerous) animals, New Guinea; in a word what reasonable prospects does Australia hold out to persons contemplating emigrating thither? If such interrogations can be answered satisfactorily, there should not be much room for hesitation on the part of men blessed with health, courage and perseverance. Those qualities will assuredly be needed, but compared with the task undertaken by the first pioneers, or even of those fifty years ago, the dangers and privations to be encountered to-day are insignificant. It is plain sailing now.

THE COMMONWEALTH

embraces six States, placed here in the order of their founding:—

- | | | |
|---------------------|-----------------------|----------------|
| 1. New South Wales. | 3. Western Australia. | 5. Victoria. |
| 2. Tasmania. | 4. South Australia. | 6. Queensland. |

POSITION, AREA AND NATURAL FEATURES.

Australia (proper) is the largest island in the world—so large that it is designated a Continent, and it ranks as the fifth division of the land surface of the globe. Lying between the parallels of 11° and 38° south latitude and the meridians of 112° and 154° east longitude, its extreme breadth from east to west is 2,400 miles, and from north to south 2,000 miles; thus enclosing an area of about 3,000,000 square miles, or one-fourth less than that of Europe. Its irregular coast-line of over 8,000 miles is broken up by two principal indentations—that on the south extending from Cape Otway to Cape Leeuwin, a distance of 1,600 miles, with a depth from the line

so drawn of four hundred miles, this is known as the "Great Australian Bight." The other indentation, on the north-east, is the Gulf of Carpentaria, which is about four hundred miles wide and deep. Besides these, there are several large expanses of water, such as Port Phillip Bay, Western Port, Twofold Bay, Botany Bay, Port Jackson, Moreton Bay, Shark Bay, King George's Sound, Spencer's Gulf, and not a few fine river harbours. A mountain chain, starting at Cape York, runs down the eastern side of the continent at varying distances from the coast, and terminating at Wilson's Promontory. For convenience this great chain is regarded as broken into groups which bear local designations, and these branch off into lateral spurs which become the sources of rivers and creeks. The highest point in the range, Mount Kosciusko, 7,260 feet, in New South Wales near to the Victoria border, is the source of the Murray (flowing westerly 1,600 miles). There are mountains on the west coast, but they bear no comparison with those on the east, either in extent or elevation, and consequently there are fewer and less constant rivers. Isolated mountains of no great altitude are dotted about the central portion.

Soon after the founding of New South Wales (1786) curiosity was awakened as to what was hidden behind the mountains that threatened disaster to anyone who should attempt to penetrate their mysteries. But the spirit of enquiry could not be long suppressed. One after another intrepid and skilful explorers passed beyond the frowning sentinels that guarded the west, each one invariably adding something to the accumulating store of knowledge, and setting further back the limits of possible production. The track of the explorer was quickly followed by the squatter with flocks and herds; and although the latter suffered severely in periods of drought, recovery was rapid with the return of favourable seasons. By the achievements of Sturt, Mitchell, Leichhardt, Grey, Eyre, Gregory, Stuart, Burke, Warburton, Forrest and others, the continent was eventually crossed from south to north and from east to west, leaving only four or five detached portions of comparatively small area unexplored. The result is that instead of a mere fringe on the coast line being available for industrial occupation, immense territories have been disclosed suitable for various productions, and for ever dismissing a long prevalent belief in a vast inland sea. A considerable portion of Queensland, the Northern Territory (which still forms a part of South Australia), and Western Australia, or 1,149,320 square miles, is north of the tropic of Capricorn, but the whole area of the Commonwealth within the temperate zone is 1,825,261 square miles.

Unquestionably there is a considerable expanse of the central depression of the continent that is desert, and will remain so. Rock and sand, and the utter absence of vegetation and of surface water for scores of miles constitute a picture of desolation that it is difficult

to describe. And yet in the outlying districts of New South Wales, Queensland, South and Western Australia, there are large areas of water-bearing strata, some of which have been tapped by artesian wells, principally at a great depth, even 2,000 feet. Many of these bores yield as much as 2,000,000 gallons daily, and though the water is not the best for human consumption, it is suitable for stock and irrigation. By means of these wells, runs that were dependent on a precarious and scanty rainfall have been provided with a copious and permanent supply of water, thus saving the lives of hundreds of thousands of sheep and cattle, and increasing the value of the properties immeasurably. Possibly the artesian basin may be wider than has hitherto been ascertained, if so these wells will largely mitigate Australia's principal natural defect—a sparse general water supply. It may turn out, as was suspected several years ago, that the rains falling on the vast catchment of Central Australia sink through the porous surface to form an underground river discharging into the Great Australian Bight, in a certain part of which evidence of such an outflow is said to be discernible. The pressing want of at least the remoter districts to-day is a largely increased and constant supply of water. This want has been felt for more than half a century, and it is surprising that no well-devised and concerted scheme has been put forward for securing this desideratum, which would double the producing and sustaining capabilities of the continent.

A few words must be devoted to Tasmania, which is not included in the foregoing. The island is separated from the continent by Bass Strait, which is from 120 to 130 miles wide. It is situated within the parallels of 40° 33' and 43° 39' south latitude and the meridians of 144° 39' and 148° 23' east longitude; its length from north to south is 170 miles, and from east to west 160 miles. Exclusive of islands and lakes, its area is 24,330 square miles, or 15,571,500 acres; its islands—Flanders 513,000 acres, King 272,000, Cape Barren 110,000, Bruni 90,000, Robin 24,500, Maria 24,000, Clarke 20,000, East Hunter 19,000, West Hunter 18,400, Schouten 7,000, all others 33,100, total islands 1,131,000 acres; lakes, 75,500 acres; total area 26,215 square miles, or 16,778,000 acres. Like its larger neighbour, Tasmania has two principal mountain chains running from north to south parallel with the coast and at no great distance from it, probably a continuation of the eastern chain of Australia. The western chain, known as the Western Tiers, is an almost unbroken range extending over the entire length of the island, the highest among many peaks being the Cradle Mountain, 5,069 feet, about fifty miles in a straight line from the Indian Ocean, and thirty-five from Bass Strait. On the eastern side the chain is less continuous; the highest summit, Ben Lomond, about the same height as Cradle Mountain, is thirty-five miles from the South Pacific Ocean, and fifty

from Bass Strait. Between these ranges lies the central plateau from which rise several isolated mountains of much lower elevation, amongst which is situated the Lake Country, the lakes being from two to three thousand feet above sea-level. As might be expected in such a mountainous region, rivers are numerous, many of them carrying a large volume of water, and all ever flowing. Tasmania has been correctly described as a "beautiful well-watered island, rich in harbours and inlets, traversed by high mountain chains, full of craigs, glens, and ravines of commanding appearance. . . . Everywhere there are good anchorages and many excellent harbours. Altogether the coast offers the most manifold changes and generally charming scenery, being for the most part of a bold, rocky character. The interior especially is delightful, and here are united, so to speak, the climate of Italy, the beauty of the Apennines, and the fertility of England. Mountain and valley, hill and dale, crowned with high forests, and rich pasture grounds in the plains, afford the most pleasing variety." Besides the noble estuaries of the Derwent and Huon in the south, and the Tamar in the north, there are several very fine expanses of water, such as Macquarie Harbour and Port Davey in the west; Storm Bay, Frederick Henry Bay, and Norfolk Bay in the south; Oyster Bay, George's Bay, and Bay of Fires in the east; Ringarooma Bay, Anderson's Bay, Noland Bay, and Emu Bay in the north.

The remarks that follow apply to all the States.

CLIMATE.

Australia is greatly favoured in regard to climate, being in a measure free from the extremes of heat and cold characteristic of other continents, and which are so trying to many constitutions. Taking the entire group of States, the average temperature is congenial to all races, and only in the furthest north is it likely to seriously interfere with the ordinary labours of Europeans. Here, as in other large stretches of land, the range between extremes increases with increasing distance from the coast. The following useful summary of winter and summer temperatures in the several States is from the Commonwealth "Official Year Book," 1909 :—

"The extreme range of shade temperature in summer and winter in a very large part of Australia amounts to probably only 81 degrees. In Siberia in Asia the similar range is no less than 171, and in North America 153, or say, nearly double the Australian range.

"Along the northern shores of the Australian continent the temperatures are very equable. At Port Darwin, for example, the difference in the means for the hottest and the coldest months is only 8·7°, and the extreme readings for the year, that is, the highest maximum in the hottest month and the lowest reading in the coldest month, show a difference of under 50°.

"Coming southward the extreme range of temperature increases gradually on the coast, and in a more pronounced way inland.

"Perth.—The more exact climate history of Perth did not properly commence until 1897, when the present Observatory was established. During the period 1897 to 1907, the mean annual shade temperature of Perth was 64° , about a degree higher than that for Sydney and Adelaide, over 5° higher than that for Melbourne, and 10° above that for Hobart; but on the other hand, 4° below that for Brisbane. The extreme average temperature for the month of January is 73.6° , and for July 55.2° . The extreme maximum shade record of 107.9° was registered in December, 1904, and the lowest minimum shade temperature was 36.4° in July, 1906.

"Adelaide.—In Adelaide the climate is drier and more sunny than in the other capitals, and consequently radiation is less hindered. The extremes of heat are consequently more marked, especially in the summer months. The mean shade temperature for January and February is 74° , and that of July 51.6° . . . The highest record of shade temperature in Adelaide is 116.3° , registered in January, 1858, and the lowest 32.2° , a range of 84.1° . The freezing point, although closely approached, has never actually been reached by the shade temperature thermometers, notwithstanding the fact that records have been kept for fifty-one years. Frosts have, however, occurred on the grass (four feet below the shade thermometer) at various times between the beginning of April and the end of November.

"Brisbane.—In Brisbane the monthly mean shade temperature ranges from 77.3° in January to 58.0° in July, a difference of 19.3° . The extremes have varied from 108.9° in January to 36.1° in July, viz., through a range of 72.8° .

"Sydney.—In Sydney the highest monthly mean is 71.5° recorded in January, while the lowest is 52.3° , giving a range of 19.2° . The extremes of shade temperature recorded at Sydney over a period of nearly half a century are 108.5° in January, 1896, and 35.9° in July, 1890, i.e., a range of 72.6° .

"Melbourne.—In Melbourne the January mean shade temperature averages 67.3° , and that of July 48.5° ; the highest reading ever recorded being 111.2° in January, 1862, and the lowest 27.0° in July, 1869.

"Hobart.—The mean temperature for the hottest month at Hobart is 62.0° in January and February, and that of the coldest 45.7° ; the highest reading ever recorded being 105.2° in December, 1897, and the lowest 27.7° , nearly a degree higher than the lowest experienced in Melbourne.

HUMIDITY.

"Next after temperature the degree of humidity may be regarded as of great importance as an element of climate.

"Perth.—Annual mean at 9 a.m. 63 in June; greatest monthly mean is 83 in June, and the lowest 45 in January.

"Adelaide.—Annual mean is only 56; the monthly mean has been as low as 33 in January, and as high as 84 in June.

"Brisbane.—Annual mean 68; lowest monthly mean recorded is 47 in September, and highest 85 in March and May.

"Sydney.—Annual mean 73; greatest monthly average occurred in May, 1889; the wettest month on record during the last forty years was 90, while the lowest monthly mean was 55 in October, 1867.

Australia's Attractions for Immigrants. 131

"Melbourne.—Annual mean 72 ; greatest monthly average 88 in June and July, and lowest 54 in February.

"Hobart.—Annual mean, 72 ; highest 92 in June, lowest 51 in February."

Probably the above capitals, from local causes, do not represent the actual means for their respective States ; but as shown by the returns they stand in the following order:—Sydney, Hobart, Melbourne, Brisbane, Perth, Adelaide ; Sydney being the wettest and Adelaide the driest.

RAINFALL.

To any community, especially to that portion directly interested in land cultivation, the amount of its annual rainfall is of prime importance. I again quote from the authority mentioned :—

"The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by the physiographical features generally.

"Australia lies within the zone of the south-east and westerly trade winds. The southern limit of the south-east trade strikes the eastern shores at about 30° S. latitude. Hence we find that with very few exceptions the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains upon which the rain-laden winds blow from the New South Wales northern border to Thursday Island. The converse effect is exemplified on the north-west coast of Western Australia from the summer south-east trade winds. Here the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

"The westerly trade winds, which skirt the southern shores, are responsible for the very reliable, although generally light, rains enjoyed by the south-western portion of Western Australia, by the south-eastern agricultural areas of South Australia, by a great part of Victoria, and by the whole of Tasmania.

"The wettest place in Australia is Geraldton, on the north-east coast of Queensland, where the average rainfall is no less than 145 inches, the maximum yearly total being 211·24 inches, and the minimum 69·87 inches. The difference of range between these extremes is 141·37 inches.

"The driest known part of the continent is about the Lake Eyre district in South Australia (the only part of the continent below sea-level), where the annual average is but five inches, and where it rarely exceeds ten inches for the twelve months.

"The inland districts of Western Australia have until recent years been regarded as the driest part of Australia, but authentic observations taken during the past decade at settled districts in the east of that State show that the annual average is from 10 to 12 inches."

The mean annual rainfall at the capitals of the different States, deduced from observations taken for a great number of years, was—
at Perth, 33·18 ; Adelaide, 20·88 ; Brisbane, 48·44 ; Sydney, 48·54 ; Melbourne, 25·57 ; Hobart, 23·71.

POPULATION.

A census of the Commonwealth is to be taken in 1911, meanwhile the estimated population of the several States at 31st December, 1907, is as follows:—

TABLE A.

	WHITES.			ABORIGINES.		
	M.	F.	Total.	M.	F.	Total.
N. S. Wales ...	838,913	730,029	1,568,942	2,451	1,836	4,287
Victoria ...	623,683	624,412	1,248,095	163	108	271
Queensland ...	294,959	246,806	541,765	3,089	2,048	5,137
S. Australia ...	208,076	184,588	392,664	14,076	12,357	26,433
W. Australia ...	152,159	109,404	261,563	2,933	2,328	5,261
Tasmania ...	94,690	89,318	184,008	—	—	—
Commonwealth ...	2,212,480	1,984,557	4,197,037	22,712	18,677	41,389

With an area of 2,974,581 square miles, the population of Australia represents only 1·41 persons to the square mile; Europe has 111, Asia 55, Africa 13, and America 10. Obviously, therefore, there is ample room for expansion, though the rate of increase is very slow. If the present rate continues until 1950 the population of the Commonwealth will be 7,949,000, whereas if the rate was equal to that of the United States of America it would be 15,058,000. Surely there is something here which demands instant attention.

The population is distributed thus:—In Sydney 577,180, or 36·79 per cent. of the whole; in Melbourne 538,000, or 43·11 per cent.; in Adelaide 178,300, or 45·41 per cent.; in Perth 50,380, or 19·26 per cent.; in Hobart 40,326, or 21·92 per cent.; Commonwealth 1,519,841, or 36·21 per cent. In Wellington the population is 70,947, or 7·63 per cent. of the whole population of New Zealand, leading to the inference that in the Dominion the primary industries are more sedulously prosecuted, resulting in a proportionately larger foreign trade. Excluding Sydney, Melbourne, Adelaide, and Brisbane, there are in the Commonwealth cities or towns with inhabitants of 20,000 and under 100,000—N. S. Wales 2, Victoria 3, Western Australia 3, Queensland 1, Tasmania 2. 10,000 and under 20,000—N. S. Wales 3, S. Australia 2, Queensland 6. 5,000 and

Australia's Attractions for Immigrants. 133

under 10,000—N. S. Wales 10, Victoria 4, S. Australia 1, W. Australia 1, Queensland 3, Tasmania 2. 3,000 and under 5,000—N. S. Wales 13, Victoria 12, W. Australia 3, Queensland 3, Tasmania 2.

It is interesting to note that 77·23 per cent. of the population of Australia were born in the Commonwealth, 0·68 in New Zealand, 18·03 in the United Kingdom, 1·98 in other European countries, 1·25 in Asia, 0·08 in Africa, 0·33 in America, 0·28 in Polynesia, 0·14 at sea. Thus about 96 per cent. are our own countrymen.

In Tasmania there are no Aborigines, the race having become extinct for many years. The continental tribes, though still numerous, especially in the northern parts, are rapidly disappearing before the white man.

Births and deaths registered in the year 1907 :—

TABLE B.

	BIRTHS.			DEATHS.		
	M.	F.	Total.	M.	F.	Total.
N. S. Wales	21,604	20,597	42,201	9,444	6,967	16,411
Victoria	15,986	15,379	31,365	7,977	6,562	14,539
Queensland	7,451	7,089	14,540	3,482	2,116	5,598
S. Australia	4,689	4,549	9,238	2,087	1,741	3,828
W. Australia	3,962	3,750	7,712	1,866	1,065	2,931
Tasmania	2,797	2,494	5,291	1,083	915	1,998
Commonwealth ...	56,489	53,858	110,347	25,939	19,366	45,305

Amongst the principal causes of death, non-specified or ill-defined diseases represent 9,954, 3,136 senile debility, 3,801 organic diseases of the heart, 3,038 congenital debility and malformations, 2,679 violence, 3,166 tuberculosis of the lungs, 2,940 cancer and other malignant tumours, 1,901 congestion, hæmorrhage, and softening of the brain, 1,788 pneumonia, 1,760 nephritis and Bright's disease, 2,733 diarrhoea and enteritis (children under two years only). The remaining deaths are ascribed to various causes inevitable in growing communities, though often preventable by prudence and timely attention. A case of Asiatic cholera has never occurred in the Commonwealth.

The rate of infantile deaths during 1907 was—N. S. Wales 88·46 per 1,000 births registered, Victoria 72·60, Queensland 77·65, S. Australia 66·57, Western Australia 97·51, Tasmania 82·97, Commonwealth 81·06. Twenty-three centenarians died in the same year, 13 were males and 10 females. Of these, six males (one 119) and one female died in N. S. Wales, three males and five females in Victoria, two males and one female in Tasmania, one male in Western Australia, one male and one female in South Australia.

PRODUCTION AND COMMERCE.

Australia's natural productions are varied and unique. It has large forests of very fine hard and soft woods, durable and ornamental, from the jarrah of Western Australia to the pines and cedars of N. S. Wales and Queensland; besides a host of others suitable for every purpose. Some of the eucalypts, particularly in Gipps Land and Tasmania, attain a height of 300 feet, 14 to 16 feet in diameter, and 100 feet to the first limb. But timber of this size is not met with in the more northern States; indeed, immense plains are there on which there is scarcely a tree, however diminutive. In favourable seasons these plains are covered with grass so high that cattle in it are distinguished with difficulty, and sheep may be entirely concealed. Then after a few months of dry weather the grass is dried up, and if not accidentally fired, it is trodden down and nothing remains but bare earth, from which the stock must be removed immediately, or perish. In past years this has happened on numberless stations, and hundreds of thousands of sheep and cattle have perished from thirst and starvation. More recently the settlers have adopted means to mitigate these terrible droughts. By converting the native grasses of good seasons into ensilage, and boring artesian wells, stock owners in many localities are able to tide over droughts that would otherwise prove disastrous. Much more will probably be done in this direction by individuals, but a thorough cure will not be effected until water conservation is undertaken on a scale so vast that it can be attempted only by the governments of all the continental States acting in concert.

An enquirer interested in land cultivation will probably glean the information most desired as to the capabilities of the Commonwealth by learning what crops are grown, the acreage devoted to each and the yield per acre. From such evidence an intelligent practical farmer would be able to arrive at fairly accurate conclusions, for the principal crops with which Europeans are familiar are also the principal crops in Australia, slightly varying in productiveness with the climatic differences of the respective States. Wheat, oats, barley, hay, and potatoes are common to the whole as they are also

in the British Isles and Europe, and this is how a State comparison of these crops stands for the harvest of 1907-8:—

TABLE C.

		Wheat.	Oats.	Barley.	Hay.	Potatoes.
N. S. Wales	{ acres	1,390,171	75,762	11,890	541,761	31,917
	{ bushel	9,155,884	851,776	75,148	367,800	55,882
	{ per acre	6.59	11.24	6.32	0.68	1.75
Victoria	{ acres	1,847,121	398,749	63,074	682,194	54,149
	{ bushel	12,100,780	5,201,408	1,059,295	682,370	135,110
	{ per acre	6.55	13.04	16.79	1.0	2.50
Queensland	{ acres	82,461	715	6,943	54,037	7,889
	{ bushel	693,527	9,900	64,881	77,601	13,177
	{ per acre	8.41	13.85	9.34	1.44	1.67
S. Australia	{ acres	1,753,755	66,297	37,321	328,672	9,062
	{ bushel	19,135,557	874,388	566,937	376,170	20,263
	{ per acre	10.91	13.19	15.19	1.14	2.24
W. Australia	{ acres	279,609	46,666	6,019	131,056	1,854
	{ bushel	2,925,690	721,753	76,205	137,511	5,671
	{ per acre	10.46	15.47	12.66	1.04	3.06
Tasmania	{ acres	30,794	54,625	5,852	73,859	38,640
	{ bushel	644,235	1,526,002	149,186	98,406	145,483
	{ per acre	20.92	27.94	25.49	1.33	3.77

The yield of Hay and Potatoes is given in tons.

Of course there are other crops, and in the northern States those which are not suitable or practicable for higher latitudes. For instance, there is maize: during the harvest just dealt with the yield was—New South Wales, 4,527,852 bushels; Queensland, 3,093,789; Victoria, 508,761; Western Australia, 1,080; South Australia (more attention being given to wheat), 6,263. Tasmania did not attempt it, although in a few instances it has been successfully grown for green fodder.

The production of cane sugar, hitherto confined to the northern part of New South Wales and Queensland, has developed into a very important industry. Whether it can be carried on permanently to the exclusion of coloured labour is a problem that only time can solve. In 1907-8 the area under cane was—New South Wales, 17,953 acres; Queensland, 126,810; yielding 277,390 tons, and 1,665,028 tons, or 27.97 and 17.64 tons per acre respectively.

Wine-making is another branch of trade that has developed into prodigious proportions in this young country. The climate of Tasmania does not permit the growth of the vine for this purpose,

but it flourishes in all the other States, the acreage of each in 1908 being as follows:—New South Wales, 8,483; Victoria, 26,465; Queensland, 1,973; South Australia, 21,080; Western Australia, 3,231; a total of 61,232 acres. The wine produced was:—New South Wales, 778,500 gallons; Victoria, 1,365,600; Queensland, 90,191; South Australia, 2,061,987; Western Australia, 153,755; total 4,450,033 gallons.

Orchards occupy a large area in each State—in New South Wales, 46,714 acres; Victoria, 54,111; Queensland, 14,397; South Australia, 20,736; Western Australia, 15,049; Tasmania, 19,441; total 170,448 acres. "The principal varieties grown in Victoria are the apple, plum, peach, apricot, cherry, and pear. In New South Wales citrus fruits (orange, lemon, &c.) occupy the leading position, although apples, pears, peaches, plums, and apricots are also extensively grown. In Queensland, the banana, orange, pineapple, apple, peach, mango, and plum are the varieties most largely grown. In South Australia, in addition to the apple, pear, peach, apricot, plum, orange, and lemon, the almond and olive are largely grown. In Western Australia the apple, orange, peach, pear, plum, fig and apricot are the sorts chiefly grown; while in Tasmania, although the apple represents more than two-thirds of the area in that State devoted to fruit growing, small fruits, such as the currant, raspberry and gooseberry, are extensively grown, and the balance of the area is mainly occupied with the pear, plum, apricot, peach and cherry."

Space will not permit further details respecting productions from the land, and perhaps sufficient has been said to show that Australia (including Tasmania) is "a goodly land" literally "flowing with milk and honey," and only needing industrious, thrifty, upright workers to turn its still hugh solitudes into prosperous and happy homes. But room must be found to give what the Federal Statistician records as the "annual average of gold production, 1901 to 1907," viz., Western Australia, £7,931,059; Victoria, £3,155,021; Queensland, £2,518,101; New South Wales, £991,840; Tasmania, £282,302; South Australia, £79,886—£14,958,209; New Zealand, £2,017,554; or a grand total of £16,975,763 annually! Think of it: it almost takes away one's breath!

Some idea may be formed of the vast industrial resources of the Commonwealth when it is stated that during the year 1907 the value of imports from the United Kingdom and British possessions amounted to £38,607,877, and from foreign countries to £13,201,156—together £51,809,033. Exports were:—to the United Kingdom and British possessions £47,098,252, and to foreign countries £25,725,995—together £72,824,247. Thus one year's trade represents the enormous sum of £124,633,280, nearly £29 per head of the whole population.

RAILWAYS, TELEGRAPHS, &C.

The length of railway (Government and private) open for traffic in the several States in 1908 was:—New South Wales, 3,743½ miles; Victoria, 3,443; Queensland, 3,694½; South Australia, 1,937½; Northern Territory, 145½; Western Australia, 2,581½; Tasmania, 667½; total, 16,212½ miles. It may be useful to give the capital cost of construction and equipment of the Government lines in each State up to 1908:—New South Wales, £45,683,484; Victoria, £41,928,567; Queensland (narrow gauge), £22,575,603; South Australia, £13,909,635; Northern Territory, £1,180,174; Western Australia, £10,732,941; Tasmania, £3,977,611; Commonwealth, £139,988,015. The cost per mile open was:—New South Wales, £13,156; Victoria, £12,346; Queensland, £6,721; South Australia, £7,402; Northern Territory, £8,115; Western Australia, £5,524; Tasmania, £8,590; Commonwealth, £9,550.

Adelaide, Melbourne, Sydney, and Brisbane are connected by rail, and branch or short separate lines run back to the principal centres of settlement on the whole of the eastern side of the continent, and from Brisbane to Cook Town, on York Peninsula. A line was commenced to cross the continent from north to south (Adelaide to Palmerston), of which about one-fourth has been completed; and a line is projected and is now being surveyed to unite Adelaide with Perth, thus to link all the continental capitals together—doubtless a most important work for defence purposes. Hobart and Launceston are united by rail. Launceston is also united on the west with Burnie, and on the east with St. Mary's and Scottsdale; the latter line is being extended in the direction of Ringarooma.

Not only is Australia reticulated with telegraph wires, but it is united by cable with Great Britain and the world by the Eastern Extension Telegraph Company and the Pacific Cable Company. A separate Federal cable connects Tasmania with the mainland. Telephone services have also been established throughout the Commonwealth, in which there are now something like 50,000 connections.

POLITICAL.

The form of government is substantially the same in all the States. There is in each a Governor appointed by the Crown, and two Houses of Legislature, both of which in Victoria, South Australia, Western Australia, and Tasmania are elective; in New South Wales and Queensland the Legislative Councils are nominated by the Crown for life. All the Houses of Assembly are elected on a practically manhood suffrage (including women); for the elective Legislative Councils there are a few trifling property qualifications.

The Federal Parliament is constituted on the same model, a
Vol. V., No. 2.

Governor-General appointed by the Crown, and two Chambers, both elective.

Customs, Exoise, Postal, Telegraph, Telephone, Patents, Quarantine, and some other Departments have been taken over from the States, between which there is absolute free trade.

Primary education is free, compulsory, and undenominational. The State Schools are well staffed and furnished, and the scholars are thoroughly equipped for the ordinary avocations of life. For the more advanced branches of study there are High Schools, Colleges, and Universities, besides special Colleges for Mining and Agriculture.

Old age pensions have been paid in Victoria and New South Wales (following the example of New Zealand) since 1901; but in 1908 the Federal Government undertook that duty, and it came into effect in July, 1909. It is expected that the sum needed for this purpose will reach £2,500,000, but there can be no question that it will prove a great blessing to many thousands of aged and infirm.

Facilities exist in all the States for acquiring land on terms exceedingly easy for men possessing only a small amount of cash. To attempt even to outline them here would occupy too much space, and then would be unsatisfactory. An enquirer had better apply direct to the Lands Department of the selected State, and he will be promptly furnished with all the information desired.

Within the last few years a disturbing element has found its way into Australian politics, as also into the politics of other countries, in what is known as the "Labour Party," which claims to specially represent the labouring classes, and practically does so exclusively. Its existence is the natural outcome of the education of the masses, and the gradual but substantial improvement of their social condition. Neglected and oppressed for centuries, in the past their only means of protest was insurrection, which was put down with violence. Their hard lot had been greatly alleviated, but society needed to be shaken up. With the spread of education, the extension of the franchise, and the introduction of the ballot-box, the labouring man became capable of thinking—for brains are not limited to classes—and of giving expression to his thoughts at the polling booth. From among his fellow-workers there quickly arose men who undertook to be his guides in political matters for whom the way had been prepared by antecedent trade unionism. Some of these men were undoubtedly impelled by a sincere desire to benefit their fellow-labourers, and to deliver them from the bitterness of a bondage with which they were too familiar; but there were others influenced by less worthy motives, and the last hindrance to their ambition was removed when salaries were paid to Parliamentary representatives. The effect of this departure from long established usage, it is held by many, has been to create an order of professional politicians who seek entrance into

Parliament as a convenient way of earning a tolerably easy income. The novelty of the situation will wear off; the prizes will after all be comparatively few; experience will show that exclusively class legislation, whether labour or anti-labour, cannot satisfy a community. When this discovery is made it may be hoped that moderate views will prevail all round. Meanwhile industrial legislation is receiving more attention than ever, by which the hard condition of the workers has been greatly ameliorated.

WILD ANIMALS.

But little room remains to discuss the wild animals of Australia, and in truth but little is needed. The marsupial wolf, the "native tiger" of the early colonists (*Thylacinus cynocephalus*), the largest and most formidable of the carnivorous mammals, is limited to Tasmania, where it is now but rarely met with; it attacks only sheep. The dingo, or wild dog (*Canis dingo*), was numerous in Australia (unknown in Tasmania), and was very destructive amongst the flocks, but it has been so hunted that its numbers have been greatly reduced. There are a good many smaller animals, but as they do not menace man they need not be individualised here. In Australia there are many species of snake, most of which are venomous, but there are some not venomous, including a python in the tropical zone, where also there are alligators. In Tasmania there are three species of snake, all of which are venomous, but fatalities from snake-bite are very rare.

NEW GUINEA.

This immense island, exceeding 300,000 square miles, has been annexed by Great Britain, Germany, and Holland. The whole of the portion west of the 141st meridian, about one-half, is claimed by the Dutch; the eastern half is divided nearly equally between Great Britain and Germany. The south-eastern portion, about 90,540 square miles, lying nearest to Australia, is British, and on 16th November, 1906, was proclaimed a dependency of the Commonwealth, by which its Government is administered. The revenue for 1907-8 amounted to £26,019, and the expenditure to £48,525. The country is well watered, there are large forests, good harbours, gold mining is prosecuted, and ere long an important trade is likely to be developed.

CONCLUSION.

I fear my limit has been exceeded, though the half of the wonderful and varied resources of this great Commonwealth has not been told. An attempt has not been made to accentuate any assumed or supposed advantage that one State may possess over another. The object has been to treat all as forming a single entity endowed with extent, productions and capabilities so vast and diversified as to render it suitable for every branch of the human family. Perhaps

sufficient has been said to satisfy our imaginary enquirer that he is not in danger of being transported to a wilderness tenanted by black fellows yelling for his life. On the contrary, he is invited to a land occupied by his own kith and kin; where the men have fair skins and speak his own language; where "the virgins are soft as the roses they twine"; and where the cities and towns (supplied with trams, water, gas, electric light, and all modern conveniences and refinements) are as imposing as most of those he will leave behind; a land, too, where he will find larger spaces, kindlier skies, greater freedom—a sphere affording ample scope for intellectual activity, social development, scientific research, religious fervour, and hopeful effort: in short, a land where the whole environment is favourable to the upbuilding of a noble character in both individual and national life. It is such a land that extends to him a hearty and helpful welcome, in the firm conviction that the prosperity that smiles upon it to-day is but the dawn of a future whose meridian glory may well mock the wildest flight of present fancy.

The Commonwealth occupies a unique geographical position. At the confluence of two civilisations: that of the Orient, hoary and senile—that of the Occident, youthful and aggressive—she may take the hand of each and draw them together in mutual embrace. The East is especially her sphere of influence, and by the character of her dealings with the teeming millions of India, China, Japan, and the islands of the surrounding seas, will her claim to be their teacher be judged. If, avoiding racial antipathies and ungenerous aspersions, in her relations with these peoples she displays a kindly tone, a loftier morality than their own, and a purer faith, it may be that they will be gradually won over to the enjoyment of those inestimable privileges and prospects which Christianity alone confers. So will the Commonwealth fulfil its highest mission, and peace and plenty will diffuse their blessings over the Southern Hemisphere.

Rise, crowned with light, imperial Salem rise!
 Exalt thy towery head, and lift thy eyes!
 See a long race thy spacious courts adorn;
 See future sons and daughters yet unborn
 In crowding ranks on every side arise,
 Demanding life, impatient for the skies!
 See barbarous nations at thy gates attend,
 Walk in thy light, and at thy temples bend;
 See thy bright altars thronged with prostrate kings,
 And heaped with products of Sabea springs.

See heaven its sparkling portals wide display,
 And break upon thee in a flood of day.

HENRY BUTTON.

THE NATIVES OF SOUTHERN RHODESIA.

IN Southern Rhodesia, as in many other countries where a new civilisation is gradually encroaching on the old customs, the social conditions of the natives are in a state of flux. The tribal system is being undermined, and with it the ancient institutions and ideas. In our April number we remarked on the same process in West Africa. The problems of administration are similar in all such places, and the study of the subject in one has an interest for the others, though the point of view is by no means always the same. The report of the Native Affairs Committee of Enquiry in Southern Rhodesia is full of suggestive matter and is marked by the directness with which the essential difficulties are attacked.

The first use of a native, in the ordinary European relations with him, is to supply labour. It is an easy and common corollary that he will not work, or only to little purpose, except under a white master. It cannot be denied that this view of the matter has had a large acceptance in South Africa. But it gets no countenance from the Committee of Enquiry, or from a Conference of Superintendents of Natives to which the Committee refer.

"It is," the Superintendents remark, "a commonly made statement that most of the male natives of Southern Rhodesia do no work at all, and, if left to their own inclinations, lead a lotus-eating existence at their village, while their womenkind perform the manual drudgery required to keep them supplied with the necessaries of life. It is argued that the native, unless engaged in working for a white master, is a useless member of the community.

"We submit that the time has arrived for this fallacy to be once and for all exposed.

"The proposition ignores the fact that the native, in his natural state, is an agriculturist and stock-breeder, and those who put it forward forget that his products are an important factor in the commercial output of the country. At his own kraal the native man performs the following duties, all more or less incidental to his agricultural and pastoral life:—

"He carries on all the heavy preparation of the land, the greater part of the tillage falling to his lot; in harvesting and threshing he also takes his share, and finally he transports the bulk of the produce of his land to the market. The whole process of hut-building, with the exception of grass-cutting and plastering, is undertaken by the males, and, finally, the care of the cattle and other stock is entirely in their hands.

"The grain produced by natives during the year 1908 in Southern Rhodesia was estimated at over two million bags, and, at the close of the year, the value of the cattle owned by them, at an average of £3 per beast, was £600,000, small stock, at 5s. a head, amounting to a further £200,000.

"Do those who press for compelling all natives to work for European employers realise what would be the economic result of withdrawing them from their agricultural and pastoral industries?

"We know that during certain seasons of the year their home work does not press very hardly on the natives, but these intervals are short, and the employment of natives at such times would be of little practical assistance to the chief industries of the country which demand engagement for continuous periods."

On the other hand it is urged by the Superintendents that "any legitimate means of inducing the natives to work should be adopted, and we say this in their own interests, for it is only by becoming workers that they can be elevated from barbarism." This argument only applies to the surplus labour which is left unabsorbed by the native agricultural work. The substitution of peace and order for internecine strife and spoliation has left a considerable proportion of the native population free to work for wages, and the administrative object is to secure this labour for European employers. No doubt the waning of the tribal system produces mischiefs which go far to justify this object on moral grounds. "The Committee have received overwhelming evidence as to the gradual weakening of the restraining influences of tribal control, and of the adverse effect which this has had upon marital and parental authority. The result is that the young men are losing all sense of discipline, obedience and self-control, and all respect for their elders, and for authority generally. We cannot but realise that the surroundings under which a native youth is reared at his kraal are far from healthy—morally, mentally, or physically. He should undoubtedly be subject to some more rigid discipline than that exercised by his parents."

Having arrived at the conclusion that a paternal government is necessary, the road is clear for definite recommendations, and these are given by the Committee as follows:—

(1) That officials who directly control the native population be authorised and requested to preach the doctrine of labour as civilising factor.

(2) That these officials be authorised and requested to endeavour, by all legitimate means, to induce parents to apprentice their boys, between the ages of 14 and 18, to some approved employer or industrial institution for at least six calendar months in each year.

(3) That the minimum rate of pay in each district should be fixed by the State, and that a portion of the prospective wages, say 30s., should, in the case of the apprenticeship of a boy, be paid to the parent, as compensation for loss of his services, at the date of the entry into the apprenticeship, the balance of the wages to be paid monthly to the apprentice.

(4) That the State should provide machinery for the safeguarding of all boys so indentured, including the due fulfilment of the contracts.

(5) That where possible the apprentice should be afforded facilities for simple religious and literary instruction, including English.

(6) That where the official who directly controls the natives of a district finds that a youth of between 14 and 18 years of age is being materially prejudiced by the absence of proper control and discipline at his kraal, such official may cause such youth to be brought before the Magistrate of the district, who may, after due enquiry, cause him to be apprenticed, even without the consent of his guardian, to some approved employer or industrial institution; provided that he shall not be apprenticed in the mining industry except with the consent of the parent or guardian.

It will be seen that the policy advocated contemplates a considerable degree of pressure in the direction of inducing boys to work under Europeans. The case of native settlements near towns is also dealt with. It is said that the control of these "locations" is not satisfactory. "There is very little semblance of home life in any location, and we think this accounts for a good deal of the disorder and immorality which is reported to be prevalent in them. Forms of recreation are few, other than gambling and drinking. This naturally attracts indifferent characters, and those natives who are law-abiding and quiet have to suffer. Kaffir beer, often adulterated, is illicitly sold in most, if not all, locations. In the vicinity of many towns there are private plots where natives of doubtful character congregate. These are a constant source of trouble to the police." The Committee make the following recommendations:—

(1) That at all the larger towns the locations should be under the supervision of a European of good character, who should live either in the location, or in the vicinity.

(2) That squatting on plots in the vicinity of towns should be absolutely prohibited.

(3) That improved dwellings of different classes be erected in the locations, and that moderate rent be charged in accordance with the class of dwelling. This would give the better class of native, who is

usually more highly paid, an opportunity of improving his surroundings.

(4) That garden plots be granted, at a reasonable rental, to the occupants of the location. This would give the wives of men who are away at work all day some legitimate means of occupying their spare time, instead of spending it in a less wholesome manner.

(5) That a rest house be provided in each location for the use of natives who visit the town and are unable to complete their business in time to leave the same day.

(6) That a refreshment room or kaffir eating house be established in each location, strictly under the control of the local authority. Food and good wholesome beer in reasonable quantities should be sold there. It appears that this system has been adopted in Durban, and has proved a success.

(7) That the sale, introduction, or manufacture of beer, otherwise than by local authority, be absolutely prohibited.

(8) That every encouragement be afforded approved educational bodies in establishing institutions for religious and literary instruction, but that such institutions be under the supervision of the Education Department.

(9) That at smaller towns where it is not possible for the local authority to sell beer, natives be allowed to brew it in small quantities under written permit, but not for sale. That all unauthorised beer be confiscated, and the person in whose possession it is found be liable to punishment.

(10) That, where beer is sold by the local authority, any profit derived from the sale, or from rent, be utilised in improving the location.

(11) All house boys should be medically examined periodically.

Many witnesses urged that a reason for increasing the personal tax on natives (£1), which was substituted for the old hut tax of 10s., was that the supply of labour would be increased. A man would have to work more to earn the increased amount. The Committee considered (Col. Grey dissenting) that an increase of taxation on this ground would not be justified, and that it was extremely doubtful whether it would have that effect.

It is recognised that there are features of certain industrial employments which tend to deter natives from accepting them. "The work is arduous, the hours are long, and it is not a matter of surprise that they do not take to them readily. There are other circumstances connected with European employment which do, no doubt, have some effect on the labour supply. To these the Committee desire to refer. In enumerating them, they do not wish to say that they are largely present. There is abundant evidence that the vast majority of employers treat their native employees with great consideration and fairness, as will be seen later in the report. On

the other hand, there is proof that the grievances do exist, that they are very real ones to the natives, and that they warrant attention.

"Complaints are made of short payment of wages. On this point the Committee consider that the evidence is strong that instances of it do occur.

"Another objection was that the labourers are frequently kept unduly long on the minimum wage. This was particularly referred to in the case of natives engaged by the Bureau. The explanation given by one witness was that the capitation fee was so heavy that the employer could not afford the same pay as that given in the case of labourers engaged independently. The question of the minimum wage is an extremely vexed one. The contracts of the Bureau purport to specify what is intended to be the commencing wage of labourers, but they contain a protecting stipulation to secure that employers shall increase the pay of men who prove efficient to the amount which is current for their particular class. The following is the relative clause of one of such contracts (paragraph 3 of form No. 2):—'If any native efficiently performs work for which voluntary natives on the mine are paid a higher rate than 9d. per diem (more especially underground drill or hammer work, firing boilers, or mill work), then such native shall receive the higher rate of pay applicable to the class of work performed.' The trouble that arises in connection with a condition of this sort is the fact that in a very large number of cases the natives are not very well informed as to their rights or as to the methods of enforcing them, and it is feared, therefore, that at times, legitimate increments are withheld." The remedy for these and the like cases must be found in close supervision.

The shortage of labour is, however, more acute on many farms than on the mines. In spite of its hardships and risks, mining has greater attractions even for indigenous labourers than farm work. The rate of pay is higher, the food and supervision better, and the social side of life on the mine is more agreeable, though it might be supposed that farm labour is more in harmony with their own traditions and inclinations. Probably, if in cases in which married men are engaged their families could be induced and permitted to settle on the farms with them, conditions might be created which would afford them inducements to remain. By such a system, too, a farm labour class would probably grow up, as has happened elsewhere in South Africa. It is apparently difficult to induce indigenous natives to accept such an arrangement, and the Northern Administrations do not encourage it in the case of labourers from those territories. As a consequence natives, largely alien in number, live on farms without their families, and without the attractions which town or a large mine affords. It is not difficult to realise that such an existence is not calculated to encourage them to remain under a prolonged term of engagement.

While the report shows that advance under civilization is manifested in many ways, it is admitted that there are serious drawbacks. "From the evidence of many of the witnesses, it would appear that the natives have degenerated in some respects, and that contact with civilization has had a retrograde effect, especially in regard to sexual immorality and in the lack of respect for parental and tribal authority. This may be attributed largely to the weakening of tribal control which has resulted from a civilized system of government and to the discouragement, which is inevitable, of time-honoured ceremonies and customs, which, though appearing in European eyes to be influenced by mere foolish superstitions, have, nevertheless, played an important part in compelling respect for tribal, parental and marital authority. These superstitions represent the religion of those who profess belief in them; and, as regards some of them, at least, it is questionable whether it is wise to suppress them suddenly or until they are replaced by a higher order of faith and worship.

"The immorality of women, both married and single, in the vicinity of mines and other industrial centres, is a growing danger to the future welfare, both moral and physical, of the native races. It is alleged that husbands allow their women to take beer for sale to natives employed at these centres, that this leads to prostitution, and that the former share the proceeds of money so earned. It may be mentioned that prior to our rule prostitution was practically unknown amongst natives, as the punishment for the offence was so severe. The sale of beer is contrary to all native traditions, and is largely the cause of moral decline.

"We are told that even amongst the natives more remote from civilization sexual immorality is common amongst children of 12 or 14 years of age. Excessive beer drinking is also a pronounced evil. In the old days the younger people were only allowed a limited quantity at assemblies, whereas they now demand and receive as large a share as their elders. This tends to immorality, and is also the cause of serious crimes of violence. At the same time, it is only right to point out the marked absence of serious crime amongst the indigenous natives as compared with aliens."

On the subject of immorality there is some plain speaking, which is the more important in view of the agitation over the "black peril." Paternal government carries with it responsibilities in such a matter which the Committee fully recognise. "Earnest representations were submitted on the subject of the irregular sexual relations which it is alleged frequently exist between white men and black women. The question is an extremely important one. Apart from the moral aspect of the matter (a grave enough one of itself) the prestige and influence of Europeans are seriously affected by such incidents. On the other hand, the natives evidently object to relationships of

such a nature. Besides European evidence to that effect, native witnesses gave emphatic testimony on the subject: 'It is very bad; whites ought to take whites, and blacks ought to take blacks'; 'It is very evil, and a thing we resent very much in our hearts'; 'It is a very evil thing'; were expressions of view of different native witnesses; and an instance was mentioned by a minister of religion in which a native resisted the taking of his sister by a white man. The Committee are of opinion that the subject should, if possible, be actively dealt with. Marriages between European men and native women, though lawful, are admittedly unwise, to say the least, and it is equally clear that the results even of such unions will create formidable complications both socially and politically in the future. The territory is already faced with a sufficiently grave political problem in the native question pure and simple, and it is clearly the duty of those responsible for administration to endeavour, while there is time, to head off the further difficulties which inevitably follow in the train of miscegenation, accompanied, as they always are, by serious social evils. At present the law forbids illicit intercourse between black men and white women under severe penalties (Ordinance No. 9 of 1903), but it goes no further." The Committee have carefully considered the best means of dealing with this very serious question. A majority are in favour of legislation prohibiting marriage between white men and black women. But they recognise that for any useful purpose it would be of little avail to forbid such marriages unless concubinage is also prohibited. Instances of the latter will be infinitely more frequent than the former, and will therefore cause proportionately more mischief from a political and other points of view; it would be illogical to forbid a union which is *per se* moral, and to acquiesce in or be silent with regard to immoral relationship; and, lastly, merely to forbid marriage would have the effect of encouraging the class of connection which, after all, is the true cause of most of the troubles arising from miscegenation. The Committee, as a whole, feel that, if it be possible to give effect to legislation dealing with concubinage, both such relationship and marriage between white men and native women should be prohibited. "With regard to the question generally, the evil is one which can, to a great extent, be dealt with by the force of public opinion and by active measures of discouragement, official and private. The Committee learn that illicit relationship with native women of persons in public employ is viewed in the gravest light by the Government, who have imposed in the past, and would impose in the future, extreme penalties for an offence of such a nature. If private employers of Europeans would follow the policy observed by the Government the evil would, the Committee think, be considerably abated."

REVIEWS AND NOTICES.

International Law.—By F. E. SMITH, K.C., M.P. 4th Edition, revised and enlarged by J. WYLIE, Barrister-at-Law. (*J. M. Dent & Sons, Ltd.* 7s. 6d. net.)

Mr. F. E. Smith's work was published eleven years ago and has had a high reputation, but in that period the subject has had a great development and a revision of the book has become necessary. The Hague Conventions have not merely added matter; they have gone far to alter the character of international law. Before them there was no authoritative body which could decide what such law is, or which could interpret an international agreement, or which could supply any sort of "sanction." The risk of war was the only deterrent which could prevent nations from trampling on the doctrines generally accepted. Now there is a court which is competent to decide questions, and though it has no means of enforcing its judgments its composition and influence undoubtedly give it a great actual strength. International law has in fact now found a sort of sanction in the wide public opinion which will support orderly agreement against the law-breaker. The task of incorporating The Hague decisions has been excellently carried out in the present volume, and the work is now indispensable to those who may be concerned with international law. There is also a useful account of the controversy concerning the Declaration of London.

It seems regrettable that all works on this subject are devoted so largely to belligerent matters. War, after all, is an exceptional state of things, and though the old writers had to keep it constantly in view there is now a larger opening for the discussion of questions which arise under normal conditions. It would, for instance, have been interesting to read a discussion by Mr. F. E. Smith and Mr. Wylie on the interpretation given in the United States of the most favoured nation clause in commercial treaties. There it has been held judicially that an international commercial

agreement entered into for special consideration is outside such treaties. According to this view the most favoured nation clause does not secure the same treatment as is given to a particular country under a bargain by which special terms are obtained. Whatever may be said for the special bargain, the result seems to be a derogation from the original agreement, and the American view does not appear to be that generally entertained. In any case the only possible rule for the interpretation of treaties is to follow the same method and principles as in the case of other written instruments. We confess to some surprise to find it laid down by the authors that "No independent Government can indefinitely and for all time bind its successors by treaty, for the community so shackled would no longer be completely independent. It should follow therefore that every state became legally entitled to repudiate a treaty of indefinite obligation as soon as the conditions which preceded its formation have undergone substantial modifications." The Declaration of London of 1870 laid it down explicitly that "no power can liberate itself from the engagements of a treaty, nor modify the stipulations thereof, unless with the consent of the contracting powers, by means of an amicable arrangement." It is quite true of course that treaties have been torn up, and the statement is upheld as a statement of fact. It may be submitted however that, while the statement has unfortunately been correct in certain cases, to elevate it into a principle, legal or moral, is anarchic.

Off the Main Track.—By S. O. HYATT. (*T. Werner Laurie.* 12s. 6d. net.)

Mr. Hyatt's pen is generally dipped in gall, but he has lived in the midst of the scenes which he has described and whether his impressions are correct or not they have been genuinely acquired. The work, for all its invective, is salutary reading, and will attract many by a candour and realism which contrast strongly with the superficial optimism characteristic of most literary travellers. He spares no classes—the settlers, the blacks, Rhodes, the Chartered Company, all come under the lash in turn. The author of the *Diary of a Soldier of Fortune* is still a free lance. He has no respect for the old state of things and no liking for the new. Much of his description is no doubt accurate, but he makes no allowance for the difficulties of a transitory period and acknowledges no merit in recent developments. He has, in fact, a grievance which blinds him to these things. He has lived on the Transport Roads, and these have been supplanted by the railways. The old life in Mr.

Hyatt's eyes was far preferable to the new. He has the feeling which we all have at times that railways are unromantic things and that the only way to understand and appreciate a country is to follow the road.

"Every man who has lived on the Road—as distinct from those who have merely travelled on it—loves it. He must love it, or he would never have remained on it. The passenger views it in a different light altogether. To him waggon trekking is merely a tedious and uncomfortable way of reaching his journey's end, of getting to the place where he hopes to make sufficient money to repay him for the hardships he has undergone in reaching it. He never knows the road, he has not time to learn to know it, and if he is of the storekeeping or mining type, the chances are that he could never, in any circumstances, learn to know it. His will not be the nature which understands such things." The result is that "the new man, the settlers or colonists or whatever else they call themselves, are grossly uninteresting." As against this it may be gathered freely from Mr. Hyatt's pages that the predecessors of the "new man" did not have either a long or a particularly bright and merry life. Everybody, he says, who counted is either dead or has disappeared. No one will be surprised at this if they trust Mr. Hyatt. Gambling, drink and vice were the principal occupations in the townships, according to his narrative. If so it could not and did not last. "I suppose all these places have changed since my time. Salisbury must have become more decent, or it would surely have met the fate of the cities of the plain; whilst Victoria, with a railway creeping out in its direction, has probably grown almost conventional. Never again will they dance war dances round the judge's quarters, or insist on the retirement of the local parson because he had four native wives, and they reckoned one was sufficient for a cleric." These good times have gone, and a drab respectability has succeeded. The new state of things does not make for the good stories such as abound in *Off the Main Track*, and one can understand Mr. Hyatt's antipathy to the good citizens "who intend to carve a home out of the wilderness, or do something equally estimable," and who "ooze with virtue and respectability."

Mr. Hyatt has made up his mind that South Africa has a terrible time in front of it. The only doubt he has is whether the third Boer War or the Native War will come first. He believes that the only way to settle the native question would have been to put South Africa for ten years under military rule and after that under direct Imperial control. He is almost as bitter against the South African Union as against the British South Africa Company. It is all a long way from practical politics, but the book is an honest one and puts forward novel points of view which are at any rate interesting. One instance is his opinion of the kind of women who are wanted in such

places: "If you are going to build up a colony with wholesome ways and wholesome ideals, you must have wholesome women of British birth, not strong-minded women, or 'pioneer women' who can make butter, or hammer a native, or cut up a pig, but nice, dainty women who will serve to remind men of things at Home, and so keep them up to the mark. I like a woman who can do things, womanly things; but I have no respect for the woman who wants to do the work of a man, at least on the frontier." This is hardly the conventional view, but Mr. Hyatt knows more on the subject than most people do.

The Fiji of To-day.—By J. W. BURTON. (*C. H. Kelly. 7s. 6d. net.*)

Fiji has a tropical climate, but without the scourge of malaria. Hence, the Rev. J. W. Burton observes, the European has much less strain on his health than in most lands of similar temperature. The life insurance companies take risks at ordinary rates. The soil is good. The Colony is prosperous. For a long period after annexation the cultivation of land, for proper and worthy motives, was restricted, but the result was that commercial enterprise was checked. The natives cultivate only a trifling quantity of their land, and show no disposition to use more. Within recent memory the Colony had a hard time, so hard that the salaries of the civil servants were reduced all round—the only case of the kind, as far as we are aware, in Crown Colony administration. In recent years, it has been made easier to acquire land, and a new era of activity has been opened up. The trade now amounts to about a million and a half, 86 per cent. of which is with Australasia. This development is largely due to imported labour. There are now some 40,000 coolies in Fiji. Of natives there are about 86,000: fifty years ago there were 200,000, and the present annual decrease is at the rate of 15,000. It does not require much foresight to see the way the country is going. The Fijian under present conditions is dying out before the Hindu, and a population which has been converted to Christianity is becoming Asiatic in religion. It may prove that there is little place for the lazy islander under a commercial system. The pent up forces of the East may sweep him out of the way. The prospect is not a pleasant one for the Christian missionaries. They have on the whole been remarkably successful in the South Pacific. But this was when the field was not disputed. It is now invaded by the chartered ships from Calcutta, and the breach made will grow wider and wider. "Capital, followed by his busy servant Commerce, has paid a visit here, and left pledges that he will fulfil the contracts he has entered into.

These are nothing less than the complete revolution of the Pacific. In these days the golden sceptre of Wealth in the hand of Enterprise does more to decide the destinies of peoples than the fiat of kings. Capital sits upon the throne of the gods, and the other deities nod to his decrees. At his sordid behest nations are born—or more often destroyed—in a day. No race, however interesting or attractive, will be allowed to live which does not pay tribute to this merciless Cæsar. No considerations of sentiment have a place in this kingdom of Mammon. Peoples, traditions, virtues, and tastes, must all be expressed in term of pounds, shillings, and pence. If the present occupants of these islands do not furnish the labour that capital requires, a fleet will soon be on the waters bearing the type demanded. We may object as much as we will to the exploitation of these countries, but it will go on in spite of our caveat, and congested wealth and congested population will together seek relief in these fruitful islands."

The coolie shows no disposition to become Christianised, and in his new surroundings he is probably not at his best. The government in Fiji as in other colonies can make provision against his ill-treatment by his employers and give a medical supervision over his health.

Mr. Burton freely admits that the Immigration Department in Fiji takes every care, so far as possible, to prevent the oppression of the coolie. His indictment is that the system is a barbarous one, and that there are occasional cases of brutal conduct by the overseers on the estates. Things, however, he remarks, were better than they were. When the five years service are over, the coolie is a "free man," and has no difficulty in leasing a piece of land. In most cases he does very well, and there are very few who after a long residence are not fairly well-off. It is hardly necessary to say that he has already almost entirely secured the retail store-keeping trade. Physically he seems to do very well—better than in India. Whatever occasional abuses there are in connection with the indentured system, the ultimate result seems to be undoubtedly good, if the position and habits of the emigrants in their own country are properly taken into account. Mr. Burton has much to say, and says it in plain terms, about the immorality of the Indian. But he did not acquire these things in Fiji, where in fact the level is little if at all higher among the natives, and in spite of all he thrives and prospers. Intellectually, he is greatly above the Fijian.

This contrast of races makes the study of Fiji exceptionally interesting, and Mr. Burton's pages are full of close observation and suggestive comments. He knows the Hindu well, and while he regrets the victory which the latter is achieving, he recognises his good points. He rests his hopes for the Fijians on industrial education. It is quite possible that the diminution of the race may

be arrested. It is undoubtedly capable of education, and is now at a much higher level in this respect than were other races which have withered away at the touch of Western civilisation.

A Resident's Wife in Nigeria.—By CONSTANCE LARYMORE. (*George Routledge & Sons, Ltd.* 4s. 6d. net.)

A second edition is welcome of this book, which is written with a delightful freshness and a cheerfulness which almost obscures the very real pluck with which Mrs. Larymore faced adventures and misadventures. One, and not the least drawback to service in West Africa is that, in addition to the climate, lack of accommodation has prevented wives from accompanying their husbands. A few brave efforts have been made, and no doubt the railways and harbour improvements will now rapidly make things easier for such women. It is remarkable how great a fascination West Africa has exercised over the few women who have tried it. They have certainly been highly prized there, nor have the natives been backward in admiration, though not many in future will have "greatness thrust upon them" as happened to Mrs. Larymore, as the first white woman seen by a tribe. The natural cheerfulness of the natives has a good deal to do with the attraction, and many who have served on the Coast will echo the following. "Indeed, I can never conquer that curious feeling of chilly depression that overtakes me each time I return to England, and feel that, except for the tiny majority of my own friends, I am alone in a crowd; infinitely more alone in Bond Street, where almost every brick and stone is familiar, than I could ever be in the busy streets of Kano, or any other city of Nigeria, which I might enter even for the first time, where I should find two hands and one willing tongue all inadequate for the due return of the ceaseless shower of smiling salutations and greetings that would be poured upon me from every side. And this is by no means a tribute to any personal charms of mine. Any traveller, black-skinned or white, receives the same treatment as a matter of course."

A good deal of water has flowed down the Niger since Mrs. Larymore first described her travels, but they can be still read or re-read with interest. The most useful part of the book consists of the household hints, which contains a great amount of matter not to be found in the official information or the numerous treatises on domestic requirements in the tropics. Mrs. Larymore is not satisfied with the bare necessities, but shows how the bungalow can be made cheerful and attractive by simple methods. She gives good advice as to poultry keeping and gardening. The leave system interferes with the continuous attention which is required in such matters, but much might be done to increase the comforts of life. The keeping

of poultry should certainly be tried wherever possible, as the native fowl is a wretched specimen; it is fairly easy to get them out, and though Mrs. Larymore's stock suffered from animal depredations, the use of wire netting could stop such losses. The gardening notes are excellent, recording as they do both the successes and the failures.

The African Rubber Industry and *Funtumia Elastica* ("Kichxia").—By CUTHBERT CHRISTY, M.B., O.M. (*John Bale, Sons, and Danielson.*)

Africa, Dr. Christy states, is supposed to yield about one-third of the world's annual production of rubber, but the product is markedly inferior to that from South America and other places, not on account of inherent inferiority in the latex of either trees or vines, but chiefly owing to faulty preparation. Even more important than the question of quality is that of the diminution of supply. There seems very little prospect of staying the extinction of the indigenous wild rubber, particularly the trees. The industry must in the future, Dr. Christy thinks, be largely dependent on planting, and certainly all the indications point that way. The cultivation, however, of the African rubber tree, the *Funtumia Elastica*, has not been successful, owing to a want of knowledge of its special characteristics. Dr. Christy vigorously attacks the policy which has allowed this.

"It is to be feared that Colonial administrations in tropical Africa have in the past been too apt to regard the apparently unavoidable devastation of the forests with complacency, being content to formulate regulations which can never affect the individual rubber collectors. A special study, extending beyond the limited sphere of each particular colony, of the tree which is capable of producing, and has produced, more wealth than any of the other African forest products, should long ago have been instituted. Knowledge of the best methods of cultivation and of tapping *Funtumia*, and of the preparation of its rubber, seems to have remained until quite recently, in our own dependencies at least, almost what it was at the time of its discovery now nearly thirty years ago. The resultant loss is incalculable.

"No other rubber can be planted so cheaply or with so little skilled labour. If only ten years ago the natives in the best forest districts had been induced, as the result of expert investigation, to plant *Funtumia* on the communal plantation system so successful in Southern Nigeria, or upon the principles now becoming well recognised in the Kamerun plantations, a very different state of things would exist. The African rubber industry would to-day, with very small capital outlay, be an ever-expanding one, instead of being in

sight of extinction, its rubber the worst on the markets, and the forests ruined." No doubt there is much force in this indictment, but we do not think that in our own possessions the devastation of the forests has been regarded with complacency. The fact is, as Dr. Christy shows elsewhere, it is practically impossible for a government to prevent the devastation of wild rubber. The idea that efficient control can be maintained over vast areas is almost chimerical. Moreover, the knowledge and experience required for planting operations comes slowly. Even now in the East, where the subject has received a vast amount of study, there are problems which await solutions. No one is quite sure yet what the commercial life of planted *Hevea* is, or when tapping should best begin. Dr. Christy's book is itself the result of eight years work. While, however, we suggest that there is some excuse for a want of prevision on the part of governments, we can hardly give too much praise to the comprehensive manner in which Dr. Christy has dealt with this important subject, and it is to be hoped that good results will follow. A beginning has at any rate been made with planting under administrative auspices, and the studies contained in this volume will be appreciated.

In the Gold Coast, rubber assumed the first place among the exports in 1904, but, owing to crude preparation and the inclusion of dirt, stones, etc., the quality was exceedingly poor. We regret to find that, according to Dr. Christy, the quality at the present day is in no way improved. In Lagos the export attained magnificent proportions in 1896, but in the following year the disastrous results were obvious. The Ibadan and Jebu forests were ruined. The natives quite understood that a source of profit was being destroyed, but it was idle to expect that they would exercise any providence on that account. "I notice that no rubber trees are left along the road. A year ago, although the trees were dead or dying from the over-tapping, the trunks remained standing and were much in evidence. . . . Discussed the state of affairs with Alambo, King of Ibese. He agrees that the rubber is entirely killed out and says, 'Yes! Yes!' to suggestions as to the advisability of making some country law against destroying young rubber plants in the bush. He is fully alive to the fact that they represent money. One can see, however, that his acquiescence is purely a matter of politeness. He thinks that the hunters and the bush people are the ones to be interviewed about it.

"The hunters at Ilogbord did not seem to take an intelligent interest in the matter, but said that the big men at Ilaro are the only people who can take steps to initiate anything in the shape of protective measures. The big men at Ilaro care not a scrap about the whole matter. The rubber was God's gift and came in handy. It is now finished, and so we will continue to live happily with our

wives, with our mouths open for whatever Providence and the white men may next bring us. African kings seem purely ornamental when they are not obstructive." (*Diary of Mr. C. Punch, Director of Agriculture.*)

The export, Dr. Christy observes, continued to fall until in 1902 it was less than one-sixth of that of 1896; subsequently, owing to greater demand in the home markets, the output rose again. The increased quantity exported in 1906 was said to be due mainly to the tapping of the Ilesha forests, one of the richest rubber areas in the western district, after being closed for nine years. On the prohibition being removed, no less than 3,266 licences to tap were at once issued. The state of that forest was soon worse than at first.

In the Belgian Congo there was a good deal of ruthless destruction at first, but the State saw the mischief, and about 1899 planting was begun on a system which provided for 150 new trees or vines for every ton of rubber collected. This policy is now having good results. The energy shown in the matter by the administration, as contrasted with the inactivity elsewhere, was no doubt due to the direct interest of the State in the commerce. In Liberia no great harm has been done so far. But on the whole the industry is rapidly declining in West Africa, and the only hope of recovery lies in extensive planting. In East Africa also the trade has been threatened by destructive practices, but it will no doubt be protected there by the greater powers possessed by the governments of dealing with land, as by reserving areas and making large concessions to companies which show more forethought and can be better supervised than individual workers.

It is of the utmost importance, therefore, that the best modes of planting should be carefully considered, and for this purpose Dr. Christy's work is of the greatest value. He appears to establish clearly that the future in Africa rests with the Funtumia. "It cannot," he says, "be disputed that Funtumia may be planted in Africa on a very large scale infinitely more cheaply than Hevea, or indeed, than any other rubber; and the yield per acre per year is not much if at all inferior to that of Hevea. Under European supervision and sufficiency of skilled labour, Hevea is possibly the best of all rubbers to plant in suitable localities, but Funtumia, I maintain, is second to none, not even Hevea, for general planting by natives and others in tropical Africa; by its means and by no other will it be possible for West Africa to regain its position as a rubber-producing region." To allow the Funtumia a fair chance, the underwood must be cleared. In open ground the tree is a fairly quick grower, and attains much larger dimensions than when in the forest. It must also be coppiced, for if planted weak it grows all head and foliage. A considerable depth of loose and well-drained

soil is desirable as the main root, almost equal in diameter to the trunk, goes down five feet or more and then divides into roots which descend a great distance.

Social Insurance: Report by the Australian Commonwealth Statistician.—G. H. KNIBBS.

Australia is remarkable for the departmental reports which collect material from all sources and discuss administrative questions from a local point of view. Mr. Knibbs' report is a good example of the care with which the doings of the other countries are examined on such occasions and of breadth of treatment. He observes that the fundamental doctrine underlying the whole fabric of social insurance, a doctrine which has to some extent become concrete in the countries of Europe, is that a proper regard for the solidarity of each community requires that all classes belonging to the community should be protected by the strength of the community as a whole against the incidents of misfortune on the class or on the individual. This notion of solidarity, viz., that the strong must carry the weak, is regarded as essential to a favourable development of the nation, and it is recognised that the national welfare requires sacrifices to be made, by those able to make them, for the well-being of its weaker elements. In other words, it is recognised that, in order to advance the prosperity of a nation as a whole, and to conserve its vital forces, it is better that a misfortune falling on an individual should be distributed and borne lightly by the whole community, rather than that the individual should be crushed by the weight of his own misfortune. The full scope of social insurance was first recognised in Germany, largely owing to the rapid development of an agricultural into an industrial country and to the growth of social democracy. In 1881, that country attacked the problem of the insurance of workmen against industrial accidents and against disability caused by old age or invalidity, and other continental countries rapidly followed suit. Between 1889 and 1908 there were no less than eight international congresses to discuss the subject. Insurance against unemployment was first tried by Switzerland and Belgium. These schemes and those more or less founded on them are explained in detail by Mr. Knibbs, who finds much to say in favour of the principle. As regards the action to be taken in Australia, he sums up as follows:

"The question now arises whether it is advisable and practicable for the Commonwealth to adopt some method of unemployment insurance. Though none of the systems which have been tried in Europe offer a complete solution of the problem of unemployment insurance, much may be learnt from a study of the efforts which have been made. Though these efforts must be regarded as faulty, it is

not desired to give an impression that such municipal institutions cannot serve a useful purpose. On the contrary they have been of great value, and though not based on scientific principles, they have afforded a species of "assisted insurance" far preferable to the old methods of indiscriminate and uncertain relief. The principle of registration, the fact that the workman is contributing regular premiums, and that he has a legal right to unemployment allowances are valuable features of these systems. The unemployed are brought under the supervision of the municipal authorities, and are assisted in finding work, and workmen are required to make some personal sacrifice before they are entitled to relief, which can only be obtained by *bonâ fide* residents.

"At the present time there exist no sufficient data relating to Australian experience of unemployment to indicate what the effects of any such system would be. The necessary information on which to found any proposals for practically dealing with this question could be obtained by proper inquiry.

"It should be observed that any scheme for Australia must devise some means of reaching those classes not possessing labour organizations, if it is to fulfil its normal functions. There is no reason why the organized trades should not themselves develop systems of unemployment allowances, and there is ample warrant for giving national State encouragement to such development. A most important part of any system would be in rendering assistance (through efficient labour exchanges) to the unemployed in finding work.

"Finally, it remains to be said that all social insurance, and particularly that against unemployment, can hope to succeed only if a higher degree of total industrial efficiency can be secured thereby. If the alleviation of the load of trouble should result in relaxing in any measure strenuousness of effort on the part of workmen, then the schemes of social insurance are foredoomed. Not only so, but what might have been singularly helpful in creating a healthy social solidarity by reinforcing the energies and favourably influencing the destiny of the nation can, on the other hand, assuredly bring about its doom."

The Canadian Annual Review, 1910.—By J. CASTELL HOPKINS, F.S.S. (TORONTO).

Empire matters came in for a large amount of attention during 1910, and many animated discussions took place with the usual diversity of opinions. The question of eventual "Independence" was discussed widely in connection with the Navy debates in Parliament and the French Nationalist movement. The Review

gives a very full account of the debate on the Naval Service Bill, which brought on a Nationalist campaign in Quebec and probably caused the defeat of the Government at the Athabaska bye-election, and a very good idea of the conflicting views may be gathered from these pages. For a knowledge of both Dominion and Provincial events the Annual Review is indispensable.

Report of the Bahamas Commission on the Customs Department.

In the many colonies where the revenue is almost entirely dependent on customs receipts, the revenue department should be distinguished by sound business method, but in the Bahamas at any rate this has not been the case. The Commission say frankly that the opportunities for smuggling under the existing conditions are unlimited. No adequate precautions are taken to supervise transshipments into lighters or to the dock, and the examination of packages is insufficient. A disturbing circumstance is that the statutory power of the revenue officers to demand from the master of a ship the bills of lading has been ignored in practice, and instances have occurred where goods have been delivered to persons not at the time of delivery actually entitled to them as holders of the bills of lading, but on the mere production of the invoices, to the detriment of persons to whom the goods were consigned to order.

This state of things has made the work of the Commissioners far from easy, but they have attacked the problem carefully and their treatment of it and recommendations merit the attention of revenue authorities generally.

The Story of the Rubber Industry in Malaga.—By H. M. RIDLEY, Director of the Botanic Gardens, Singapore. (Malay States Development Agency.)

This little book gives a history of the rise of the industry of rubber cultivation, which has brought the Straits and its hinterland into prominent notice in the last few years. The exceptional advantages of the country are explained and concise directions are given for cultivation and preparation. The following figures show the immense development which has taken place.

“The area under cultivation in Para rubber in the Malay Peninsula is estimated at 400,000 acres; that alienated for planting but not yet planted up is 700,000 acres. These estimates are only approximate, but not very far above or under the actual one. The capital sunk in the industry is:—

STERLING COMPANIES.

(a) Capital of 189 Malay Companies included in the Guide published in September, 1910	£17,728,000
(b) Capital of Companies founded since the issue of the Guide and private ownership is (estimated)	3,000,000
	<hr/>
	£20,728,000

DOLLAR COMPANIES.

(c) Capital of 42 Malayan Companies as given in published Guide	\$18,457,000
(d) Other Companies and private estates (estimated) ...	6,543,000
	<hr/>
	\$25,000,000 = 2,916,666
	<hr/>
	Total £23,644,666

“Probably (b) and (d) are underestimated—the calculation is certainly on the cautious side.”

As most people interested in rubber are anxiously conjecturing what the effect of the increasing supply will be we cite Mr. Ridley's remarks on this aspect of the matter. “As a very large area has not yet come into bearing, and a large number of producing trees have not by any means arrived at their maximum output, it will be easily imagined what a vast store of rubber will be produced when the whole 1,100,000 acres are in full swing. It will not, however, be more than is wanted by the world, for not only does the demand increase, but should the price fall from the large amount poured into the market, the result would be the replacing of the inferior jungle rubbers and recovered rubbers by the superior cultivated product, and so cheap is the latter to prepare that even if it were to fall to a lower figure than it has done since the original industry was first started, still the profit from a properly conducted estate would be a very good one. There is no likelihood of what may be called over-production for very many years to come.

“Synthetic rubber, a bugbear to many, is even less likely to interfere with the planting industry. It is quite possible to make real synthetic rubber in the chemical laboratory, but its cost would be so great that it could not compete with the real article at a price which would leave a big profit to the planter. Many of the so-called “synthetic” rubbers are merely poor imitations, and

cannot replace rubber at all, while others are merely adulterated rubbers.

"Those who have read this little pamphlet will easily gather the immense importance and value of this quite new industry in the Far East, and will see that it is not a mere flash in the pan affair got up to sell shares, but a thoroughly sound, steady and profitable business, planned and carried out with the utmost care in the region which has proved to be the most suitable one in the world—that is, the Malay Peninsula."

Johore in 1910.—By D. G. CAMPBELL, General Adviser to the Johore Government. (*Kelly and Walsh, Singapore.*)

This report contains ample evidence of remarkable progress and the country appears to have a prosperous future before it. The revenue for 1910 was \$3,323,185, and the expenditure \$2,718,105, and the utilisation of a considerable amount of such surplus revenue will, it is expected, render vast areas of fertile land accessible and convenient to Singapore, and favourable terms of alienation should ensure that much Singapore capital which hitherto has been sent further afield will come to Johore. Lands are granted mostly subject to a rent of $2\frac{1}{2}$ per cent. on the value of the produce removed and in many cases to a quit-rent as well, and during the year a great number of applications were received; 223 were granted, embracing over 360,000 acres.

Trees and Timbers of the Malay Peninsula.—By A. M. BURN-MURDOCK, Conservator of Forests. (*Price \$1.*)

The primary object of these notes is to enable forest officers and others to identify the more useful trees in forests, of which there are at least 100 kinds in Malaya. It is difficult to take photographs of such trees owing to the density of the forests and the height of the leaves, and the notes are particularly valuable for the photographs taken by Mr. Burn-Murdock under these difficulties.

BUSINESS NOTES.

Rubber.

The rubber boom of 1910 was caused mainly by the operation of the ordinary law of supply and demand, but two special circumstances helped largely to make it a sensational incident. One was that the companies which had taken up this industry had a much sounder footing than is usual. They commenced business with a moderate capital, frequently privately subscribed and free from promotion expenses, and they were carefully managed by the men who conducted the planting. When the demand went up and prices increased, the market found these concerns soundly established and paying handsome profits. Another was the severe drop in prices which was caused by the financial depression in the United States in 1908. This necessitated great care and caution on the part of planters and investors, and a healthy position was made all the stronger by the trials to which it was subjected. The crisis was as short-lived however as it was sudden, and as it passed away the boom set in. It could not be expected that prices would remain at the high level which they touched, but for the future the solid foundation on which most of the undertakings rest assures a substantial amount of success. The Amazon and Congo have probably had their best times in the competition. This output is, if anything, being reduced, and this process of reduction is likely, at present prices, to continue. The demand is increasing steadily, and planters have good reason to look forward to a favourable market.

No country is so much concerned in the prosperity of the planting industry as ours. The British possessions already contain more than half the planted area of the world. Every colony in the tropics is eagerly considering how far it can share in the profits, and the comparative merits of every kind of rubber tree or vine are being carefully examined. In Ceylon and Malaya the question of selection was settled long ago. It was in 1876 that Kew Gardens procured seeds of *Hevea Brasiliensis*, and soon seedlings were sent to those colonies. It was not till quite recently that planting was undertaken

on a large scale, but such has been the activity of late that Ceylon has now some 200,000 acres under rubber, and Malaya 400,000. Malaya is, indeed, an ideal place for the industry, for it possesses in an almost unique measure the combination of heat and of constant rainfall throughout the year. As the supplies from these sources are developed, inferior countries will no doubt suffer. A higher standard of quality will be set up, and adulteration and bad preparation will be punished. It must be admitted that in many places under the British flag there is plenty of room for improvement. Not only is liquid added, but such insidious adulterants as yaws and cassara. There may be some wood and stones. The agent who buys from the natives has no particular interest in protesting against these practices. He is usually paid by the weight, and the devices which suit the collector suit him unless they are too flagrant. Naturally, the authorities, when this state of things becomes notorious, endeavour to stop it, and orders are issued with that object. The result is that the business falls off, and complaints arise immediately of the mischief caused by government interference. It may perhaps be argued that the quality of the rubber is the trader's concern. It is difficult for the authorities to persuade the natives to adopt honest methods when it is clear that less scrupulous treatment will pay better. There are numerous regulations, but it is extremely doubtful whether they are carried into practice to a satisfactory extent. Thus it was observed in Southern Nigeria in 1907 that the revenue derived from the 10s. licences to collect rubber was only £53 10s.; the quantity exported was 210,566 lbs., and it was ridiculous to suppose that 107 licence holders could collect such a vast quantity. Illicit tapping on a big scale must therefore have been carried on. When it is considered that a large native staff has to be paid to try to stop these practices, it will be evident that the system is at any rate not economical. The difficulty of policing enormous areas is the reason why in some countries an export duty is imposed in place of licences. This tax is more just in the sense that it can be efficiently collected, and therefore falls equally on all, and it makes it possible to protect the quality of the product. This is the system in the French colonies. However this may be, it is certain that the industry is rapidly falling off in West Africa. It seems almost hopeless to attempt to put things right by checking wasteful methods. Whenever rubber can be got, it is got and usually the collectors are ruthless. The best remedy is to replace waste and circulate better ideas by encouraging the natives to plant. The treatment of such plantations and the tapping in due course can be supervised, and the operation will be an object lesson of which the natives are quite capable of profiting.

It is to be hoped that the natural anxiety to begin tapping as soon as possible will not lead to planters giving the trees insufficient

time to come to maturity. It may be the fact that the latex has little to do with the growth of the tree except the bark. But the general experience is that the best rubber is taken from old and untapped trees. It is particularly important to avoid premature tapping where there is a lack of moisture.

The importance of the industry was well evidenced by the exhibits at the second International Rubber and Allied Trades Exhibition held in July at the Royal Agricultural Hall. The President, Sir H. A. Blake, prophesied that the time will soon arrive when rubber will be used for paving streets. This application would certainly open up a magnificent prospect for growers, and would incidentally do away with most of the racket and dust of great towns. There are a few instances of such paving, but they are very special luxuries. They suffice to show however that an inch of vulcanized rubber may last under heavy traffic some 30 years, though it gets very hard under the pressure. The cost at present would be about 4s. per square foot, and the initial outlay would therefore be very heavy, but it is more than possible that some combination of materials may result in a satisfactory roadway at a lower price. The principal consideration is the longevity of the paving, and the increase of motor traffic tends to make this greater. It is therefore quite possible that we may see development in this direction. For the present, however, planters must look to the established art and manufacturer, and it is a good indication of coming demands that the American motor car makers are now showing increased activity.

The exhibits of machinery were remarkably comprehensive. Every process was represented and many valuable inventions were on view.

The most important purpose of machinery in connection with rubber is to secure good coagulation. On this process quality mainly depends. Formerly rubber was rudely coagulated on the spot by primitive methods, that is, spontaneously or by boiling; then plants and barks were used, not very satisfactorily; and recently a large number of chemical coagulants have been tried, such as tannic acid, alum, and the patented "purub." It is remarkable, however, that notwithstanding all these new methods, the buyer, who looks at results only, prefers Para, which is prepared by a simple smoking process, to any other. Much thought has been given to the discovery of the secret of the excellent results of this coagulation. Mr. Wilhelm Pahl claimed in a statement made at the International Conference in connection with the Exhibition to give the solution. He explained that carbonic acid is the only agent. This is what gives Para its peculiar "nerve." It contains metallic salts (carbonates) which play an important part in the subsequent vulcanization; it never oxidises or putrifies; it consists of strongly polymerized rubber molecules, and its solution has a high viscosity. Hitherto the planted rubber

has not possessed these qualities, but the discovery of the carbonic acid method of coagulation opens up a new prospect.

At the Exhibition there were machines shown which are designed to smoke and coagulate the latex by a process substantially the same as that used by the natives in Brazil. The system was introduced by Mr. José Da Costa, of Belem do Pará, many of whose machines are now used in the East. A Da Costa "Rapid" coagulating plant was shown by Messrs. Bridge & Co. of Manchester. In this the latex is poured into tanks, and steam raised from wood, the distillation of which produces some acetic acid, is forced into the tanks by an injector. The latex is thus violently agitated so that every particle is reached, and in a few minutes the caoutchouc globules coagulate and rise to the surface. It is a very quick process, and it is claimed that any kind of rubber can be treated in this way.

Bacterial Disease of Bananas and Plantains.

The Trinidad Board of Agriculture has issued a pamphlet by Mr. J. B. Rorer on a disease which appears to be different from those generally recognised.

The presence of the disease is as a rule first detected in the lower leaves. The leaf-blades droop a little more than usual and have a slightly yellowish tinge, symptoms very similar to those brought about by drought. Soon however the petiole of one of the leaves gives way just at the base of the leaf-blade, and all the other leaves quickly break down in a similar manner. Eventually the terminal leaf, too, bends over and the plant dies and rots down to the ground.

Transverse sections of the pseudo-stem show that practically all the vessels are discoloured, the colour ranging from pale yellow to dark brown or bluish black, and filled with bacteria. The discoloured bundles run back into the true stem and thence into the young suckers and buds. Sometimes in badly diseased plants the tissues of the leaf-stalks and stems are broken down completely so that fairly large bacterial cavities are formed.

If transverse sections of leaf or stem are let stand for a short time the cut surfaces soon become covered with bacterial drops which have been forced out from the ends of the bundles. If the sections when freshly cut are put in large covered dishes away from the air, pure cultures of the organism may be obtained directly from these drops. If the disease is not severe, or a plant does not become infected until it has just formed a bunch of fruit, it may remain perfectly healthy looking, but many of the young fruits, or "fingers" do not properly mature; they remain small and eventually become black and rotten. In such cases it is found that there are some discoloured bundles filled with bacteria in the leaves, stem, fruit-stalk, or fruits. When diseased

suckers are planted the terminal leaf frequently turns black and dries up so that the plant dies.

Mr. Rorer states that this "moko" disease has been well controlled in Trinidad on several small plantings of plantains and bananas, purely by sanitary measures. As soon as a diseased plant is found it is dug up and destroyed on the spot, and all tools and implements used in the work sterilized by fire. It is needless to emphasize the importance of examining all suckers before they are planted.

Sponges.

The demand is continually increasing, but production is hampered by the fact that the business is almost entirely in the hands of a ring. Probably new fields will be opened up and some of the colonies have good opportunities. The Commissioner of the Turks and Caicos Islands makes the following observations on cultivation. "Sponges may be artificially multiplied and improved by grafting, from the egg, and from cuttings. The first two methods require great skill and are impracticable for those generally engaged in the industry, but the growth of sponges from cuttings is a feasible method of cultivation, provided suitable methods of handling and attachment are adopted. Experiments with small cuttings of about $1 \times 1 \times 1\frac{1}{2}$ inches, or about 120 cuttings from a 6-inch sponge, show that, growing at the rate of 1 inch in a year, they would in 4 years give a size of 75 times that of the original sponge. It has, however, been fairly established that, for commercial purposes, equilateral cuttings of from 8 to 10 cubic inches, or about $1\frac{1}{2} \times 2\frac{1}{2} \times 3$ inches, are the most suitable. These cuttings are raised on the sea bottom or on discs mounted so as to allow the salt water currents to have full play below the sponges. Discs, about 10 inches in diameter and $1\frac{1}{4}$ inch thick, perforated by two holes and made of a composition of 1 part cement to 3 or 4 parts of sand, with spindles, are the best form of attachment, and the cuttings are bound to the discs by short pieces of aluminium wire passed through the holes."

An experiment is being tried by the Marine Products Board of the Bahamas with the view of increasing the growth of sponges, and if successful it will no doubt be followed elsewhere.

The Board during the past year has buoyed a small space of water off the Port of Governor's Harbour for the purpose of carrying out an experiment with the view of increasing the numbers of the valuable sponge (known to the trade as current wool) which grows on the southern coast of Eleuthera.

The Board from time to time has heard of curious substances on which these sponges have adhered to and grown. Owing to the

depth of the mud in that locality, the sponge seeds that are thrown off from the mother sponge can find nothing to adhere to but the conchs which live in those waters; these, however, are insufficient in number to save the millions of seeds that are produced, and in consequence the waste of sponge life must be very great.

The Board has strewn the enclosure with wattles and other material to which it is hoped the seed may cling and live.

Should this experiment prove successful, it is the intention of the Board to carry on this work on a large scale, not only on the Eleuthera coast, but on other well-known sponging grounds where such conditions obtain.

The Board is of opinion that this method will prove more practical and economical than that of propagating sponges by cuttings.

Nigerian Tin.

In Northern Nigeria the promising position of the Naraguta mine shows that the difficulties of development can be dealt with successfully. No doubt tin in these territories lies frequently in very shallow deposits which would soon be worked out, but the concessions granted are mostly of large areas, and if only a small proportion proves payable the concerns will do well. The Chairman of the Naraguta Company has stated that if only 5 per cent. of their property prove payable they can be satisfied as to the future. Under present conditions it would take about 60 years to work out a square mile to a depth of six to seven feet, and, though no doubt better machinery will lead to quicker working, it is clear that there may be a long life before the industry if the workings yield encouraging results.

Messrs. Waterlow and Sons Ltd. are publishing a plan prepared by Mr. E. A. Langslow-Cook, Government Inspector of Mines, showing 9,000 square miles round Naraguta and including all mining leases, exclusive prospecting licences, and applications under consideration. It is intended as a guide to prospectors and investors, and can be obtained from the Crown Agents for the Colonies, price £2 2s. 0d.

Malaya Tin.

The production of tin in the Federated Malay States fell by about 10 per cent. below that of the previous year, which itself showed a drop from 1908. There has been a great reduction in the number of miners, who in 1910 numbered 170,361 as against 231,000 in 1907, and the output suffered accordingly, and in fact to more than a proportionate extent. No doubt the attractions of rubber

suckers are planted the terminal leaf frequently turns black and dries up so that the plant dies.

Mr. Rorer states that this "moko" disease has been well controlled in Trinidad on several small plantings of plantains and bananas, purely by sanitary measures. As soon as a diseased plant is found it is dug up and destroyed on the spot, and all tools and implements used in the work sterilized by fire. It is needless to emphasize the importance of examining all suckers before they are planted.

Sponges.

The demand is continually increasing, but production is hampered by the fact that the business is almost entirely in the hands of a ring. Probably new fields will be opened up and some of the colonies have good opportunities. The Commissioner of the Turks and Caicos Islands makes the following observations on cultivation. "Sponges may be artificially multiplied and improved by grafting, from the egg, and from cuttings. The first two methods require great skill and are impracticable for those generally engaged in the industry, but the growth of sponges from cuttings is a feasible method of cultivation, provided suitable methods of handling and attachment are adopted. Experiments with small cuttings of about $1 \times 1 \times 1\frac{1}{2}$ inches, or about 120 cuttings from a 6-inch sponge, show that, growing at the rate of 1 inch in a year, they would in 4 years give a size of 75 times that of the original sponge. It has, however, been fairly established that, for commercial purposes, equilateral cuttings of from 8 to 10 cubic inches, or about $1\frac{1}{2} \times 2\frac{1}{2} \times 3$ inches, are the most suitable. These cuttings are raised on the sea bottom or on discs mounted so as to allow the salt water currents to have full play below the sponges. Discs, about 10 inches in diameter and $1\frac{1}{2}$ inch thick, perforated by two holes and made of a composition of 1 part cement to 3 or 4 parts of sand, with spindles, are the best form of attachment, and the cuttings are bound to the discs by short pieces of aluminium wire passed through the holes."

An experiment is being tried by the Marine Products Board of the Bahamas with the view of increasing the growth of sponges, and if successful it will no doubt be followed elsewhere.

The Board during the past year has buoyed a small space of water off the Port of Governor's Harbour for the purpose of carrying out an experiment with the view of increasing the numbers of the valuable sponge (known to the trade as current wool) which grows on the southern coast of Eleuthera.

The Board from time to time has heard of curious substances on which these sponges have adhered to and grown. Owing to the

depth of the mud in that locality, the sponge seeds that are thrown off from the mother sponge can find nothing to adhere to but the conchs which live in those waters; these, however, are insufficient in number to save the millions of seeds that are produced, and in consequence the waste of sponge life must be very great.

The Board has strewn the enclosure with wattles and other material to which it is hoped the seed may cling and live.

Should this experiment prove successful, it is the intention of the Board to carry on this work on a large scale, not only on the Eleuthera coast, but on other well-known sponging grounds where such conditions obtain.

The Board is of opinion that this method will prove more practical and economical than that of propagating sponges by cuttings.

Nigerian Tin.

In Northern Nigeria the promising position of the Naraguta mine shows that the difficulties of development can be dealt with successfully. No doubt tin in these territories lies frequently in very shallow deposits which would soon be worked out, but the concessions granted are mostly of large areas, and if only a small proportion proves payable the concerns will do well. The Chairman of the Naraguta Company has stated that if only 5 per cent. of their property prove payable they can be satisfied as to the future. Under present conditions it would take about 60 years to work out a square mile to a depth of six to seven feet, and, though no doubt better machinery will lead to quicker working, it is clear that there may be a long life before the industry if the workings yield encouraging results.

Messrs. Waterlow and Sons Ltd. are publishing a plan prepared by Mr. E. A. Langslow-Cook, Government Inspector of Mines, showing 9,000 square miles round Naraguta and including all mining leases, exclusive prospecting licences, and applications under consideration. It is intended as a guide to prospectors and investors, and can be obtained from the Crown Agents for the Colonies, price £2 2s. 0d.

Malaya Tin.

The production of tin in the Federated Malay States fell by about 10 per cent. below that of the previous year, which itself showed a drop from 1908. There has been a great reduction in the number of miners, who in 1910 numbered 170,361 as against 231,000 in 1907, and the output suffered accordingly, and in fact to more than a proportionate extent. No doubt the attractions of rubber

seriously interfered with the employment of capital in mining, and of late the decline in value of rubber enterprises has had the effect of locking up the capital put into them, as owners are unwilling to sell at a great sacrifice. On the other hand the increased price of tin should have a marked effect in stimulating production, but there is no indication of this, and probably the Chinese find that the difficulties of mining the metal are increasing. If the price advances the eventual result may be the formation of large concerns to take the place of the present small producers and the use of better appliances.

Cement.

It is well to bear in mind that recent improvements render cement more liable than it used to be to deterioration by exposure to air. Aeration used to be desirable with coarsely ground cement, but the material is now finely ground and the finer it is the more readily it absorbs moisture, and this water combines with the silicates and aluminates, ultimately causing the formation of calcium carbonate or chalk. This renders inert a part of the cement, and if it is allowed to go on long enough the whole would be rendered useless. It is only a question of time, and the moral is that cement should as far as possible be bought as required and not kept stored.

Wireless Telegraphy.

A tender for a 5 kilowatt installation has been accepted by the Falkland Government from the Marconi Wireless Telegraphy Company, the price, including the services of an engineer, being £2,800. This is the outcome of a deputation of sailing ship owners, which waited upon Mr. W. L. Allardyce in London last October and urged the establishment of wireless communication between the Falklands and the mainland of South America. The station will no doubt be of the greatest value to ships which in the course of the Cape Horn voyage are obliged to put into the Falklands.

Vacuum Cesspool Exhauster and Combined Water Cart.

A novel apparatus, adapted for either cesspool emptying or road watering, has just been placed on the market by Messrs. Merryweather and Sons. It consists of a cylindrical tank of 300 gallons capacity, mounted on a four-wheeled van, on which an air pump is

also fitted. For cesspool work a vacuum is created in the tank by means of the air pump, and on suction piping being dropped down the cesspool, the contents thereof are drawn up into the tank without contaminating the atmosphere in any way. The water spreader is fitted at the rear of the tank, and the water can be turned on and off from the driver's seat in the usual manner.

The vacuum system of cesspool emptying was introduced into this country about fifteen years ago by Messrs. Merryweather, and the apparatus has since met with considerable success and has been extensively adopted in districts where cesspools are in vogue. The addition of a water spreader to a plant of this kind constitutes a new departure, and should be a further inducement to public authorities to adopt it.

RAILWAY AND HARBOUR NOTES.

Lagos: Northern Extension.

It is understood that all bridges will be completed by the middle of October, with the exception of those at Taraji, Pimmi and Ebba (miles, $68\frac{1}{2}$, 81, and $74\frac{1}{2}$ respectively), and that the track will be sufficiently ballasted and in good enough order to permit of passenger and public goods traffic being carried. The bridges above referred to are not of great magnitude.

At the Niger Bridge both slipways are completed, and the "Fabius" has been working whenever there has been material to cross.

The two rail-heads, from Zungeru and Jebba, were connected on 17th June.

Mr. Glasier's administration report for 1910 has some ominous references to the future of the line. So far all is well. In 1910 there was a surplus of £95,737, the revenue showing an advance of 24.6 per cent. on that of 1909. But in the current and subsequent years the addition of the Jebba-Minna Section of the "Political" line, as it is now called, will, it is feared, put a different complexion on the matter. The cost of this section and of the bridge over the Niger will come to nearly a million, and the traffic prospects over it are not encouraging. Through rail communication with Kano may save the situation, but it takes a long time to alter customs and trade routes which have been established for generations. It will be no easy matter to settle the rates, especially as some sort of correspondence should be observed with those *via* Forcados and the Niger, but it is important that they should be agreed upon and published as soon as possible.

Lagos Harbour Works.

During the first half of this year satisfactory progress was made with the construction of the East Mole, though naturally the lineal progress diminished as deeper water was entered upon. At the end of June 6,362 feet had been completed. Good progress was made with the iron wharf required in connection with the

construction of the Mole Works on the West side of the entrance to the harbour; and it is expected that stone-tipping on the West Mole can be begun shortly after the end of this year. The two dredgers "Egerton" and "Sand Grouse" dredged in the six months 990,000 tons, and 25,000 were deposited on the reclamation. The improvement works on the Customs Wharf were almost completed.

Gold Coast.

The gross revenue in 1910 of the Coomassie line was £253,328, as against £185,409 in 1909; this striking result was due to unexampled activity in the mining industry and to abundant crops of cocoa, rubber and cola. The enormous agricultural and forest wealth of the Western Province and Ashanti has scarcely yet been touched, and awaits the extension of railways and construction of feeder lines. The recurrent expenditure was £84,709.

Mr. W. E. Smith, the General Manager, remarks as follows respecting the branch to Prestea and Broomassie:—

"The engineering difficulties have been numerous, and the rainfall is probably the heaviest experienced in any part of the Colony. The cost of maintenance for a few years will probably be heavy. The total length of the branch is 20 miles and the approved estimate was £160,000. When the accounts are finally closed it seems unlikely that the actual expenditure will be more than a hundred pounds or so in excess of the estimate. Considering the number of unforeseen difficulties and enforced delays the resident engineer has had to contend with, and bearing in mind that from the period rail-head reached the Ancobra he has been handling regularly large consignments of machinery, coal, timber, and general traffic for the Mines, to the serious interference at times with construction progress, I venture to express the opinion that this undertaking reflects the greatest possible credit upon Mr. Tower's organization, skill and resource, combined with an almost religious regard for the economics of administration and expenditure generally. The principal accounts connected with this construction have been controlled by open lines. This process has proved satisfactory in every respect, and I have no hesitation in saying that the departmental principle of carrying out construction work, as herein evidenced, leaves little if anything to be desired."

Seccondee Harbour Works.

By August 22,875 cubic yards were deposited in the reclamation. Preparations for blocksetting on the breakwater were complete, and 335 blocks had been made.

A time table has been issued, showing departure from Seccondee at 7.0 a.m. and arrival at Coomassie at 5.30 p.m.

Accra Harbour Works.

By August the decking of the jetty was nearly complete and commencement was made with the laying of rails. The work was begun of removing sand above low water between the jetty and the breakwater.

East Africa: Jinja-Kakindu Railway.

The Jinja-Kakindu Railway has progressed very satisfactorily, and will be finished by the end of the year. There are very good prospects of extensive cotton growing in the Choja region. On Lake Victoria Nyanza the downwards tonnage carried has increased from 7,457 in 1907, to 15,268 in 1910, and to 19,347 for the financial year 1910-11. The bulk of the increase is from Uganda, and not from German ports. The financial results provide 11 per cent. on the capital outlay. It is anticipated that, if a market can be secured, which depends largely on increased steamer accommodation on the lakes, Uganda and the Nyanza Province will export yearly 60,000 to 80,000 bales of ginned cotton and 4,000 to 5,000 tons of cotton seed, making an increase of traffic on the Uganda Railway of about £25,000.

Central Africa.

The development of Central Africa is of considerable interest to us and to France, Belgium and Portugal, and many eyes are turned to the district which suddenly became the pivot of railway and commercial enterprise in the heart of the dark continent. According to recent estimates, the Katanga copper belts are the richest in the world, and whether this is true or not it is certain that they are exceptionally fine, and Katanga is the objective of four lines. In a district where the political conditions are so diverse, the railways are not constructed simply on the principle of taking the shortest line to their destination, but are affected by territorial considerations. Two of the lines start from the Belgian port Matadi, but even the shorter is much longer and more inconvenient than that from Benquella, which is Portuguese. The results of the latter line are of good omen for similar enterprises. It carried 1,000 tons in 1905; 21,000 in 1909; and 32,000 in the first nine months of 1910.

Ceylon: Mannar Extension.

In July there remained 30 bays of the North Pier and 25 of the South Pier to finish, and this would take about 60 weeks; allowing further time for the steelwork of the head and for small fittings it seemed likely that the date of completion would be about April,

1913. The rest of the railway will, it is anticipated, be finished about the end of 1912.

Rail-head in July was moving towards Chettykulam, and it is expected that the bridge at Kal Aar will be completed before the end of the year.

Singapore Railway.

The gross earnings in 1910 were \$297,327, an increase of \$63,534; the working expenses were \$175,386, an increase of \$9,738. The through traffic with Johore and F.M.S. was suspended for about a month owing to landslips in Johore. The results are very satisfactory, and further increase of through traffic is anticipated.

Johore State Railway.

The mileage open for traffic at the end of 1910 was 120 miles 61 chains, and the average expenditure per mile was \$96,578.25. The gross revenue was \$196,454.82, and the working expenses \$218,859.23.

Tanjong Pagar Dock Works.

The Lagoon Wet Dock and Main Wharf Reconstruction Works were taken over by Messrs. Topham, Jones and Railton, Ltd., in July.

The reconstruction works have made good progress, and in June 872 men were at work.

Tadang Java-Kuala Selangor Railway.

The work was commenced in April, and, by the end of June, out of a total of 381,128 cubic yards of earthworks in the whole line, 19,536 had been executed. The number of bridges and culverts provided for in the estimates is 66.

Gemas-Kuala Semantan.

By the end of June the rails were linked in for a length of 75 miles.

Semantan-Kuala Tembililing.

At the same time the rails on this line were linked in for 16½ miles, and the clearing completed for 41.

MEDICAL NOTES.

Annals of Tropical Medicine and Parasitology, Vol. V., No. 2.
(*Liverpool University Press.*)

THIS number contains articles on the Papataci flies of Malta, human trypanosomiasis in the Gambia, suppression of urine in black-water fever, and beri-beri. Sleeping sickness has been known in the Gambia for some years, but cases have not been very common. The natives say that it has been in the country for two or three generations, and Professors Todd and Wolbach compute that at least 0·8 of the whole population are now infected. It seems likely that the cultivation of rice in the swamps near the river encourages the spread of the disease, as the *glossina palpalis* haunts such places. The Foulahs, who are pastoral, are less liable to the disease than the riparian workers. It is suggested that the growing of rice in such places should be forbidden. The article on beri-beri gives Schau-mann's observations, the conclusion being that in the majority of cases the disease is due to a long deficiency of organic phosphorus in the diet, causing deep-seated lesions which take a long time to cure. The valuable work done by Fraser and Stanton is recognised. The writers confirm from their own researches the unfavourable influence of polished and steamed rice, and speak of the protective influence of whole rice. The discussion of the disease bears upon the "standard bread" question which has so profoundly agitated English households. In the fine English white bread the phosphorus is removed with the bran. Pigeons fed upon it became ill and died in 15 to 20 days, showing marked degenerative changes in their peripheral nerves. On whole-meal bread they flourished. Thus probably a whole cycle of diseases, such as rickets, have a similar etiology to that of beri-beri. "It may be objected that our white bread is baked with yeast and so the missing organic phosphates are compensated for, but the amount of yeast used is very small and probably insufficient (Holst's pigeons died on yeast bread towards the end of three months; more slowly, it is true, than on bread baked with baking powder (average 40 days) but none the less surely). And it

must further be remembered, that much of the bread now sold is made with baking powder and not with yeast, and so a further factor making for deficiency is introduced. Failures of absorption, bacterial infections, and other internal disorders no doubt play their part as in tropical beri-beri, but it may well be that success of the present agitation for a whole-meal bread will have a wide reaching effect on the betterment of the physique of our nation, in lowering our death-rate and in lightening the overcrowding of our hospitals."

The Etiology of Beri-Beri, by H. FRASER, M.D., and A. T. STANTON, M.D. (Studies from the Institute for Medical Research. F.M.S., No. 12.)

The Malay Peninsula has long been known as an "endemic focus" of beri-beri, and the Government have greatly interested themselves in the investigation of the disease. Five years ago the task of defining the etiological factors was assigned to the authors, and this book sums up their work. Their conclusion, arrived at after numerous experiments on fowls, is that beri-beri has an intimate connection with the consumption of a diet of which white polished rice forms the staple. Unpolished or parboiled rice does not cause the disease. The reason is that white polished rice is wanting in some substance of high physiological importance, and this substance is supplied by the meal or polishings which are removed from such white rice in the course of milling.

Sleeping Sickness Bureau: Bulletin No. 28, Vol. III. (*Royal Society*.)

The medical authorities are not yet in complete accord as to the use of arsenophenylglycin. Dr. Hodges, P.M.O., observes:—

"The two reports, made at an interval of only four months, are instructive when compared, and show once again the difficulty in appraising the positive value of any drug in sleeping sickness until a considerable interval has elapsed since treatment.

"The most that can be said at present is that arsenophenylglycin appears to show no superiority over several other drugs unless in the treatment of early cases; that experience in the treatment of early cases in Uganda has not yet been sufficient to allow of a decided opinion being formed as to its value; that the drug seems to be considerably less toxic than other arsenical preparations which have been tried, and that further experience in the treatment of early cases is to be desired, especially by single full doses."

Dr. Van Someren, who treated 42 persons in February near Lake Edward, takes a rather more favourable view.

"I have no doubt that in arsenophenylglycin we have the most useful and potent drug yet put forward for the treatment of

MEDICAL NOTES.

Annals of Tropical Medicine and Parasitology, Vol. V., No. 2.
(*Liverpool University Press.*)

THIS number contains articles on the Papataci flies of Malta, human trypanosomiasis in the Gambia, suppression of urine in black-water fever, and beri-beri. Sleeping sickness has been known in the Gambia for some years, but cases have not been very common. The natives say that it has been in the country for two or three generations, and Professors Todd and Wolbach compute that at least 0.8 of the whole population are now infected. It seems likely that the cultivation of rice in the swamps near the river encourages the spread of the disease, as the glossina palpalis haunts such places. The Foulahs, who are pastoral, are less liable to the disease than the riparian workers. It is suggested that the growing of rice in such places should be forbidden. The article on beri-beri gives Schauermann's observations, the conclusion being that in the majority of cases the disease is due to a long deficiency of organic phosphorus in the diet, causing deep-seated lesions which take a long time to cure. The valuable work done by Fraser and Stanton is recognised. The writers confirm from their own researches the unfavourable influence of polished and steamed rice, and speak of the protective influence of whole rice. The discussion of the disease bears upon the "standard bread" question which has so profoundly agitated English households. In the fine English white bread the phosphorus is removed with the bran. Pigeons fed upon it became ill and died in 15 to 20 days, showing marked degenerative changes in their peripheral nerves. On whole-meal bread they flourished. Thus probably a whole cycle of diseases, such as rickets, have a similar etiology to that of beri-beri. "It may be objected that our white bread is baked with yeast and so the missing organic phosphates are compensated for, but the amount of yeast used is very small and probably insufficient (Holst's pigeons died on yeast bread towards the end of three months; more slowly, it is true, than on bread baked with baking powder (average 40 days) but none the less surely). And it

must further be remembered, that much of the bread now sold is made with baking powder and not with yeast, and so a further factor making for deficiency is introduced. Failures of absorption, bacterial infections, and other internal disorders no doubt play their part as in tropical beri-beri, but it may well be that success of the present agitation for a whole-meal bread will have a wide reaching effect on the betterment of the physique of our nation, in lowering our death-rate and in lightening the overcrowding of our hospitals."

The Etiology of Beri-Beri, by H. FRASER, M.D., and A. T. STANTON, M.D. (Studies from the Institute for Medical Research. F.M.S., No. 12.)

The Malay Peninsula has long been known as an "endemic focus" of beri-beri, and the Government have greatly interested themselves in the investigation of the disease. Five years ago the task of defining the etiological factors was assigned to the authors, and this book sums up their work. Their conclusion, arrived at after numerous experiments on fowls, is that beri-beri has an intimate connection with the consumption of a diet of which white polished rice forms the staple. Unpolished or parboiled rice does not cause the disease. The reason is that white polished rice is wanting in some substance of high physiological importance, and this substance is supplied by the meal or polishings which are removed from such white rice in the course of milling.

Sleeping Sickness Bureau: Bulletin No. 28, Vol. III. (*Royal Society*.)

The medical authorities are not yet in complete accord as to the use of arsenophenylglycin. Dr. Hodges, P.M.O., observes:—

"The two reports, made at an interval of only four months, are instructive when compared, and show once again the difficulty in appraising the positive value of any drug in sleeping sickness until a considerable interval has elapsed since treatment.

"The most that can be said at present is that arsenophenylglycin appears to show no superiority over several other drugs unless in the treatment of early cases; that experience in the treatment of early cases in Uganda has not yet been sufficient to allow of a decided opinion being formed as to its value; that the drug seems to be considerably less toxic than other arsenical preparations which have been tried, and that further experience in the treatment of early cases is to be desired, especially by single full doses."

Dr. Van Someren, who treated 42 persons in February near Lake Edward, takes a rather more favourable view.

"I have no doubt that in arsenophenylglycin we have the most useful and potent drug yet put forward for the treatment of

trypanosomiasis, and though it cannot effect miracles any more than any other drug, still in 'A' cases I feel sure that it is of the greatest utility, and it is to be regretted that it was not obtainable when camps were first started. It has many advantages over hitherto used drugs, the chief to my mind, when dealing with natives, being that only one injection is given. Repeated injections cannot be recommended in face of experience elsewhere. It ought to be given in every case of human trypanosomiasis in an initial heavy injection as giving the patient the best chance of recovery."

The *Bulletin* sums up the case as follows:—

"When one compares the Report on arsenophenylglycin from Uganda with that from the neighbouring territory of German East Africa (see *Bulletin* No. 25, p. 119) one is struck by the frequency of fatal results attributed to the drug in one country and the relative absence of even unpleasant symptoms in the other, though the doses do not seem dissimilar. A possible explanation is that the cases in German territory were more advanced than was supposed or previous treatment had been overlooked. The therapeutic results, however, in Uganda cannot be considered satisfactory. The dose given was perhaps scarcely large enough: a glance at v. RAVEN's most recent table shows that in his cases 2 to 3·6 gm. was usually given (in two doses). But the poor results are best explained by the small number of early cases available. Arsenophenylglycin seems no better than any other trypanocide, according to some it is inferior to atoxyl, in cases which are advanced or have relapsed under treatment. The lesson seems to be that the drug must be used early and in combination with one or more others. In view of all the reports one cannot but think that Van Someren's suggested dose, 5·0 gm., is a dangerous one."

While the treatment of the disease remains an unsolved problem, it is encouraging to find indications that it is not increasing but rather decreasing. Dr. A. D. Milne considers that it is not now raging in the East Africa Protectorate as formerly. He thinks that the acme of the disease was reached about the years 1904-6, and since then the number of cases has steadily declined. The first account we have of the disease in that region is Dr. C. Christy's Preliminary Report dated October, 1902, and published in the Sleeping Sickness Reports of the Royal Society (No. 2, pp. 3-8). He wrote:—

"It seems pretty certain that the disease is spreading Eastwards. Until I visited Southern Kavirondo it was not known to have spread beyond Usoga, but I found it in its worst form all along the lake shore as far as Kisumu, though less prevalent as I neared that place. Beyond Kisumu, and along the south of Kavirondo Bay, I met with no cases, though a very thickly populated district, till I had passed Homa Bay, and reached Kasagunga and Lusinga Island.

Here I again met with the disease, some 10 per cent. or more of the population being infected. The configuration of the map of this district would suggest that the disease, after reaching Uyoma promontory in South Kavirondo, has jumped the mouth of Kavirondo Bay and gone on spreading Southwards along the East shores of the lake.

"In Kavirondo, from what I could gather, the disease was not known earlier than 11 months back, and, in Lusinga Island and Kissingere district, 5 months only seemed to be the duration of the epidemic."

The *Bulletin* observes that examination of the map illustrating Dr. Christy's paper shows very much the same distribution of sleeping sickness in 1902 as in 1910. If the disease attacked every one and was invariably fatal, the inhabitants of these areas should have been nearly, if not quite, wiped out, but not only is this not the case, but it is alleged that the population is increasing. The evidence perhaps is not very conclusive, but if no vigorous measures of prevention are undertaken it should be possible in a year or two to say definitely. It seems probable that in Kavirondo as on the Gold Coast a state of equilibrium is establishing itself, and sleeping sickness will become less and less obtrusive. The suspicion arises that nature may be doing better for the Kavirondo than the Administration of Uganda for the inhabitants of that country; for, owing to the continued infectivity of the fly in the abandoned zone, demonstrated by the experiments of the Sleeping Sickness Commission, no one would venture to allow the evicted natives of Uganda to return to the lake shore. In any case East Africa serves as an admirable "control" to the experiments in neighbouring countries, and it will conduce most to knowledge if the Administration continues to let things be.

Health in the Gambia.

A general improvement in this Colony calls attention to the precautions taken. It is said that the practice of sleeping in mosquito-proof rooms or under mosquito curtains is not only invariable among the Europeans, but is being adopted by some of the more educated natives. "All Government officials are provided with mosquito-proof cubicles and also with separate mosquito-proof shelters, in which they can sit and work or read during the day. This latter provision is probably the cause of the smaller number of days spent by European officials on the sick list on account of malaria during the past year and of the general improvement in their health.

"A considerable advance in the number of tanks for the storage of drinking water, obtained from the roofs of houses, was made in the

past year. In addition to extra tanks supplied to Government quarters and the provision of the large Acera pattern tank, holding 10,000 gallons, for some quarters, a portion of the aforementioned grant of £1,000 was expended in the importation of thirty-five 400 gallons tanks, which have been issued to certain persons in the town who are refunding the cost by instalments.

"The public wells are gradually being fitted with Jonets Water Elevators, which have proved a great success, as they are very efficient in preventing pollution of the water, and, further, they render the wells fly-proof. Six new wells have been sunk in Bathurst during the year."

Cholera.

A memorandum suitable for the guidance of Europeans in out-stations has been prepared by Dr. J. D. Gimlette, Kelantan. The treatment of the disease and the precautions to be taken to prevent it spreading are clearly explained.

Prevention of Malaria in Rice Growing Districts.

The Journal of the Royal Society of Arts states that as a remedy for Malaria in the rice-growing districts bordering on the Po, the rearing of fish is said to have given good results. This region, which covers an area of about 200,000 hectares (nearly half a million acres), is more or less unhealthy. The young carp are turned out into the flooded fields towards the end of June, and greedily devour the larvæ of the insect life which appear to be a cause of the disease. The cost of the young fish does not exceed four to five francs per hectare (1s. 4d. to 1s. 9d. per acre). It is stated also that the crops are improved by the rearing of the carp to the extent of four to five quintals of rice per hectare (two to two and a-half cwts. per acre).

A special preparation of petroleum is being put on the market under the name of "mosquito oil," for spreading over pools where mosquitos and other insects germinate. It is said to have a much lower specific gravity than water, and will remain on the surface for a considerable period, thus effectually preventing germination.

The Judges appointed to examine and report on the exhibits at the Festival of Empire have awarded a Grand Prix to Messrs. Newton, Chambers & Co., Ltd., for their Izol disinfectant preparations. The exhibit showed the many purposes—medical, veterinary, horticultural and domestic, for which Izol is prepared, and in this department apparently British manufacturers are quite up to date.

COLONIAL STAMPS.

SINCE our last issue H.M. the King has signified his approval of the use for the stamps to be issued by the Crown Colonies and Protectorates of the portrait adopted by the Indian Government, but without the mantle, and with the crown raised above the head as in the stamps bearing the portrait of the late King.

The border of the stamps printed from the general keyplate will probably be entirely altered.

The engraving of the necessary key dies has been put in hand by Messrs. De la Rue & Co., but there is little hope that any of the new stamps will appear before March or April next, as the Government of India has recently extended its contract with Messrs. De la Rue & Co. for a further three years and is making heavy demands upon the resources of the firm in connection with new dies and plates for the Indian stamps.

The experiment which the Imperial Government is about to make in the issue of stamps of high value printed by the copper plate process will be watched with interest. It has been believed hitherto that such stamps offer temptation to the forger, but many experts say that while a poorly designed copper plate stamp is to the highest degree insecure a well and clearly designed one will present so striking a portrait that the public would readily recognise a lithographic reproduction. Another objection which has hitherto been raised against such stamps is that they are so permanent that a very large amount of cleaning can be done without seriously impairing their appearance. This view is, however, said to date from a time prior to the introduction of the present cancelling ink which is of so penetrating a character that it almost, and in some cases quite, permeates the stamp. The stamps which are to be printed by the copper plate process will not, we presume, be available for purposes requiring only pen cancellation.

The active Philatelic Society of British Guiana opens an Exhibition on the 7th October.

SOUTHERN NIGERIA STAMPS.—The Crown Agents for the Colonies have received information from the Government of the Southern Nigeria Protectorate of the loss of 60 sheets of 6d. Postage and Revenue Stamps of the current issue.

The sheets are numbered in the margin from 3379 to 3438.

If any sheet so numbered, or any whole sheets, should be offered for sale, the Crown Agents would be much obliged if notice were given to them at once, and if the name and address of the seller could be obtained.

BRITISH HONDURAS 25 cents stamps have been supplied for the first time in the colour appropriated to 1s. stamps on the Colonial colour scheme.

ST. HELENA.—1d. stamps of the large design have been supplied for the first time in the Postal Union colour and also on multiple watermarked paper, and 4d. and 6d. stamps of the small size for the first time in singly fugitive ink and on unsurfaced paper.

ST. VINCENT.—2d. stamps have now been supplied in all grey.

SOMALILAND.—The 12 annas stamps have been supplied for the first time on surfaced paper.

(Tune—" *Only a Pansy Blossom.*")

Stale as the pansy blossom,
Only a third class Clerk,
After a term of service
As musty as Noah's ark.
Lord, make me tranquil minded,
Happy whate'er befall,
Cheerful, and well contented
To be no class at all ;
And magnify the SERVICE
With clerks like me, O Lord,
Who keep, like the pansy blossom,
And look for no reward.

Splendid to be, at fifty,
Scheduled a third class Clerk,
Glory and laud and honour
Lie all within the mark ;
For blest is the broken spirit,
Blessed the contrite heart,
Adversity hath its uses,
Misfortune its better part,
Ambition is sweet when withered,
Romantic when, if you please,
Preserved, like the pansy blossom,
To call up memories.

Mirage-like loometh pension,
That quittance for days unblest,
(As the wicked cease from troubling
And the weary are at rest)
And, that the end may brighten
A past all dreary and dark,
Whereas I am aged sixty,
A white-haired, worn, third class Clerk,
Stale as the pansy blossom
(But scarcely as meet for show)
Let my corpse be laid, in honour,
Next a defunct *Hi Hes Ho*.

J. W. DAVIDSON,
Fyi.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Sir P. C. SMYLY (Chief Justice, Sierra Leone), Chief Justice, Gold Coast.
- Mr. G. K. T. PURCELL (Senior Puisne Judge, Gold Coast), Chief Justice, Sierra Leone.
- Mr. D. T. TUDOR (Attorney-General, Grenada and St. Vincent), Chief Justice, Bahamas.
- Mr. H. R. WALLIS, C.M.G. (Government Secretary, Nyasaland), Chief Secretary to Government, Uganda.
- Mr. H. A. SMALLWOOD, (Treasurer, St. Lucia), Treasurer, East Africa Protectorate.
- Dr. R. DENMAN (Health Officer, Federated Malay States), Director of Medical and Health Department, Mauritius.
- Mr. L. L. KERR (Deputy Inspector-General of Police, British Guiana), Inspector-General of Police, Mauritius.
- Mr. W. T. PORTER (Magistrate, East Africa Protectorate), District Judge, Cyprus.
- Mr. H. J. F. HOLME (2nd Clerk, Colonial Secretary's Office, Antigua), Chief Clerk in Secretariat, Southern Nigeria.
- Mr. J. L. WHITTY (Assistant Treasurer, Somaliland), 2nd Assistant Accountant in Treasury, Ceylon.
- Dr. R. P. COCKIN (District Medical Officer, Cyprus), Resident Surgeon, Colonial Hospital and Bacteriologist, Grenada.
- Captain E. B. LESSE (Company Commander, Gold Coast Regiment, West African Frontier Force), Travelling Commissioner, 3rd Grade, Gambia.
- Captain P. H. SHORT, D.S.O. (Company Commander, Northern Nigeria Regiment, West African Frontier Force), Assistant District Commissioner, Northern Territories, Gold Coast.
- Mr. E. C. LANE (Divisional Engineer, Public Works Department, Cyprus), Engineer of Roads, Gold Coast.
- Mr. P. C. LAWRENCE (late of Department of Posts and Telegraphs, Transvaal), Postmaster, Nyasaland.
- Mr. L. A. HARCOURT (Chief Clerk in Post Office, East Africa Protectorate), Postmaster, Nyasaland.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ARCHER, A. M. G. ...		BARWELL, H. G. ...	28 Oct., '11
ARCHER, Capt. F. J. E....	28 Dec., '11	BURNETT, W. ...	...
ADAIR, Miss S. ...	...	BROWN, C. C. ...	1 Jan., '12
ARSCOTT, F. W....	23 Dec., '11	CUTFIELD, A. J....	...
ATTERBURY, J. L. ...	4 Dec., '11	CUNNINGHAM, Capt. A. B.	4 Nov., '11
ABRAMS, A. B. ...	4 Dec., '11	Naval & Military Club,	
BACKHOUSE, Capt. H. D.	9 Oct., '11	Piccadilly, W.	
BARKER, E. B. ...	13 Oct., '11	CHILD, E. E. ...	12 Dec., '11
Junior Naval & Military Club, 98, Piccadilly, W.		CONBROUGH, W. E. ...	29 Nov., '11
BRADSHAW, J. A. G. ...	28 Oct., '11	CHEESEMAN, J. H. ...	1 Dec., '11
BEAMISH, J. A. ...	31 Oct., '11	CLARIDGE, Dr. W. W. ...	27 Oct., '11
BURKE, B. ...	Due back	d'AMICO, Dr. G. de P. ...	11 Dec., '11
	16 Dec., '11	ELDRID, Dr. A. G. ...	16 Oct., '11
BRYAN, Maj. H., C.M.G.	18 Dec., '11	EDWIN, J. N. ...	Steamer leaving 11 Oct., '11
Army & Navy Club,		FURLEY, J. T. ...	7 Oct., '11
Pall Mall, S.W.		FORDE, Dr. G. F. ...	4 Oct., '11
BURBRIDGE, H. G. ...	29 Oct., '11	FORD, A. G. ...	8 Nov., '11
Biggs, C. W. S....	1 Jan., '12	FESTING, Maj. A. H.,	8 Jan., '12
BROWNE, W. S. ...	19 Oct., '11	C.M.G., D.S.O.	
BURKE, W. H....	...	GOUGH, F. H. ...	1 Jan., '12
BAUERLE, W. ...	4 Jan., '12	GREEN, Miss E. F. ...	Due back
Grosvenor Club, Piccadilly, W.			31 Jan., '12
		GOODBRAND, Dr. S. ...	4 Jan., '12
		GRIMSHAW, H. C. W. ...	24 Oct., '11

GOLD COAST—continued.

HARDING, Col. C., C.M.G., White's Club, St. James' Street, S.W.	13 Oct., '11	MAY, D. R. ...	8 Nov., '11
HOBART, Capt. E. H.	1 Jan., '12	McKELLAR, F. L. ...	19 Nov., '11
HARE, F. D. ...	12 Dec., '12	McADAM, J. ...	8 Oct., '11
HOLLOWAY, J. H. ...	25 Dec., '11	NEWLANDS, H. S. ...	25 Dec., '11
HEATON, J. W. ...	11 Jan., '12	OMAN, D. J. ...	14 Nov., '11
HOBBS, G. ...	30 Dec., '11	PATERSON, A. M. ...	18 Oct., '11
INGRAM, J. ...	14 Nov., '11	PIPER, G. R. ...	16 Oct., '11
JEFFERS, P. ...	25 Oct., '11	POTT, P. A. H. ...	14 Nov., '11
JOHNSTONE, W....	1 Jan., '12	POPHAM, H. B. ...	31 Oct., '11
JONES, P. N. H....	1 Jan., '12	PETRIE, W. V. ...	1 Jan., '12
KORTRIGHT, Capt. H. A.	17 Oct., '12	PARK, A. ...	29 Nov., '11
LEESE, Capt. E. B. ...	5 Nov., '11	ROBINSON, F. A. C. C. ...	
LEWIS, I....	24 Oct., '11	ROGERS, J. A. ...	4 Jan., '12
LEIGH, Capt. A. H. C.	4 Dec., '11	REW, Maj. C. E., D.O.	19 Oct., '11
Walker		Army & Navy Club, Pall Mall, S.W.	
LOWE, E....		STOREY, F. H. ...	27 Oct., '11
MITCHELL, A. R. ...	18 Oct., '11	SAUNDERS, C. ...	4 Oct., '11
MURRAY, D. ...		SPICE, G. F. ...	29 Nov., '11
MOFFATT, Dr. J. E. ...	11 Jan., '12	SOMERVILLE, J. ...	31 Oct., '11
MAIN, F. G. ...	28 Dec., '11	Royal Societies Club, St. James' St., S.W.	
MARLOW, Capt. J. ...	1 Jan., '12	TRIMMER, J. ...	
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		THRELFALL, J. ...	
MILES, T. ...	12 Dec., '11	WHITE, Dr. R. O. ...	17 Oct., '11
MUGLISTON, Dr. R. ...	2 Jan., '12	WHITTALL, P. F. ...	13 Oct., '11
MATHIESON, G. V. ...	14 Nov., '11	WHITE, R. ...	14 Nov., '11
		WHITTOW, A. ...	

SIERRA LEONE.

ASHLEY, J. E. ...	21 Nov., '11	NEWSTEAD, Maj. G. P....	8 Jan., '12
BRACKLEY, G. ...	24 Oct., '11	Sports Club, St. James' Square, S.W.	
CLIFFORD, J. W. ...	12 Dec., '11	Ogilvie, A. N. ...	16 Oct., '11
COMBER, J. R. W. ...	30 Nov., '11	Dover Club, Dover	
DAVIES, W. A. N. ...	31 Oct., '11	ORPEN, Dr. R. W. ...	24 Nov., '11
Sports Club, St James' Square, S.W.		PICKIN, J. J. ...	31 Oct., '11
EVELYN, E. E. ...	20 Dec., '11	PAKES, W. G. ...	24 Nov., '11
ESPENT, R. W. ...	21 Nov., '11	RENSHAW, S. ...	19 Dec., '11
FORSTER, M. N....	21 Nov., '11	SPILLANE, C. A. ...	1 Jan., '12
HOOKE, R. S. ...	19 Dec., '11	SMITH, J. C. ...	12 Dec., '11
MARTIN, A. ...	25 Dec., '11	THOMSON, A. B....	12 Dec., '11
McCONAGHY, Dr. J. ...	20 Oct., '11	WILLIAMS, Maj. R. H. K.	25 Dec., '11
NICHOLSON, Dr. W. A....	31 Dec., '11	WILLIAMS, H. J. ...	17 Nov., '11

GAMBIA.

FOSTER, A. N. ...	30 Oct., '11	KINGDON, D. ...	Due back 1 Nov., '11
GREGORY, F. E....	5 Oct., '11	MOREY, G. B. ...	10 Oct., '11
HUME, E. A. ...	Due back	MEAD, F. W. ...	9 Oct., '11
Union Club, Trafalgar Square, W.	1 Nov., '11	McCALLUM, J. K. ...	Due back 25 Nov., '11

GAMBIA—continued.

NICHOLAS, Rev. T. F. ...	VERONICA, Sister M. ...	23 Dec., '11
PRYCE, H. L. ...	WOODS, T. ...	4 Nov., '11
... Due back	WALSH, J. ...	2 Nov., '11
SPROSTON, H. F. ...	c/o Bank of B. West	
SANGSTER, G. H. ...	Africa, Ltd., 17,	
... Due back	Leadenhall St., E.C.	
... 29 Oct., '11		

SOUTHERN NIGERIA.

ALDER, J. F. ...	COCHIN, M. S. ...	14 Dec., '11
ANDERSON, H. ...	COPLAND, J. G. ...	19 Dec., '11
ADAMS, E. R. V. ...	CRAVEN, J. C. ...	21 Dec., '11
ASHLEY, F. N. ...	DUNLOP, J. M. M. ...	4 Dec., '11
ADAMS, G. S. C. ...	DAYRELL, E. ...	18 Nov., '11
BRANDON, T. ...	c/o Sir C. R. McGrigor,	
BERNARD, L. A. ...	Bart., & Co., 25, Charles	
BENSON, A. E. ...	Street, S.W.	
BUTTERWORTH, Capt. A. ...	DARBY, F. J. d'E ...	10 Oct., '11
W.	DRURY, G. F. ...	1 Jan., '12
BROWNE, C. W. ...	DALE, C. E. ...	16 Oct., '11
BELL, G. G. ...	ELLINGHAM, C. ...	19 Dec., '11
BRADSHAW, T. E. ...	EVANS, A. ...	3 Oct., '11
BRAY, H. W. ...	EGGINS, F. K. ...	18 Nov., '11
BRYANT, T. S. ...	EDWARDS, W. W. ...	31 Oct., '11
BRITTON, R. ...	FOX, D. B. ...	4 Oct., '11
BAKER, T. W. ...	FRANCIS, C. J. ...	28 Jan., '12
BURT, F. W. ...	FARMER-COTGRAVE, R.	
BLATCHFORD, A. E. ...	W. ...	17 Oct., '11
BOURNE, A. ...	FIRTH, S. ...	12 Oct., '11
BATE, Dr. J. B. ...	FARMER-COTGRAVE, H.	
United Empire Club,	H. ...	2 Oct., '11
117, Piccadilly, W.	GALLAGHER, Dr. G. H. ...	9 Dec., '11
BROWN, Capt. W. R. ...	c/o London and South	
... Due back	Western Bank, Ltd.,	
10 Dec., '11	170, Fenchurch Street,	
BURROUGH, Capt. H. S. ...	E.C.	
Junior Army & Navy	GOVIER, L. J. ...	29 Nov., '11
Club, Pall Mall, S.W.	GRANT, M. G. ...	13 Oct., '11
BLACK, J. H. ...	c/o Messrs. H. S. KING	
BAIN, A. ...	& Co., 9, Pall Mall,	
CARTER, F. St. L. ...	S.W.	
CLEWES, P. ...	GREEN, E. C. ...	31 Oct., '11
CULHAM, A. B. ...	GREENSTOCK, Lieut. A. ...	24 Oct., '11
CAVANAGH, B. G. ...	GREENWOOD, E. ...	18 Nov., '11
CLARK, R. C. ...	GOLDSMITH, A. ...	1 Dec., '11
CURRIE, Dr. J. ...	GORDON, Miss K. M. ...	4 Dec., '11
CHAMLEY, H. P. ...	GEPP, W. F. J. ...	8 Oct., '11
CROSS, E. ...	GARDNER, P. J. ...	31 Dec., '11
CULLEN, R. A. ...	c/o Messrs. Cox & Co.,	
CARTER, O. G. ...	16, Charing Cross,	
c/o Messrs. Cocks, Bid-	S.W.	
dulph & Co., 43 Charing	GERRARD, H. V. ...	31 Oct., '11
Cross, S.W.		

SOUTHERN NIGERIA—continued.

HEPWORTH, L. F. ...	12 Dec., '11	MAY, G. C. McF. ...	18 Jan., '12
HAMMETT, F. T. ...	4 Oct., '11	Royal Colonial In-	
HISCOCK, R. C. ...	8 Jan., '12	stitute, Northumber-	
HEARNSHAW, H. ...	5 Nov., '11	land Avenue, W.C.	
HARCOURT, A. G. B. ...	1 Jan., '12	MAPLES, Dr. E. E. ...	13 Nov., '11
HENDERSON, Lieut. P. D.,		MAJENDIE, V. H. B. ...	22 Dec., '11
R.N.R. ...	21 Nov., '11	MILNE-STEWART, J. D. ...	31 Oct., '11
HOPKINSON, Capt. C. R. T. ...	9 Dec., '11	MAYER, T. F. G. ...	24 Oct., '11
HITCHENS, P. ...	4 Dec., '11	MORLEY, G. S. ...	4 Dec., '11
HODGSON, H. ...	9 Oct., '11	MELDRUM, D. R. ...	14 Nov., '11
HANSON, H. J. K. ...	9 Oct., '11	MAY, W. E. ...	10 Dec., '11
HILL, W. R. ...	1 Nov., '11	MOLINEUX, C. R. N. ...	29 Nov., '11
HAWKES, J. A. ...	17 Oct., '11	MANSFIELD, T. L. M. L. ...	29 Nov., '11
HINTON, W. B. ...	10 Oct., '11	NEVILL, Miss E. K. ...	4 Dec., '11
HARRIS, H. J. ...	18 Feb., '12	NORMAN, H. H. ...	7 Nov., '11
HELLAND, W. B. ...	8 Jan., '12	NICHOLS, R. J. ...	4 Dec., '11
HUGHES, J. L. ...	8 Nov., '11	NICHOLS, E. ...	16 Oct., '11
HANSON, E. C. ...	14 Nov., '11	NOBLE, Rev. L. S. ...	17 Oct., '11
Royal Colonial Insti-		OWENS, J. ...	4 Oct., '11
tute, Northumberland		OBORNE, E. W. ...	18 Oct., '11
Avenue, W.C.		PROSSER, J. A. B. ...	8 Nov., '11
HUBBARD, A. G. ...	8 Oct., '11	PHILLIPPS, E. C. ...	3 Nov., '11
HAWES, A. B. ...	8 Oct., '11	PODEVIN, G. S. ...	3 Nov., '11
JOHNSON, W. H. ...	24 Oct., '11	POCKNELL, E. ...	13 Oct., '11
KELLER, H. G. L. St. J. ...	8 Nov., '11	PECK, R. W. ...	24 Oct., '11
KELLY, W. N. ...	25 Dec., '11	POLLEN, J. M. ...	8 Jan., '12
LAWDER, N. W. ...	14 Nov., '11	PURVIS, T. H. ...	15 Nov., '11
LENKE, O. F. R. ...	8 Dec., '11	PARNTHER, A. S. ...	19 Dec., '11
LEADER, F. W. M. ...	14 Nov., '11	RIDSDALE, D. W. ...	6 Nov., '11
LEIGH-LYE, Capt. F. M. ...	4 Oct., '11	ROOTS, A. E. ...	Due back
LAURIE, Dr. R. ...	31 Dec., '11		11 Feb., '12
LORAIN, Capt. E. B. ...	3 Oct., '11	ROBERTSON, W. ...	16 Oct., '11
Guards' Club, Pall		RUE, J. H. ...	25 Dec., '11
Mall, S.W.		ROSS, W. A. ...	15 Nov., '11
LLOYD, T. ...	14 Nov., '11	Caledonian Club, 30,	
LYDIARD, B. ...	10 Oct., '11	Charles Street, S.W.	
MARSH, L. ...	31 Oct., '11	RUMANN, W. B. ...	21 Dec., '11
MARTIN, H. ...	21 Nov., '11	RICHARDSON, Capt. T. C. ...	8 Oct., '11
McERVEL, A. G. ...	7 Dec., '11	RISING, F. S. ...	1 Jan., '12
McDONALD, A. ...	25 Dec., '11	RAWLES, H. L. ...	1 Jan., '12
MCKENZIE, N. S. ...	16 Oct., '11	SULLIVAN, J. ...	21 Nov., '11
MASON, T. ...	29 Nov., '11	SYER, W. C. ...	4 Oct., '11
MURRAY, T. ...	8 Jan., '12	c/o Sir C. R. McGRIGOR,	
McLAURIN, J. ...	24 Oct., '11	Bart. & Co., 25, Charles	
McEVoy, R. J. ...	4 Dec., '11	Street, S.W.	
MARSHALL, J. F. ...	12 Dec., '11	SELANDER, J. E. ...	16 Oct., '11
Grosvenor Club, Pic-		SUTHERLAND, R. C. ...	19 Jan., '12
cadilly, W.		SKILTON, G. ...	21 Nov., '11
MARTIN, Lieut. A. R. P. ...	16 Oct., '11	SMITH, P. ...	29 Nov., '11
R.N.R.		SWENEY, C. H. ...	25 Oct., '11
MOORE, Capt. C. W. ...	24 Oct., '11	SEALY, J. B. D. ...	8 Feb., '12

SOUTHERN NIGERIA—continued.

STANFORD, H. J. ...	8 Oct., '11	THOMPSON, P. G. ...	24 Oct., '11
STOKER, W. H., K.C. ...	25 Dec., '11	TREZISE, F. J. ...	1 Nov., '11
SOLLY, J. B. A. ...	8 Nov., '11	TURPIN, A. S. ...	21 Nov., '11
United Empire Club, 117, Piccadilly, W.		WHEELER, O. ...	4 Oct., '11
SARGANT, C. F. G. ...	25 Dec., '11	WENNBERG, W. ...	31 Oct., '11
SOLOMON, N. V. S. ...	24 Oct., '11	WARMAN, H. ...	18 Nov., '11
United Empire Club, 117, Piccadilly, W.		WALTON, J. H. ...	20 Oct., '11
STEELE, W. M. ...	10 Oct., '11	WOOD, Maj. S. M. ...	Due back 5 Nov., '11
SMITH, E. G. ...	24 Oct., '11	WRIGHT, H. O. S. ...	20 Oct., '11
STEELE, A. W. M. ...	4 Dec., '11	WILKIE, D. ...	16 Oct., '11
THOMSON, J. D. ...	1 Jan., '12	c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.	
TIPPER, Dr. E. H. ...	10 Oct., '11	WYNDHAM, Capt. J. ...	
THOMPSON, Dr. C. S. ...	31 Oct., '11		

NORTHERN NIGERIA.

ANGUS, G. ...	26 Sept., '11	DUFF, E. C. ...	6 Nov., '11
ANDERSON, Capt. G. ...	6 Nov., '11	c/o Messrs. Grindlay & Co., 54, Parliament St., S.W.	
ATTWOOD, A. ...	21 Oct., '11	DANIEL, W. E. ...	16 Oct., '11
BRADLEY, L. R. ...	30 Nov., '11	DANN, R. ...	18 Oct., '11
BISSELL, Capt. F. E. ...	27 Oct., '11	DALZIEL, Dr. J. M. ...	29 Dec., '11
Junior Naval and Military Club, 96, Piccadilly, W.		DOORLY, J. ...	24 Nov., '11
BIFFEN, E. H. ...	11 Oct., '11	DIX, E. W. ...	13 Nov., '11
BLAND, E. M. ...	9 Oct., '11	Sports Club, St. James' Square, S.W.	
BOSTOCK, W. C. ...	9 Oct., '11	DAWSON, H. W. ...	9 Oct., '11
BREMNER, J. ...	10 Oct., '11	EDGAR, Major F. ...	17 Oct., '11
BOND, J. ...	23 Oct., '11	FOWLER, Capt., W. M. ...	30 Oct., '11
BIRKETT, J. ...	28 Dec., '11	FINCH, J. ...	20 Oct., '11
BAXTER, H. H. ...	1 Jan., '12	c/o Messrs. Way & Co., 11, Haymarket, S.W.	
BYFIELD, B. D. ...	18 Oct., '11	FERGUSON, D. S. ...	17 Oct., '11
BLAIR, Dr. M. C. ...	13 Nov., '11	FRASER, W. K. ...	16 Nov., '11
BADHAM, J. F. ...	8 Jan., '12	FREWEN, H. M. ...	3 Oct., '11
BROWNE, G. S. ...	4 Jan., '12	GROOM, A. H. ...	3 Oct., '11
United Empire Club, 117, Piccadilly, W.		GIBB, J. ...	10 Oct., '11
BREMNER, Dr. A. ...	1 Jan., '12	GILBERT, E. A. ...	22 Dec., '11
BOVILL, H. E. W. ...	17 Oct., '11	GRAHAM, M. W. ...	14 Nov., '11
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		GOWERS, W. F. ...	21 Nov., '11
CHANNELL, C. W. ...	25 Dec., '11	Bath Club, 34, Dover Street, S.W.	
COLB, S. J. ...	14 Nov., '11	GREENWOOD, J. O. ...	25 Dec., '11
COCK, E. A. L. ...	22 Oct., '11	GILL, J. W. ...	7 Oct., '11
Thatched House Club, St. James' Street, S.W.		GOULD, H. ...	8 Oct., '11
CATOR, D. ...	18 Nov., '11	GLENTWORTH, J. ...	7 Nov., '11
COCKS, E. W. ...	8 Nov., '11	GIRARDIN, G. J. ...	7 Oct., '11
CHAPMAN, R. S. ...	1 Dec., '11	GOODCHILD, O. ...	31 Oct., '11
CHISHOLM, G. S. ...	10 Nov., '11	GODWIN, Capt. F. A. E.	20 Oct., '11
		HUNT, Lt. A. W., R.N.R.	4 Oct., '11

NORTHERN NIGERIA—continued.

HOLME, H. F. C. ...	NEWPORT, A. ...	4 Dec., '11
HENDERSON, D. ...	NORMAN, Dr. G. B. ...	4 Oct., '11
HAMILTON, K. ...	ORR, Major J. B., D.S.O. ...	9 Oct., '11
HAUGHTON, T. H. ...	OAKES, O. ...	4 Dec., '11
c/o Bank of Nigeria, Ltd., Norfolk Street, Strand, W.C.	ROWE, Capt. C. F. ...	18 Dec., '11
HUNT, J. H. ...	RAE, K. T. ...	9 Oct., '11
JEFFREY, R. C. ...	RUTHVEN, T. O. B. O. ...	24 Oct., '11
KENT, R. R. ...	RAY, S. ...	31 Oct., '11
KING, G. C. W. ...	ROSE, Major T. A., D.S.O. Junior Naval and Military Club, 96, Piccadilly, W.	4 Oct., '11
LITTEDALE, B. ...	SUTHERLAND-BROWN, J.	4 Dec., '11
LLOYD-WILLIAMS, E. ...	STRICKLAND, Col. E. P., D.S.O. ...	31 Oct., '11
LEE, H. ...	Naval and Military Club, 94, Piccadilly, W.	
LEWIS, G. P. ...	SHARPE, Major W. S., C.M.G. ...	18 Oct., '11
LAING, E. H. B. ...	Junior Naval and Military Club, 96, Piccadilly, W.	
LYCETT, T. ...	STREET, Capt. N. K. ...	24 Oct., '11
LINDSAY, Dr. J. ...	SOPER, F. P. W. ...	6 Nov., '11
LENTAIGNE, B. ...	STONE, T. ...	12 Dec., '11
MORRIS, E. H. ...	SILCOCK, J. A. ...	1 Feb., '12
c/o Colonial Audit Dept., 41, Charing Cross, S.W.	TURNER, J. C. ...	14 Nov., '11
MARSH, F. ...	THOMPSON, E. G. ...	9 Oct., '11
MALTBY, F. E. ...	VEREKER, S. H. P. ...	13 Nov., '11
MCLENNAN, J. ...	c/o Messrs. Woodhead and Co., 44, Charing Cross, S.W.	
MORGAN, H. ...	WATERS, B. E. M. ...	18 Nov., '11
MILLER-STIRLING, H. J. G. S. ...	WILLIAMS, W. E. ...	19 Dec., '11
MIDDLETON, H. H. ...	Junior United Service Club, Charles St., S.W.	
MACLAVERY, C. F. S. ...	WILLAN, Dr. R. ...	30 Nov., '11
MACFIE, Dr. J. W. S. ...	WOODELL, L. L. ...	3 Nov., '11
MORAN, Capt. G. W. ...		
MCCLINTOCK, Major A., D.S.O. ...		
McCAR, Dr. F. W. ...		
MOORE, L. G. ...		
MAIR, W. D. K. ...		
New Oxford and Cambridge Club, 60, Pall Mall, S.W.		

EAST AFRICA.

ARMSTRONG, C. B. ...	BOOVEY, M. CRAWLEY ...	Due back
ATKINS, H. T. ...		13 Feb., '12
ANDERSON, T. J. ...	BAKEWELL, J. A. ...	28 Jan., '12
ANDERSON, H. C. ...	BEBB, H. L. M. ...	11 Dec., '11
ADAMS, C. H. ...	c/o Colonial Audit Dept., 41, Charing Cross, S.W.	
BARNES, H. C. E. ...	BARTON-WRIGHT, R. ...	27 Oct., '11
BOYCE, A. E. ...	BENNETT, C. ...	6 Dec., '11
1 Nov., '11		
BROWNE, P. F. ...		

EAST AFRICA—continued.

BOWRING, C. C., C.M.G.	8 Dec., '11	MILNE, Dr. A. D.	6 Nov., '11
COMBE, R. M.	11 Nov., '11	Sports Club, St. James' Square, S.W.	
CORBETT-WINDER, F. F.		MONSON, W. J.	6 Nov., '11
Claridge, Miss C. H. R.	21 Dec., '11	Union Club, Trafalgar Square, S.W.	
CRUICKSHANK, A. E.	4 Nov., '11	MAYES, W.	11 Dec., '11
c/o Bank of Scotland, Ltd., 164, High Street, Elgin, N.B.		MOON, J. L.	6 Nov., '11
CHURCH, A. F.	Steamer leaving 13 Oct., '11	MATURIN, W. K.	8 Nov., '11
COLLYER, A. J. M.	9 Oct., '11	MOORE, G. P.	23 Jan., '12
DEWHURST, R.	Due back 13 Dec., '11	MACKENZIE, J. M.	Steamer leaving 10 Nov., '11
DONALD, R.	4 Feb., '12	MALING, H. B. W.	25 Nov., '11
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		MANSBERGH, J. L. O.	29 Nov., '11
DENCH, L. J. E.	8 Nov., '11	MURRAY, Capt. C. J.	20 Dec., '11
EDWARDS, Capt. W. F. S.		MAJOR, F. W., I.S.O.	8 Nov., '11
D.S.O.	18 Nov., '11	OSBORNE, G. H.	8 Nov., '11
ELIOT, J. A. R.	8 Nov., '11	PIDCOCK, Capt. H.	6 Dec., '11
FULLER-MAITLAND, G. A.	28 Feb., '12	PEARSON, W.	27 Jan., '12
GRANVILLE, R. K.		RICHARDSON, G. W.	15 Nov., '11
GALLAGHER, M.	31 Dec., '11	REHM, Miss E.	3 Dec., '11
GOODSHIP, H. E.	8 Nov., '11	REYNOLDS, C. H.	Steamer leaving 13 Oct., '11
HAMILTON, F. G.	5 Jan., '12	ROBERTSON-EUSTACE, Capt. R. W. B.	5 Oct., '11
HYATT, G. O.	6 Dec., '11	RAMSEY, S. H.	3 Nov., '11
HAWKING, T.	6 Nov., '11	SMALL, Dr. R.	Steamer leaving 5 Jan., '12
HOBLEY, C. W., C.M.G.	6 Nov., '11	SARGRANT, J.	28 Feb., '12
HOPE, J. O. W.	6 Dec., '11	SKENE, R.	31 Dec., '12
Caledonian Club, Charles Street, S.W.		TARLTON, E.	12 Oct., '12
ISHERWOOD, J. D.	6 Nov., '11	TANCRED, Capt. J. G.	Steamer leaving 2 Nov., '11
JENKINS, F. M.	8 Nov., '11	TRIM, E. W.	15 Jan., '12
JONES, L. A. F.	26 Jan., '12	TODD, W.	24 Jan., '12
JOHNSTON, J.	8 Nov., '11	VEREKER, L. G. P.	30 Jan., '12
KITTERMASTER, H. B.	15 Jan., '12	WRIGHT, W. S.	31 Dec., '11
LEA, L.	9 Oct., '11	WILSON, D. J.	15 Oct., '11
LUCKMAN, Capt. A. O.	Steamer due 1 Nov., '11	WARD, C. E.	9 Oct., '11
LANE, C. R. W.	9 Dec., '11	WALKER, A.	8 Nov., '11
MACNAGHTEN, L. H.	13 Nov., '11	WARD, J. C.	8 Nov., '11

UGANDA.

BROOKS, W. T.	15 Oct., '11	FOX, T. V.	22 Feb., '12
COOTE, J. M.	2 Jan., '12	FOWKE, Capt. M. C.	13 Feb., '12
Travellers' Club, Pall Mall, S.W.		GREENWOOD, Capt. T.	6 Dec., '12
CUNNINGHAM, J. F.	11 Oct., '11	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
ENNIS, G. F. M.	8 Jan., '12	HENRY, C. F. H.	16 Nov., '11
FRASER, Capt. A. D.	23 Oct., '11	HUTCHINSON, Comm. H.	3 Nov., '11
c/o Messrs. Holt & Co., 3, Whitehall Pl., S.W.		HILL, Capt. R. B.	
		LEAKEY, E. W.	8 Nov., '11

UGANDA—continued.

LEAKEY, F. H. ...	...	TAYLOR, Dr. J. A. ...	2 Nov., '11
MORRIS, W. V. ...	23 Nov., '11	TARRANT, H. M. ...	25 Nov., '11
MORTON, T. A. ...	24 Jan., '12	TOMKINS, S. C., C.M.G. ...	11 Oct., '11
PLACE, Capt. E. B. ...	2 Jan., '12	TREWIN, A. B. ...	7 Dec., '11
RUSSELL, W. A. ...	15 Oct., '11	VAN SOMEREN, Dr.	
Savile Club, Piccadilly,		R. A. L. ...	13 Nov., '11
W.		WRIGHT, H. P. ...	6 Dec., '11
STURROCK, J. C. R.	Steamer leaving	WYNDHAM, Lt.-Colonel	
	10 Nov., '11	L. C. E. ...	31 Oct., '11
STALLARD, J. ...	30 Nov., '11	WILLMOT, A. C. ...	8 Nov., '11

NYASALAND.

ARCHER, J. ...	7 Oct., '11	MERCIER, G. H. V. ...	8 Nov., '11
c/o London County &		RIDGE, A. ...	20 Oct., '11
Westminster Bk., Ltd.,		RYLEY, A. M. ...	6 Nov., '11
Earl's Court, S.W.		SIBBERAD, H. ...	28 Nov., '11
BAYLES, H. L. ...	7 Jan., '12	STANNUS, Dr. H. S. ...	12 Jan., '12
GRANT, C. ...	22 Nov., '11	TADMAN, Miss A. M. ...	26 Oct., '11
HEARSEY, Dr. H. ...	26 Nov., '11	URQUHART, A. ...	4 Mar., '12
INGRAM, H. I. ...	9 Sept., '11	WILKINS, C. ...	18 Nov., '11
LYALL-GRANT, R. W. ...	9 Jan., '12	WOODARD, H. ...	20 Dec., '11
MORLAND, Capt. W. E. T.	24 Dec., '11		
c/o Messrs. Cox & Co.,			
16, Charing Cross, S.W.			

SOMALILAND.

CALLAGHAN, C. R. ...	10 Nov., '11	O'BRYNE, H. M. ...	18 Oct. '11
CONNOR, A. ...		POWER, E. ...	
MACREADY, Capt. W. ...	Due back	SALKELD, Capt. R. E. ...	
c/o Messrs. Grindlay	30 Nov. '11		
& Co., 54, Parliament			
Street, S.W.			

BECHUANALAND.

CHASE, W. H. ...	6 Feb., '12	MURPHY, W. H. W. ...	12 Feb., '12
LAMB, J. ...	10 Nov., '11	ROBERTS, H. J. ...	30 Nov., '11
MATHIESON, R. ...	17 Feb., '12		

BASUTOLAND.

GIBSON, H. W. ...	9 Nov., '11	ROBERTS, H. J. ...	30 Nov., '11
NATTLE, Dr. H. R. F. ...	30 Nov., '11		

SWAZILAND.

DUTTON, E. G. ...	31 Dec., '11	ROBERTS, H. J. ...	30 Nov., '11
LEWELL, E. ...	31 Oct., '11	SHERIDAN, H. ...	31 Oct., '11

BRITISH HONDURAS.

MAXWELL, Sir F. M., K.C. Royal Colonial Institute, Northumberland Avenue, W.C.	28 Oct., '11	MACKAY, Dr. C.... REES DAVIES, C.	30 Nov., '11
--	--------------	---	--------------

FIJI.

ALLARDYCE, K. J. ...	25 Apr., '12	BROUGH, Dr. C. A. la T.	3 Mar., '12
BAILEY, A. E. ...	23 Dec., '11	Royal Colonial Institute, Northumberland Avenue, W.C.	
Bank of New Zealand, Ltd., 1, Queen Victoria Street, E.C.			

GILBERT AND ELLICE ISLANDS.

ROBERTSON, Dr. A.
-------------------	-----	-----	-----	-----	-----	-----	-----

CYPRUS.

ARCHER, W. J. ...	10 Nov., '11	BAXENDALE, F. R. S. ...	17 Nov., '11
BOWRING, W. A. ...	25 Oct., '11	JELAJIAN, M. E. ...	1 Dec., '11

GIBRALTAR.

CROOK, J. R. ...	13 Oct., '11	GREENWOOD, A. C. ...	
EVANS, Sir F., K.C.M.G., C.V.O.	15 Oct., '11	TAMPLIN, F. W. ...	11 Oct., '11

MALTA.

INGLOTT, E.	12 Dec., '11
-------------	-----	-----	-----	-----	-----	-----	--------------

ANTIGUA.

COOKE, J. H. ...	Steamer leaving 8 Nov., '11	MACRISON, W. M. ...	29 Oct., '11
HOLME, H. F. ...	10 Oct., '11	WHYHAM, W. H., I.S.O.	10 Nov., '11

LEEWARD ISLANDS.

BELL, Capt. E. ...	27 Nov., '11	SWEET-ESCOTT, Sir E. B., K.C.M.G.	
MARTIN, C. M. ...	10 Apr., '12		

BARBADOS.

CHANDLER, W. K., LL.D., C.M.G.	20 Nov., '11	KAYE, Lt.-Col. A. B. R.	22 Oct., '11
		SMITH, F. S. ...	7 Nov., '11

BAHAMAS.

ARMSTRONG, F. ...	22 Oct., '11	JAMESON, H. B. L.	23 Oct., '11
-------------------	--------------	-------------------	--------------

ST. VINCENT.

HAYES SADLER, Sir J., K.C.M.G., C.B. c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.	Steamer leaving 22 Nov., '11	MURRAY, Hon. C. G. ...	25 Dec., '11
		TUDOR, D. T., K.C.	31 Oct., '11

ST. LUCIA.

CONDELL, C. F. ...	... 24 Dec., '11	HAYES SADLER, Sir J. Steamer leav-	
DOUGLAS, W. J. ...	... 22 Nov., '11	K.C.M.G., C.B. ...	ing 22 Nov., '11
GRAY, F....	... 31 Dec., '11	c/o Messrs. H. S. King	
		& Co., 9, Pall Mall,	
		S.W.	
		LABORDE, E. D., I.S.O....	11 Jan., '12
		SHERIFF, P. M. C. ...	Steamer leav-
			ing 11 Oct., '11

GRENADA.

BRANCH, G. F. ...	... 25 Dec., '11	JOHNSTONE, R. S. ...	7 Nov., '11
HAYES SADLER, Sir J., Steamer leav-		LEGGE, C. A. ...	19 Dec., '11
K.C.M.G., C.B. ...	ing 22 Nov., '11	Royal Colonial Insti-	
c/o Messrs. H. S. King		tute, Northumberland	
& Co., 9, Pall Mall,		Avenue, W.C.	
S.W.		ORFORD, Dr. T. C. ...	12 Dec., '11

JAMAICA.

ASTWOOD, E. W. ...	... 26 Oct., '11	NUNES, R. E. ...	... 24 Oct., '11
BRANCH, E. St. J. ...	... 19 Oct., '11	PEARCE, F. L. ...	... 23 Oct., '11
BISHOP, Dr. H. ...	... 31 Oct., '11	SHACKLETON, Dr. T. F. ...	2 Jan., '12
CALDER, Dr. J. A. L. ...	7 Dec., '11	SIMMONS, R. ...	... 30 Oct., '11
CLARK, W. P. ...	...	TUDOR, D. T., K.C. ...	31 Oct., '11
DEERR, G. H. ...	... 22 Oct., '11	WILLIAMS, A. P. ...	18 Dec., '11
GIFFORD, Dr. L. ...	... 19 Nov., '11	WILLIAMS, J. R. ...	9 Nov., '11
c/o Brit. Med. Assoc.,			
429, Strand, W.C.			

TRINIDAD.

ALSTON, Dr. H. M. ...	Steamer due	KNAGGS, S. W., C.M.G.	2 Nov., '11
	24 Oct., '11	LITTLEPAGE, C. A. ...	24 Oct., '11
CARRNODY, Prof. P. ...	22 Nov., '11	LOW, A. M. ...	14 Jan., '12
Royal Colonial Insti-		PASHLEY, E. R. ...	24 Jan., '12
tute, Northumberland		PASEA, H. G. ...	30 Oct., '11
Avenue, W.C.		REID, Dr. C. B. ...	Steamer leav-
FITZGERALD, E. ...	5 Dec., '11		ing 25 Oct., '11
GORDON, W. M....	Steamer due	SWAIN, Lt.-Col. G. L. D.	17 Nov., '11
	7 Nov., '11	THOMPSON, T. A. ...	26 Oct., '11
GUPPY, G. E. L. ...	23 Dec., '11	United Empire Club,	
GUISEPI, Dr. P. E. H.	23 Jan., '12	117, Piccadilly, W.	
HALM, D. M. ...	21 Nov., '11	WRIGHT, E. B. ...	30 Nov., '11
INNISS, Dr. K. U. A. ...	21 Dec., '11		

BRITISH GUIANA.

BRUNKER, Capt. H. M....	18 Feb., '11	CRUICKSHANK, Miss V....	16 Feb., '12
BUGLE, C. W. H. ...	18 Mar., '12	COX, N. ...	2 June, '12
BOURKE, S. G. T. ...	15 Oct., '11	CALDER, W. J. ...	25 Oct., '11
c/o Messrs. Woodhead		West Indian Club,	
& Co., 44, Charing		Howard Hotel, Nor-	
Cross, S.W.		folk Street, W.C.	
BOASE, Dr. W. G. ...	26 Nov., '11	FARRER-MANBY, P. A. ...	10 Dec., '11

BRITISH GUIANA—continued.

GIBBS, R. P. ...	31 Dec., '11	McTUEK, W. H. ...	8 Dec., '11
HODGSON, Sir F. M., K.C.M.G.	5 Dec., '11	PILGRIM, E. O. ...	15 Jan., '12
KING, E. E. ...	30 Nov., '11	RAE, Rev. J. ...	27 Jan., '12
LEGGE, C. H. E....	16 Apr. '12	RAYNER, Sir T. C. ...	<i>Steamer due</i>
LONGLEY, Rev. T. ...	9 Dec., '11		26 Oct., '11
LAW, Dr. W. F....	3 Jan., '12	ROSS, Dr. I. H. ...	31 Jan., '12
University Club, Dublin.		SWAIN, A. W. ...	19 Feb., '12
MILLER, Rev. J. ...	29 Oct., '11	SHANKLAND, W. C. ...	7 Dec., '11
McINROY, J. R....	30 Nov., '11	STOCKDALE, F. H. ...	<i>Steamer due</i>
			23 Nov., '11
		SPAIN, H. G. ...	5 Dec., '11

MAURITIUS.

BARBEAU, Dr. L. J. ...	25 July, '12	LE GUEN, H. ...	29 Dec., '11
CLINTON, Ven. Arch- deacon T. W....	8 July, '12	PONGNET, G. ...	10 Apr., '12
CABÉLIEU, Rev. J. C. ...	12 June, '12	PONGNET, E. D....	30 Apr., '12
		WILMANN, L. ...	26 Mar., '12

SEYCHELLES.

DAVIDSON, W. E., C.M.G. ...	11 Nov., '11
-----------------------------	--------------

STRAITS SETTLEMENTS.

AMBROSE, J. ...	4 Apr., '12	LANGLER, H. ...	6 Apr., '12
ANTHONISZ, J. O. ...	15 May, '12	LANGHAM-CARTER, W....	1 Feb., '12
BUXTON, Miss N. A. ...	23 Apr., '12	MUCKART, G. P. ...	30 Nov., '11
BUTLER, W. ...	28 Mar., '12	McLEAN, G. A. ...	13 Mar., '12
CATOR, Lt. B. A. ...	<i>Steamer due</i>	McNAIR, Miss M. J. ...	7 Dec., '11
	29 Dec., '11	MULCOCK, W. ...	13 Apr., '12
EDWARDS, E. ...	<i>Steamer due</i>	MANN, F. ...	27 Apr., '12
	29 Nov., '11	MORGAN, T. B. ...	21 Nov., '11
ELLIS, Dr. W. G. ...	9 Jan., '12	NATHAN, J. E. ...	28 June, '12
FRY, R. S. ...	25 Nov., '12	ROOKE, Miss A. M. D. ...	24 Dec., '11
FALSHAW, P. L. ...	2 July, '12	STUTCHBURY, S....	14 Jan., '12
GARDINER, E. A. ...	19 Dec., '11	SUTOR, W. C. ...	21 June, '12
GREEN, C. F. J. ...	9 Mar., '12	TALMA, E. L. ...	10 July, '12
HELLIER, M. ...	18 Jan., '12	c/o Messrs. H. S. King and Co., 9, Pall Mall, S.W.	
HENSON, S. B. ...	30 Nov., '11	WILLIAMS, R. ...	11 Feb., '12
c/o Messrs. H. S. King, 9, Pall Mall, S.W.		WOLFERSTAN, L. E. P. ...	20 Mar., '12
HOGAN, E. D. ...	1 Feb., '12	c/o Lloyds Bank, Ltd., Tamworth.	
HARDING, Miss A. A. ...	12 Dec., '11		
HOWARD, J. A. ...	9 Feb., '12		

TANYONG PAGAN DOCK.

CARRUTHERS, R. ...	14 Dec., '11	MACDONALD, W. ...	31 Mar., '12
KENNEDY, J. ...	25 Dec., '11		

WEI HAI WEI.

FORCEY, F. ...	20 Dec., '11	WALTER, R. ...	16 Feb., '12
----------------	--------------	----------------	--------------

HONG KONG.

APPLETON, F. ...	<i>Steamer leaving</i>	MORRIS, Mrs. L. ...	3 Feb., '12
ATTWELL, G. A. ...	21 Oct., '11	MESSER, C. McI. ...	<i>Steamer due</i>
ARMSTRONG, J. W. ...	14 Jan., '12		20 Mar., '12
ALLEN, F. ...	25 Apr., '12	MCLEOD, J. M. ...	16 Feb., '12
BOULGER, P. F. ...	9 Dec., '11	MOORE, Dr. W. B. A. ...	9 Aug., '12
BIRKBECK, R. J. ...	17 Nov., '11	PASSMORE, A. G. ...	<i>Steamer due</i>
BARKOW, Miss C. H. ...	6 Dec., '11		28 Dec., '11
BRAYN, R. F. ...	16 May, '12	REED, E. B. ...	23 Apr., '12
BADELEY, F. J. ...	23 May, '12	REES DAVIES, W., K.C.	7 Jan., '12
CARPENTER, E. W. ...	10 Dec., '11	Reform Club, Pall	
DA CUMBA, J. C. ...	23 Apr., '12	Mall, S.W.	
DYMOND, A. G. ...	29 Mar., '12	SHEPHERD, G. C. ...	17 Dec., '11
DAVITT, W. ...	28 Jan., '12	SIMMONS, A. W. J. ...	18 Jan., '12
DAVIS, A. J. ...	17 Nov., '11	TAYLOR, Comm. B. R. H.,	31 Jan., '12
FRITH, C. E. ...	17 Nov., '11	R.N., Carlton Club,	
GORHAM, Miss A. E. ...	4 Jan., '12	Pall Mall, S.W.	
IRVING, E. A. ...	7 Feb., '12	WHEAL, I. A. ...	7 Dec., '11
JACKSON, G. ...	3 Nov., '11	WOLFE, H. A. ...	17 Dec., '11
LAST, F. J. W. ...	17 Nov., '11	WILDIN, J. C. ...	16 Feb., '12
MORRIS, A. ...	31 Dec., '11	WALKER, A. T. ...	15 Dec., '11
	3 Feb., '12		

PERAK.

BARTLETT, R. J. ...	9 July, '12	MADDOCKS, W. E. ...	1 Feb., '12
BAILEY, D. ...	25 Jan., '12	MAGER, F. W. ...	9 Sept., '12
BERKELEY, H. ...	25 Oct., '11	PALMER, H. ...	10 July, '12
BRIDGES, Dr. D. ...	20 Feb., '12	RIGBY, J. ...	<i>Steamer due</i>
BELFIELD, H. C., C.M.G.	11 Feb., '12		8 Nov., '11
Junior Carlton Club,		SYMES, W. L. B. ...	31 Mar., '12
Pall Mall, S.W.		SHORT, P. G. ...	20 Nov., '11
CHILL, J. M. ...	30 Mar., '12	STONOR, O. F. G. ...	24 Mar., '12
DARLASSON, F. W. ...	12 Jan., '12	TOPLISS, J. ...	10 Aug., '12
DISHMAN, A. J. ...	21 Feb., '12	WARD, J. ...	19 Jan., '12
HENRY, Miss K. ...	7 Mar., '12		

KEDAH.

FLENNY, J. J. ...	23 Jan., '12	HOOPS, Dr. A. L. ...	29 July, '12
GORMAN, J. ...	3 Feb., '12	McDONOUGH, J....	19 Dec., '11

SELANGOR.

DE BASAGOITI, H. P. ...	<i>Steamer leaving</i>	NIGHTINGALS, E. ...	2 Apr., '12
	20 Oct., '11	PARRY, F. W. ...	<i>Sailing</i>
GARDNER, J. W. ...	28 Mar., '12		20 Oct., '11
HOSE, E. S. ...	19 Sept., '12	STOKOE, E. R. ...	29 May, '12
MILLS, Comm. J. F. ...	4 Jan., '12	WYATT, G. ...	23 May, '12
MACDERMOTT, Maj. A. T.	4 June, '12		

NEGRI SEMBILAN.

ALLEN, P. T. ...	8 Apr., '12	STEELE, H. E. ...	<i>Steamer due</i>
BAILEY, J. ...	30 Apr., '12		15 Nov., '11
MARTIN, V. J. ...	24 Apr., '12		

FEDERATED MALAY STATES.

BARMAID, H. C....	... Steamer due	HOWLEY-FOLEY, Miss V.	
	28 Dec., '11	E.	3 Jan., '12
BURN-MURDOCK, A. M.	26 Jan., '12	JACKSON, Col. H. M. ...	30 Jan., '12
c/o Messrs. H. S. King		c/o Messrs. Cox & Co.,	
& Co., 9, Pall Mall, S.W.		10, Charing Cross, S.W.	
BROWN, L. C. ...	Steamer leaving	LEE-WARNER, W. H. ...	4 May, '12
	21 Oct., '11	McKENZIE, J.	29 Nov., '11
BELFIELD, F. ...	20 May, '12	MORLEY, A.	23 May, '12
Isthmian Club, Piccadilly, W.		MORRIS, B.	25 June, '12
CORNWALL, A. E. ...	24 Mar., '12	MARSHALL, H.	17 Jan., '12
CURTIS, A. T. ...	29 Apr., '12	MAGILL, G. S.	18 Apr., '12
CUSCADEN, G. P. ...	16 Apr., '12	PUGH, E....	13 Apr., '12
CORMAC, C. R. ...	24 Aug., '12	PRATT, E.	21 Sept., '12
FLOOD, P.	3 Sept., '12	POUNTNEY, A. M. ...	9 Aug., '12
FAIRBURN, H.	24 Aug., '12	STREET, F.	31 Jan., '12
FOX, G. H.	29 Dec., '11	STEVENSON, A. M. ...	9 June, '12
FORD, T. A.	Steamer leaving	SHAW, H. R.	2 June, '12
	21 Oct., '11	TAYLOR, H. C.	30 Nov., '11
FIELD, W.	30 Apr., '12	TAYLOR, Miss C. E. ...	Steamer due
FREER, Dr. G. D. ...	17 Dec., '11		5 Dec., '11
FRASER, Dr. H....	26 Dec., '11	THOMPSON, C. C. ...	31 Oct., '11
FORBES, G. C. ...	Steamer leaving	WILLETT, J.	26 July, '12
	21 Oct., '11	WYATT, E. W. N. ...	21 June, '12
GOLATHORP, J. O. ...	28 Nov., '11	WALKER, H. J. N. ...	28 May, '12
GUMMER, W. A. ...	25 Dec., '11	New Oxford and Cambridge Club, 68, Pall Mall, S.W.	
GOGGIN, T.	29 Dec., '11	WILDE, J. E.	14 Apr., '12
GOODYEAR, C. M. ...	9 Mar., '12		
HANSON, W. H. ...	15 June, '12		

CEYLON.

BRODHURST, H. W.,		DEWEY, W. C. D. ...	Steamer due
C.M.G.	14 Nov., '11		27 Nov., '11
BARNARD, H. O....	4 Aug., '12	EBELL, Dr. J. H. ...	30 Apr., '12
BLOOMFIELD, H. C.	29 Feb., '12	FOX, H. O.	28 Oct., '11
BINGHAM, P. M....	23 Nov., '11	GREGSON, W. B. ...	18 Apr., '12
BRYDE, W. L.	Steamer due	HARWARD, C. C. ...	26 Mar., '12
	2 Nov., '11	HEATON, J.	16 Apr., '12
BARTLAM, A.	14 Dec., '11	HEDGELAND, A. J. ...	18 Nov., '11
BALFOUR, J. A.	7 Nov., '11	HARRIS, L. J.	14 Mar., '12
c/o Messrs. T. Cook		c/o National Bank of	
and Sons, Ludgate		India Ltd., 26, Bishops-	
Circus, S.E.		gate St., E.C.	
CLAYTON, A. G....	29 Oct., '11	HORSBURGH, B....	30 Dec., '11
CHAPMAN, T. H....	30 Jan., '12	HORRILL, J.	8 Feb., '11
COOKSON, G. M....	9 Aug., '12	HARTLEY, C.	14 May, '12
COOTE, R. G.	23 Dec., '11	HELLINGS, R. B. ...	9 Jan., '13
DICKMAN, A. C. H.	1 June, '12	INGLES, W. C. S. ...	Steamer leaving
DAVIES, J. M.	16 Feb., '12		5 Oct., '11
DOWBIGGIN, H. L. ...	Steamer due	JACKSON, W. H. ...	11 Apr., '11
	4 Nov., '11	JAMES, R. S.	8 Nov., '11
DITTON, B. J.	25 Apr., '11	JOSEPH, Pro. A. F. ...	31 Jan., '12

HONG KONG.

APPLETON, F. ...	Steamer leaving	MORRIS, Mrs. L. ...	3 Feb., '12
	21 Oct., '11	MESSER, C. McI. ...	Steamer due
ATTEWELL, G. A. ...	14 Jan., '12		20 Mar., '12
ARMSTRONG, J. W. ...	25 Apr., '12	MCLEOD, J. M. ...	16 Feb., '12
ALLEN, F. ...	9 Dec., '11	MOORE, Dr. W. B. A. ...	9 Aug., '12
BOULGER, P. F. ...	17 Nov., '11	PASSMORE, A. G. ...	Steamer due
BIRKBECK, R. J. ...	6 Dec., '11		28 Dec., '11
BARROW, Miss C. H. ...	16 May, '12	REED, E. B. ...	23 Apr., '12
BRAYN, R. F. ...	23 May, '12	REES DAVIES, W., K.C.	7 Jan., '12
BADELEY, F. J. ...	10 Dec., '11	Reform Club, Pall	
CARPENTER, E. W. ...	23 Apr., '12	Mall, S.W.	
DA CUMBA, J. C. ...	29 Mar., '12	SHEPHERD, G. C. ...	17 Dec., '11
DYMOND, A. G. ...	28 Jan., '12	SIMMONS, A. W. J. ...	18 Jan., '12
DAVITT, W. ...	17 Nov., '11	TAYLOR, Comm. B. R. H.,	31 Jan., '12
DAVIS, A. J. ...	17 Nov., '11	R.N., Carlton Club,	
FRITH, C. E. ...	4 Jan., '12	Pall Mall, S.W.	
GORHAM, Miss A. E. ...	7 Feb., '12	WHEAL, I. A. ...	7 Dec., '11
IRVING, E. A. ...	3 Nov., '11	WOLFE, H. W. ...	17 Dec., '11
JACKSON, G. ...	17 Nov., '11	WILDIN, J. C. ...	16 Feb., '12
LAST, F. J. W. ...	31 Dec., '11	WALKER, A. T. ...	15 Dec., '11
MORRIS, A. ...	3 Feb., '12		

PERAK.

BARTLETT, R. J. ...	9 July, '12	MADDOCKS, W. E. ...	1 Feb., '12
BAILEY, D. ...	25 Jan., '12	MAGER, F. W. ...	9 Sept., '12
BERKELEY, H. ...	25 Oct., '11	PALMER, H. ...	10 July, '12
BRIDGES, Dr. D. ...	20 Feb., '12	RIGBY, J. ...	Steamer due
BELFIELD, H. C., C.M.G.	11 Feb., '12		8 Nov., '11
Junior Carlton Club,		SYMES, W. L. B. ...	31 Mar., '12
Pall Mall, S.W.		SHORT, P. G. ...	20 Nov., '11
CHILL, J. M. ...	30 Mar., '12	STONOR, O. F. G. ...	24 Mar., '12
DARLASSON, F. W. ...	12 Jan., '12	TOPLISS, J. ...	10 Aug., '12
DISHMAN, A. J. ...	21 Feb., '12	WARD, J. ...	19 Jan., '12
HENRY, Miss K. ...	7 Mar., '12		

KEDAH.

FLENNY, J. J. ...	23 Jan., '12	HOOPS, Dr. A. L. ...	29 July, '12
GORMAN, J. ...	3 Feb., '12	MCDONOUGH, J. ...	19 Dec., '11

SELANGOR.

DE BASAGOITI, H. P. ...	Steamer leaving	NIGHTINGALE, E. ...	2 Apr., '12
	20 Oct., '11	PARRY, F. W. ...	Sailing
GARDNER, J. W. ...	28 Mar., '12		20 Oct., '11
HOBSE, E. S. ...	19 Sept., '12	STOKOE, E. R. ...	29 May, '12
MILLS, Comm. J. F. ...	4 Jan., '12	WYATT, G. ...	23 May, '12
MACDERMOTT, Maj. A. T.	4 June, '12		

NEGRI SEMBILAN.

ALLEN, P. T. ...	8 Apr., '12	STEELE, H. E. ...	Steamer due
BAILEY, J. ...	30 Apr., '12		15 Nov., '11
MARTIN, V. J. ...	24 Apr., '12		

FEDERATED MALAY STATES.

BARMAID, H. C....	... Steamer due	HOWLEY-FOLEY, Miss V.	
	28 Dec., '11	E.	3 Jan., '12
BURN-MURDOCK, A. M.	26 Jan., '12	JACKSON, Col. H. M. ...	30 Jan., '12
c/o Messrs. H. S. King		c/o Messrs. Cox & Co.,	
& Co., 9, Pall Mall, S.W.		10, Charing Cross, S.W.	
BROWN, L. C. ...	Steamer leaving	LEE-WARNER, W. H. ...	4 May, '12
	21 Oct., '11	McKENZIE, J.	29 Nov., '11
BELFIELD, F. ...	20 May, '12	MORLEY, A.	23 May, '12
Isthmian Club, Piccadilly, W.		MORRIS, B.	25 June, '12
CORNWALL, A. E. ...	24 Mar., '12	MARSHALL, H.	17 Jan., '12
CURTIS, A. T. ...	29 Apr., '12	MAGILL, G. S.	18 Apr., '12
CUSCADDEN, G. P. ...	16 Apr., '12	PUGH, E....	13 Apr., '12
CORMAC, C. R. ...	24 Aug., '12	PRATT, E.	21 Sept., '12
FLOOD, P. ...	3 Sept., '12	POUNTNEY, A. M. ...	9 Aug., '12
FAIRBURN, H. ...	24 Aug., '12	STREET, F.	31 Jan., '12
FOX, G. H. ...	29 Dec., '11	STEVENSON, A. M. ...	9 June, '12
FORD, T. A. ...	Steamer leaving	SHAW, H. R.	2 June, '12
	21 Oct., '11	TAYLOR, H. C.	30 Nov., '11
FIELD, W. ...	30 Apr., '12	TAYLOR, Miss C. E. ...	Steamer due
FREER, Dr. G. D. ...	17 Dec., '11		5 Dec., '11
FRASER, Dr. H....	26 Dec., '11	THOMPSON, C. C. ...	31 Oct., '11
FORBES, G. C. ...	Steamer leaving	WILLETT, J.	26 July, '12
	21 Oct., '11	WYATT, E. W. N. ...	21 June, '12
GOLATHORP, J. O. ...	28 Nov., '11	WALKER, H. J. N. ...	28 May, '12
GUMMER, W. A. ...	25 Dec., '11	New Oxford and Cambridge Club, 68, Pall Mall, S.W.	
GOGGIN, T. ...	29 Dec., '11	WILDE, J. E.	14 Apr., '12
GOODYEAR, C. M. ...	9 Mar., '12		
HANSON, W. H. ...	15 June, '12		

CEYLON.

BRODHURST, H. W.,		DEWEY, W. C. D. ...	Steamer due
C.M.G. ...	14 Nov., '11		27 Nov., '11
BARNARD, H. O....	4 Aug., '12	EBELL, Dr. J. H. ...	30 Apr., '12
BLOOMFIELD, H. C. ...	29 Feb., '12	FOX, H. O.	28 Oct., '11
BINGHAM, P. M....	23 Nov., '11	GREGSON, W. B. ...	18 Apr., '12
BRYDE, W. L. ...	Steamer due	HARWARD, C. C. ...	26 Mar., '12
	2 Nov., '11	HEATON, J.	16 Apr., '12
BARTLAM, A. ...	14 Dec., '11	HEDGELAND, A. J. ...	18 Nov., '11
BALFOUR, J. A. ...	7 Nov., '11	HARRIS, L. J.	14 Mar., '12
c/o Messrs. T. Cook		c/o National Bank of	
and Sons, Ludgate		India Ltd., 26, Bishops-	
Circus, S.E.		gate St., E.C.	
CLAYTON, A. G....	29 Oct., '11	HORSBURGH, B....	30 Dec., '11
CHAPMAN, T. H....	30 Jan., '12	HORRILL, J.	8 Feb., '11
COOKSON, G. M....	9 Aug., '12	HARTLEY, C.	14 May, '12
COOTE, R. G. ...	23 Dec., '11	HELLINGS, R. B. ...	9 Jan., '13
DICKMAN, A. C. H. ...	1 June, '12	INGLES, W. C. S. ...	Steamer leaving
DAVIES, J. M. ...	16 Feb., '12		5 Oct., '11
DOWBIGGIN, H. L. ...	Steamer due	JACKSON, W. H. ...	11 Apr., '11
	4 Nov., '11	JAMES, B. S.	8 Nov., '11
DITTON, B. J. ...	25 Apr., '11	JOSEPH, Pro. A. F. ...	31 Jan., '12

CEYLON—*continued.*

JINADASA, Dr. M. J. ...	19 Nov., '11	OHLUMS, Dr. T. ...	24 Jan., '12
KINDERSLEY, W. L. ...	29 Feb., '12	PHILLIPS, E. A. ...	3 Dec., '11
LOCKHART, J. ...	23 May, '12	PEDDER, G. ...	10 Dec., '11
McGUILLEN, P. ...	19 Feb., '12	REED, M. ...	4 June, '12
MARSTON, S. ...	9 Dec., '11	ROBERTS, T. W. ...	10 Dec., '11
McCALLUN, Sir H.,		RANKINE, G. N. ...	31 Dec., '11
G.C.M.G. ...		SMITH, S. J. ...	22 Dec., '11
c/o Messrs. Cox & Co.,		STORK, B. P. ...	16 Apr., '12
16, Charing Cross, S.W.		STRICKLAND, R. B. ...	20 Jan., '12
MEADEN, B. G. ...	30 Apr., '12	TURNER, F. J. S. ...	27 Sept., '12
MARTIN, H. A. ...	16 Apr., '12	WOOLF, L. S. ...	20 May, '12

THE COLONIAL OFFICE JOURNAL.

VOL. V.

JANUARY, 1912.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE appointment of H.R.H. the Duke of Connaught to be Governor-General of Canada makes a new departure in our Colonial history. At no remote period it was considered that the relations of a Governor with the Secretary of State were incompatible with the position of a member of the Royal Family. Since then those relations have in the case of the Dominions undergone a substantial change, and the possibility of a controversy between the Secretary of State and a Governor-General is now, to say the least, remote. The last definite hold which this country retained over the great Colonies when they were granted self-governing powers was the reservation by the Governor of Acts dealing with certain specified subjects, but in the case of Canada any difficulties of this kind would probably be arranged in a different way. The Governor-General is not a Viceroy, and is technically the officer to execute the specific powers with which his commission clothes him; but it need hardly be said that his real value nowadays lies in fields not contemplated by the formal documents, and the appointment of the Duke of Connaught has been warmly welcomed and appreciated.

The result of the Canadian elections in September was not only remarkable for the administrative change which it involved,

but was specially distinguished from ordinary political contests by a great manifestation of national feeling. The general view in this country has been that the Canadians, as it has been put by Mr. Faithfull Begg, Treasurer of the London Chamber of Commerce, believed that they were at the parting of the ways; "at the end of one road they saw, or believed they saw, the Stars and Stripes floating, at the end of the other the Union Jack: regardless of all other considerations, regardless of a dazzling vista of material gain, highly coloured, no doubt, but none the less alluring, they deliberately decided in favour of the loftier idea of Imperial unity." It may be questioned, however, whether the ideas of commercial association with Great Britain and with the United States were so sharply contrasted in the Canadian mind as all this implies. It is easy to make the mistake of attributing to other people the point of view which we take ourselves. The strongest force which influenced the elections was the belief of the Canadians in their own country and the determination to work out their own salvation. Intimately connected with this is the railway policy, which in Canada is always influential and is bound up with the union and the national sentiment. The possibility that the produce of the West might be diverted to American lines is enough to raise a great wave of opposition.

The Empire Club of Canada gives opportunities not only to Canadians but to distinguished visitors from this country to discuss subjects with which they are specially acquainted, and a recent volume, edited by Mr. J. Castell Hopkins, of Toronto, contains a number of addresses on Canada's various problems and questions affecting the Empire. One of the most interesting of these topics is the Hudson's Bay Route between Great Britain and Western Canada. The great grain-growing area of Canada is from 1,000 to 2,000 miles nearer to Hudson's Bay than to Montreal, and from both these places the distance is practically the same to Liverpool. It is necessary in order to realize this to bear in mind the shape of the earth at these latitudes. The construction of a railway of some 400 miles to connect Hudson's Bay with the Prairie Provinces would therefore materially lessen the cost of transport, and would greatly strengthen the trade with Great Britain, which in this way would be provided with a very advantageous access to Western Canada. The Bay never freezes over, but the chief difficulty is that in the Straits there are icebergs at all times of the year and navigation is therefore dangerous. No doubt fast traffic would be out of the question, but for cargo there is much to be said for the route. It would

certainly help greatly to keep the West British, as labourers could be taken over at low cost for the harvesting in summer and many would no doubt remain. There is already a congestion in freight during the harvest time, and when this gets worse the demand for another route will become stronger.

The most interesting part of the Franco-German agreement, from our particular point of view, is the cession to France of the "Duck's Beak" between the Ceari and the Logone and the grant of enclaves on the Benue and Mayokiti. The significance of these acquirements is that they improve the means of communication with the basin of Lake Tchad. There are two routes to the French Central Africa. One is the Congo from Matadi. From this port the Belgian railway conveys to Stanley Pool, and from there it is necessary to go up the Congo and the Ubangi to Fort Sibut; after this the journey is by land to the Ceari and by that river to Fort Larry. To accomplish this journey with merchandise eight to nine months are necessary, and often a year. The cost of transport is put at 1,327 francs *par tonne*, without reckoning the duty of 10 per cent. *ad valorem*. An officer travelling with only necessary baggage can, with good luck, do it in ninety days. The other route is by the Benue through British territory, and by the Logone and the Ceari through the northern point of the German Cameroons, the "Duck's Beak." The cost of transport by this route is 826 francs *par tonne* and there is no duty to pay. Eight months are required, and more if the goods exceed 100 tons. An officer can travel in ten days less than by the first route, but the expense is 4,900 francs, 450 more. The cession of the "Duck's Beak" will enable the French to effect a much-wanted improvement in the means of communication, and it is to be hoped that they will find the facilities afforded in the British territory good enough to make this route preferable to that *via* the Congo. Up to the present, notwithstanding its length and cost, the latter has been used most.

After Morocco and the ancillary questions came Tripoli. The Tripolitan territory historically extends to the borders of Senegal, Nigeria, the Cameroons and the French Congo. It is the home of the caravan, and ancient routes lead from it to various parts of the interior. It has long been in this way the gate of the Sahara, but now one great field is practically cut off by the Egyptian railway and another is threatened by the Kano railway. There still remains a great hinterland which is traded with in the old way, but the business does not appear to be flourishing. The only definite limit of this territory to the south is that

indicated in the Anglo-French agreement of 1899 as the northern extremity of the French zone, an arrangement against which, it should be added, the Turkish Government protested. To many parts of the great desert country the Turkish troops have never penetrated, and the field is held by the Senoussi, whose policy is to keep out Turk and Christian alike.

The recommendations of Admiral Sir R. Henderson, K.C.B., as regards the naval forces of the Commonwealth have been published in Australia. The Admiral observes that, once the command of the sea is lost by the Empire, no local system of defence, naval or military, could secure Australia's autonomy, and she would be the prey of the strongest maritime power. The primary object of an Australian navy, therefore, should be the immediate support of the Empire's naval forces in their determination to retain the command of the sea. The secondary object should be the protection of ports and shipping from raids and invasions by hostile ships and cruisers. The Admiral does not discuss the probabilities of such raids, but it is fairly certain that, under the conditions of modern warfare, the objects of both belligerents would be to concentrate their forces at the points where they would be most effective for offence or defence. The great cost of operations and enormous economical losses caused by a state of war will compel quick issues, and the roving missions which have characterised old struggles will be obsolete. It is, however, necessary to contemplate the case of the Empire's sea supremacy not being sufficiently established to prevent an invasion at some point on a large scale, or the destruction of commerce, and for this purpose local forces are required, particularly in the case of Australia, whose over-sea commerce is the life-blood of her prosperity. The first step, the building of the "Fleet Unit" has been decided on, viz., one armoured cruiser, three protected cruisers, six torpedo boat destroyers, and three submarines, but the "Completed Fleet," recommended by the Admiral as the goal to be attained, would go far beyond this, consisting of fifty-two vessels. He allows a period of twenty-two years for the realization of this project, and strongly urges that a Board should be constituted, on the lines of the Admiralty, and having responsibility as a whole.

Some noteworthy facts may be gathered from the Financial Statement made in August by the Treasurer of Queensland. One was that the Colony was able to borrow in the London market at a lower rate than was offered to it by the Commonwealth. There has been a steady flow of immigrants, and land settlement has continued

at a high rate. The Sugar industry, which represents nearly £2,250,000 in value to the State, has been generally successful; the production during the previous year amounted to 210,756 tons, nearly equal to the 240,000 consumed annually in Australia. The productiveness of the soil in some districts is very great. Fiji, however, is threatening Queensland's banana trade in the Southern states, and is likely to compete in citron fruits, pineapples, and the like. The fruit export to the rest of the Commonwealth is now much less than it used to be a few years ago. Fiji's success in these lines need, however, hardly be grudged, as the dairying is making magnificent strides. The growth of the industry in the Eastern States of Australia is one of the economic marvels of the time. Its prosperity is due to the depth of alluvial soil, the richness of the grass, and the mildness of the climate. In this country we have a soil which is comparatively shallow, grass which, however abundant, is, for feeding purposes, poor and chill, and a climate which necessitates the housing of cattle and the liberal use of winter foods. It is not surprising that, with his advantages, the Australian grower is able to compete successfully in the markets of this country. The meat, however, is said to be decidedly inferior in quality to that from the Argentine, where practically it is all the produce of stock topped off, if not entirely grazed, on alfalfa (lucerne).

In South Africa the imports rose from £29,842,463 in 1909, to £40,105,532 in 1910, a very remarkable increase, of which this country appears to have had a good share. Deducting specie, the value of the goods imported was £37,914,439, of which the British share was 71 per cent., while the two principal competitors, Germany and the United States, contributed less than 17 per cent. Mr. R. Sothorn Holland, His Majesty's Trade Commissioner for the Union of South Africa, points out that, even of this amount, much, in the case of Germany, has been secured, not by the ordinary exertions and plain competition of the manufacturers, but by financial arrangements, under which it has been a condition of contract that machinery and the like should be purchased in Germany. The "Victoria Falls" affair is a well-known case of this kind, and by itself contributed nearly £700,000 to the German imports. The position of British trade, therefore, is highly satisfactory, but in making comparisons it is only fair to admit that the 3 per cent. preference has a good deal to do with this result.

The Orange Free State census returns show that the whites have increased by 22·96 per cent. and the blacks 43·67. The disproportion is the more significant as the Free State was not originally a

black man's country. When the Voortrekkers came in, in 1836, the country was practically uninhabited. There was a clear field for both races. But the blacks show a rate of increase of two to one, and if this were to go on long Professor Brown's theory that South Africa will be black in a century would come near realization. An ominous fact is that the black race has triumphed in past epochs. The white races have invaded Africa time after time, and have penetrated far into the interior. What became of them is more or less of a mystery, but they disappeared. It is not likely that they left the continent: they were absorbed, probably in considerable numbers, by the indigenous races. All over the world climatic characteristics seem to fix the local type, as was suggested in our last number, and in the long run this type tends to prevail. It is argued in South Africa that the remedy lies in immigration, and the facts are used to support the proposal for state-aided immigration. This addition of white blood from outside would, of course, assist the white race in the struggle for the present, but, clearly, it could not affect the position permanently, unless the forces which have hitherto assimilated exotic breeds to the native type can be counter-acted. Undoubtedly it is a sound instinct in such cases to endeavour to keep the white race pure. When once the barrier has been broken down the local type must win. In former ages there was no such doctrine; fusion was common, and the imported variety disappeared. In South Africa there is a strong feeling on the subject, and though the blacks will increase and multiply the established superiority of the modern white race will prevent history being repeated in this respect. On the other hand it is clear that the industries are largely falling into the hands of the natives. Apart from their numbers, education is making a remarkable change in their efficiency. The working men of white race do not in fact show up well against them. They object to performing the rough manual work which is considered to be Kaffir's work. In consequence large numbers fall into poverty and idleness. Unless this fault can be cured there is no particular advantage in encouraging the immigration of working men from Europe into South Africa.

In the Cape there has not been much discrimination between white and coloured for railway work, and most of the work which does not require special skill is done by natives. In the Transvaal and Orange Free State it is the policy to substitute white men for work previously done by natives: this has been carried so far that over 3,000 men are now employed on such work. This is of course expensive, as the difference of pay is about 2s. a day; and in other respects the results are disappointing. The chief justification of the policy is that it provides work for a large number of men for whom it would be difficult to make provision in any other way, but it

seems regrettable that the administration should be obliged to have to come to the assistance of so many white workers. Such circumstances go far to explain why an active immigration policy has not been adopted.

An investigation of the life history of the tsetse fly has been made by the Natal and Zululand Game Protection Association. The report does not countenance the theory that the fly can be got rid of by clearing out game in an infected area. This theory assumes that game are necessary to the fly, but there is evidence to show that it can also live on the blood of reptilia and on certain vegetable juices such as that of sugar cane. Apparently it is attracted by vegetation of a certain character. Further, the fly is very migratory, and the removal of game would not be likely to prevent domestic cattle being attacked eventually. The Association pins its faith to the ability of the expert to produce immunising sera. Its report comes at an opportune time, now that the Colonial Office commission which is to enquire into the subject of sleeping sickness is commencing its work in Nyasaland. Meanwhile the Sleeping Sickness Bureau (Bulletin, Vol. 3, No. 30) has also attacked the subject, and cites observations tending to show that the presence of game, either large or small, has no well-defined relationship to the presence of the fly.

In Nyasaland in 1910-11 the revenue was a record one. The production of cotton, tobacco and rubber has substantially increased, while coffee, once the staple industry, has been gradually abandoned. The prospects are very favourable, especially for cotton. Nyasaland Upland maintains its position as the highest-priced Upland in the world. The annual report states that, as regards native labour, the Government has steadily pursued the policy of discouraging the emigration of natives to other territories by every just and lawful means in its power, being confident, in view of the rapid increase of agricultural industry in the Protectorate itself, and the ample opportunities of local employment which now exist, that such emigration must eventually be detrimental not only to the interests of local planters and others, but likewise to those of the native community, in whose case the larger wages obtainable in South Africa must be discounted by the prejudicial effect produced by intercourse with more sophisticated centres upon their simplicity of character, upon their habits of life, and upon the lot of their wives and families remaining behind. While, however, the Protectorate Government discountenances emigration for the above reasons as far as it legitimately can, it recognises that natives who have formed a

settled determination to quit Nyasaland must be allowed to do so, and to such natives passes are issued accordingly. The number of passes so issued during the year under review amounted to 4,386.

A proposal has been set on foot to organise in the Protectorate a subordinate native civil service, the advantages of which, more especially by way of security of tenure, periodical increments of salary, and a moderate provision for old age, will, it is hoped, if the project is fulfilled, tend to attract and retain in Government employ an adequate staff of trained and intelligent native clerks. Of the native scholars now annually turned out by the missionary schools, the greater proportion, including the most capable and enterprising, leave the Protectorate almost as soon as they quit school, in order to avail themselves of the more attractive conditions and wider field offered by the South African Colonies.

The depredations committed by buffaloes and many kinds of antelopes upon both European and native crops, and the probability that the presence of wild animals may attract tsetse fly, has led to a systematic revision of the game laws of this Protectorate, and to a considerable relaxation of the restrictions which have hitherto been enforced with regard to hunting generally.

The inadequacy of the communications has been felt more strongly owing to the increase of exports and a persistent diminution in the water of the Lower Shire River between Villa Bocage, the head of the permanent fairway of the river, and Port Herald, where the Shire Highlands railway line commences. These two circumstances occurring in coincidence with each other have resulted in a very serious congestion of traffic during the dry season, when the river steamers cannot reach Port Herald, and must militate strongly against the natural tendency of a young and promising country to enlarge its activities. A still graver obstacle is now threatened or rather has been placed already in the way of local enterprise by the spread of tsetse fly, and the consequent closing of many important roads against all forms of animal transport. The last highway to be thus barred is the road between Blantyre, the chief commercial centre of the country, and Zomba, the administrative capital. Fortunately the macadamisation of this road was begun some $2\frac{1}{2}$ years ago, and now extends for 23 miles, viz., more than half its length, so that motor vehicles and other mechanical means of transport can ply along that distance. This, the only piece of metalled road in the Protectorate, other than township roads, was commenced on account of the impossibility of driving ox-waggon along ordinary unmade tracks during the rainy season from November to March. The spread of tsetse fly adds a new and still more cogent reason for increasing the mileage of metalled ways, and it is indeed only thus that the many promising agricultural settlements now

existing in different parts of the Shire Highlands can hope for a safe and regular means of access to the railway line.

In a very different part of the world an eloquent plea is being put forward in favour of an animal sanctuary. The Laurentians claim the title of the "Everlasting Hills." They are in fact the only part of the visible earth which was present when life was born. Most of Labrador is a rocky tableland, but it is rich in interesting fauna. The country seems ideal for a sanctuary, for the population is so sparse that there is not one person for every 20,000 acres. It contains a hundred Saquenays, wild cañons, great lakes and waterfalls. The argument for a reserve in such a place is very strong, for the animals are not dangerous as they are in the tropics. At present the waste of life from wanton destruction threatens to end in the extinction of everything that is valuable.

What Lancashire chiefly requires from the Colonies is a greater and steadier supply of the cotton which is suitable for fine yarns. There has been much bitter discussion of the market manipulations which have affected American prices, but Egyptian prices have fluctuated more. This is due to the limited field of supply, and recently endeavours have been made to use long staple Upland for fine yarns. This kind is not so strong as the best Egyptian cotton, but in other respects it is as good, and improvements of machinery have made it possible to produce mercerised goods from it which can hardly be distinguished from those made from Egyptian cotton. This fact opens up an excellent prospect for planters in such places as Nyasaland, where long staple Upland of excellent quality is grown. The production per acre is much greater in many cases in Egypt, but there the rent of agricultural land averages £8 per acre, and manual labour is 1s. a day—very much higher than in Nyasaland. The industry is rapidly increasing in popularity with the natives, and is removing the inducement to emigrate for work to South Africa. The development will therefore have important social as well as economical results, and has no doubt facilitated the policy of the Nyasaland Government against recruitment for South Africa.

In Fiji the revenue for 1910 was the highest recorded during the last five years, largely owing to the enhanced price of copra. The Colonial Sugar Refining Company has extended its operations and it will be interesting to see how their policy will be affected

by the movements in Queensland. The green fruit trade was retarded by the effects of the hurricane, but it revived considerably, and greater facilities have been provided for export. The growth of this trade should affect the question of improved communication with Canada. The immigration of East Indians continues steadily, 3,879 coming in during the year, and an impetus is now given to their introduction by the prohibition of Polynesian immigration. The Government had still for disposal all but 18,000 of the 150,000 acres handed to it by the natives for settlement by lease. During the year the alienation of native land by lease continued steadily, mostly of small areas to East Indians, and for short leases of from five to ten years. The success of this class in getting land from the natives is one proof of its adroitness.

The industrial progress of the South Sea Islands does not attract much attention here, as the trade is with Australia in the first place, but it is noteworthy. Not very long ago their chief and generally only value was in the deposits of phosphates, and in fact a great number of them were brought under the British flag by the grant of licences to work these. A vast amount of discussion took place from time to time as to how the Crown could secure a fair rent or royalty, and, considering that, as a rule, no one but the discoverer knew anything about the value of the deposits, and supervision was hardly practicable, the problem was a difficult one; but one good and far-sighted provision was made whenever practicable by requiring the licensee to plant coco-nut trees. To-day the coco-nut industry is the mainstay of the Pacific. Its growth is illustrated by the issue of an excellently got-up handbook, published at Tulagi, in the British Solomon Islands. These islands were for a long time exceedingly troublesome, as numerous murders of white men were committed by the natives, in particular of Bishop Pattison in 1871 and Commodore Goodenough in 1875, and perhaps some of natives by white men; but though some cases were brought to Fiji for trial before the High Commissioner's Court, no conviction was ever obtained, as it was impossible to secure the attendance of witnesses. The only remedy was for a man-of-war to "visit" the islands. In 1893, as a result of an arrangement with Germany for partitioning this part of the world, the Southern Solomons were placed under a British protectorate. In 1900 the Northern Solomons were transferred by treaty from Germany to Great Britain. The plantations of coco-nut palms owned by white men now cover 18,000 acres, not much of which has yet come into bearing. Cotton and rubber are also being grown. Labour is

cheap, being from £6 per annum to £26 for exceptional men, but the supply will soon be absorbed by the growth of plantations.

The quick temper and revengeful spirit which characterise many parts of the Mediterranean have inspired many themes of literature and music, but from the point of view of an administration, which has no soul for romance, they cause a good deal of trouble. In Cyprus there has been an increase of cases of murder and manslaughter, and the Chief Justice has pointed out the traits in the character of the villager which, to some extent, explain the prevalence of this class of crime. The majority of the inhabitants of Cyprus live in villages, and are as a rule poor, while their habitations are for the most part comfortless and insanitary. Their pursuits are almost entirely pastoral or agricultural. These people are very sensitive and ready to take offence. Any insult rankles, and their minds seem to brood over any slight, real or imaginary, however small, until it has assumed proportions which, for their self-esteem, they consider they must revenge by murder. There are men in some of these villages who, for a small reward, say £10, will murder a man against whom they have no grievance, or whom they have never seen before. In many cases if an inhabitant is obnoxious to the community, they will have him killed by common agreement. They are very quick tempered, and many homicides occur in brawls, in cafés, and weddings, where men are under the influence of drink. Without reflection a knife is drawn, and their natural impulse is to kill. "I have tried many murderers in this island," writes the Chief Justice, "and I cannot recall one who was sorry for his victim or showed remorse for his crime. As a rule a murderer boasts of his crime. It is a source of pride to himself, and gives him power over his neighbours."

The Legislature declines to pass any law effectually preventing the carrying of dagger knives, and strongly opposes the prohibition of carrying fire-arms. Under the Ottoman Penal Code the only punishment for intentional killing without premeditation is fifteen years' imprisonment, which is practically cut down to eleven years and three months by the rules for the remission of sentences, and this period does not appear to be a very strong deterrent. In recent years the village and other elections have led to many crimes of violence, and it is necessary to admit that a liberal policy, designed to encourage the villages to carry out improvements themselves, has stirred up factious feelings and animosities which lead to bloodshed. Nor does it appear that compensation

for these evils can at present be found in the efficiency of the local councils. The annual report observes that : "The Cypriot peasant—in common with the inhabitants of many other countries—wishes to enjoy all the advantages of legislation without incurring any of its duties or cost, and labours under the idea that Government is endowed with unlimited funds, and that Government officials will always step in and relieve him of whatever is burdensome. Government, on the other hand, endeavours to foster initiative and local enterprise and responsibility and to avoid the paralysing grip of the dead hand of bureaucracy. Its efforts are, however, continually thwarted by the habit of dependence on the central government, engrained doubtless, in the Cypriot by centuries of despotic rule."

In the annual report for Barbados it is shown, by a sort of elimination of other causes, that the increasing prosperity of the island is largely due to the visitors who stay in it. The sugar crop of 1910, though good and realizing good prices, was not superior to its predecessors to such an extent as to account for a record revenue. Nor is there any other commercial cause, while on the other hand the break in the main line connection of the R.M.S.P.L., and the loss of the transshipment service must have caused a severe financial loss. There can be little doubt that the attractions of the West Indies to tourists and visitors are becoming more and more important and appreciated: but they might be better known, and when that is done, the islands will have, to use Mr. Burdon's words, a "valuable source of wealth and revenue."

The census report of Grenada shows that, while there is an increase of 3,312 on the figures of 1901, the rate of progress of previous decades has been by no means maintained, and the cause of the shrinkage is the extraordinary rush of labour to Central and South America. In the last ten years about 22,000 labourers have sailed away. "This abnormal emigration from the Colony of its labouring people is regrettable, especially because the loss thus sustained is not likely ever to be recovered. As a class, the places vacated by these people cannot, or will not, be filled by the succeeding generation, who are known to have cultivated views rather different from their parents as to the manliness of all honest labour. The recognition of the moral of this factor having, however, resulted in active steps by the Government in the way of facilities for the settlement of the remaining people upon holdings of their own at home, will, it is hoped, tend to check, to

some extent at least, the tendency both in Grenada and Carriacou to seek for betterment abroad, since recouping by immigration is absolutely out of the question." It can hardly, however, be said that Grenada is badly off for population, as the density is 502 to the square mile. About 13,000 of the emigrants came back, presumably with some savings in their pockets. The coolies, as such, have disappeared: Europeans, Africans and East Indians have dwindled and at the present rate will soon leave the field entirely to the natives. The compiler pays a tribute to the virtues of the East Indians, who are thrifty and shrewd and have greatly improved their status.

In more primitive communities the difficulties of census taking have to be solved by drastic methods. Thus in the Gambia Protectorate the people are in such ignorance as to their ages that there was nothing for it but to divide them into two sections—of those over and those under fifteen years. Questions about infirmities are naturally resented and the answers are not to be relied on. In the Gambia the classification of education was into "good," "slight" and "nil"; and the task must have been considerably simplified by the fact that 140,000 out of 146,000 were placed in the third division.

The taking of the census in Brunei was naturally attended with difficulty, as not only are the natives shy, but, as the report plaintively observes, "the idea of scheduled enumeration is one that is as yet wholly outside their capacity." To add to these difficulties the headmen are unable to count. However, thanks to the energetic help given by the Sultan, the work was accomplished in a fairly satisfactory manner. The population of Brunei Town is now 9,967. In former times it was reputed to reach 120,000, and at the beginning of the eighteenth century it was estimated at 70,000. Slavery and small-pox seem to have been the chief scourges. Now, however, that the tide has begun to turn, the fact that the country has been able to support a large population encourages the hope that Brunei may again see better times.

In Hong Kong in 1910 a welcome increase was shown in British ocean shipping of 4·8 per cent. in tonnage, being rather more than that of foreign shipping. The total British tonnage was 4,041,557, out of a total of 8,112,985, the German and Japanese being the only large rivals. 111,058 emigrants left Hong Kong during the year, this being a large increase due to the demands of the rubber plantations in the Malay States; but 149,564 returned, a fact which goes to show that the Chinaman

does not wish to stay permanently abroad. Increasing numbers of Chinese show themselves desirous of an English education, and the new University, the gift of Sir Hormusjee Mody, will probably be open by the middle of this year. All the opium divans were closed on the 1st March, 1910, and the Home Treasury made the Colony a grant of £9,000 on account of a loss incurred in respect of opium revenue.

The ideas and customs of the Chinese are of continual interest to Europeans, as they represent a civilization which, whatever its defects, possesses a remarkable power of resistance and may by sheer weight of numbers eventually affect other territories. In Wei-hai-wei there is a Chinese population of about 147,000, a number sufficiently large to permit of examination of its characteristics. In this possession the population per square mile is 510, or rather above the mean density of the great plains of China. This is, for agricultural land, a very high figure, and must nearly approach the maximum which the land will support. The birth rate is abnormally large. At present infant mortality is also high, but it is clear that if by better knowledge this could be kept down there would be a great increase of population. A noticeable feature is the solidarity of the family. It is a common object for as many persons as possible to live together without dividing up the family property. The report on the recent census shows that there are many large undivided families at Wei-hai-wei, the largest being that of a widow with a family of sixty-six, though this excellent lady has not attained the object of the highest ambition, which is to house five generations under one roof. No doubt this custom has much to do with the conservative character of the Chinese and the strength of family connections, against which alien influences beat in vain. If a Chinaman seems to change his views, it is highly probable that this is only a temporary adaptation under stress of circumstances. The census officer mentions that four years ago he was informed that in a certain village there were thirteen Catholic worshippers, but on going there he found that, the native priest having left, all the other twelve had reverted to their ancient persuasion, which is a sort of ancestor worship and is really more a system of customary observances than a religion.

One difference between the West and the Far East is that in the former, speaking generally, the males at birth are less numerous than the females, while in the latter the females are in the minority. In Wei-hai-wei there are 893 females to 1,000 men. The difference, applied to vast territories, encourages the

emigration of men. It has been suggested that the disproportion is apparent only in far Eastern countries, and may be due to the seclusion of women, but the case of Wei-hai-wei does not support this, as there is no such seclusion there. One little habit goes the other way; it is common for a Chinese mother to give a son the name of a girl, apparently to cheat the Fates, for it is a common and true saying that a girl is easier to rear. There are some other customs which are calculated to trick the enumerator. Thus a Chinese child just born is reckoned to be one year old, and as soon as it has entered on a new year it is two; so that it may be two years old when (European reckoning) it is a few days old. However, the year of birth is faithfully recorded, because the Chinese divide the year into cycles of twelve, each represented by a different animal, and all the people born in one year say they belong to the class of the corresponding animal. Thus the Chinese year representing 1876 was a year of the rat, and all born in that year or in any year arrived at by an addition of twelve or a multiple of twelve, belong to the class rat. The other animals are the ox, tiger, hare, dragon, snake, horse, sheep, monkey, fowl, dog and pig. Everyone has to remember his class for the purposes of betrothals, fortune telling, or choosing lucky days.

The work of administration in countries where there is a large native population is made difficult by the fact that the European ideal of life is one thing, and that of the natives another. The latter is what nature has made it. The bounty of a tropical climate does not stimulate work, and the idea of industrial productiveness is exotic. It follows that, as Sir Sidney Olivier observed in his paper laid before the Universal Races Congress, "African peoples generally are not at all suited by temperament or talent for that kind of industrial position as wage-workers under capital into which the proletariats of industrial European countries have come, nor does it appear to me at all desirable that they should, if they can avoid it, pass into that position or acquire in all respects the characteristics of the European wage-worker; but under present circumstances it appears that their powers of production cannot be quickly increased except under organised education by employers of the advanced or industrial race."

From their unwillingness to work, from an European standard, follow such devices as the hut tax and the *corvée*. The hut tax serves two purposes—it brings in revenue and it compels the native to do some work over and above what is necessary for his rudimentary wants. It may of course be abused, as may be the practice of compelling tribes to make roads and such works. However, Sir Charles Dilke, who was a keen critic of such matters, and reviewed

the cases, did not appear to condemn the *corvée* altogether so long as it is reasonably managed. He was more severe against the possible abuses of indentured labour, which no doubt is open to the objection that it takes the native from his home and generally from his family, and that full protection is difficult.

The difficulty of obtaining the conviction by a white jury of a white man who has killed a native has been much discussed recently, and there is a considerable body of opinion in South Africa that the present machinery is unsatisfactory. It may be frankly recognised that the trial of such cases places a very heavy burden on the jurymen in countries where the native population is very large, and a possible source of danger, and when there is a natural desire in the white community to stand by its own members. The jury system was not invented for such cases. It does not, however, follow that, because jurymen acquit the prisoner, they desire that he should go unpunished. They cannot bring themselves to give a verdict which necessarily entails the punishment contemplated by law, but they may have no particular objection to someone else in a responsible position doing so. The Rhodesian Agricultural Union has adopted a resolution that it views with the gravest concern the result of trial by jury in certain cases where Europeans and Natives have been in conflict, and recommending legislation substituting a tribunal of a judge and two magistrates or native commissioners for a jury, in cases where the High Commissioner is of opinion that justice would be best served by that course. It has been suggested that a better course would be to define the cases for such trial by statute, or to leave it to the High Court to decide, so as to remove the question entirely from the political to the legal arena. Many years ago it was found in Fiji that it was impossible to get a white man convicted by a jury, and other provision was made for the trial of such cases.

The reports recently issued on the results of the mineral surveys of Southern Nigeria and Nyasaland do not disclose any striking discovery, but countries which are so well off in the products of the soil can afford to do without mining. The present prosperity of Southern Nigeria is indicated by the trade and revenue returns, and there is abundant indication that the vast possibilities of the country are only beginning to be realised. The Sierra Leone annual report points out that the quantity of oil exported is small in comparison with the quantity of kernels exported, from which it is inferred that there is much waste in the extraction of oil. The remedy for this is the installation of central palm oil factories, and this will no doubt be adopted eventually wherever there is a large

palm tree area and good transport. Methods of conservation will well repay study in this and other matters. In the old days of tribal wars the forests had intervals of rest which enabled them to get over destructive ways of farming, but now the results in many parts are disastrous; the trees are cut down to make room for crops, and when the humus has been used up it is not re-made, and eventually the land becomes pure savannah. In Sierra Leone ninety-nine per cent. of the rain forests have been destroyed by the natives in their wasteful methods. The consequence is that the rainfall is lessened, and the usual native crops are seriously interfered with.

BLACK AND WHITE IN SOUTH AFRICA.

Inter-Racial Problems, Edited by G. SPILLER. (*P. S. King & Son*, 7s. 6d.)

Black and White in South-East Africa. By M. S. EVANS, C.M.G. (*Longmans, Green & Co.*, 6s. nett.)

The British Electorate rules over many millions of subject races, but it is not in contact with them. It knows little of these peoples and has no pronounced racial prejudices or aversions, and has no occasion to be on its guard against a large alien element in its midst. It is therefore largely in sympathy with the doctrine of equal rights, nor is this feeling by any means confined to Great Britain. The papers laid before the Universal Races Congress show that there is a widespread body of thinkers who lay stress on the brotherhood of man and bring in much scientific research to prove that the resemblances between all races of mankind are great and the differences small, the conclusion being that all barriers should and will be broken down with a view to mankind becoming one great family. Thus we find elaborate arguments that the human race is of monogenetic origin; and that though various types have been evolved these are unstable, and there is no hereditary superiority of one type over another. The physical investigation begins with the Neanderthal man, and it is shown that the nearest living representative of this type of "*homo primigenius*" of Western Europe is the modern black Australian native. It is inferred from such facts that "there is only one species of man"; and the corollary is added by Ratzel that "the variations are numerous, but do not go deep." This school goes on to contend that the intellectual, moral and physical differences have been brought about by privation and plenty, and other accidental causes of unequal conditions, and concludes that "an impartial investigator would be inclined to look upon the various important peoples of the world as, to all intents and purposes, essentially equal in intellect, enterprise, morality and physique." If an uncivilized man of a race not markedly degraded could be put wholly in the place of a European, it is urged that

he would quickly throw off his old civilization, such as it was, and assimilate the new. "Races show nothing but skin-deep differences. Differences of language, of religion, of manners and customs, are nothing but accidental modalities attendant on the respective historical evolution in the past—in no way sufficiently powerful to efface the substratum common to all humanity, and in no way tending to hinder any co-operative effort in the fulfilment of the mission common to mankind in general."

From a scientific point of view evidence is accumulating that the physical characteristics which distinguish races, such as the shape of the head and the character of the hair, are not so stable as used to be believed, but are rapidly influenced by a change of environment. It is in fact not the race but the locality which in the long run fixes the type, nor do the most successful races show the highest physical evolution in all respects. All have become adapted to their surroundings under the law of the survival of the fittest, and just as the physical differences on close examination are found to be comparatively superficial and changeable, so far no doubt the variations in character and intellect are not really so deep as used to be popularly supposed. The differences of necessity and opportunity account for most of the distinctions. Uncivilized races may be indolent, but generally they are fully as active as their circumstances require. The view, therefore, that the lower races mark a transition stage in the evolution of man is now generally discarded. It is obvious enough that some countries are much more backward than others; but if it is recognized that human differences are not fundamental and that it is a mistake to judge any race by its static condition instead of allowing for dynamic movements, the inordinate pride of race which has placed a great gulf between white and coloured nations is discouraged.

Nationalism first arises where nature gives fixed boundaries and a sense of security. It was first developed in Greece and Italy, which are protected by the sea and mountains, and in modern times the insular position of England gradually brought about a national life, the type of which has been exported far and wide. In Africa the remarkable lack of natural boundaries has prevented evolution of this kind. In large countries again the manifestations of nature are on a vast scale; floods and earthquakes make man humble, and it is not in such lands that one would expect the formation of the individualism which is at the root of Western civilization and which requires freedom for its development. The native in countries where life is insecure has felt it necessary to protect himself, as much as he can according to his lights, by a mass of social regulations. He is in fact hide-bound by customs, the origin of which he has forgotten. The difference between

his position and that of the European is enormous. But it by no means follows that there is any great difference of thinking power. But when all this is admitted, the fact remains that, from a practical point of view, men have to be taken as they are, and the distinctions, however they arose, and however accidental, have a powerful effect socially and politically. Arguments drawn from the geological ages have no effect on this point. There is, on the modern facts, little reason to suppose that the progress of coloured races in education and morality will tend to destroy racial prejudice. It is futile to argue that their assimilation to European standards will make them acceptable to white societies when it is clear that this advance aggravates instead of diminishes the hostility. The argument assumes a nobility of character which is, in fact, mostly conspicuous by its absence. The greatest illustration of the subject is given by the United States, and a very interesting statement of the position there is given by Dr. Bu Bois in Mr. Spiller's volume. He shows "that there has grown up a Negro world in America which has its own economic and social life, its churches, schools, and newspapers; its literature, public opinion, and ideals. This life is largely unnoticed and unknown even in America, and travellers miss it almost entirely. The average American in the past made, at least, pretence of excusing the discrimination against Negroes on the ground of their ignorance and poverty and their tendencies to crime and disease. While the mass is still poor and unlettered, it is admitted by all to-day that the Negro is rapidly developing a larger and larger class of intelligent property-holding men of Negro descent; notwithstanding this more and more race lines are being drawn which involve the treatment of civilized men in an uncivilized manner. The argument of those who uphold this discrimination is based primarily on race. They claim that the inherent characteristics of the Negro race show its essential inferiority and the impossibility of incorporating its descendants into the American nation. They admit that there are exceptions to the rule of inferiority, but claim that these but prove the rule. They say that amalgamation of the races would be fatal to civilization and they advocate therefore a strict caste system for Negroes, segregating them by occupations and privileges, and to some extent by dwelling place, to the end that they (*a*) submit permanently to an inferior position, or (*b*) die out, or (*c*) migrate.

"This philosophy the thinking Negroes and a large number of white friends vigorously combat. They claim that the racial differences between white and black in the United States offer no essential barrier to the races living together on terms of mutual respect and helpfulness. They deny, on the one hand, that the large amalgamation of the races already accomplished has produced

degenerates, in spite of the unhappy character of these unions; on the other hand, they deny any desire to lose the identity of either race through intermarriage. They claim that it should be possible for a civilized black man to be treated as an American citizen without harm to the Republic, and that the modern world must learn to treat coloured races as equals if it expects to advance.

"They claim that the Negro race in America has more than vindicated its ability to assimilate modern culture. Negro blood has furnished thousands of soldiers to defend the flag in every war in which the United States has been engaged. They are a most important part of the economic strength of the nation, and they have furnished a number of men of ability in politics, literature, and art, as for instance, Banneker, the mathematician; Phillis Wheatley, the poet; Lemuel Haynes, the theologian; Ira Aldridge, the actor; Frederick Douglass, the orator; H. O. Tanner, the artist; B. T. Washington, the educator; Granville Woods, the inventor; Kelly Miller, the writer; Rosamond Johnson and Will Cook, the musical composers; Dunbar, the poet; and Chestnut, the novelist. Many other Americans, whose Negro blood has not been openly acknowledged, have reached high distinction. The Negroes claim, therefore, that a discrimination which was originally based on certain social conditions is rapidly becoming a persecution based simply on race prejudice, and that no republic built on caste can survive.

"At the meeting of two such diametrically opposed arguments it was natural that counsels of compromise should appear, and it was also natural that a nation whose economic triumphs have been so noticeable as those of the United States should seek an economic solution to the race question. More and more in the last twenty years the business men's solution of the race problem has been the development of the resources of the South. Coincident with the rise of this policy came the prominence of Mr. B. T. Washington. Mr. Washington was convinced that race prejudice in America was so strong and the economic position of the freedmen's sons so weak that the Negro must give up or postpone his ambitions for full citizenship and bend all his energies to industrial efficiency and the accumulation of wealth. Mr. Washington's idea was that eventually when the dark man was thoroughly established in the industries and had accumulated wealth, he could demand further rights and privileges. This philosophy has become very popular in the United States, both among whites and blacks.

"The white South hastened to welcome this philosophy. They thought it would take the Negro out of politics, tend to stop agitation, make the Negro a satisfied labourer, and eventually convince him that he could never be recognized as the equal of the white man. The North began to give large sums for industrial

training, and hoped in this way to get rid of a serious social problem.

"From the beginning of this campaign, however, a large class of Negroes and many whites feared this programme. They not only regarded it as a programme which was a dangerous compromise, but they insisted that to stop fighting the essential wrong of race prejudice just at the time was to encourage it.

"This was precisely what happened. Mr. Washington's programme was announced at the Atlanta Exposition in 1896. Since that time four States have disfranchised Negroes, dozens of cities and towns have separated the races on street cars, 1,250 Negroes have been publicly lynched without trial, and serious race riots have taken place in nearly every Southern State and several Northern States, Negro public school education has suffered a set back, and many private schools have been forced to retrench severely or to close. On the whole, race prejudice has, during the last fifteen years, enormously increased.

"This has been coincident with the rapid and substantial advance of Negroes in wealth, education, and morality, and the two movements of race prejudice and Negro advance have led to an anomalous and unfortunate situation. Moreover, many careful thinkers insist that, under the circumstances, the 'business men's' solution of the race problem is bound to make trouble; if the Negroes become good cheap labourers, warranted not to strike or complain, they will arouse all the latent prejudice of the white working men whose wages they bring down."

From this it would appear that the hostility of the whites is chiefly based on economical grounds, and is the same in principle as that shown in other places where the working man resents the intrusion of any emigrant who will compete for his work. The logical result of this attitude is the segregation of the coloured race as far as possible, and if the clash of the two elements does in fact produce a feeling of hate and a state of disorder there is much to be said in favour of the policy as, at any rate, better than mob violence. In the United States this solution, though frequently discussed, is made practically impossible by the large blending of the two communities in industry which has taken place. In South Africa the conditions of life have not been so far fixed as to put the discussion out of court, and the main contention of Mr. Maurice Evans is that a substantial increase of segregation is the proper remedy for the native difficulty in that country. We do not find in this volume, sympathetic as the writer is with the natives, any trace of the doctrine that racial differences are slight and can be easily extinguished. On the contrary, Sir Matthew Nathan, who contributes an impressive preface in general approval of Mr. Evans' object, remarks that the underlying idea of his

work is that there are essential mental and spiritual, as there are obvious physical differences between the Abantu and the European, and that it will be more advantageous to both races if the natives are consciously developed on lines indicated by their characteristics, than on the assumption that their intelligence and natures are those of white men. This idea seems to imply that there is a fundamental difference between the two natures, so that one mode of education is suitable to the black and another to the white. But Mr. Evans' pages would, we think, be searched in vain for proof of these propositions. The white race in South Africa has to maintain its dignity before the natives, and the trouble is that many members of it fail to do this. Ordinary domestic servants from England, for instance, do not appear to feel that there is any particular difference between themselves and the native article, and this is considered in South Africa as a vital objection to their employment. Higher up the scale the intellectual difference is of course obvious, but at this point the question of training and opportunities comes in. No doubt the primary education of the natives should be something very different from that imparted in the board schools of this country. It should be based on the conditions and requirements of the place. For that matter the same policy is being suggested for the agricultural districts of this country, and we are gradually coming round to the view that the boy or girl is best developed by being interested in what lies before them. Methods of education are in fact still *sub judice*, but whatever kind is selected for natives the lines followed would be European, and would be based on the belief that, however different the customs are, the intelligence and nature of the natives are much the same in character as those of white men. The trouble is, in fact, not that it is difficult to educate natives, or that it is necessary to manufacture any distinguishing method for them, but that as fast as they are educated they compete with the whites; in other words, it is not that European education fails, but that it succeeds. The trained black man, Mr. Evans remarks, may make life more difficult for the white worker in trades and handicrafts. The result is to intensify race prejudice. Mr. Evans urges a policy of segregation in order to keep the industrial and social life of the two communities as far as possible apart and so reduce racial hostility. Another object is to escape from the franchise difficulty. In the Cape Colony no distinction was made when responsible Government was granted between black and white, but later on an educational and property qualification was introduced, with the effect of keeping down the native voters to a comparatively small figure—about 14,000 mixed and 8,000 black out of a population of nearly a million and a half. In Natal, practically, and in

the Transvaal and the Orange Free State openly, the native is for this purpose put aside. The Earl of Selborne suggested that the solution of the problem might be found in a "civilization test," a native to be admitted to the franchise on proof that by his general standard of living and conduct he was a civilized man. This is eminently reasonable if the object is to bring the races closer together. But this is just what the white population as a whole wishes to avoid, nor are the natives themselves at all desirous of it. Lord Selborne said of the Basutos, "the one thing they most desire is to be left alone." Their spirit is very much like that of the Turkish Cadi, who, Lord Sanderson recently related, wrote to Sir Henry Layard in reply to a request for statistics: "My illustrious Friend and Joy of my Liver, the thing that thou askest is both difficult and useless," and added, "Of a truth thou hast spoken many words and there is no harm done, for the speaker is one and the listener is another. After the fashion of thy people thou hast wandered from one place to another, until thou art happy and contented in none. We (praise be to God) were born here and never desire to quit it. Is it possible then that the idea of a general intercourse between mankind should make any impression on our understanding? God forbid!"

The many evil results of a superficial contact with civilization are obvious enough. On the other side, the presence of a large native population has effects which permeate the whole life of the white community and which prevent the growth of a class of white workers, such as forms the foundation of society in progressive countries. "The class which in European countries, the other British Colonies and the United States, must live hard and work hard, whose livelihood depends on labour which is an imperative discipline, which tightens the fibres, and hardens the muscles, does not exist in South East Africa. Men of this class do come to the country, often unaware of the special conditions here, quite prepared to toil in the way they have been accustomed to do all their lives, but they never do so in South East Africa. Even if they desired so to do, the place and opportunity is not open to them, the custom of the country forbids it, and although they may take off their coats and roll up their shirt sleeves, it is simply force of habit, not to labour as before, but to supervise the black man. Their hard hands become soft, their muscles flaccid, as compared with their peers in the lands they have left. It matters not whence they came, Norway, Germany, England, Scotland, Ireland, Australia, Canada, New Zealand: we have had them all and all fall under the spell."

It can therefore be readily understood that to many students of the question segregation for the mass of natives is the only

remedy. It is not of course suggested that it should be a hard and fast policy; the mines and the farms must have labourers, and some of the natives acquire a liking for emancipation from tribal rule and the freer life of the white settlements. The principal difficulty is to find the land in areas large enough. This might be overcome by reducing the excessive wastefulness of present agricultural methods. The object, as set out by Mr. Evans, is admirable. It is to make "the black man's land one attractive to him, freeing him thus from the irritation and overlordship of individual whites, and giving him every opportunity for personal and race development." A practical importance has been given to the idea by its having been adopted, in principle, by the South African Native Affairs Commission. The only doubt that we suggest is whether any artificial arrangements of this kind can last long, in view, firstly, of the sacrifices which would be required from both sides; and, secondly, of the strong influences which are permanently at work to make each race useful to the other. The social situation is not what it is in the United States. The natives have not borne the stigma of a servile race. In the oldest colony the different classes of the population have settled down amicably to a common life. It is not so in Natal, but Natal is young. How the Cape strikes a Natalian is vividly described by Mr. Evans. "The mixed coloured population of that city and neighbourhood is a feature that deeply impresses him. He sees a mixture of races to which he is quite unaccustomed. Hottentot, Bushman, Mozambique black, Malay, and other peoples from the Far East, liberated slaves from West and East, Abantu and European all fused, in varying proportions, to make the coloured Cape people of to-day. At one end of the scale he sees men and women almost white, well educated, well spoken, well dressed, courteous and restrained in manner, and at the other end of this colour scale some whom he considers inferior to the ordinary native or Indian coolie of his home. He hears that it is quite a common thing for the European immigrant introduced for railway and mechanical work to marry, even to prefer to marry, women of colour, and is told that at the other end of the scale there is reinforcement from the black side. He sees a toleration of colour and a social admixture to which he is quite unaccustomed; it is evident in the streets, on the tramcars, in the railway stations, public offices, and in places of entertainment. Should he take a walk in Plein Street, on a fine Saturday evening, he will witness a sight impossible in an Eastern town such as Durban or Pietermaritzburg. The street is crowded, footway and roadway alike full of strollers, all shades and all colours, but generally speaking, all neatly dressed and all well behaved. As a rule whites and coloured people keep apart and do not mix, but there are very

many exceptions; he will, for instance, not infrequently see cases corroborative of the miscegenation between the races of which he has been informed. Young white men will be seen walking with well-dressed coloured girls, and an older European may often be seen with coloured wife and children of varying shades, taking the air, and gazing in the shop windows. The doors of a bioscope entertainment are open, and the crowd waiting admission and jostling each other as they get tickets, includes representatives of every colour, from the light-haired fair complexioned Scandinavian sailor, or English workmen, to the sooty-black of the Shangaan, and if he enters the overcrowded room and braves the foetid atmosphere, he will find no distinction made, all and any colour occupy the same seats, cheek by jowl, and sometimes on each other's knees."

It may reasonably be asked whether such results are not inevitable in the long run. It may be conceded that there is much to be said for the policy of segregation for those natives who desire to dwell apart, provided the restrictions are not onerous; but present indications point to the native coming more actively into the field of European labour. At present every white worker requires two natives to help him, the proportion of European labour in Cape Province being one-third, and it is a general experience that young coloured men are keen to learn trades. The necessities of the European and the ambitions of the native article tend to cause larger and larger numbers to dwell side by side.

REVIEWS AND NOTICES.

The Great Plateau of Northern Rhodesia: being some Impressions of the Tanganyika Plateau.—By CULLEN GOULDSBURY, of the British South Africa Company's Administration, and HUBERT SHEANE, F.R.A.I., of the Company's Service (*Edward Arnold*. 16s. net.)

The Great Plateau lies on the backbone of Africa, varying in height from four to six thousand feet above the sea, and begirt by the four great lakes of southern Central Africa. It is the altitude of these thousands of square miles which created the hope that they would become the home of emigrants from our crowded isles. This was Mr. Rhodes' aspiration, and clearly this was a very different country from the malarial swamps and rivers of other parts of Africa. Whether the nerves of the white man will stand the tropical sunshine remains to be seen, and perhaps there is not so much confidence now as there was a few years ago. So far there is a mere handful of white men and women in this territory. There are no big movements or vital questions, but quietly the work of administration goes on. The present volume gives a picture of the life led by the small band of workers. In a way it is a lotus-life. It is not troubled by tourists, or public works, or any form of modernity. It is only reached from outside by the native carrier. There is no Dutch element here, and there has been no native rising. There is nothing much to trouble about, but, at the same time, the man who lives in such a primitive wilderness has always the feeling that he is in the grip of elemental forces. The writers point out how this fashions the ideas of the inhabitants. Everywhere there is a suggestion of infinite space, of utter, vast loneliness. Here and there are little patches of human life, and around the inscrutable silence of the virgin land, where great beasts move noiselessly in the twilight, and every twig and blade teems with insect life.

"And so, to one who knows the land and its majesty, what might otherwise appear mere pagan superstition becomes natural, necessary, inevitable. The religion of the people—if, by such a

term one may designate the network of custom and belief with which their lives are ensnared—has been evolved under this stupendous weight of Nature's influence. Man, here, has no false views as to his capabilities. He is a mere atom in the everlasting scheme—a pawn in the game of the great gods. What wonder, then, that he should seek, by any means that may occur to him, to propitiate these unknown forces which rule the air and the land and the deeps beneath? Fetishes, spirit-worship, the propitiation of ancestors—what are they but the natural instinct to stand well with the powers that hold him in their hands?

"It has become traditional to invest the native of Africa with the attributes of a good-natured, happy child. Smiles, laughter, neglectfulness, carelessness of what the morrow may bring—these are, it would seem, the signs by which we may know him. But is it really so?

"Watch the face of the adult native in repose. Surely in the dark eyes there is a kind of unconscious sadness? Are there not lines upon the forehead and about the mouth that seem to argue an incessant anxiety, unrecognised, perhaps unfelt, yet none the less existent? May it not be that he, too, feels that pressure of the illimitable spaces—knows that Nature rules, and that it is futile to kick against the pricks?"

The operation of this feeling is shown in the respect for law, the severity of punishment for infringements of it, and the corporate responsibility for illegal acts. Every precaution that can be taken is taken. The accused is invariably considered guilty until proved innocent. Property and personal rights count for little as such: the gravity of an offence is not that it is a crime causing damage, but that it is a sin against religion and morality. Nor to the native man is verbal evidence much to be relied on. He knows well enough that lying and collusion are easy. Hence the practice of the ordeal and the arts of the medicine man. The advent of white man's law is therefore attended with some difficulties, and the position of the Native Commissioner is no sinecure; but the task is facilitated by the quiet and contentment of the country, and most of the dissensions now relate to the eternal feminine. The natives practise polygamy, but in practice women are well protected. "Divorce is an easy matter, and the native woman's parents are only too ready to take her back with open arms. While, if their son-in-law is not attentive to them, and does not work in their gardens, they will take the initiative themselves and remove their daughter. Among the majority of tribes, indeed, it was imperative for him to move into the parents' village, where his mother-in-law would be at hand to keep him up to the mark. The Wemba mother-in-law is always ready to take up the cudgels on behalf of her daughter—and, indeed, she

possesses, in a sense, the virtue and advantage of immortality, since on the decease of the true mother her sister succeeds to the title and exacts the same respect from her son-in-law. The fierceness of the Wemba woman is proverbial. On several occasions one of the writers has been awakened in the middle of the night by a much-bitten husband, who has plaintively asked that he may be placed in gaol until morning, as the only safe place from his wife, who was pursuing him like an avenging fury."

The social habits and customary law of such a country will have a great influence on the religious question. Paganism is doomed, but how far Christianity or Islam will prevail is a matter on which opinions differ. At present in Africa things are tending toward Mohammedanism. Polygamy has something to do with this, but, perhaps, the more solid reason is that the Koran doctrine is that religions must be suited to the peoples, and the Mohammedan system is to graft on the native worship.

The writers give a lucid description of the natives' ideas and habits, and a detailed account of the life of the white official, including his domestic requirements, which would be appreciated by all who dwell in similar circumstances. The country will not be a lotus-land much longer. The railway approaches. When it arrives, the whole situation will change. The white population will rapidly grow, for the soil is rich and labour is plentiful. The bugbear is Sleeping Sickness, but in countries where this is of long standing the mortality is nothing like that caused by cholera and plague in India. The terrible visitation in Uganda has alarmed the world, but on the Plateau the bulk of the population is away from the lakes.

Secret Service in South Africa.—By DOUGLAS BLACKBURN and CAPT. W. WATTHMAN CADDELL (*Cassell & Co.*, 10s. 6d. net).

The "Secret Service" of this entertaining book includes all the subjects which had to be dealt with in a more or less secret manner in South Africa, in the 'eighties and 'nineties, such as the illicit liquor trade, illicit gold and diamond buying, the "Third Rand," the Jameson Raid, and the Boer preparations for war. There is no doubt that the writers had abundant opportunities for seeing how things went on under the surface, and as rogues and vagabonds swarmed through this period, and conspiracy, of one kind and another, was always in the air, they have no lack of material. How far it is all true it would be hard to say, but the narratives are given so circumstantially that they wear a strong appearance of credibility. The illicit liquor trade is described as based on a system of wholesale bribery. As is generally the case when the traffic is

against the law, the drink sold to the natives was of atrocious quality. The natives in fact preferred this sort. They would not pay for liquor that did not show speedy effects, and such tonics as sulphate of copper, alum, cayenne pepper and green chili were added to supply the demand for a drink that would bite. It was a poor sample, it is explained, that would not raise a blister on a saddle within an hour. The price for an ordinary tot was anything from sixpence to half-a-crown, and two tots had to be enough for the desired effect. The profits were of course enormous. There was also, it may be added, a good deal of hard drinking among the whites, except the Boers. Another field for rascality was the illicit labour business. The writers observe that the general public does not grasp the vital fact that, despite the existence of a teeming native population, only a very small percentage of the males will, or need work. From their communal system and the fewness of their wants they are born to a fairly easy livelihood. As time went on the supply fell far short of the demand created by the striking advance of the Rand, and abuses began to occur, with the result that Natal prohibited recruiting for the Rand. Then the "illioits" made their appearance, and added the variation of wholesale robbery of the unfortunate "boys." It is satisfactory to find that the worst evils were put down; the remedy used was the lash, and it seems to have been effectual. There was no extradition from the Transvaal, and this immunity led to the selection of that country by a number of undesirables who reflected no credit on their country of origin. Frequently they took Kaffir wives and became social outcasts. In the higher realm of Transvaal politics, the stories told of President Kruger, the corruption of the Third Rand, the Jameson Raid, and the Boer preparations for war, will certainly secure the attention of the reader. On the whole, the picture is far from being a pleasant one from any aspect. There was an immense amount of trickery and corruption, and from this arose a spirit of unrest and conspiracy which naturally led to social confusion and prepared the ground for war. The book, like Mr. Hyatt's "Off the Main Track," is a valedictory review of a past state of things, but the period is still fresh in memory, and full of interest, and such a collection of circumstantial narratives about important events is rare indeed.

John Boyes, King of the Wa-Kikuyu, written by himself
(Methuen & Co., Ltd., 12s. 6d nett).

This book relates a career which reminds one of the travels of Gulliver and the adventures of Robinson Crusoe, with the difference that it is a story founded on fact, and has taken place in our own time. The author began life, as might have been expected, by

running away from home and going to sea, and in due course found himself at Durban. With a scent for favourable opportunities, which was evidently instinctive throughout life, he arrived at Bulawayo at the time of the Matabele campaign, and duly joined the Matabeleland Mounted Police. This episode over, he got to Zanzibar and from thence to Mombasa, where he was received with scant courtesy, and advised to leave the country. It need hardly be observed that Mr. Boyes did not accept the advice, and as the Uganda railway was being built he decided to organise a transport service, for which, in fact, there was plenty of room. The officials, it appears, tried to stop him—a fact which, he remarks, may have been due to there being no organized administration in the country, but was “peculiarly consistent with the Downing Street policy which prevails pretty well throughout our African dependencies, and which seems to be based on the principle that—in the eyes of Colonial Office officials—a native is more to be considered than three white men.” We always like to quote any lay criticisms of official policy, and it may perhaps be conceded that the authorities might have known that Mr. Boyes could take sufficient care of himself. At any rate, if the above equation represents the official belief, Mr. Boyes was never under any such delusion himself. He presented himself calmly to the Kikuyus, and ingratiated himself with them by helping them to defeat their enemies. He established his position as a Medicine Man by the ingenious use of Eno’s fruit salts, which the natives would come in crowds to watch him drink, saying that the white man could drink boiling water. He organised the natives on sound military principles. Previously they had observed no sort of formation in their attacks, but simply made a mad rush at the enemy. Mr. Boyes taught them to keep together, forming a line with their shields together, and to select their ground. These classic methods succeeded *à merveille*. Out of many instances we quote the following to show how Mr. Boyes won position and fame. “A large body of warriors came boldly on, never thinking that we were waiting for them, and no doubt expecting the same easy victory that they had had on previous raids. But a big surprise was in store for them. Owing to the narrowness of the path, they could only approach in single file, and we waited until they had almost reached the top before letting them know we were there. I had given strict orders that no man was to make a move, or utter a sound, until I gave the signal by firing my rifle. Coming steadily on, they had got close upon us when I fired, and my rifle-men opened on them at once, while the bowmen followed the volley up with a flight of poisoned arrows. The invaders were taken completely by surprise, and before they could recover themselves the Kikuyu warriors swept down on them with swords and spears. Bolting in a mad panic, they were hotly pursued down the

mountain-side, suffering severely in their flight. Arriving at the river, they found that the bridge was gone, and many of them jumped into the stream, of whom some got safely across, but a good many were drowned on the way. At least fifty had been killed, and many wounded, and these I gave orders were not to be killed, but brought in as prisoners, of whom, when all were collected, we had a very large number, so that the victory was altogether complete, while my force had suffered only very slight loss." It appears, however, that it is necessary, in order to maintain kingship in such circumstances, to add other feats to those of war. Mr. Boyes' accomplishment was his gift of swallowing native poisons, if not with relish at any rate with impunity. "My thorough defeat of their sworn enemies, the Masai, had given me a great reputation among them, which was increased by their belief that it was impossible to kill me, a belief which had been strengthened by my defying the witch doctors to poison me, and swallowing, in their presence, samples of what they considered their most deadly poisons without any ill effects. In consequence of the reputation I had thus gained my word was law, and I advised them that it would be greatly to their advantage to stop quarrelling and fighting among themselves, which advice I backed by severely punishing any one I caught quarrelling. With regard to my singular immunity from the effects of the poisons of the native witch doctors, it is, perhaps, difficult to find a satisfactory explanation. Whenever I met a witch doctor I always insisted on sampling any poisons he might have with him, which were always prepared with honey, and appeared to me to be a mixture of honey and the ashes of burnt herbs—a black, sticky mess—and though not, perhaps, the most appetising morsel one could choose, yet not so unpleasant to the taste as to be objectionable. But, in spite of the opportunities thus offered them to get rid of the one man in the country whom they both hated and feared, I never felt the slightest ill-effects from these experiments." Not many men, we imagine, would care to run the risk. It is regrettable to have to add that, in due course, the Protectorate authorities sent officers to arrest Mr. Boyes. Not only had he levied war, but in all expeditions his men carried the Union Jack. Mr. Boyes argued that he could not very well fly the Russian flag or any other except that of his own country, but we presume that this view of the matter was not accepted. Finally he was brought to Mombasa and tried for "dacoity," but we are pleased to find that he was acquitted, and left the court-house, as the judge said, without a stain on his character. Probably he did good service, however irregular the way, in preparing the country for the advent of the white race. His courage and resource were splendid, and no doubt greatly impressed the natives. The book itself is full of interest from beginning to end.

Java, Sumatra, and the other Islands of the Dutch East Indies. — By A. CABATON, translated and with a preface by BERNARD MIALL (*T. Fisher Unwin*, 10s. 6d. net).

The Dutch East Indies not only constitute one of the finest colonial possessions of Europe, but are clearly destined to play an important part in the racial struggle in the East. Java alone is more thickly populated and wealthier than Cuba, to which it is often compared, and all Central America together. Its productiveness has been developed by Holland with remarkable patience and sagacity. Not much has been written on the subject, and the present work is by a Frenchman. No doubt the Dutch have succeeded in keeping the possessions more to themselves, so far as other Europeans are concerned, than has been the case elsewhere. But the Botanical Institute has a world-wide fame, and is indeed without a rival. A budget of agriculture amounting to £600,000, devoted to the introduction of new crops and the improvement of those in existence, testifies to the thoroughness with which the yield of the soil is studied. The natives, who number nearly 30,000,000, are not all Javanese, as there are considerable numbers of Malays, Sundanese and Madurese, but they form the immense majority, and their gentle and sociable character has greatly facilitated the work of the Dutch. In Sumatra the almost interminable Achinese war still lingers, but there a different race, probably of Hindu origin, is encountered. The Javanese are probably the most prolific race in the world, and though at present they are lacking in energy, at any rate, in the eyes of European employers, there are signs that they see the value of Western civilization, and are beginning to demand opportunities of acquiring it. The author remarks that the Javanese aristocracy are far from crying "Java for the Javanese," because, at the present moment, such a cry would be a piece of fatuous vanity. What they do cry is "Give us light!—light under the maternal ægis of Holland." He is quite clear that the administration by the Dutch has been vastly for the good of the country. Two characteristics of it stand out, both showing that it was not designed to interfere unduly. One is that no attempt was made to encourage proselytism. The zeal of the missionaries in early days was carefully checked; the authorities preserve a wholly neutral attitude in religious questions. Another is that no attempt has been made to impose the Dutch language. Possibly this was due in the last two centuries to the idea that the dignity of the rulers would be best preserved by keeping the language to themselves. The official language is Malay, which owes this position to its greater facility and its wide diffusion in the East. There is now, however, a cry for education in Dutch, and for a scheme of education which would extend to scholarships, bringing the best students to the schools of Holland. This

movement is now, it is said, well afoot, and no doubt, if a road is provided to the summit, the education of the Javanese will be greatly improved from the beginning.

As to the political development of the country, the following remarks may be cited from the conclusion, as British administration is of much the same character:—"Even though the moral and intellectual qualities of the people of the Indian Archipelago, and of the Javanese and Malays in particular, may justify their hope of a freer future, it is very difficult to imagine that a common destiny could be shared by races so different, and ranking so unequally on the scale of civilization, without either cohesion or unity. With all these peoples the political sense is very rudimentary. The Malays and Javanese were able to rise from the anarchical conception of semi-barbarous tribes always at war to that of a host of autocracies, brutal and conquering powers; but not to the idea of a nationality, or even of a federation of states united by ethnological or linguistic affinities. This mental disability, which delivered them up to the Europeans, renders them still incapable of gaining freedom except at the cost of falling back into anarchy.

"Thus the European theory that 'the natives should be left to arrange matters between themselves' is simply puerile. The only way in which people 'arrange' matters in any part of the world—but especially in the Far East—is, as history shows, by crushing the weak. The natives of Indo-China 'arranged matters' by subjecting the Shans and the Cambodians to the brutal tyranny of the Annamites; the people of the Indian Archipelago 'arranged matters' by means of Malay and Achinese invasions, chronic piracy, head-hunting, ritual murders, incessant warfare and depopulation, and mental degeneration on every side. To pretend that a European domination, even with its regrettable blunders and failures of justice, is not for the good of such peoples, is to deny the past, to deny the petition of the victims in favour of the complaint of the privileged despoiled of their privileges."

Nigeria: its Peoples and its Problems.—By E. D. MOREL
(*Smith, Elder & Co.*, 10s 6d. net).

This volume gives a collection of very interesting articles which appeared in the *Times*, with one on cotton which appeared in the *Manchester Guardian*. Mr. Morel was a keen and appreciative observer of all that was to be seen on his travels, and his description of the scenes through which he passed are always vivid and picturesque. He has also thought much about native life and ideas, and there is a touch of spirituality in his treatment of the problems which gives a high tone to his discussions. It is easy to understand that to such a spectator the policy of the West African adminis-

trations may seem a thing of shreds and patches. He sees the results, but not the great practical difficulties which have beset every important step. He criticises, for instance, the adoption of a narrow gauge for the Baro-Kano railway. There is no reply to his criticism, except that if the narrow gauge had not been accepted the railway would not have been built at all. The leading feature of the work is the consideration given to the native, with whose future Mr. Morel is genuinely concerned. We gather that his solution is a technical education which will not anglicize the native, but leave him to develop in his own way. The same idea is being put forward by other writers, all of whom are sensible of the fact that the breaking down of native restraints is mischievous in many ways. But we do not find any attempt to wrestle with the points that great numbers of natives, West Africans not the least, do not want to be, and are not fitted to be, artisans: that great numbers, living as they do, cheek by jowl with whites, must and will be educated generally on European methods: and that, putting aside technical education, which is the same for everybody, and religious education, which is not in question, no one has shown how the native is to be developed on his own natural lines, whatever they may be, and in such a way that he will not be infected with "Anglicization." But whatever may be thought of such questions, Mr. Morel's treatment is always suggestive, and his ideal uniformly high.

"By Flood and Field."—By A. SEAREY (*George Robertson & Co., Australia.* 5s. 3d.)

The interest in the Northern Territory, a domain of 340,096,000 acres, is growing in Australia, and this book of the experiences of a real pioneer will stimulate it. Apparently there is no lack of rich country and fine scenery. "A turn of the head, and the eye would rest, say, on a series of lagoons where beautiful lotus-lilies slept on the mirror-waters, and water-fowl revelled in the comfort of their translucent realm. A glance in yet another direction would discover vistas of superbly-rich valleys, musical with the murmur of water-falls and the song of birds; and beyond these again the great winding rivers with their fringes of giant trees. Around us were kangaroos, mobs of wild cattle and untamed horses, sometimes feeding quietly, as if they knew nothing of fear; at other times starting and staring at us before stampeding across the plain." Perhaps our sportsmen will presently be tempted to investigate a region which lends itself so readily to adventure. The instinct for sport is, no doubt, well represented there already, judging from the following story:—"They bury men up there casually. When the coffin arrived at the grave-side, on one occasion, it was found that a wild cat had taken possession. A terrier showed fight, after the nature of his kind. One old gentleman remarked: 'I'm sure Dick

(the dead man) won't mind waiting a bit. Indade, it's himself would like to be standing up to see the fun, God bless him !' " The fun started. " Both animals had their backers, and numerous bets were made by the crowd as it raged round the grave. The contest was short, sharp, decisive, the cat 'going under,' but not until it had inflicted severe punishment on its adversary. The dog was then hoisted out of the grave, the fellows immediately became fittingly solemn, and the burial of poor old Dick was proceeded with."

Behind the Ranges. Parenthesis of Travel.—By F. G. AFLALO (*Martin Secher*. 10s. 6d. net).

Mr. Aflalo discusses the commonplaces of travel, the ordinary experiences of boat and train, cakes and ale, the pleasures and the discomforts of long journeys. He does not affect to have many serious things to say, but his topics are those which interest the majority, and there is a good deal of experience behind his comments. Travelling may be said to have begun with the pious pilgrimages of medieval times, and though, no doubt, somewhat vulgarised now by being made easy for everybody, it has a greater educational influence on the world than is generally realised. Mr. Aflalo's pleasant pages will help the old traveller to enjoy his experiences again.

The Irrigation of Mesopotamia, with Plates in Portfolio.—By SIR W. WILLCOCKS, K.C.M.G. (*E. & F. N. Spon, Ltd.* 20s. net).

An irrigation scheme by so well-known an authority as Sir W. Willcocks has an interest for other countries which have similar problems. Mesopotamia is an old example of irrigation. The giant banks of old canals and the ruins of ancient towns are met constantly. In classical times the country was studded with "a vast number of great cities," and these depended for existence on irrigation. The soil lent itself to the work, as it contains a large amount of lime, and is therefore much easier to work than clay soils, such as Egypt has. The ancient method was to build up one bank of a river against inundation, and to allow the floods to go over the other. Thus at Bagdad the right bank of the Tigris was protected by massive dykes and canal banks, within which clustered the rich gardens and orchards of the town, while on the other side the waters fell down a depression. It is impossible to improve on this method in the like circumstances, but if it is desired to keep up irrigation throughout the year it is necessary to have barrages, with canals above them, which are capable of maintaining flood levels throughout the year. It is of course not safe to build barrages or regulators on sand, and therefore hard ground must be sought. This was understood in early times, for it is related that the first public work which Alexander the Great undertook in Babylonia was the con-

struction of a new head on solid ground for the Hindia branch of the Euphrates; before this the annual closing was a work of extraordinary difficulty, and 10,000 men were required for the work. This was, therefore, good engineering up to a point, but the weak part of the ancient system was that all the canals took off without weir, and gradually they silted up and were obliterated. When once the process of choking has begun the end is near. So long as canals remain deep enough to carry off water with velocity all is well; but as they silt up they take only the crests of the rises of the rivers, and these are extraordinarily full of deposit. Slack water is comparatively free from sediment, and the object of modern practice is to force the heavy current to the other side while taking the slack into the canals. In some cases the muddy flood waters can be taken across canals by iron pipes of the "Acme" class. Having got the canals as they should be, the next step is to provide for drainage, irrigation without drainage being apt to be mischievous.

Sir W. Willcocks estimates that, allowing reasonable rents, there would be a return of 9 per cent. on the cost of the works. An ample allowance appears to be made for the cost, for, as he observes, in a country liable to floods such as Noah experienced, he can recommend no economy when facing the question of inundation. It is anticipated that both sugar and cotton could be grown with success.

Certainly recent experience seems to show that very costly schemes of this kind may prove exceedingly profitable. It is said that, after the completion of the Assouan dam, the value of land was enhanced by 1000 per cent., and in New South Wales irrigation sent up the value from 20s. an acre to £80.

Report of the Government Entomologist of the Uganda Protectorate. (*Government Press, Uganda.*)

Mr. C. C. Gowdey carefully describes the insects which are injurious to various products and the means of holding them in check. The insects mostly injurious to coffee are the Mediterranean Fruit Fly and the Coffee Beetle. As regards the first, it is stated that in only two stages of the life-history of this insect are there any vulnerable points at which we can direct our forces with any hope of success in the destruction of the pest. These two stages are the larval and adult. When the eggs have been deposited they are at once beyond our control. The larvæ are secure until the mature fruit fall from the trees. The puparia are quite safe under the ground unless we resort to the unsatisfactorily means of turning over all the soil in the immediate vicinity of the trees. The adults can be induced through their inordinate attention of sweets to eat poisoned baits.

Destruction of fallen fruit.—The fallen fruit should be collected carefully at least once daily, and preferably twice, to prevent the fully grown maggots from escaping from the fallen fruit into the ground to pupate. This measure seems very simple; but this procedure often fails, because it needs systematic effort.

The cultivated fruit can be destroyed (1) by burial, in which case it should be covered by two feet of soil; (2) incineration, and (3) by covering the fruit with water allowing fermentation to take place, which will cause the death of the maggots.

Netting.—The method of covering the trees with netting to prevent the oviposition of eggs is quite a practical method. As the fruit are usually stung within a fortnight of picking, safety can be insured by keeping the trees under the netting for from three to four weeks. But whether or not the expense of protecting the fruit in this way is justifiable must depend wholly on local conditions.

Poisoned Bait. Although it has long been known that the flies are great feeders, that they die quickly if unable to obtain food, and that they are readily attracted by any sweet stuff, the question of poisoned baits has not received the consideration it deserves. They are readily attracted by treacle containing an arsenical poison.

Kerosene has been used with great success in West Australia. The oil attracts the adults and they are killed as soon as they come into contact with the oil. The experiments were carried out by placing tins containing the oil on the forks of the trees. Other oils, such as benzine, turpentine and naphtha, are claimed to act in a similar way to kerosene, but they evaporate even more rapidly than kerosene.

The coffee beetle is extremely difficult to control, as it is protected for the greater part of its life. The affected beans, which are easy to find, should be picked and destroyed, so that the insect will in some stage or other be destroyed.

The fly which attacks cacao is attracted by any sweet substance, so the poisoned bait method of treatment, whereby a solution of attractive sweetness is made the carrier of a poison which will destroy the flies, was devised. The following formula was adopted as being the most economical and the most effective :—

Sugar ...	...	...	3 lbs.
Arsenate of lead ...	...	...	$\frac{1}{4}$ "
Water ...	...	...	5 gallons.

The most convenient way of applying the bait is by means of a garden syringe with a very fine nozzle. The liquid must be kept well stirred each time the syringe is filled. The spray should be forced up over the tree, thus enabling it in descending to be evenly distributed over the leaves. A thick film is not desirable, as the lead settles to the bottom of the leaf and is not removed by the flies.

The conditions under which the trial of the bait was made were very severe, because many of the cacao pods were in the stage of ripeness attractive to the flies and there were many flies about, many of them trying to deposit their eggs.

An experiment was made on a small scale with a decoction of the foliage of an Apocynaceous plant, *Halophylon cinnicidum*, obtained from Mexico through the kindness of Dr. L. O. Howard, Chief of the Bureau of Entomology, United States Department of Agriculture. The decoctions were sweetened and used as a spray, but the quantity of foliage received was so small as to make positive deduction as to the value of the experiment impossible. The plants grow wild in Mexico and decoctions have been used against the Mexican Orange Fruit Fly, *Trypeta ludens*, Loew, with very satisfactory results. The preparation is made by boiling two pounds of the plant in three gallons of water for about two hours, straining this decoction and then adding about two pounds of sugar.

All infested pods should be destroyed, either by incineration or by burial. In the latter case the fruit should be covered by at least two feet of soil.

For the past year Cotton Stainers have proved themselves to be the most injurious and wide-spread pest on cotton.

These insects are so named from the fact that they stain the fibre with their excrement and with the juices of their bodies, which are crushed during picking and ginning operations.

There is really no satisfactory, practical method for controlling this insect when it has once become wide-spread. On small areas good results can be obtained by shaking the insects into tins containing a little oil, as is done over large areas in the case of the large *Dysdercus* species.

This pest enters into its dormant period in a very casual manner, concealing itself under any rubbish or in any crevice it may find. The most satisfactory method, therefore, of combating this pest is either to remove the quarters suitable for the passing of the dormant period, or by using these places as traps to be destroyed with the insects they conceal.

Frequent complaints are received of the damage that "White Ants" do to rubber plants. Enquiries invariably reveal that "ant-hills" have either been allowed to remain in the fields or in the vicinity. The "ant-hills" should obviously be removed as the initial step to the control of these insects.

Fatal results in few cases have been caused by the application of tar or kerosene oil to the stems of these trees. The former, in particular, is a very dangerous substance to apply to living tissue, and the latter should only be used when diluted with water and dilution can only be effected by emulsification. Kerosene is certainly a doubtful remedy. Soaking pieces of sacking in a sugar solution

to which an arsenical poison has been added and wrapping the sacking around the trees near the soil has proved fairly successful.

The palm weevil is found in practically all the species of palms in Uganda. The badly attacked trees which are beyond treatment should be destroyed. All wounds on the soft parts of the stem should be dressed with a mixture of tar and clay. Premature removal of old branches should be avoided, as this exposes tender places on the stems, which are very attractive to the beetle.

West Indian Bulletin: Vol. XI., No. 4.

This number reviews broadly the work of the Imperial Department of Agriculture in the past and indicates some of the problems of the future.

In the nineties, Sir W. T. Thiselton-Dyer remarks, the West Indies had sunk from prosperity to poverty, and he heard it publicly stated in the City of London that annexation to the United States was the only remedy. But in 1898 the Imperial Department of Agriculture was established, and its first object was to improve the sugar content of the cane. This was done with so much success that "a moribund industry has been given a new lease of life by bringing scientific method to bear upon it." It may be added that it is well to remember, when comparisons are made between old and recent times, that in the palmy days of slave labour the price of sugar ranged as high as £100 per ton, and that sugar was cultivated to an extent that became impossible when competition set in. In the *Bulletin* the present good position of the industry is attributed to the improvement of methods. "The Antigua Handbook" (Waterlow & Sons Ltd.) recently issued, explains how antiquated and wasteful methods were persisted in, and how both cultivation and manufacture have been improved, and how the Brussels Convention gave a stability to the enterprise which encouraged the formation of up-to-date works.

The Agricultural and Forest Products of British West Africa.—By G. C. DUDGEON. (*John Murray*, 5s. net).

Arrangements have been made for the publication of a series of handbooks on the tropical commercial products of West Africa, under the editorship of Professor Dunstan, of the Imperial Institute. This volume is the first of the series. The author is Inspector-General of Agriculture in Egypt, and was lately Inspector of Agriculture for West Africa. The book deals with each colony separately, and gives a full account of its staple products. The descriptions are clearly written, and some good maps and illustrations accompany them.

It is a common reproach that Colonial reports are issued long after the period to which they relate, and we have noticed with sympathetic interest that the same charge is brought against the French Colonial Office. "1909"—says a Paris paper—"et déjà l'année 1911 est presque achevée si bien que tous les chiffres ont un petit parfum de vétusté qui vous fait vous demander pourquoi en seconder la poussière?" There is, however, a publication which is a marvel of promptness. This is the Trade Statistical Abstract of Southern Nigeria, giving a great mass of figures about imports for the six months ending 30th June, and promising the further publication of figures within two months of the period recorded. Such a collection of figures has a formidable appearance, but we trust that it will be consulted by merchants who wish to know exactly what the local demand amounts to.

BUSINESS NOTES.

WHENEVER the price of a tropical article goes up, there is a general hunt for more specimens of it or new ways of producing it. Rubber held the field for a long time, but the latest fashionable subject of exploitation has been oil-seeds and oil. We have long endeavoured to preach the commercial virtues of the cocoanut, and present values must be very gratifying to the fortunate possessors of the article. The difficulty is the seven years of waiting, after planting, but crops can be sown in the meantime. In the South Seas it is often possible to combine the collection of phosphates with this industry, and the rise in the value of copra will incidentally lead to the working of many places for guano where this alone would not be remunerative. West Africa is able to produce good copra and cocoa-nut oil, in districts which are not too damp, but at present the oil-palm brooks no rival. There is a strong demand for examples of castor oil, cotton and other seeds, and as these may be used for different purposes according to their nature—*i.e.*, as lubricants, as food-stuffs, or as manures—the demand is sure to be permanent. A great number of products are being tested for the production of volatile oils, but minute examination is necessary before their market values are established. Tanning materials are much sought after, and there are numerous enquiries about timber.

The highest price for copra in the London market is obtained by the Ceylon product: this was quoted recently at £26 17s. 6d. per ton, while F.M.S. fetched £23, and Singapore, Zanzibar and Manila a little less. African copra was quoted in Liverpool at £18 10s. 0d. for fine quality: this is equal in appearance to the best Ceylon grades, but contains a higher percentage of free acids.

The Survey of the Empire.

The annual report of the Colonial Survey Committee gives the following review of the work done in Africa in 1910:—

“Topographical Surveys.—A total of about 54,000 square miles has been topographically surveyed in British Africa. The most important areas are :—

South Africa—

Cape of Good Hope	...	...	12,630 sq. miles.
Orange Free State	...	...	12,596 „ „
Transvaal	...	...	7,900 „ „
East Africa	...	...	12,250 „ „
Uganda	...	...	4,115 „ „
S. Nigeria	...	...	2,579 „ „

“General Maps.—Northern and Southern Nigeria.—A general map on a scale of $\frac{1}{200,000}$ with an index to place names, has been published.

“Rough Surveys and Explorations have been carried out in the Anglo-Egyptian Sudan, Northern Nigeria, East Africa, and Sierra Leone.

“Geodesy.—The computations for the geographical co-ordinates of the stations of the arc of meridian in Uganda have been completed. The report on the work of the party employed on this work is in course of preparation.

“Cadastral Surveys have been in progress in East Africa, the Gold Coast, Northern and Southern Nigeria, and Uganda.

“Boundary Commissions :—

- (i.) An agreement was signed at Brussels on the 14th May, 1910, dealing with the Eastern frontier of the Congo, and with the Anglo-German frontier between Uganda and German East Africa, west of Lake Victoria.

A boundary commission has been appointed to delimit this frontier from Nkabwe to Sabinio, and also the Anglo-German frontier to the East of Sabinio. The commission left England in December, 1910, reached Nkabwe in February, 1911, and is now at work.

- (ii.) The Commissioners employed on the boundary between Nigeria and the Kameruns, extending from Yola to the Cross River, have agreed upon a definite boundary, which, however, has not yet been formally sanctioned by the two Governments. The African General Service medal has been granted to the troops engaged in the fighting which took place in the Sonkwala Valley during the course of the delimitation of the boundary.

A general report on the work of this commission has been published, together with a report on the geographical features of the country through which the boundary passes.

- (iii.) The boundary between Nigeria and the French Sudan stretching from the Niger to Lake Chad, has been ratified since the close of the year under review.”

The Production and Prevention of Rain by Gun Firing.

An enquiry has recently been received from a colonial government on this subject. The suggestion that it is possible to influence the weather by bombardment is an old one. In countries where stress of weather is felt in the form of drought the process has been put forward as a means of inducing rainfall; in others, where serious damage is done by hailstorms, the power of inducing the clouds to shed their moisture in the form of rain is claimed for it, and more recently it has been advocated as a means of dispelling fog.

Experiments, having for their object the production of rain by explosion, have been carried out extensively, particularly in America and Australia, where Governments and private persons have supplied the necessary funds. Recent official trials are those made in August, 1907, at Oamaru in New Zealand. An account of the experiments, drafted by the Government Meteorologists, was printed by order of the New Zealand House of Representatives. (Return to an Order of the House of Representatives, dated the 13th of November, 1907.) Three extensive sets of experiments were made, but in no case could any interference with natural phenomena be traced. If rain fell, it fell over an area of many thousands of square miles in consequence of the passage of a cyclonic depression, and it was not specially heavy near the scene of the experiment. The general conclusion arrived at is that the experiments afforded no evidence that precipitation was induced, or in any way influenced by the explosions.

Perhaps the most exhaustive series of experiments on "weather shooting" have been made in Austria and Italy, as the result of an agitation by wine growers and others anxious for the safety of their crops. After much inconclusive discussion in the public press, an international conference of experts was invited by the Austrian Government to meet in Graz in 1902. The conclusion arrived at was that there was probably no effect attributable to the shooting, but the evidence was not sufficiently clear to justify the categorical statement that the ineffectiveness had been proved.

Further trials under careful conditions were, therefore, made in Austria and in Italy under Government Commissions. The immediate object in view was the prevention of hailstorms, but the experiments actually amounted to an exhaustive test of the efficacy of weather shooting generally. The result was summed up in the *Meteorologische Zeitschrift* :—

"Hereby the matter is disposed of, not only among scientific men, but also among all objectively minded persons among agriculturalists. The failures at Windisch-Freistritz and Castello franco, and the ineffectiveness of rockets and bombs, as demonstrated by the Italian experiments, entitle us to say, 'Hereby the end of weather shooting is sealed!'"

The notion that concussion might affect rainfall goes back at least to the middle ages, when the ringing of church bells was thought to be effective. Upon the introduction of fire-arms these were brought in as an aid to controlling the weather, sometimes with the addition of pellets made of the remains of candles preserved from the celebration of Candlemas. As new methods of producing concussion are developed the older ones are disregarded. The power of the church bell is now transferred to heavy ordnance. But there is no evidence either of a practical or theoretical character that heavy ordnance is more effective than a church bell, or that either has the smallest effect upon clouds or rainfall. We can easily detect the effect of the smoke of London and other great cities in intercepting a good deal of sunshine, but we cannot say that even that affects the amount of rainfall.

On the theoretical side it may be pointed out that the energy involved in producing rainfall is enormous. The heat liberated in the condensation of a rainfall of one-tenth inch over an area of one square mile is the equivalent of the energy that would be produced by an engine of ten million horse power in half-an-hour. The energy expended in the heaviest cannonade that man can produce must be puny compared with so vast an expenditure of power. An effect could only be expected if the atmosphere were in a state resembling that of a loaded gun, and the explosion provided the analogous of pulling the trigger. There are no grounds for supposing that the atmosphere is in a state of unstable equilibrium such as this suggestion demands. The only instances where we have any evidence of instability are those afforded by violent thunder squalls, but even then we have no reason for supposing that we could influence the course of the phenomena by explosives.

Oils—Classification for Tariff Purposes.

The two usual methods of using Petroleum as a source of power are:—

(1) Crude or fuel oil with the more volatile spirit removed. Such oils are used as a boiler fuel for the generation of steam.

(2) Volatile oils, the product of fractional distillation. Such oils are applicable for direct use in internal combustion engines.

The first class might be permitted to be imported provided the oil has a flash point above 150 degrees F. (Abel's Test). At the same time a declaration might be required that the oil is for fuel purposes only and not for refining. Oil of this class could not be used for illuminating purposes, and refining could hardly be carried out without the knowledge of the Government.

As to (2), some oil can be used both for illumination and for internal combustion engines, so that it would be difficult to tax them for the former purpose and exempt them for the latter. Such oils are however less valuable than the more volatile oils and a duty would not be much of a hardship on power purposes. In these cases the applicability for illuminating purposes is very limited, and in practice is confined to power work. Such oil might be imported duty free if of a specific gravity of .750 or under (at 60° F.) In permitting importation of these volatile oils it is necessary to make stringent regulations to provide for their safe storage, conveyance and use.

The Soy Bean.

The extraordinary growth of the demand for the soy bean has been one of the most remarkable features of recent agriculture. It has for centuries been produced in great quantities in Manchuria and Japan, but only a small proportion of the oil was extracted and its possibilities escaped notice elsewhere. The first large shipment to England was in March, 1909, and a great demand rose up immediately. In the following season the requirements were estimated at over a million tons, representing a business of nearly £8,000,000. In China and Japan the beans are an important form of food, being used in some form at almost every meal. The edible oil, which amounts to 15 to 20 per cent. of the seed, makes them highly nutritious, and they are very rich in proteids and bone-forming matter. They have a low-proportion of starch and are therefore very valuable from a medical point of view, and likely to be used for many food preparations. At present they are used mostly as a food for cattle, and as such have given remarkably good results. They also make an excellent fertilizer as an organic manure. There will probably be a market for them for this purpose in Australia, where, as the trees are evergreen, the humus is not so plentiful as where there are deciduous trees. It is perhaps hardly likely that our colonies could compete with China in the production, except for the fact that the yield of all crops is increased when they follow soy beans. When the crop is harvested the pod can be ploughed into the soil and becomes a valuable fertilizer. Any soil that will grow maize is suitable, provided that the soil is not acid in reaction. The young plants require dry weather but can stand slight frosts. There have been many failures, largely owing to the fact that imported seeds are sweated in transit and such seeds are very liable to lose their germinative powers in this way. The industry, however, is established in the United States, and

is likely to grow in Australia and South Africa. The longer cultivation is tried the better, as by growing for several years the bacteria, which are necessary for growth, are established. In the near future it seems likely that the oil of the bean can be used for the making of soap. It is claimed that by new machinery a very fine quality of oil can be obtained. If so, an enormous field is opened up, for soap makers are finding the supply of tallow short and are anxiously looking out for another material.

Cotton Growing.

An article in the *Agricultural Journal* of the South African Union recommends the use of the disc plough, as it leaves the land perfectly flat and broken down and not so much surface is exposed to the sun, therefore evaporation is considerably less than with land ploughed with the ordinary mould-board plough. It mentions the Robinson six-furrow, stump-jump disc ploughs as one of the best on the market at the present time, it being very heavy and well constructed, and the stump-jumping arrangements acting perfectly. Very few breakages occur. Other makes have been found too light for the work and will not stand up against it in heavy and compact soils. These disc ploughs are set to cut a 6-inch wide furrow, as they do better work and plough deeper and take less pulling set at this width than at any other. A span of fourteen oxen is required for these six-furrow ploughs.

As soon as the rains set in the planters dress down the land with, first, a disc harrow and then tine harrows, and roll if necessary to get a fine seed bed; then drill in the cotton seed, the rows being set to 40 feet apart.

They like the new Bradley two-row planter, fitted with interchangeable cotton-seed and mealie planting arrangements, also fitted to drill in artificial manures at the same time.

Should the land be good and suitable the cotton plants must be thinned out to 3 feet between the plants in the row. This should be done when the plants are, say, some 6 inches high. If the land were in good order and moist at the time of sowing, the seed will sprout at once and be up in about five days, and ready for thinning in from ten to fourteen days from drilling. As soon as any weeds begin to show put the hoes in at once, or after rains. As soon as the land will bear it put the hoes in to break up the crust of the soil and thus prevent evaporation. This preserves the soil moisture, and cotton will by these means stand a drought from six weeks to two months. From time to time it is advisable to hand-hoe the weeds between the plants and out up any missed by the horse-hoes, for it must be borne in

mind that a cotton field must be as free from weeds as possible, for firstly, to grow weeds is a waste of manure and of soil moisture required for the cotton; and, secondly, the dried leaves and trash from the weeds are likely to get mixed up in the raw cotton when the bolls burst and damage the sample.

As soon as the cotton plants begin to flower and the young bolls form all work must cease in the field, otherwise great damage might occur, the flowers and young bolls being easily knocked off. In about four to five months after drilling the bolls will begin to burst and ripen off, the raw cotton showing in round white balls. These should be picked as soon as they have dried off and hang well down out of the pods.

Coarse, white linen or cotton apron bags, slung round the neck, are used by the pickers so as to leave both hands free for picking. These bags are emptied at either side of the field into long wooden trays with bottoms made of $\frac{1}{2}$ -inch wire netting, or on to sail cloths or wagon covers, and the contents spread out evenly to dry in the sun. The cotton takes about a day or a day and a half to dry, and care should be taken to cover up these trays or sail covers at night to prevent the dew or rain wetting the raw cotton. The raw cotton should then be packed in wool-bales and taken to the factory for ginning.

The pickers must not start work in the morning until the dew is off and the cotton quite dry. The same applies of course after a shower of rain.

The trays used are 12 feet long and 3 feet wide at the bottoms, which are covered with $\frac{1}{2}$ -inch wire netting. The sides are 18 inches high, sloping out to 4 feet at the top, and are placed on trestles 2 feet high. The trays are very much better than sail cloths, etc., as the netting allows the air to draw up through the cotton, and also permits any dust, dirt, and insects to fall through. These trays are very easy to make. They may be made out of floor boards and ordinary 3 feet wide wire netting, with a few cross-bars at the bottom to hold up the netting.

The cotton is trodden into the wool bales in exactly the same way as wool is packed, only great care must be taken to see that the cotton is thoroughly dry before baling, otherwise it will heat and go afire. There is hardly any material that heats and goes afire so quickly as raw cotton. Being very inflammable, care must be taken if any lights are used about it.

As soon as the picking is over it is advisable to at once cut down the bushes and burn them on the land so as to destroy all insects, etc., and lightly plough the land in readiness for deep ploughing for the mealie crop. Cotton is one of the best rotation crops for mealies, as it helps to clean the land and also enriches it with humus.

Tobacco.

The Victoria Journal of Agriculture states that as tobacco is needed for many different purposes, and as special types are required for each, pure seed of every variety used is of great importance so that the characteristics valued in each may be preserved. These can only be maintained by systematic selection and great care in preventing cross-fertilization, except where cross-breeding is intended with a view to improvement in shape, vigour, and quality.

Tobacco, if not carefully watched, has a tendency to lose its type under certain circumstances. Where different varieties are grown within a few miles of one another, cross-fertilization is common, owing to the pollen being carried by bees and other insects, or the wind. The result is that, where no care is taken to prevent inoculation, a type is soon lost, and it is found impossible to maintain the qualities required in the different tobaccos.

Even without cross-fertilization, a variety planted in a soil and climate not suitable will, in three years, lose its useful characteristics altogether and a fresh importation of seed be found advisable.

During the last ten years it has been clearly proved that cross-breeding, with knowledge, has been the means of producing tobacco with better colour, texture, and burn, in addition to heavier yields. Judicious seed selection will also control the same results.

The tobacco plant is self-fertile; consequently, no cross-fertilization is necessary, provided the plant is holding the type required. The vitality of the seed is wonderful, considering its diminutive size—from 300,000 to 400,000 seeds to an ounce. A single plant will, in some varieties, produce this quantity, about 70 per cent. being fertile. The life of tobacco seed is from 10 to 20 years, when properly cared for; though after 10 years a smaller proportion will germinate, and the older the seed the slower the germination.

An experienced grower will, in a good season, save enough seed to last him for ten years. There is less risk in this way of deterioration than if the seed be saved in every succeeding year. Care must always be taken that the plants selected are acclimatized at least one year, if grown from imported seeds.

In selecting plants for seed bearing, the grower should have in his mind the following ideals:—

1. A vigorous healthy plant with a tendency to early maturity. This means less risk from frost, and a shorter growing period which will entail less working expense. The quicker tobacco is grown, especially for wrapper leaf, the better the quality. Some of the best leaf, from the time it is transplanted to the harvesting stage, is only 12 weeks in the ground; heavier plug tobaccos will be from 16 to 20 weeks. The seed from a vigorous plant, grown in a season clean in respect to fungus and other diseases, will naturally produce plants less liable to disease.

2. Size, number, and shape of leaves must also be considered. These objects will depend on the purpose for which they are grown, and the quality of the soil in which they are produced. The size for heavy plug types can hardly be too large, leaves of this kind being sometimes as much as 39 ins. in length and 24 ins. wide. But where such large leaf is grown, it is well to endeavour to keep the size of the midrib as small as possible. The lateral veins should not be too large or prominent and should be even distances apart. If they appear close together, it is indicative of the seed running out, and such plants should be avoided. For sigar and plug filler size is of no great consequence, except in so far as heavy yields are concerned.

The number of leaves will depend chiefly on the quality of the soil used ; a rich soil will develop a larger number than a poor soil, so that no hard and fast rule can be laid down here, but each grower must use his own judgment, according to the conditions he is working under. In a rich sandy loam, on which heavy plug leaf is being produced, a strong plant will mature from 20 to 25 leaves. In choosing a seed plant from such a crop, not less than 20 leaves, exclusive of the four top and four bottom leaves, should be selected. Where, however, a poorer soil is in use, from 10 to 15 leaves will be found sufficient for the plant to mature. It is better to err on the side of having rather too few, than too many leaves, so that each may be properly developed and of as nearly as possible uniform size.

Where more leaves are grown than the plant can produce to their full size, extra labour in handling during the stripping and classing will be required, and a poorer quality obtained. If, however, a thinner textured leaf is the object for sigar wrapper purposes, then a greater number of leaves can be left on with advantage. Wrapper leaf is grown not so much for its smoking qualities, as for appearance, and comprises only a small proportion of the sigar or plug when manufactured. It must always be remembered that the middle leaves, from the fourth at the bottom to the sixth from the top of the plant, are the best.

As a general rule, the wider the leaf, in proportion to the length, the greater the amount of usable material is present, with a smaller percentage of waste in the shape of midrib, which comprises from 24 per cent. to 30 per cent. of the whole weight. It is only natural, therefore, that buyers should prefer a wide leaf. The heart shape of the Hester and Hyco varieties is very popular.

3. Consideration should also be given to the easy working qualities in some plants, as compared with others. Plants which grow the leaves close together on the stalk, and which have a quantity of frill round the butt of the leaf, are not so easily suckered as those which have the leaves further apart, neither do they cure so well in the shed, as the leaves are more covered one with the other, and consequently do not get the air so readily, or evenly.

The first desideratum then is to select healthy, vigorous plants, true to whatever type is required. As soon as the flower bud appears, in order to prevent cross-fertilization, tie a square of cheese cloth or paper bag over the top to prevent access of insects or pollen from other plants before the flower makes its appearance. Only the centre bunch of buds or pods should be reserved; all lower branches bearing flowers should be removed, also the top five or six leaves, with the object of growing only so much seed of heavy, virile qualities as the plants can mature. As the plants grow, the bags should be removed from time to time and tied loosely round the stem.

As the plant ripens, the seed pods turn brown; the leaves can then be stripped and cured and the stalk cut 2 to 3 feet below the pods, and hung with the tops down in a dry situation in the shed. The bags are left on and will catch any seed which may shell; if they are removed, such seeds, being so small, would not easily be recovered.

During the growth and before putting them in the shed, it is well to examine the plants for a small green caterpillar which is given to attacking the pods and rendering them useless. The seed plants should also be hung where mice cannot attack them.

Five or six plants are sufficient to save for seed under ordinary circumstances, but it is wise to choose twice or three times that number and label each plant according to its variety, etc. Then as they mature, make a final selection of those best fitted to produce the largest yield of the most valuable class of tobacco desired. All suckers should be kept down; many growers go so far as to remove, from time to time, the weaker capsules or buds on the bunch in order to send all the strength possible into those left.

Do not be disappointed if the leaves taken from the seed plants are not as good quality as those taken from topped plants. They are never so good, owing to the fact that the effort to mature the seed has robbed the leaves of some of their virtues.

When the seed pods have all turned brown, and are thoroughly dry, the seed can be thrashed out by rubbing the pods between the palms of the hands over a sheet of paper. The seed should then be put through a fine sieve and the fine chaff blown away. Each pod should contain from 1,000 to 4,000 seeds. When thoroughly dry, the seed should be placed in Mason, or other jars, and the lid screwed tightly down. Each jar should be labelled with the variety and date of saving, and kept in a dry situation. Blowing machines are used for separating the light seed from the heavy. The latter is just as desirable in tobacco as any other crop.

Tobacco seed weighs 35 lbs. per bushel. One farm in America produces from 100 to 125 bushels per annum, the yield per acre being about 4 bushels.

To test the vitality of tobacco seed, sow thinly on a piece of dark woollen cloth and moisten the whole, then fold the cloth and keep in

a warm situation and moisten with warm water from time to time. In nine days the sprouts will show if the seed is good. A further test is to drop a little seed on a hot piece of tin or iron; if good, the seed will pop; if dead, will burn. An experienced man can tell by rubbing the seed on the palm of the hand; if too old the seed will crumble, but if good will roll without breaking.

The world production of tobacco is not keeping pace with the increase in consumption, and therefore values have of late years been steadily increasing. It was estimated recently in America that supplies had fallen 20 per cent. behind the demand. Manufacturers, both in England and America, complain that, owing to the short supplies, it is not possible to age the tobacco to the same extent as formerly. The prospect of a new country for a tobacco industry is therefore encouraging.

It must always be borne in mind, however, that popular tastes for tobacco incline to lighter types than previously; and, in order to obtain these, lighter soils must be used for growing and the varieties suited to them adopted. There will naturally always be a certain amount of heavy tobacco smoked, but the tendency is towards the lighter kinds.

Cocoa-Palms.

The improvements in the extraction of the oil from the nuts have greatly added to their value, and the cultivation of these trees promises to become more and more remunerative. The United States Consul at Pernambuco, where the cocoa-palm grows most luxuriantly, states that the nut is first planted in its natural state in hull and fibre. At the expiration of about twelve months, or when the plant has reached a height of about three feet, it is transplanted and set out in rows about forty feet apart. If cultivated and irrigated the tree will produce at the end of five years, otherwise it will require about ten years to produce. Although the rainfall within the coast region averages about eighty inches per annum, it all occurs during the months of the rainy season, and often when it is of no service to certain vegetation. The summers are hot and dry, and young plants and trees need to be irrigated. There are two cocoa-nut markets in the city of Pernambuco, one for the green and the other for the mature or dried nuts. The green nuts, which are picked at about the end of five months, and before the real meat of the nut has begun to form inside, are composed entirely of water, which forms one of the principal and most popular beverages of the neighbourhood. The water is non-alcoholic, and when iced is converted into a most savoury refrigerant. Its action is diuretic. When the nut is partially mature the inside is sometimes extracted, and by the use of sugar and some other ingredients is converted into a

popular confection. The meat of the dried or ripe nut is used exclusively for food, being usually seasoned and mixed with different provisions for flavouring purposes. The owner of one of the large plantations in Pernambuco has recently stated that he averaged about four shillings net profit per annum from each tree.

Coffee Cultivation.

The Cape Government Agriculturist has supplied the following memoranda on the subject:—

There are two varieties of coffee grown, viz., *Coffee Arabica* and *C. Liberica*, commonly called Arabian or Common Coffee and Liberian respectively. The latter is of higher flavour and aroma, and is gradually becoming more popular with growers.

Origin and where procurable.—It originated, as its name implies, in Arabia, and is now grown in most tropical countries, but chiefly in the West Indies and South America. The seed is obtainable at the Royal Palm Nurseries Oneco, Florida, U.S.A.

Weight per bushel.—A bushel of ripe berries will produce about 10 lb. of marketable coffee.

Suitable soil.—Coffee thrives on a variety of soils, but a deep rich soil with plenty of humus gives the best results. Clay soils are also suitable. It should be well hilled and drained. A gravelly soil and sub-soil, if virgin, will produce shrubs till about four years, when the trees begin to decline and finally die, due to the greater tendency for the washing out for the plant foods in light soils. The best soil is virgin bush or forest land.

Climate.—Coffee prefers a humid atmosphere where it gets from 50 to 200 inches of rain per annum, but it has been grown with less, an altitude from 1,500 to 2,500 feet above sea level, and an average temperature of 60° with the absence of frost. Severe frost kills coffee.

Preparation of soil.—In preparing the land the ground should first be cleared, then well ploughed, and allowed to lie for some time. During the period it is fallowed it should be well cultivated to bring it to as fine a condition as possible.

Selection of site.—In selecting a site for coffee a place should be chosen which is protected from the prevailing and cold winds. If this is not obtainable screens should be planted of some quick-growing tree, such as Lombardy Poplar and Japanese Privet.

Seed-beds: Locality and preparation.—In preparing the seed-bed it should be put into a shady spot, and the ground, preferably of a sandy nature, well worked to bring it to a fine tilth. The beds are best laid out four feet wide, with a path between so as to facilitate weeding and watering.

Planting seeds.—The bed should be well watered the evening previous to sowing. The seeds are pressed lightly into the soil about two inches apart each way. The bed should then be sprinkled freely with wood ash and again watered. A cover should be used to protect the young seedlings from the noonday sun. A screen run on wires about three feet above the bed is found very effectual. This should be removed gradually, until finally the young plants are exposed to the sun. This method gives good, strong plants, and prevents succulent growth. One bushel of parchment coffee (seed with inner skin attached) will yield about 30,000 plants, which are about enough to plant thirty-five acres, giving a good margin for accidents. When the first round leaves show, which is about ten weeks from the time of planting the seed, the young plants should be transplanted into nursery beds, which are similar to the seed-beds. Only those plants should be transplanted that have a straight, well-developed taproot. This taproot is cut to about four inches long, and care must be taken to prevent the roots being exposed to the sun. In setting out, care must be exercised that the plant is not put deeper than it stood in the seed-bed, also that it is planted straight. The plants are set out about six inches all ways. These beds should be watered after transplanting and kept moist when weather is dry.

Transplanting.—The plantation must be carefully marked out where the plants are to stand, and a distance of eight to nine feet between the rows all ways is considered best. This allows of cultivation with light machinery to keep down the weeds, and thus save hand hoeing. A hole is made about two feet square, and the subsoil placed on one side. When planting, only the surface soil is placed back in the hole, the necessary amount being collected round the hole, and the subsoil takes its place. The young plants should be strong. The time for transplanting is during the rainy season, September or October, about twelve months after the seed has been sown. When the ground is ready great care must be exercised in keeping the roots of the transplants protected from the sun, and again to keep the plant upright and not put it too deep in the soil. Only upright-growing plants should be used. When planting is finished put a small branch on the sunny side, which will greatly help the young plant making a start. All misses must be replanted to get a uniform plantation. If any side-shoots should have grown on these transplants they must be carefully removed, and the single stem only left.

Training and pruning.—This is a very important point, for on this depends the facility of gathering the future crops. If any laterals should grow out, they are pinched back, and any superfluous branches removed. When the plant has reached about five feet in

height it should be topped, and never allowed to grow higher. It will then grow laterally and subsequently meet the other bush. Subsequent attention is necessary to remove dead wood, and at the beginning of the growing season to remove water shoots, which grow inside the bush, so as to keep it open to allow free access of light.

The age of bearing.—Under ordinary circumstances the shrubs will come into bearing at three years old, and in their sixth will be in full bearing. With ordinary care and attention they will keep in bearing for many years. They have been known to bear annually for twenty years in Australia.

Crop.—Each shrub bears from 3 to 5 lb. berries, and an acre will produce about 5 cwt. upwards of marketable coffee according to the strength of the shrubs and fertility of soil.

Gathering.—The berries are ripe and ready to pick when they turn red or nearly purple. If left after this they drop. There are two ways of gathering:—(1) To place a sheet under the shrub and shake the shrub, but this method is not recommended, as it tends to loosen and bruise the surface roots; (2) to pick by hand into baskets, which takes longer, but is the best in the long run. A person can pick 100 to 150 lb. a day, which will yield 12 to 18 lb. marketable coffee. The berries have a tendency to get smaller the nearer they are to the tip of the branch, and some growers grade in the picking by putting those berries at the tip in one basket, the middle ones in the next, and the base ones in the third basket.

Treatment.—After gathering, the berries are subjected to one of two treatments:—(1) They are dried immediately and put through hullers to extract the bean; (2) they are pulped immediately they are picked by machinery to remove the outer skin. They are then put in tanks and allowed to ferment for about thirty hours to remove the saccharine matter, after which they are subject to a washing process and put on trays or floors in the sun and allowed to dry to the point of storing safely. They are then put in drying drawers or trays and put out to dry every day and taken in at night. If rain threatens they are put under cover again. During this process the berries are constantly turned. As soon as the coffee is dry, that is when it is brittle enough to break between the teeth, it is either hulled or left in the parchment. It is hulled and polished by the merchants who buy the coffee.

Enemies.—It is subject to a few insect pests and fungi diseases, which all go down before treatment.

The world's production in 1906 was 16,741,215 bags of 132 lb. each.

References.—"Cyclopedia of American Agriculture"; "New South Wales Agricultural Gazette."

Cotton Gins.

The Single Acting Macarthy Rolling Gin has been recommended for either Sea Island or Marie Galanti cotton. The Gins cost about £39 each with spares and packing. A hand press, packing bales 200 lbs. weight, costs also about £25. An oil engine to work gins, with spares, costs £154; this may be a Crossley 12 b.h.p. horizontal oil engine, complete with all pipes, 24 ins. dia. × 10 ins. face driving pulley, six water tanks, foundation bolts, etc.; this engine can be used with either refined or crude oil but when the latter is being burnt the power would be reduced by 15 per cent.; it will drive five gins using refined oil, and four when using crude. A gin without spares costs about £24, and a small engine, Crossley N N N Type 7½ b.h.p., about £90.

Soapstone (talc).

This stone, the name of which is often misapplied, is being found useful for many purposes, and is being extensively quarried in South Australia. It is chiefly produced in the United States, and probably it will be found and worked in many other districts when its uses are better known. An Adelaide paper states that in every respect the substance resembles nothing else so strongly as it does a piece of discoloured soap, and anybody on handling a sample for the first time might easily mistake it for a scentless "compound companion of the bath." Soapstone in its original state has this peculiarity—it exists in a single huge block. There are no seams as in most other stone deposits. Consequently, owing to the fact that explosives would hopelessly shatter the body, the quarrying has to be done by means of crowbars and wedges. With the aid of these instruments, the material, which spits away from the main bulk as "true as a hair," is carefully dislodged, and then cut to the size and shape desired—from 1 in. to 2 ft. in thickness—with cross and hand saws. The quarry is on the side of a hill, and it is estimated that about 2,000 tons have been removed, and that there are 30,000 tons in sight. The reef can be traced for a mile, but its depth is unknown, the width varying from 15 to 20 ft. In the Commonwealth the substance is chiefly used for lining cooking stoves, grates, steam boilers, bakers' ovens and fruit evaporators, and for firebricks. The soapstone which cannot be worked up into saleable blocks is broken down to a 2 or 3-in. gauge and put through a chalk mill driven by an oil engine. After the material has been properly crushed, it passes through a series of sieves of a gradually diminishing mesh, and finally is silk dressed. The result, it is claimed, is a product equal to the best imported French chalk, and commanding a ready sale in the States and elsewhere. Most of the ground substance is used in the manufacture of paper of various kinds, especially building paper.

It finds application also in the manufacture of moulded rubber forms and as foundry facings and paints. It readily absorbs grease and is used to remove spots from silk and to bleach cotton goods. On account of its slipperiness, one of its most important properties, it is widely used to lessen friction, and for this purpose it is dusted into gloves and shoes and blown into conduits to ease the introduction of electric wires or other conductors. One of its widest applications is in toilet powders, most of which are made from high-grade talc imported from Europe. Laundry tubs, griddles, foot warmers, and many other similar utensils are manufactured from soapstone. The higher grades of massive talc, free from flaws, are sawed up to make pencils or crayons, French chalk, gas tips, and other special articles.

Cooling of living rooms.

A method has been adopted at Kalgoorlie, Western Australia, of reducing the temperature of a living room by having the sides constructed of double walls of wire netting packed with charcoal through which water drips and absorbs heat by evaporation. A reduction of 30 or more degrees Fahr. has been obtained, and the adoption of the system may be very useful in other parts which have a dry hot climate.

A memorandum forwarded by the Governor of Western Australia gives the following details:

The minimum theoretical temperature that can be obtained by this method of cooling is that of the wet bulb temperature of the locality where it is to be erected. In practice the results are generally 5 to 10 Fahr. higher.

In humid climates, such as in the tropics near sea level, the effect will be inappreciable, while in dry climates, such as Kalgoorlie, Western Australia, 40 of a depression theoretical and 30 actual is not uncommon.

The room to be cooled may be of any size and any construction provided the walls consist of charcoal filled into suitable frames, and retained there by wire netting of small mesh, half-inch for preference, and provided the outside of the roof is covered with an absorbent material, such as cocoanut matting or blanketing.

The roof should preferably be hipped on the four sides, when an ordinary garden rose fixed to the opening will supply all the water necessary to keep the absorbent covering damp. This will keep the roof at wet bulb temperature, and if the space between the ceiling and roof is made as air-tight as practicable the mass of air imprisoned there will also be cool and keep the ceiling cool.

The best results are obtained when the cool chamber is quite detached from other buildings, so that no matter what direction the wind comes from, it will always blow through wet charcoal. It is

never necessary to keep more than two walls to windward wet, and therefore the gutter which distributes the water to the charcoal may be divided into two portions, each provided with a separate source of supply, the one to windward being turned on in accordance with the direction of the wind.

As it is not convenient to have water trickling over the door and window it is best to select the side of the building that is normally coolest for them and place them side by side so as not to break into the cooling walls more than is necessary. The window should be air tight and not arranged to open, ample ventilation being provided by the porous walls.

In a sketch which is merely intended to illustrate the essential points, the roof is represented as being supported on eight posts, four corner, and four intermediate. Into each of the bays thus formed is introduced a frame consisting of four studs and a top and bottom plate all three inches by two inches.

When the frame is made half-inch mesh wire netting is tacked to one side of it, and it is laid flat on the ground of floor. Charcoal is then filled into each panel, varying in size from a cubic inch to two or three cubic inches, levelled off and held in position by more wire netting being tacked over it. To prevent undue bulging, the two walls of wire netting may be tied together at suitable intervals by copper wire. Before fitting the charcoal panels between the posts, it is necessary to nail galvanized sheet iron on the floor flanged on the inside edge about two inches high, and about one foot inside from the wall, the other edge being bent down outside. This forms a shallow gutter to catch the drip and carry it outside. The charcoal walls are then placed in position on top of the sheet iron and secured to the front adjoining posts. In the sketch seven frames are shown filled with charcoal, the eighth bay being reserved for door and window. When the charcoal panels are secured in position a gutter is run round the walls inside and about six inches from ceiling, closed at the end and divided into two sections as already explained, and two half-inch water pipes connected through a tap one to each or a hose pipe will serve the same purpose, and over the edge of the gutter next to the wall is hung a strip of blanket one edge rushing into the bottom of the gutter, the other hanging over the gutter so as to rest on the top of the charcoal.

The outer edge should be scalloped, so as to form a large number of points, at each of which a drop will trickle down as soon as water has been let into the gutter, the blanket acting as a syphon to carry it over the edge of the gutter.

In order to allow of the blanket being placed on top of the charcoal the inner wire netting is stopped about three inches short of the top and a two inches by one inch batten cut into the studs at that height permits of it being fastened.

Should the black walls of the room be objected to on æsthetic grounds, the objection may be overcome by nailing three by one battens horizontally on the inside wall at suitable intervals and tacking thereto sheets of perforated zinc which can be painted any desired colour and decorated to suit individual tastes.

Where electric power is available a considerable benefit will be obtained by installing an electric fan for use when there is no wind. The effect will be to whirl the air of the room round against the wet charcoal walls, and obtain artificially the same result as if a breeze were blowing through the walls.

The two absolutely essential conditions for success are (1) keep the walls uniformly wet, and (2) admit no air except through the charcoal.

Marine Motors.

British enterprise in this line is very desirable, as continental makers were prominent at the start. Messrs. Thornycroft have listed several new and improved types, particularly an engine, in which the cylinder dimensions are $8\frac{1}{2}$ ins. diameter by 12 ins. stroke, and the set is designed to develop 100 B.H.P. at about 500 R.P.M., or 120 B.H.P. at about 600 R.P.M. on ordinary paraffin lamp oil. If supplied purely as a petrol engine, the power will be 120 B.H.P. on petrol at about 500 R.P.M. The system of sight feed lubrication adopted successfully in the "C" type engines has been embodied in this type. This provides for the drips being visible from the driving position so that immediate attention is drawn to stoppage occurring in any of the lubricating channels. The engine is governed by a powerful governor which operates on the inlet valves by varying the lift to suit the power required. The valves are arranged on one side of the engine and are operated from one camshaft. The cylinders are cast together in pairs, and ample provision is made for cleaning the jackets. Large doors are also provided in the crankcase through which pistons and connecting rods can be removed if desired. The control is effected entirely by one hand lever acting on the governor springs. This system simplifies the manœuvring of the engine considerably. Ignition is by high tension Magneto, but duplicate plug holes are provided so that, if necessary, a duplicate system of ignition may be installed. The starting system is one which has been devised specially for this type of engine and has many features of interest. This and other type engines are now being constructed to Board of Trade and Lloyds requirements. This is a noteworthy advance as there has been very great

difficulty hitherto in fulfilling the requirements of both the Board of Trade and Lloyds.

Wireless Telegraphy.

The service of Berbera and Aden was opened to the public on 15 December, 1910, 6d. per word being charged. The chief source of revenue is from messages exchanged with ships, and these are mostly for the Aden station to be transmitted over the cable system. The stations are staffed by Telegraphists and engine drivers seconded from the Indian Telegraph Department, with a European superintendent. The service is a success.

Turin Exhibition.

Two "Grands Prix" have been secured by Messrs. Merryweather and Sons' exhibit at Turin. This firm was entrusted with the fire protection of the British Section, and in addition to a firemain and hydrant system, served by two powerful stationary steam fire engines, their exhibit of motor, horse and hand draught fire engines was also available in case of fire. Foremost among the exhibits, and a recipient of one of the "Grands Prix," is a petrol automobile "Hatfield," engine of a pumping capacity of 380 gallons per minute. When tested this engine threw powerful jets over the roof of the British Section, and its value in the event of a fire would be enormous. The disaster at the Brussels Exhibition taught a lesson by which the Turin authorities have profited, with the result that the fire protective arrangements at the Italian Exhibition were of the most exhaustive character.

Transvaal Coals.

It is an important question in the Transvaal whether it is possible to establish a steel industry. There would be great opportunities if steel could be produced, and the chief question is whether the local coal could produce a good coke suitable for metallurgical requirements. To test this a number of samples were sent to Messrs. Bell Bros., Ltd., of Middlesbrough, who undertook to carry out the experiments. The result showed that none of the coals produced what can be considered first-class blast furnace coke, though those from the Coronation, Oogies, Tavistock and Premier Collieries give medium strong cokes low in sulphur.

Tin.

It has been said that tin is so little known to prospectors that in Rhodesia they have walked over outcrops for years without seeing them. A more technical way of putting it is that cassiterite does not attract the mineralogist by any special crystallographic or chemical characteristics. Prospectors for this valuable mineral will be much helped if they read the articles, which began in October, in the *Mining Journal*, by J. B. Scrivenor, Government Geologist in the Malay States.

RAILWAY AND HARBOUR NOTES.

Australia's Railway Problem.

It appears likely that the question of an uniform gauge will at last be taken in hand. New South Wales has 3,643 miles of the "world's gauge" or 4 ft. 8½ ins., Victoria, 3,383 of 5 ft. 3 in. gauge, and the other States, 7,710 miles of 3 ft. 6 in. gauge. Victoria adopted the gauge which was used in Ireland and is nearly the same as that (5 ft. 6 ins.) used for the principal lines of India. At that time the wider gauge was advocated because there was a need for more powerful locomotives, and makers did not think that the 4 ft. 8½ in. gauge would give room enough. The difficulty was solved by American engineers, who put the locomotive cylinders outside the wheels, and widened the firebox and grate by using a pair of low wheels beneath. It is easier to reduce the larger gauge to the smaller than *vice versa*, and if unification is decided on probably the standard size would be adopted. The Australian Consulting Engineer says that there never was any real necessity for the perpetration of the 3 ft. 6 in. gauge. This was adopted under the impression that great economy would result, but this, Mr. Deane says, was a mistake. Modern locomotives admit of sharp curves, so that one main reason which used to be given for narrow gauges in rough country does not at any rate apply now. The cheapening of cost was not more than £300 per mile, and was at the expense of stability.

Lagos Railway.

The journey between Lagos and Minna Junction will be done by the boat trains in 30 hours. The carriages are of the clerestory type, with electric lights and fans, lavatories and baths. A restaurant car is put on the boat trains, and a rest house is provided at Ibadan. The first class fare from Lagos to Minna is £4 14s. 0d., with a supplement of £1 10s. 0d. for the sleeping cars on the boat trains. At mile 45 the traveller will encounter

the first belt of the oil palm trees, the source of the wealth of the country. At 60 miles the branch to Abeokuta is reached, a place of granitic formation, where the curious may see under one rock a species of cave-dwellers, but a larger subject of study is the model native government, which has shown great enterprise. At 93 miles a forest reserve of 25 square miles is struck, and the plantations here are interesting to the student of forestry.

An order has been placed with Messrs. Swan, Hunter and Wigham Richardson for a galvanized floating dock capable of docking vessels up to 5,000 tons dead weight. The contract price is £57,750, which includes delivery and mooring at Lagos. The dock is to be of the double-sided self-docking type known as the "Sectional Pontoon" type, consisting of two parallel side walls and six similar pontoons attached to the side walls.

World's Record in Telescopic Tracklaying.

The *Royal Engineers' Journal* records the fact that this record was achieved on the Baro-Kano Railway on the 8th of March last year. The record to be beaten was one of 5 miles, made by Messrs. Pauling, in Rhodesia. $6\frac{1}{2}$ miles were laid between 5.50 a.m. and 6.40 p.m.; a further $\frac{1}{4}$ mile had been laid out but could not be linked up owing to darkness coming on and all the gang being tired out. 1,622 natives were employed and 17 Europeans. The weight of rails and sleepers handled was over 900 tons. The feat is remarkable evidence of the working powers of the natives when properly led.

Accra Harbour Works.

Apprehension has been expressed in the Legislative Council as to the present condition of the harbour, as it appears that the depth of water has been reduced, notwithstanding that sand has been pumped out. Under the circumstances the use of the jetty is difficult, and investigation of the subject seems necessary, but probably the situation will be improved by dredging.

Seccondée Harbour Works.

In September the heavy swell prevented foundation work near the gap in the reef, and the extension of the breakwater made little progress; advantage however has been taken of occasions of fine weather to close this gap with concrete. The stepped retaining wall was completed and will be of great advantage to the harbour.

Accra-Akwapim.

The time for completion has been extended to the 1st of April to allow the contractors time for the repair of damage caused by

floods. The Contractors will continue to work the line, paying the Government 50 per cent. of the gross receipts and the hire of any rolling stock lent to them.

Sierra Leone.

The gross revenue in 1910 was £101,610, an increase of £17,381. This is a record, and is nearly double the revenue of five years ago. The profit on the working of the main and branch lines represented $3\frac{1}{2}$ per cent. on the capital expenditure, but there is a loss on the mountain railway of £1,734. The trial use of wood fuel and Crown Patent Fuel was not a success. An astonishing theft of keys goes on, nearly 20,000 having been abstracted in two years.

Ceylon.

The sea coast duplication works have progressed satisfactorily. The deviation on the north side of the Kilani bank has been opened for traffic for single line.

Ratnapura Extension.

It is expected that passenger and mail traffic will be opened as far as Kuruwita and goods as far as Ratnapura this month, but as the high banks near the latter place will have hardly settled enough for fast passenger traffic the last seven miles may not be opened for passenger traffic till the middle of March.

Mannar.

It is understood that the South Indian Railway do not expect to have the piers ready before July, 1913 and the line as a whole before July, 1914. The work on the Ceylon side is believed to be at least twelve months ahead of the work on the Indian connection, a result largely due to the use of steam cranes.

Malay States.

The Semantan-Kuala-Tembeling rails at the end of September were linked for 27 miles, and the Padang, Java-Kuala Selangor rails for $2\frac{1}{2}$ miles.

Uganda.

The report for 1910-11 shows a very satisfactory year's working. There is an advance of work all round, and it has been done more economically than ever before. The increase is due greatly to the low rates for maize and beans for export, and Mr. Currie is confident that the practice of quoting low rates for export of country produce could be further extended with advantage both to the country and to the railway. A branch of about

30 miles is being constructed from Nairobi to the Thika River, and will open up one of the best parts of the highlands. The proposed substitution of oil for wood fuel on the steamers is mentioned; since the report steps have been taken to ascertain how oil can best be obtained for the requirements.

Jinja-Kakindu.

By October the earthwork left only 12 miles to be completed, and these, it was expected, would be finished by the end of the month. The rails had reached mile 30. A good supply of labour has been maintained, between 4,000 and 5,000 men being employed. It is hoped that when the line is opened the jemadars of all the maintenance gangs will be Africans.

It has been decided to provide additional vessels for service on Lake Kioga. They will consist of a stern-wheeler, three 100 ton lighters, and four spoon-dredgers.

Trinidad.

On the 29th of September the first sod of the Tabaquite-Rio Claro Line was cut by the Governor in the presence of a large company comprising the members of the Legislative Council, the heads of departments, and the representatives of the Church, the Law Courts, the Chamber of Commerce, the Agricultural Society and Board of Agriculture.

The extension from San Fernando to Siparia has been staked out by Mr. H. R. Marwood. Interference with the Public Recreation Ground has been avoided by taking the route along the foreshore. This will necessitate a sea-wall, in connection with which it is proposed to extend the wharf wall at San Fernando. The line at about 1½ mile from that town enters a district devoted to sugar plantation, which is intersected by many tramways chiefly used for the conveyance of canes to the factories and to the ports of shipment, and as far as possible the line follows these tramways. The railway crosses the Oropouche Lagoon and the Carampo River and then follows the Coura River to its source. After crossing the watershed 16 miles from San Fernando it descends to the site proposed for the station at Siparia.

No curve is sharper than 10 chains in radius and the gradients appear to have been generally well laid out.

Refrigerator Wagons.

There is little occasion for these in Europe, and the United States have done most of the experimenting. The South Africa

Railway Magazine gives a useful account of the methods. There are two principal types, the Beef Car and the Fruit and Produce Car. These two types differ in several respects, the former having closed ice tanks to give a dry atmosphere, which is necessary for the proper handling of meat, while the latter has the icebox with slatted front, the air coming in direct contact with the refrigerant which almost invariably is ice. The Beef Car has generally a heavier insulation and a heavier framing, as the meat is hung from the roof, and it is often shorter than the Produce Car.

Ice Tanks.—The Fruit and Produce Cars which are used to carry dairy products, fruit, vegetables, cured meats, etc., are equipped with an icebox at each end of the car of varying construction. Some makers adopt the slatted front while others again construct a solid bulkhead, in some cases well insulated. There seems a distinct advantage in the latest method of having a collapsible icebox which can be folded up against and secured to the end of the car when the weather conditions are such that refrigeration is unnecessary. The increase in loading space thus secured is stated to be about 15 per cent. The capacities of these ice boxes vary from 4,000 lbs. to 11,000 lbs. of ice per car, while the total cubic contents are 10 to 11·6 per cent of the capacity of the car.

The Refrigerator Beef Car which is used for carrying fresh dressed meat is equipped with four ice tanks at each end of the car, the four tanks giving a greater cooling area than one of larger capacity. These are generally made of galvanised iron and are of the closed type to prevent the air carrying moisture to the foodstuffs. The capacity of these tanks is much less than that of the ice boxes in the Fruit Car, being only about 5·2 per cent. of the cubic contents of the car and carrying 5,000 lbs. of ice, salt being mixed with the ice to further lower the temperature. The smaller quantity of ice required for the Beef Car is due to the fact that the meat is loaded in a pre-cooled condition, while this is seldom the case with the load of the Produce Car.

The draining of the meltage from the ice boxes in the Produce Cars is done through traps to prevent loss of cold air. In the case of the Beef Car where salt is mixed with the ice serious objections are raised to the draining of the brine over the roadbed causing increased expenditure in maintaining rails, bridges, signal equipment, etc. Further, it has been proved by tests carried out by a Committee appointed by the Master Car Builders' Association that the greatest amount of refrigeration is obtained by retaining the brine in the tanks and only draining at icing stations. The following is the recommendation made by the said Committee:—"All salt water drippings should be retained in the ice tanks and drained off only at the icing stations. The mechanism for handling drain valves

should be simple and positive and so designed as to ensure closing the valves before hatch-plugs can be returned to their places."

Insulation.—The question of insulation has been thoroughly investigated of late, as it is increasingly realised that a very large proportion of the refrigeration is absorbed in taking up the heat that leaks in through the body of the car. It is estimated, after careful calculation, that in the average cold storage building 70 per cent. of the refrigeration applied is used to remove the heat which leaks in through insulated walls, and as this amount must be even greater in a less insulated refrigerator car the advantage gained by having good insulation is at once seen.

The following is a comparative table showing the thickness of different materials required to give the same insulation:—

Linofelt	3·25 inches.
Hairfelt	4·70 "
Granulated Cork	6·54 "
Best Slagwool	7·27 "
Soft Mill Shavings	8·00 "
Sheathing and Air-spaces	9·15 "

Travelling Cranes.

Overhead wiring over a goods yard is objectionable as the wires are very much in the way of operations when lengthy articles are being handled. A live rail is also objectionable as where there is much traffic it is likely to cause serious and even fatal accidents. A conduit system avoids these defects. It is important to provide proper drainage for it. Messrs. Preece, Cardew and Snell have observed in a recent case that if travelling is only occasional a series of plug boxes can be arranged, connection from which to the crane would be made by means of armoured flexible cable. This system is in use at Dover Harbour for the cranes working the cross-channel traffic.

An Imperial Edict issued in China last June states that "the state ownership of railways is essential for the efficient administration of the railway policy, but much more so for the relieving of the people's distress." This is excellent doctrine, and there is to be no mistake about carrying it out. Perhaps the instructions given are too drastic for general imitation, but in their way they are a good model for the repression of objectors.

"The Director-General of the Canton-Hankow and Szechuan-Hankow Railways is hereby commanded to proceed with all speed to his post and to act in conjunction with the Viceroy and the Governor of the said provinces in conformity to the suggestions

above enumerated. He shall execute his duties with genuine earnestness especially with regard to his investigations of the sums realised under the different forms of collection. The Throne has very carefully considered every point of this matter, and is acting with extreme liberality and at great sacrifice. After the adoption of the present measures, if there be still incorrigible persons who utilise the name of railway affairs in the hope of inciting and creating disturbances, the ringleaders shall be instantly arrested by the said Viceroy and the Governor, and punished according to the severest law, without the least mitigation or mercy, so as to preserve public order."

MEDICAL NOTES.

Sleeping Sickness.

The Gambia Protectorate Medical Officer suggests that the disease is on the wane there, and that this is due to the natives having acquired some degree of immunity. "Several facts," he says, "seem to point this way. Tsetse flies of all sorts abound in the Gambia, a country which is merely the banks of a tropical river, and which consists for at least half its area of the alluvium and swamp which fringe such a river. Here there is every environment favourable to the life and increase of these flies. Cases, few in number though, do occur every year, so that foci of possible infection are present, and practically everywhere we have the Tsetse to carry the infection. Human carriers too would always be numerous, for travellers are many, some for trade, others for agricultural purposes; these being the hundreds of 'Strange farmers' who come in every year for the rains to plant ground-nuts in British territory. As peace and prosperity prevail everywhere there is absolutely nothing to hinder frequent intercourse between all parts of the Protectorate and of the surrounding portions of French Territory. This intercourse is large and widely spread, and means continual coming and going, for our river is still, as it has been for a century or more, the main highway from the sea to the Soudan and the interior, so that nearly all the produce of, and nearly all the imports for the neighbouring countries, as well as our own, are carried to or from our river, which provides easy water transport to Europe. With such frequent movement, therefore, from one end of the country to the other, there must be every facility for the spread of Sleeping Sickness, as there are so many places where travellers in our territory must meet with Tsetse flies—in many places indeed it would be impossible even to take the shortest journey without passing through a Tsetse haunt.

"How is it then that under these conditions, instead of one case here and there, we do not see one case followed by others infected from it, till by now the terrible state of affairs which prevails elsewhere has been reached, if our people are not more or less immune

to the disease, having acquired this immunity in the days when Sleeping Sickness was much more prevalent than at present?"

The explanation, however, of the fact that the Gambia does not show such terrible effects as have been experienced in Uganda, may be that the Gambia natives are of better physique and better fed, and are therefore better fitted to resist disease. Also the towns are better situated than in the cases in Uganda where the disease has been prevalent, as nearly all are at a considerable distance from the river, and are surrounded by a clearing of cultivated land. It is said that tsetse flies never live in such towns. Dr. Hopkinson mentions that the natives thoroughly believe in Kola as "good medicine," and observes that it is undoubtedly a wonderful stimulant and antidote to fatigue. Whatever may be the virtues of this product, it seems highly probable, in view of the fact that a considerable want of food has occurred in some of the worst districts, that good nourishment has a good deal to do with keeping the disease down. On the other hand, the theory that immunity may be acquired is supported by the case of cattle in the Gambia which are infected by trypanosomiasis but are fit and well and are now spreading to districts where they could not thrive formerly. Also it is significant that in Europeans the disease is more rapid; they appear rarely to live till the real sleeping stage is reached. It is possible, of course, that both good physique and acquired immunity contribute to the diminution of the disease, and in any case it is happily clear that things are much better than they were.

"Native tradition asserts that in earlier times the disease was much more prevalent in the Gambia than it is now, and whole districts, now desirable dwelling-places, are said to have been uninhabitable. In the Protectorate, this particularly applies to Nianija, which in former days bore such evil name that its inhabitants were few or non-existent, but is now a rich and fairly thickly populated country inhabited mainly by Turankos, a branch of the Foulah race and a prosperous people, who are the owners of large quantities of cattle. Accounts too of the slave-trade and the frequent awful mortality among the slave-gangs and slave-ship cargoes from this disease, all provide additional evidence to show in those days sleeping sickness was a much commoner disease in the Gambia, one of the chief centres of the export trade in slaves, than it is now."

Malarial Fever.

The last medical report of the Gold Coast states that the curve for Malaria begins to rise slowly after the rains set in and reaches its greatest height in August. There is then a fall, and a second but smaller rise in October, followed by another fall. The prevalence of the disease is in direct proportion to the anopheline rate.

It does not begin to rise until some time after the commencement of the rains, because there has not yet been time for any great number of mosquitoes to be bred and become infected. During the heavy rains, moreover, stagnant pools suited to the habits of the anopheles are less numerous and constantly being flushed out by flood water, and it is, therefore, only when the rainfall is decreasing and these pools remain for longer periods that the great rise in the malarial rate takes place.

The Anopheline Mosquito.

A little book on this topic, published by Mr. John Murray, price 6d., has been written for use in schools by Mr. R. C. Daughlish, of Barberton, assisted by Dr. Stephens, of the Liverpool School of Tropical Medicine. It puts the facts in a plain way suitable for children, and, as the subject is eminently fit for inclusion in the elementary education of the countries affected, it is to be hoped that a wide use will be made of it.

COLONIAL STAMPS.

THE first stamps with the portrait of H.M. the King to be issued by a Crown Colony will be despatched in the middle of January. They will be from the general keyplate which we may call for convenience the Nyasaland type, as that Protectorate was the first to use it. The difference between this keyplate and the well-known one generally referred to by philatelists as the De La Rue type (apart from its appearance) is that the former necessitates the employment of a border plate, whereas the latter is used with an overprint plate. The border plate must be at least as large as the keyplate, as the border has to be printed first, whereas the overprint plate, as its name denotes, is printed from after the impression has been produced upon the paper by means of the keyplate. The method adopted is that if, for instance, a 120-set keyplate is used, the paper with 120 impressions may be cut in half, and the overprint applied to the 60-set sheets. A border plate costs more than an overprint plate.

With regard to the appearance of the two sorts of keyplate it may be observed that the Nyasaland type, carrying a larger head and crown, leaves no room for the name of the issuing country at the top of the stamp. The positions each side of the crown are well adapted for containing the denomination of the stamp in figures, while the name of the Colony can only appear at the foot of the stamp. In the case of the De La Rue type of keyplate the crown and head are so small that when they are centred there is plenty of room for the name of the Colony at the top,

Representations have been received from at least one Colonial Government to the effect that the value shows up much more clearly if it is printed in solid colour on a background which is the colour of the paper used. It is intended to adopt this suggestion when new plates are manufactured, except where this would result in the second colour being insufficiently conspicuous, in which case it would be better to have the figure in white on an absolutely solid ground of colour.

There is only one type of general keyplate for the production of large-sized stamps, and it is one which requires the use of border plates. The name of the issuing country can be inserted either at the top or the bottom of the stamp.

"Chats on Postage Stamps," by Mr. F. Melville, is a volume which is sure of a welcome by philatelists of all kinds. It is well got up and illustrated, and contains matter of interest, not only for beginners, but even for the apparently decreasing minority who have not yet begun. Forming a part, as it does, of a series dealing with such subjects as Old China, Old Furniture, Old Prints, and Miniatures, it seems at first sight to make a definite claim for Stamp Collecting to an equal place with the collecting of the treasures of art in all its branches; but chapter vii. gives a clue to a very deep-seated difference between this and the other hobbies of which the series treats. The value of stamps, which is the measure of the extent to which they are sought after, does not depend in the slightest degree upon their beauty, or their place in the history of a particular art, *i.e.*, miniature colour printing, but upon rarity, and the stamp which has been defaced with the crudest overprint, is worth many times as much as the same stamp, or a stamp of far better execution, design, and beauty, which is not similarly defaced. This is the chief reason why stamp collecting can never make good a claim, which is often seriously put forward, to the position of an art or a science. It is a thing apart, which Mr. Melville describes as "a world-wide Freemasonry and an open sesame to the fellowship and hospitality of collectors everywhere."

ANTIGUA.—2d., 3d. and 2s. stamps (arms design) are being supplied on surfaced paper. They have not previously been supplied on multiple watermark paper.

BRUNEI.—30 cents. and \$1 stamps have been supplied in similar colours to those in which the stamps of the same values for the Straits Settlements Government are printed. The remainder of the issue will shortly follow suit, with the exception of the 2 cents., which will remain as at present. Special single colour printing plates will be employed for all values except the 2 cents., 30 cents., and \$1 values.

GOLD COAST.—2s. and £1 stamps have been supplied for the first time on surfaced paper; 5s. and 10s. stamps for the first time in the new colours and on surfaced paper.

JAMAICA.—Books of stamps will shortly be supplied with advertisements printed on the interleaves.

MALTA.—4d. stamps have been supplied in the new colours.

ST. HELENA.—4d. and 6d. stamps have been supplied on surfaced paper, as they used to be before the last supply was sent out.

STRAITS SETTLEMENTS.—4 cents. and 10 cents. stamps have been supplied on surfaced paper. The colour of the former has reverted practically to what it used to be.

TRENGGANU.—Two further values have been supplied, *i.e.*, \$5 green centre and purple border, and \$25 carmine centre and green border. Both stamps are of the large size and are on surfaced paper.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. CLAUD SEVERN (Secretary to High Commissioner, Malay States, and Private Secretary to Governor, Straits Settlements), Colonial Secretary, Hong Kong.
- Mr. A. EARNSHAW (Puisne Judge, Gold Coast), Puisne Judge, British Guiana.
- Mr. L. E. HAWTAYNE (Stipendiary Magistrate, British Guiana), Puisne Judge, Gold Coast.
- Mr. G. O'D. WALTON (Police Magistrate, Barbados), Magistrate, St. Kitts.
- Mr. W. A. MILLER, A.M.I.C.E. (Colonial Engineer and Surveyor-General, Dominica), Commissioner of Works, Fiji.
- Dr. J. LUNN (Medical Officer, West African Medical Staff), Inspecting Officer, Medical Department, Ceylon.
- Dr. E. LANGLEY HUNT, C.M.G. (Medical Officer, West African Medical Staff), Inspecting Officer, Medical Department, Ceylon.
- Dr. F. L. NORRIS (Chief Government Medical Officer, Antigua), Chief Medical Officer, Bahamas.
- Mr. K. R. CHATFIELD (Temporary Assistant Engineer, Public Works Department, Northern Nigeria), Engineer of Roads, Gold Coast.
- Mr. CHARLES O'FARRELL (late Sergeant, Transvaal Town Police), Assistant Superintendent of Police, Gambia.
- Mr. W. RANSLEY (late Preventive Inspector, Customs Department, Sierra Leone), Inspector of Produce, Customs Department, Southern Nigeria.
- Mr. H. R. BILTCLIFFE (Sergeant-Major of Police and Constabulary, Bahamas), Gaoler, Gold Coast.
- Mr. J. CONCANNON (Sergeant-Major of Police, St. Vincent), Gaoler, Gold Coast.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ARCHER, A. M. G. ...	28 Jan., '12	ELDRED, Mrs. E. F. ...	<i>Due back</i>
ARMSTRONG, J. H. ...	4 Feb., '12		26 Jan., '12
ALDERSON, E. R. ...	4 Jan., '12	FRANCE, H. D. ...	5 Mar., '12
Argyll Club, 52, Russell Square, W.C.		FESTING, Maj. A. H., C.M.G., D.S.O.	8 Jan., '12
ARMITAGE, Capt. C. H., C.M.G., D.S.O.	13 Feb., '12	FAIRWEATHER, C. ...	7 Feb., '12
ASHTON, T. ...	11 Mar., '12	FURNELL, Capt. G. O. M.	8 Feb., '12
BROWN, E. P. ...	11 Mar., '12	GETHING, W. B. ...	15 Jan., '12
BURNS, P. ...	5 Mar., '12	HARPER, C. H. ...	25 Mar., '12
BURNS, R. E. ...	6 May, '12	HARRY, H. P. ...	11 Mar., '12
BALSTONE, A. ...	13 Feb., '12	HARPER, Dr. F. S. ...	5 Mar., '12
BETTINGTON, D. R. A. ...	11 Feb., '12	HIND, C. E. ...	5 Mar., '12
BRYANT, Capt. F. C. ...	11 Jan., '12	HELLIS, C. O. H. ...	13 Feb., '12
BENNETT, R. ...	15 Jan., '12	HEATON, J. W. ...	11 Jan., '12
BURNETT, W. ...	8 Jan., '12	INGLIS, M. F. ...	13 Feb., '12
CORNEY, L. G. ...	15 Jan., '12	JUPE, Dr. F. J. M. ...	1 Mar., '12
COYLE, A. ...	11 Jan., '12	JONES, P. N. H. ...	8 Jan., '12
COLLIER, Dr. J. H. ...	12 Mar., '12	LETT, R. E. ...	23 Jan., '12
CARTER, A. ...	12 Mar., '12	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
CHAMBERLAIN, R. K. ...	13 Feb., '12	LEAT, F. W. ...	23 Jan., '12
DICKINSON, B. ...	11 Mar., '12	LLOYD, A. G. ...	
DAVIS, S. S. ...	17 Mar., '12	LUMSDEN, Capt. A. F. ...	
Royal Colonial Insti- tute, Northumberland Avenue, W.C.		MICHELIN, W. P. ...	17 Mar., '12
DUGON, Dr. T. H. ...	2 Mar., '12	MACARTNEY-FILGATE, D.	16 Jan., '12
DUGGAN, J. C. ...	7 Jan., '12	L. M.	
		MORGAN, F. ...	7 Feb., '12

GOLD COAST—*continued.*

MILES, A. C.	15 Jan., '12	SPITZER, J. R.	7 Mar., '12
MOFFATT, Dr. J. E. ...	21 Jan., '12	Royal Colonial Institute, Northumberland Avenue, W.C.	
O'TOOLE, W. F.... ..	5 Mar., '12	SMITH, H. G.	7 Mar., '12
Royal Colonial Institute, Northumberland Avenue, W.C.		SPENCER, E. C.	13 Feb., '12
ORAM, Miss J.	22 Mar., '12	THRELFALL, J.	8 Jan., '12
O'MEARA, A. E.... ..	13 Feb., '12	TRIMMER, J.	8 Jan., '12
PITT, W. J.	29 Feb., '12	TWEEDY, Dr. E. H. ...	8 Mar., '12
READ, Capt. B. M. ...	29 Jan., '12	VAN EADEN, E. C. ...	25 Mar., '12
ROBINSON, T.	6 Mar., '12	WELLACOTT, L. S. C. ...	15 Feb., '12
RANDALL, G. W.		WOODS, P. S. C.... ..	20 Feb., '12
STOREY, Capt. H. J. ...	11 Mar., '12	WITHINGTON, J.	23 Jan., '12
Sports Club, St. James' Square, S.W.		WILKINSON, Capt. S. J....	11 Mar., '12
SAICH, H. C.	15 Mar., '12	Sports Club, St. James' Square, S.W.	
		WRIGHT, H. H.	8 Jan., '12

SIERRA LEONE.

AITKEN, A.	6 Mar., '12	HEARN, W. A.	15 Jan., '12
ALEXANDER, Dr. D. ...	17 Feb., '12	LAKE, W. S.	12 Mar., '12
ANDERSON, F.	23 Jan., '12	MCLEOD, Miss A.	23 Jan., '12
BALDWIN, R. de C. ...	8 Feb., '12	MORISON, R. J.	17 Mar., '12
BAILEY, Capt. H. E. ...	13 Feb., '12	NAZER, O.	29 Feb., '12
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		NEWSTEAD, Maj. G. P....	8 Jan., '12
BOWDEN, W. D.	13 Feb., '12	PURCELL, G. K. T. ...	11 Mar., '12
BATTERSBY, C.	13 Feb., '12	PEARSON, Dr. J. S. ...	11 Mar., '12
COMBER, J. R. W.	9 Jan., '12	QUICK, W. R. W.	23 Jan., '12
FORDE, Dr. R. M.	7 Feb., '12	SALT, A. H.	7 Feb., '12
HADDON-SMITH, G. B., 25 Mar., '12		STREET, S. W.	7 Feb., '12
C.M.G.		VAN DER MEULEN, F. A. 25 Jan., '12	
HONTER, R. F.	5 Mar., '12	VAUDREY, Capt. C. H. S. 7 Feb., '12	
HOLLOWAY, W. J.	<i>Due back</i>	VEITCH, G.	13 Feb., '12
	24 Feb., '12	WRIGHT, F. W.	11 Mar., '12

GAMBIA.

GREIG, C.	31 Jan., '12
------------------	--------------

SOUTHERN NIGERIA.

APPLIN, E. G.	12 Mar., '12	BEST, Dr. W. H. G. H. 29 Feb., '12	
ADAM, Dr. T. B.	7 Apr., '12	c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.	
ANDISON, T.	19 Jan., '12	BEALE-BROWNE, Dr. T. R. 31 Mar., '12	
BOYLE, L. C.	17 Feb., '12	BLACKWELL, Maj. L. N. 15 Jan., '12	
BOSANQUET, G. A. J. ...	28 Mar., '12	BLACKISON, H.	15 Jan., '12
BLATCHFORD, A. E. ...	18 Jan., '12		
BROWNING, F. S.	15 Jan., '12		

SOUTHERN NIGERIA—continued.

BEWLEY, H. de B. ...	17 Feb., '12	HARRISON, T. St. C. ...	17 Feb., '12
BENSON, A. E. ...	8 Jan., '12	HATWOOD, Maj. A. H. W. ...	17 Jan., '12
BIDDELL, A. W. ...	15 Jan., '12	HARVEY, Miss L. ...	23 Jan., '12
BELL, H. C. ...	17 Mar., '12	HICKES, L. D. ...	13 Feb., '12
BOARDMAN, M. ...	13 Feb., '12	United Service Club, Pall Mall, S.W.	
BROOKE, C. W. ...	16 Jan., '12	HYDE, T....	29 Feb., '12
BRAY, H. W. ...	4 Jan., '12	HUGHES, R. H. W. ...	23 Feb., '12
BOLTON, H. ...	30 Jan., '12	HISCOCK, R. C. ...	8 Jan., '12
BROWN, C. A. ...	17 Mar., '12	HUNGERFORD, Dr. G. ...	15 Jan., '12
BAKER, T. S. ...	11 Mar., '12	HANSON, S. C. ...	25 Jan., '12
BRACKEN, T. B....	22 Feb., '12	HURFORD, J. ...	25 Jan., '12
BEVERLEY, Capt. W. H.	2 Mar., '12	HAZELL, J. T. ...	15 Mar., '12
Royal Societies Club, St. James St., S.W.		HARWARD, F. H. ...	25 Mar., '12
BIRTWISTLE, C. A. ...	13 Feb., '12	HORDERN, A. D....	25 Mar., '12
CLEMINSON, A. ...	8 Mar., '12	ISHERWOOD, J. ...	7 Feb., '12
CLEVES, J. ...	26 Feb., '12	JOHNSTONE, C. E. ...	13 Feb., '12
CROSS A. B. ...	15 Mar., '12	JACKSON, J. V. R. ...	29 Feb., '12
CORSELLIS, Capt. M. H.	9 Feb., '12	LITTLEWOOD, Miss C. ...	29 Feb., '12
CROSTHWAITE, Lieut. C.	23 Feb., '12	LATHEY, C. H. ...	29 Feb., '12
H. E.		LEWIS, J. H. ...	29 Jan., '12
CROSS, E. ...	14 Jan., '12	MACFARLANE, Dr. W. F.	8 Mar., '12
CHUTE, E. L. ...	22 Feb., '12	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
Sports Club, St James' Square, S.W.		MCGANN, H. ...	17 Mar., '12
CHRIST, T. ...	8 Mar., '12	MURRAY, T. ...	8 Jan., '12
CRAIG, J. ...	25 Mar., '12	MATTHEW, A. ...	26 Feb., '12
DROUYN, R. L. ...	29 Feb., '12	MOORE, J. J. ...	23 Jan., '12
DOUGLAS, K. J....	5 Mar., '12	MACKINNON, Dr. D. ...	7 Feb., '12
DAY, Lieut. T. E. ...	28 Feb., '12	MAY, G. C. McF. ...	18 Jan., '12
DON, W. ...	13 Feb., '12	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
DAVIDSON, J. W. ...	26 Feb., '12	MACLAINE, S. L. G. D. ...	9 Feb., '12
DIXON, A. ...	17 Mar., '12	MUIR, A....	29 Feb., '12
DOE, A. J. ...	5 Mar., '12	MAIR, J. ...	17 Mar., '12
EVANS, T. ...	17 Jan., '12	MAXWELL, T. D. ...	28 Mar., '12
ELMES, F. J. ...	29 Jan., '12	NICHOL, W. S. ...	25 Jan., '12
ECCLES, F. D. ...	7 Feb., '12	NEWMAN, D. A. ...	29 Jan., '12
FIRTH M. A. St. J.	20 Feb., '12	NEALE, Dr. A. E. ...	18 Mar., '12
FARQUHAR, F. C. ...	27 Mar., '12	O'CALLAGHAN, C. J. ...	8 Mar., '12
FRANCIS, C. J. ...	28 Jan., '12	O'DEA, Dr. M. E. ...	5 Mar., '12
FOSTER, T. F. V. ...	29 Feb., '12	POOLER, G. ...	17 Mar., '12
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		POOL, A. W. ...	27 Mar., '12
GRIFFITH, Capt. G. M.	4 Feb., '12	PRIMROSE, R. ...	17 Mar., '12
GUERITZ, E. L. ...	22 Feb., '12	POLLEN, J. M. ...	8 Jan., '12
GALLOWAY, Capt. L., D.S.O.	25 Jan., '12	PHILLIPPS, P. H. ...	13 Feb., '12
GREY, Dr. C. G. ...	11 Mar., '12	PLOWRIGHT, J. T. ...	Due back 7 Apr., '12
GIVEN, G. K. ...	23 Jan., '12	PROSSER, J. A. B. ...	8 Jan., '12
HARRIS, H. J. ...	18 Feb., '12	PURCELL, Capt. H. F. ...	7 Feb., '12
HELLARD, W. B. ...	8 Jan., '12	PINKETT, F. P. ...	5 Mar., '12
HENDERSON, J. A. ...	11 Mar., '12		
HILL, W. ...	11 Mar., '12		
HORTON, C. ...	29 Feb., '12		

SOUTHERN NIGERIA—continued.

PHILPOT, A. E. ...	11 Mar., '12	TURNER, H. ...	7 Jan., '12
PURVOR, R. A. ...	13 Feb., '12	THOMPSON, C. E. ...	23 Feb., '12
PHILLIPS, J. M....	27 Jan., '12	c/o Messrs. Cox & Co.,	
ROOTS, A. E. ...	Due back	16, Charing Cross,	
	11 Feb., '12	S.W.	
REYNOLDS, W. J. ...	13 Jan., '12	UNDERWOOD, J. P. D. ...	11 Mar., '12
RICHARDS, S. ...	29 Feb., '12	VOWELL, J. ...	22 Feb., '12
ROSS, Dr. F. ...	7 Feb., '12	WINCHESTER, Miss J. ...	29 Feb., '12
ROSS, G. R. ...	13 Feb., '12	WILLOUGHBY-OSBORNE, A.	28 Feb., '12
REEDER, W. ...	6 Mar., '12	c/o Manager, Lon. Cty.	
RAMSBOTTOM, J. H. ...	23 Jan., '12	& Westmr. Bk., Ltd.,	
SNEDDON, J. ...	17 Mar., '12	Harpenden.	
STEVENS, E. G. ...	25 Mar., '12	WILLITS, F. O. ...	13 Feb., '12
SUFFERN, Dr. T. H. ...	13 Feb., '12	WYNDHAM, Capt. J. ...	8 Jan., '12
SHEPPARD, J. G. ...	8 Jan., '12	Messrs. Cox & Co.,	
SMITH, H. H. ...	22 Feb., '12	16, Charing Cross, S.W.	
SMITH, W. B. ...	29 Feb., '12	WALLER, F. H....	23 Feb., '12
STORY, W. ...	15 Jan., '12	WILSON, Dr. G....	2 Mar., '12
SARGENT, J. ...	29 Feb., '12	WESTON, E. A. ...	14 Apr., '12
c/o Messrs. Cox & Co.,		Royal Societies Club,	
16, Charing Cross, S.W.		St. James' Street, S.W.	
SALTHOUSE, S. ...	5 Feb., '12	WOOD, B. G. ...	13 Feb., '12
SIME, A. F. ...	15 Jan., '12	WALLISS, E. ...	7 Feb., '12
SOUTH, F. B. ...	27 Mar., '12	WILSON, W. J. ...	11 Mar., '12
SNELL, Dr. J. P. B. ...		WYATT, F. ...	20 Jan., '12
SEALY, J. D. B. ...	8 Feb., '12	WARD, C. D. ...	4 Apr., '12
SAYER, E. ...	11 Mar., '12	WICKHAM, J. D. D. ...	25 Mar., '12
TAYLOR, C. ...	23 Feb., '12		
THORBURN, D. H. ...	15 Jan., '12		
Caledonian Club,			
Charles Street, S.W.			

NORTHERN NIGERIA.

ADAMS, J. G. ...	29 Feb., '12	BLAKE, Capt. L. H. E. ...	18 Mar., '12
Junior Naval and		BISHOP, W. W.	
Military Club, 96,		CARTER, E. J. ...	15 Jan., '12
Piccadilly, W.		CLARKE, Miss J. A. ...	29 Feb., '12
ACKLAND, Lt. A.C., R.N.		CAUDELL, C. J. ...	11 Jan., '12
BRAGHER, A. W. ...	7 Feb., '12	DOUBLEDAY, E. ...	29 Feb., '12
BENTON, P. A. ...	16 Mar., '12	DARWELL, G. ...	23 Jan., '12
c/o Messrs. H. S. King		DUPIGNY, E. G. M. ...	27 Feb., '12
& Co., 9, Pall Mall,		Royal Societies Club,	
S.W.		St. James' Street, S.W.	
BELL, F. W., V.C. ...	27 Feb., '12	EDWARDES, H. S. W. ...	9 Jan., '12
BADHAM, J. F. ...	8 Jan., '12	Royal Societies Club,	
BLACKWOOD, A. M., ...	18 Feb., '12	St. James' Street, S.W.	
Army & Navy Club,		FRASER, W. K. ...	16 Jan., '12
Pall Mall, S.W.		FRASER, N. A. P. ...	28 Jan., '12
BARKER, B. A. ...	22 Feb., '12	GEORGE, C. H. ...	27 Mar., '12
BREALY, H. H. ...	11 Mar., '12	GEDGE, H. G. ...	5 Jan., '12
BERESFORD, M. J. de la P.	9 Feb., '12	GOLD, C. ...	29 Feb., '12
BOYD, C. E. ...	12 Mar., '12	GOULDEN, Capt. C. F. ...	25 Mar., '12

NORTHERN NIGERIA—continued.

GARNIER, A. P. ...	8 Jan., '12	MEGETT, J. H. ...	29 Feb., '12
GREEN, H. W. ...	29 Feb., '12	MILLER, H. G. ...	8 Jan., '12
HAMLIN, A. D. ...	16 Feb., '12	OLDFIELD, J. A. ...	27 Jan., '12
HORAN, J. ...	17 Mar., '12	PUGH, W. A. ...	15 Mar., '12
HUGHES, W. C. ...	6 Apr., '12	PALMER, H. R. ...	16 Mar., '12
Union Jack Club, Waterloo Road, S.E.		POOL, W. ...	19 Feb., '12
HODGES, A. H. ...	8 Mar., '12	PAWLE, D. W. ...	11 Mar., '12
INGLIS, T. ...	27 Feb., '12	RENNIE, Miss C. E. ...	7 Feb., '12
JOHNSON, H. W. ...	6 Apr., '12	ROGERS, W. ...	22 Jan., '12
KIRKPATRICK, G. ...	17 Apr., '12	ROBINSON, Capt. A. T. ...	17 Feb., '12
KAY, A. S. ...	18 Jan., '12	ROYAL, E. ...	7 Feb., '12
KING, G. C. W. ...	18 Jan., '12	SANDERS, C. W. ...	10 Jan., '12
KENT, R. R. ...	11 Jan., '12	SEYMOUR, Capt. Lord, H. C., Guard's Club, Pall Mall, S.W.	29 Feb., '12
KEMP, H. ...	5 Mar., '12	SILCOCK, J. A. ...	1 Feb., '12
LAMBERT, G. E. O. F. ...	29 Feb., '12	SARGENT, F. A. ...	8 Jan., '12
LEES, Capt. D. ...	7 Jan., '12	SHOTT, Capt. H. H., D.S.O.	25 Mar., '12
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		SHAW, B. E. B. ...	18 Jan., '12
LE FANU, R. N. ...	21 Jan., '12	SINCLAIR, F. ...	11 Mar., '12
MARSH, F. ...	12 Jan., '12	SHIPWAY, A. C. ...	29 Feb., '12
MANUK, Dr. M. W. ...	8 Mar., '12	TOMSETT, A. P. ...	7 Feb., '12
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		TRAILL, Capt. H. L. N. ...	9 Feb., '12
MERRON, P. ...	3 Feb., '12	THATCHER, W. H. J. ...	29 Feb., '12
MANCE, Capt. H. O., D.S.O.	9 Jan., '12	VERMUELEN, A. ...	11 Mar., '12
MAIR, W. D. K. ...	11 Feb., '12	WILLIS, M. H. S. ...	5 Mar., '12
New Oxford and Cam- bridge Club, 96, Pall Mall, S.W.		WOOLLEY, H. M. ...	17 Mar., '12
MORRISON, Dr. W. ...	19 Feb., '12	WHALLEY, G. A. ...	27 Mar., '12
		WEBSTER, G. W. ...	28 Feb., '12
		Isthmian Club, 105, Piccadilly, W.	

EAST AFRICA.

ANDERSON, H. C. ...	6 Jan., '12	ELLIOTT, Lieut. J. A. G. ...	23 Apr., '12
BAKEWELL, J. A. ...	31 Jan., '12	EVANS, W. J. ...	13 May, '12
BOVEY, M. CRAWLEY ...	Due back	FULLER-MAITLAND, G. A. ...	29 Feb., '12
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	13 Feb., '12	FRY, J. N. ...	11 May, '12
BALMER, F. E. ...	15 Apr., '12	GALBRAITH, T. H. ...	12 May, '12
BOGON, R. ...	19 Feb., '12	c/o National Bank of India Ltd., 26, Bishops- gate St., E.C.	
BANKS, J. B. ...	26 Mar., '12	GOBY, I. E. ...	Due back
BROWN, P. F. ...	10 Feb., '12		5 Apr., '12
CREWE-REID, E. C. ...	3 Apr., '12	GRANT, R. ...	8 Apr., '12
CARPENTER, L. D. ...	10 Feb., '12	JONES, L. A. F. ...	31 Jan., '12
DUNN, Capt. W. R. H. ...	Due back	JORDAN, F. H. ...	1 Mar., '12
	6 Mar., '12	JACKSON, W. B. ...	16 Apr., '12
DONALD, R. ...	4 Feb., '12	KITTERMASTER, H. B. ...	15 Jan., '12
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		LAMB, Dr. T. F. ...	4 Mar., '12
		MOORE, J. P. ...	31 Jan., '12

EAST AFRICA—continued.

MACLEAN, A. J. ...	27 Jan., '12	PEARSON, W. ...	31 Jan., '12
MCRobERTS, B. A. K. ...	18 Mar., '12	RAWLINSON, D. V. ...	22 Mar., '12
MCHARDY, W. ...	11 Mar., '12	RIMMER, J. ...	13 Feb., '12
MURE, G. A. S. ...	23 May, '12	SERGEANT, J. ...	29 Feb., '12
MOUAT, Dr. A. ...		TODD, W. ...	31 Jan., '12
MINSHALL, G. H. ...		VEREKER, Lt. L. G. P....	30 Jan., '12
MARTELLI, C. W. ...	<i>Due back</i>	WILKES, B. C. ...	
	5 May, '12		

UGANDA.

BISSET, A. ...	29 Jan., '12	LEAKEY, F. H. ...	2 Apr., '12
DELMEGE, J. de G. ...	13 May, '12	MORTON, T. A. ...	31 Jan., '12
FOWKE, Capt. M. C. ...	<i>Due back</i>	MCCOMBIE, L. H. D. ...	14 Mar., '12
	13 Feb., '12	PETHERBRIDGE, Miss B.	27 Mar., '12
FOX, T. V. ...	28 Feb., '12	RIDDICK, Capt. C. ...	31 Jan., '12
GOWDEY, C. C. ...	27 Mar., '12	SPIRE, F....	25 Apr., '12
HAILSTONE, Dr. J. E. ...		TAYLOR, E. ...	2 Apr., '12
HOULGRAVE, G. ...			

NYASALAND.

BAYLES, H. L. ...	8 Jan., '12	OLD, J. E. S. ...	19 Mar., '12
DUFF, H. L. K. ...		PUGH, H. A. D. B. ...	
HEATH, L. M. ...	<i>Due back</i>	SOAMES, Capt. L. H. ...	<i>Due back</i>
c/o Messrs. Cox & Co.,	2 Apr., '12	c/o Messrs. Cox & Co.,	2 Apr., '12
16, Charing Cross, S.W.		16, Charing Cross, S.W.	
LYALL-GRANT, Hon. R. W.	11 Jan., '12	STANNUS, Dr. H. S. ...	19 Jan., '12
MILTHORP, B. T. ...		URQUHART, A. ...	4 Mar., '12
MCCALL, J. S. J. ...	16 Mar., '12	VERTUE, S. B. ...	19 Mar., '12

SOMALILAND.

ROBERTS, F. ...	28 Mar., '12	WILBRAHAM, R. F. B. ...	13 Jan., '12
-----------------	--------------	-------------------------	--------------

BECHUANALAND.

CHASE, W. H. ...	6 Feb., '12	MURPHY, W. H. W. ...	12 Feb., '12
MATHIESON, R. ...	17 Feb., '12		

SWAZILAND.

DUTTON, E. G. ...	31 Jan., '12	SMITH, J....	29 Feb., '12
-------------------	--------------	--------------	--------------

BRITISH HONDURAS.

BRUNTON, F. W. ...	7 June, '12	MACRAY, Dr. C....	31 Aug., '12
--------------------	-------------	-------------------	--------------

FIJI.

ALLARDYCE, K. J. ...	25 Apr., '12	RAMSAY, Dr. W. M. ...	29 May, '12
Royal Colonial Institute, Northumberland Avenue, W.C.		WRIGHT, R. E. ...	5 Apr., '12

FALKLAND ISLANDS.

EARL, Dr. R. S.	15 Mar., '12
---------------------	--------	--------------

CYPRUS.

BUCKNILL, J. A. S. ...	9 Feb., '12	STUART, A. L. C. ...	25 Jan., '12
------------------------	-------------	----------------------	--------------

GIBRALTAR.

FRERE, B. H. T., K.C.	18 Jan., '12
---------------------------	--------	--------------

LEEWARD ISLANDS.

BYETT, R. H. K. ...	16 Mar., '12	SWEET-ESCOTT, Sir E. B., K.C.M.G.	31 Jan., '12
---------------------	--------------	--------------------------------------	--------------

ST. LUCIA.

CONDELL, C. F. ...	9 Feb., '12	GRAY, F. ...	22 July, '12
--------------------	-------------	--------------	--------------

ANTIGUA.

DYETT, R. H. K.	16 Mar., '12
---------------------	--------	--------------

JAMAICA.

COOPER, E. G.	29 Feb., '12
-------------------	--------	--------------

TRINIDAD.

BOWEN, E.R. ...	24 Jan., '12	PASHLEY, E. R. ...	24 Jan., '12
INNIS, Dr. K. U. A. ...	31 Mar., '12		

BRITISH GUIANA.

BUGLE, C. W. H. ...	18 Mar., '12	McTURE, W. H. ...	8 Mar., '12
BRUNKEE, Capt. H. M. ...	18 Aug., '12	PRINGLE, Rev. Canon	30 June, '12
CRUIKSHANK, Miss V. ...	16 Feb., '12	F. S. S.	
COX, N. ...	2 June, '12	RAE, Rev. J. ...	Due back about
FOWLER, F. ...	17 Jan., '12		5 Feb., '12
LEGGE, C. H. E. ...	16 Apr., '12	ROSS, Dr. J. H. ...	31 Jan., '12
Royal Colonial Institute, Northumberland Avenue, W.C.		SLOMAN, Very Rev. ...	30 Apr., '12
		DEAN, E.	
		WALKER, H. S. ...	3 Feb., '12

MAURITIUS.

BOUCHERAT, J. ...	23 Sept., '12	GUEN, H. LE ...	29 Mar., '12
BARBEAU, Dr. L. G. ...	25 July, '12	POUGNET, E. D. ...	30 Apr., '12
CLINTON, Ven. Arch- deacon T. W.	8 July, '12	POUGNET, G. ...	10 Apr., '12
CABÉLIEU, Rev. J. C. ...	12 June, '12	WILMANN, L. ...	26 Mar., '12

STRAITS SETTLEMENTS.

ANTHONISZ, J. O. ...	15 May, '12	HOWARD, J. A. ...	9 Feb., '12
AMBROSE, J. ...	6 Apr., '12	LANGHAM-CARTER, W. ...	Steamer due
BRACE, F. J. ...	16 June, '12		15 Feb., '12
BUXTON, Miss M. A. ...	23 Apr., '12	LAUGHER, H. ...	6 Apr., '12
BUTLER, W. ...	28 Mar., '12	MCLEAN, G. A. ...	13 Mar., '12
FRY, B. S. ...	25 Nov., '12	MULCOCK, W. ...	13 Apr., '12
FALSHAW, P. L. ...	2 July, '12	MANN, F. ...	27 Apr., '12
GREEN, C. F. J. ...	9 Mar., '12	STUTCHBURY, S. ...	Steamer due
GARDNER, E. A. ...	19 Feb., '12		3 Feb., '12
HARMER, F. E. ...	4 Nov., '12	SUTER, W. C. ...	21 June, '12
HELLIER, M. ...	18 Jan., '12	TALMA, E. L. ...	10 July, '12
HODSON, H. ...	6 June, '12	WILLIAMS, R. ...	10 May, '12
HOGAN, E. D. ...	1 Aug., '12		

TANJONG PAGAR DOCK.

APPLETON, E. ...	21 July, '12	MACDONALD, W. ...	31 Mar., '12
COX, A. H. ...		SHARPE, A. ...	

WEI HAI WEI.

WALTER, R.	16 Feb., '12
----------------	-----	-----	--------------

HONG KONG.

ARMSTRONG, J. W. ...	25 Apr., '12	MOORE, Dr. W. B. A. ...	9 Aug., '12
BREWIN, A. W., C.M.G. ...	31 Oct., '12	MCLEOD, J. M. ...	Steamer due
BARROW, Miss C. H. ...	16 May, '12		22 Feb., '12
BRAYN, R. F. ...	23 May, '12	PASSMORE, A. G. ...	28 Feb., '12
CRAIG, R. H. A. ...	24 Oct., '12	READ, E. B. ...	23 Apr., '12
CARPENTER, E. W. ...	23 Apr., '12	RICHARDS, Miss A. ...	21 Oct., '12
DA CUNHA, J. C. ...	29 Mar., '12	TAYLOR, Comm. B. R. H., R.N., Carlton Club, Pall Mall, S.W.	30 Apr., '12
GOLDSMITH, H. E. ...	12 Sept., '12		
GORHAM, Miss A. E. ...	Steamer due	WILDIN, J. C. ...	Steamer due
	22 Feb., '12		22 Feb., '12
LEWIS, E. C. L. ...	17 Oct., '12		
MACKIE A. J. ...	19 June, '12		

PERAK.

BARTLETT, R. J. ...	9 July, '12	MAGER, F. W. ...	9 Sept., '12
BELFIELD, H. C., C.M.G.	11 Feb., '12	PALMER, H. ...	10 July, '12
CHILL, J. M. ...	30 Mar., '12	SYMES, W. L. B. ...	31 Mar., '12
DISHMAN, A. J. ...	21 Feb., '12	STONOR, O. F. G. ...	24 Mar., '12
HENRY, Miss K. ...	7 Mar., '12	TOPLIS, J. ...	10 Aug., '12
MADDOCKS, W. E. ...	1 Feb., '12	WINSTEDT, R. O. ...	26 Sept., '12

PAHANG.

WOLFF, E. C. H.	24 Jan., '12
---------------------	-----	-----	--------------

KEDAH.

GERMAN, J. ...	3 Feb., '12	MAXWELL, W. G. ...	8 Oct., '12
HOOPS, Dr. A. L. ...	29 July, '12		

KELANTAN.

MASON, J. S.	19 Oct., '12
------------------	-----	-----	--------------

SELANGOR.

GARDNER, J. W. ...	26 Mar., '12	PARRY, F. W. ...	20 June, '12
HOSE, E. S. ...	19 Sept., '12	STOKOE, E. R. ...	29 May, '12
NIGHTINGALE, E. ...	2 Apr., '12		

NEGRI SEMBILAN.

ALLEN, P. T. ...	8 Apr., '12	MARTIN, V. J. ...	24 Apr., '12
BAILEY, J. ...	30 Apr., '12		

FEDERATED MALAY STATES.

BELFIELD, F. ...	20 May, '12	MAGILL, G. S. ...	18 Apr., '12
Isthmian Club, Piccadilly, W.		MORRIS, B. ...	25 June, '12
CORNWALL, A. E. ...	24 Mar., '12	MORLEY, A. ...	23 May, '12
CURTIS, A. T. ...	29 Apr., '12	McCLELLAND, F. A. S.	Steamer leaving
CUSCADEN, G. P. ...	16 Apr., '12		16 Jan., '12
CORMAC, C. R. ...	24 Aug., '12	NATHAN, J. E. ...	28 June, '12
ELLIS, T. H. ...	8 Aug., '12	PUGH, E. ...	13 Apr., '12
FLOOD, P. ...	3 Sept. '12	PRATT, E. ...	21 Sept., '12
FAIRBURN, H. ...	24 Aug., '12	East India United	
FIELD, W. ...	30 Apr., '12	Service Club, 16, St.	
FOX, G. H. ...	Steamer due	James' Square, S.W.	
	6 Mar., '12	POUNTNEY, A. M. ...	9 Aug., '12
GOODYEAR, C. M. ...	9 Mar., '12	SHAW, H. R. ...	2 June, '12
HOLLYWOOD, M. J. ...	7 Mar., '12	STEVENSON, A. M. ...	2 June, '12
HOUGHTON, Miss M. ...	25 May, '12	THOMPSON, C. C. ...	31 Jan., '12
HANSON, W. H. ...	15 June, '12	VOULES, A. B. ...	16 Aug., '12
JOHNSON, A. R. ...		WILLSON, L. H. J. ...	1 Feb., '12
JACKSON, Col. H. M. ...	30 Jan., '12	WILLETT, J. ...	26 July, '12
LEE-WARNER, W. H. ...	4 May, '12	WYATT, E. W. N. ...	21 June, '12
LAW, Sir A. F. G. ...	2 Oct., '12	WALKE, H. J. N. ...	28 May, '12
		WILDE, J. E. ...	14 Apr., '12

CEYLON.

BLOOMFIELD, H. C.	... 29 Feb., '12	HARRIS, L. J.	... 14 Mar., '12
BARNARD, H. O....	... 4 Aug., '12	HARWOOD, C. C.	... 26 Mar., '12
CHAPMAN, T. H.	... 8 Feb., '12	HEATON, J.	... 16 Apr., '12
COOKSON, G. N. ...	... 9 Aug., '12	JACKSON, W. H.	... 11 Oct., '12
CAPON, F.	... 7 Mar., '12	JOSEPH, Prof. A. F.	... 31 June, '12
DICKMAN, A. C. H.	... 1 June, '12	KINDERSLEY, W. L.	... 4 Mar., '12
DUTTON, B. J.	... 25 Apr., '12	LOCKHART, J.	... 23 May, '12
DAVIES, J. M.	... 16 Feb., '12	MCQUILLAN, P. ...	... 19 Feb., '12
EBELL, Dr. J. H.	... 30 Apr., '12	MEADEN, B. G. ...	... 30 Apr., '12
EDWARDS, D. H.	... 8 Mar., '12	MARTIN, H. A. ...	... 16 Apr., '12
FRASER, J. H.	... 28 Oct., '12	OHLUMS, Dr. T. ...	... 14 Aug., '12
FORREST, G. F.	... 9 Aug., '12	PIETERS, Miss S.	... 14 Feb., '12
FAULKNER, F.	... 13 Mar., '12	ROBERTS, T. W. ...	... 4 June, '12
GREGSON, W. B.	... 18 Apr., '12	STRICKLAND, R. B.	... 23 Jan., '12
Messrs. T. Cook & Son, Ludgate Circus, E.C.		STORE, B. P.	... 16 Apr., '12
HOWISON, J.	... 30 Apr., '12	TURNER, F. J. S.	... 27 Sept., '12
HODGSON, J.	... 13 Mar., '12	c/o Messrs. T. Cook & Son, Ludgate Circus, E.C.	
HARTLEY, C.	... 14 May, '12	WOOLF, L. S.	... 20 May, '12
HORRILL, J.	... 8 Feb., '12		

NOTE.—The Governor of the Gambia has notified the alteration of his name from "Gallwey" to "Galway."

THE COLONIAL OFFICE JOURNAL.

VOL. V.

APRIL, 1912.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

The first annual report of the High Commissioner of Australia is written in the clear and frank style characteristic of Sir G. H. Reid. His aim is to advertise Australia's attractions. "Publicity—publicity—publicity—is the beginning and the end of Australia's needs in every part of the world, but especially in the older and more crowded communities inhabited by the white races, a definition which is beginning, in my mind, to include even the United States of America." That the United States are now pouring out men and capital wherever an inducement is found requires no proof, and Canada benefits greatly by the opportunities which she is able to offer to her neighbour. She has also from her topographical position the first pull on the British emigrant. As Sir G. H. Reid says:

"There are many obvious reasons for the hitherto marked difference between the attractiveness of Canada and that of Australia in the eyes of British emigrants. In the first place, the extremely short, as compared with the extremely long, distance. They can couple with their choice of Canada swift, cheap transit, and the easier chance of returning to their native land. The choice of Australia seems like perpetual exile to the Antipodes. Then the very expensive advertising campaign conducted by the

Canadian Government for a number of years has been strongly reinforced by liberal outlays on the part of railway as well as shipping companies.

"The present state of affairs in London in relation to Australia in which the Commonwealth has so much to do with the work of attracting emigrants, and nothing to do with its results, in the shape of emigration, which are divided amongst agencies of six distinct Governments, affords another marked contrast between Canada and Australia. The friendly spirit and good understanding which prevails between the six Agents-General and myself greatly relieves a situation which would otherwise be manifestly difficult, if not absolutely absurd."

Not much progress can be looked for in the matter of emigration to Australia until the States and the Federal Government agree as to the policy to be pursued and the way it is to be carried out, and for the present it is doubtful whether so much will be done as Sir G. H. Reid would like to see.

There is no lack of emigrants, but there is a shortage of shipping accommodation, and shipowners cannot be expected to make satisfactory provision until a definite policy is adopted.

Sir G. H. Reid blames the British Press for the "astounding ignorance which prevails in this country about the Australian Continent." He considers that there is a ludicrous want of proportion shown in the long notices of insignificant phases of insignificant affairs in "petty European States" as compared with the rare and brief notices of the affairs of the Commonwealth.

From a purely Imperial point of view there is force in this, and we trust that the general interest in colonial affairs will grow; but there is no getting away from the fact that with the ordinary reader the nearness of a scene of action increase his interest and distance tends to repel it. We should hesitate to speculate which of the continental countries, of which so much is written, come under the head of the "petty European States" referred to by Sir G. H. Reid, but at any rate they are places which are constantly visited by Englishmen, and which are largely associated with the history and literature of this country. Something must be allowed for the numerous claims which are made upon the attention of the British public. Sir G. H. Reid observes of London that "perhaps that which most lifts it above every other centre is the range of its interests, more or less intimately associated as they are with the concerns of every nation and every port." With such demands upon it, it can hardly be expected that the press here, concerned as it is almost entirely with the

movement of the immediate present, can afford much space for the descriptive matter which is likely to interest the emigrant or the capitalist. Such people must be approached more directly, as Canadian methods show. It is evident, however, that newspapers of all classes are giving more and more attention to news from the colonies.

The new Commonwealth office, the building of which has been commenced, will certainly do much to make Australia loom larger in the eyes of the British public. A freehold was secured from the London County Council at a cost of £370,000, including the Victoria building, and it is intended to spend £220,000 on the construction, which will occupy about two-and-a-half years. The material will be Portland stone. A leading feature will be a broad entrance and spacious hall, which will help to make the building one of the sights of London.

There have been negotiations for an improved service between Australia and Canada, and probably this will result in an important contribution to the "All-Red" route. The Pacific slope offers an excellent market to Australia. The advantage which the Australian producer has here, as in Europe, is that his season is the winter of the North. He is already supplying large quantities of meat to Manilla, and his exports to the North American continent are sure to grow rapidly. Up to the present London has been the dominant centre of consumption and distribution of Australia's meat, fruit and dairy produce, and has practically settled the world's prices for these goods. With the expansion of the industry to other markets these prices will tend upwards.

When "deferred traffic" was accepted at lower rates on the cable lines at the beginning of the year there was some misgiving whether the concession would not take away a substantial part of the revenue from the ordinary traffic. So far the results on the Pacific cable have shown that no such loss occurs. There has been a substantial amount of "deferred" business, but it is all new, except in press messages. The case is another example of the fact that reductions in charges to suit special cases may be made profitably.

In the Northern Territory of Australia the policy of the land regulations, which are now under consideration, reflects the idea of a "White Australia." The aim is to create a cattle-raising country in preference to any attempt to establish tropical agriculture. Huge

leasehold areas will be granted to pastoralists, and some of the holdings may embrace 3,000 or 4,000 square miles. The system of land development will be to interpose between the great pastoral holdings and the market which will be created by the erection of freezing works, smaller areas, with a limit of about 100 square miles. The idea is that these smaller areas shall be used with the aid of fodder cultivation for the fattening of store cattle drawn from the grading leases, and it is hoped that the result will be increased profit to the breeder, coupled with substantial benefit to the fattener. Several large ranchers from Arizona are prepared to invest considerable sums in pastoral leases, and arrangements are in train to secure tenants for the fattening farms from among the British farmers experienced in the industry. At the same time experimental work will be carried on in agriculture with special attention to fodder crops in order that the policy of development may be inaugurated. A powerful plant is being provided for the cleaning of the land.

"The Australian aboriginal is not nearly such a low type of man as he is generally believed to be." This is the judgment of Dr. Eric Mjöberg, who has conducted a Swedish scientific expedition to the north of Western Australia, and it will be welcomed by the anthropologists who find a close resemblance between the native Australian type and the primitive man of Europe. "The skull indicates a low type, but it is not quite right to come to a strict conclusion on the form of the skull. They can learn to read and speak and write English perfectly. The mission boy is able to learn all the accomplishments of a white man. He becomes proficient in music, and can learn to do mostly anything. The trouble with the Australian aboriginal is that he has developed in a special direction. His whole skill lies in tracking and hunting. He is a splendid tracker and hunter. In their wild state we found them perfect physical types. Along the routes where there were stations the blacks were poor specimens, and showed signs of physical deterioration. The main cause of this deterioration is their not being allowed to go naked. It is absolutely wrong to clothe them. They are not used to it, having gone without clothes in that hot climate for centuries, and they develop chest trouble, ending in consumption and death. The whole country inland from Derby is fever-laden, and the civilised natives get it acutely, many of them dying. The native in his wild state is more or less immune to it." The specialisation has gone on so long that it is difficult or perhaps impossible for the native to adapt himself to new conditions. But it came about naturally from the life which he had to lead, and is not a proof that the type would not have progressed under circumstances more favourable to mental development.

The railways in South Africa will soon require grain elevators on a large scale, and the American systems are being studied. They are wanted for maize, which is destined to become the staple agricultural product of the country. This is the most important of all crops, wherever it can be grown. No other gives such an enormous yield of both grain and fodder, or can be grown more easily or cheaply. It is the maize industry more than anything else that has led to the growth of the meat-packing business in Chicago and Kansas City, which are in the heart of the maize belt. The United States grow maize over an area which is more than one-third of the Union of South Africa, and the crop, which is worth £330,000,000 on the farm, is used for a great number of industrial as well as feeding purposes. It is essentially a dry-land crop, and is therefore more suitable for South Africa than wheat. It is said that the most profitable method of disposing of maize grain is to send it to market on four legs, that is, to turn it into a second product before selling, such as beef, pork, milk, butter, etc. It is highly digestible, easily masticated, and the fodder is one of the cheapest and most valuable of stock foods. Its many uses as a raw material of manufacture make it a great asset in other ways. In time, when the South African farmers have studied its cultivation better, vast districts will probably be devoted to it, and great cities, as in America, will live on its products.

The British territory of Walfisch Bay has attracted a good deal of attention from an international point of view, and is one of those places which regularly come up for mention from time to time in this connection. The country itself is probably the most desolate in the South African Union. It consists practically of nothing but shifting sand-dunes. With one exception no vegetation of any kind exists. The south-western wind covers everything with sand. An account of the district given in the *Agricultural Journal of the Union* states that there is no drinking water in the whole district; a few water holes may be found here and there, yielding a brackish nauseating fluid, but even these give out frequently. At the bay settlement a Government condensing station supplies the necessary drinking water. The district is about twenty-seven miles by forty and has only a few white inhabitants at the bay. The native population, mostly Hottentots, number about 800, and are the poorest people in the Union. Their habitats in the desert consists of a few sticks put into the sandhills and covered over with old sacks. The poorest hovels of the Natal coolies are palaces in comparison. The Hottentots are being steadily decimated by tuberculosis. A few are engaged at the Government works at the bay, others go to the neighbouring German town, Swakopmund, the rest live on fish caught in the bay and on the Narrah fruit.

The Narrah or Narra is one of the most interesting products of nature. For the inhabitants of the territory of Walfisch Bay it is of the utmost importance, being practically their only food. A failure of the narra season would inevitably mean death from starvation for hundreds. The plant—if such it can be called—belongs to the species of cucurbitaceae or pumpkins, but unlike all pumpkins or melons it is leafless. The leaves are crippled in their first formation and from their centres shoot out, always in pairs, long and very sharp thorns. And this is the very protection needed against animals devouring the fruit. A kind Providence seems to have given the plant specially to the poor inhabitants of the desert, and thus protected and preserved it for them only. The root is not unlike a bramble-bush root and goes 40, 50, and 60 feet down through the sand-dunes until it strikes moist ground. A further protection was needed against the terrible sandstorms raging almost daily and forming immense chains of sand-dunes. For that purpose the plant was given a marvellous power of growth. No matter how often the stem may be covered with sand, its growth always outstrips the sand and the stem remains “top-dog” and pierces through. If it had leaves like the pumpkin or melon, the sand would weigh them down and with them the stem, which would then be irretrievably lost and perish. Nature is performing thus one of its wonders in preserving the stem leafless, and with it the only means of yielding the only food for the wretched dwellers in the desert. It is marvellously nutritious, a veritable wonder of the desert.

The difficulty of census taking was particularly great in the Federated Malay States, largely in consequence of the babel of tongues which prevails. Schedules were filled up in fifteen different languages, to say nothing of three which defied identification. The usual treatment of figures is inapplicable to these territories, where 60 per cent. of the population is migratory and movements depend largely on non-local causes; thus a wave of immigration may be due to a bad harvest in South China. However, a great increase has occurred in the last decade, the census figures being now 1,036,999, as against 678,595 in 1901. Even this rate of increase (52·8) is less than that of the previous decade (62·1). The increase in the last decade is, of course, mostly due to rubber. The increase of Chinese, though remarkable enough, is dwarfed by that of Indians. There is ample room for more, for the population is still only about one-fourth that of Ceylon, which is of almost the same area. A distinction in favour of Indian immigrants is that they show no marked disinclination to bring their families, whereas the Chinese do, and no section of them profess that it is not allowable.

The spread of Mahommedanism in Africa is exciting wide attention, and we notice from a recent report that the German officials in East Africa are concerned over it. It appears to be considered that the movement is not fundamentally due to any religious feeling, but simply to the physical fact that the period of lactation in such countries is often for two or even three years, and that by tribal custom co-habitation between husband and wife during this period is forbidden. The result is the practice of polygamy, at any rate so far as the prohibited period is concerned. The erring native, if he has been converted to Christianity, is then expelled from the mission, and betakes himself to the more convenient fold of Islam. There is another reason for the popularity of the latter faith. The negro becomes the equal, in the religious ceremonies, of the most important personages among his new co-religionists. In the Christian church, it is said, he does not get this impression; the white man always seems to him to have a higher place, and he himself is relegated to the second position.

The recent developments in Nyasaland are highly creditable to both the official and the unofficial classes of the community, which have worked well together and with admirable spirit. But the country is now approaching the limit of cultivation unless the transport is extended. An extension towards Zomba and the Lake is urgently required, and at Port Herald there is sometimes a veritable block of produce and much stuff has been destroyed. A great amount of rich country will be available when communications are improved. The success of cotton in this country is a very satisfactory feature. With more experience and care a greater yield per acre will no doubt be secured. The Director of Agriculture believes that with selection and pedigree breeding the strength of the Upland cotton could be so much improved that it will reap in a greater degree the high prices paid for superior Egyptian cotton.

The arrangements for the extension of the Shire Highlands Railway to Beira invite attention to the general scheme of railway enterprise in Central Africa. The line from Port Herald to Blantyre is but a short one of 115 miles, and constitutes a portage along a difficult part of the Shire river. The Mozambique Company is preparing to construct a line from the frontier to the coast at Beira, and when this is done the benefit to Nyasaland will be very great. The Mozambique Company has a territory of 300,000 square miles, and paid a dividend of 5 per cent. in 1910. From the Northern end of Lake Nyasa a line will no doubt eventually be laid over the 250 miles which separate it from Lake Tanganyika. The latter water

is now nearly connected with the Atlantic, via the Congo. Along the Congo three portages have been constructed: the first from Matadé, at the head of the estuary, to Leopoldville, the second from Stanleyville to Ponthierville, and the third from Kindu to Kongolo. This last point is only 187 miles from Lake Tanganyika, and the Congo Lakes Company is now constructing a railway over this stretch. In this way communication may eventually be established between the Indian and the Atlantic oceans. But the route from Beira will not be the first to reach Lake Tanganyika from the east. This achievement will fall to the German line from Bar-es-Salaam to Kigoma on the Lake, which is well advanced and is expected to be opened in 1914. The richness of the tropical produce of Central Africa is the attraction for these railways from east and west. The continuation of the lines from the south has been due to the minerals of Katanga, but there is no present indication of any scheme to bridge the distance between this country and Lake Tanganyika. Katanga in fact will be tapped by the Benguela Railway in a way which puts the "Cape to Cairo" idea out of court for a long time.

The revenue of the East Africa Protectorate in 1910-11 amounted to £609,586, an increase of £106,546 over that of the previous year. A pleasing feature in the returns is that the exports of the Protectorate's produce showed an advance of no less than 45 per cent. The greatest increase was in copra, and it is to be hoped that the extensions of this industry will be carried on, as there is nothing artificial or transient in the rise of prices for fats of all kinds. It must, however, be recognised that the exports from German East Africa through our Protectorate exceed those from the Protectorate itself, and that in 1910-11 these showed an increase of 70 per cent. The prosperity of the German colony is thus a very great help to the Uganda Railway, and it is to be hoped that it will continue to be so, but the realisation of the German railway schemes will make a great difference.

There have been many complaints that the development of British East Africa has been retarded by the inability of the authorities to issue titles to land as fast as they are wanted. This is a result of the Government ownership of land. The Government claims generally on the coast all waste land, whether it has been cultivated in the past or not, but it does not know, until it has made an examination, what comes under this claim, and thus transactions have to be suspended. A Land Titles ordinance was passed in 1910 which set up an arbitration board to deal with a district of particular importance. But an enormous amount of work remains to be done.

It appears that there were in 1911 over 1½ million acres of "arrears" which the Survey Department had been asked to survey for settlers and the Administration, without including the surveys required at the coast for the registration of titles. One can only sympathise with the small and hard-working staff which has to face this mountain of work, under pressure from many quarters. It was calculated that the field-work of this would take the present staff some four years from March, 1911. Eventually all purchasers from the Government will benefit by acquiring an indisputable title.

In Uganda in 1910-11 there was a phenomenal expansion of the export trade. The increase in domestic exports over the previous years is greater than the total export of five years ago. The greatest increase was in cotton, the value of which was £168,620 as against £60,000 in the previous year. The Jinja railway will now help materially to swell the returns. Great attention is given to agriculture in the schools for native boys, the sons of chiefs, and in this way the natives will be instructed how to develop their own lands. It is satisfactory to find that in 1910-11 deaths from sleeping sickness continued to decrease in numbers, and fresh infections were rarely met with. The report states that practically no inquiries were received from persons outside Uganda and East Africa for land. The local demand amongst those having a knowledge of the country and its possibilities has, however, increased rapidly, and all pieces of Crown land in what are regarded as good planting districts have been taken up almost as soon as they became available by the operations of the Survey Department. Planters of a very desirable type, some having come from home, some from East Africa, but the majority men having a personal acquaintance with the country through Government service, and recognising its possibilities, have taken up land and are energetically developing it to qualify for a freehold. One estate only, that of the Kivuvu Rubber Company, is as yet approaching the dividend stage. Rubber, coffee, and cocoa have been planted on the estate, and all reports regarding these typical products are of a most favourable character.

The Game Warden of the East Africa Protectorate does not agree with the opinion commonly held that the present standard of sport cannot be continued for more than a few years, but thinks that under properly organised protection the magnificent stock of game at present existing will last for many years. No doubt the game is a very valuable asset. "The Big Game Hunter, far from decreasing, is becoming more numerous every year and will continue to do so, and the demand for this shooting

is likely to increase steadily, as the game in other parts of Africa becomes exterminated. It is, therefore, undoubtedly wise policy to preserve as strictly as possible the *unsettled areas* which constitute the shooting grounds not only near the railway line but also in the furthest outlying districts. Other branch lines must eventually be constructed which will bring these areas, at present inaccessible, within easy reach of sportsmen." It seems likely that the hunt for ivory will soon exterminate the elephant in every part of Africa except our own possessions, and this consideration supports the suggestion that trade in ivory should be regulated more severely.

The export of cocoa from the Gold Coast now exceeds that from San Thomé, and a notable feature of it is that it is the result of native industry and small plantations. Usually in such countries the work of planting is left to the women, but here the men do it. The neighbourhood of an old white settlement has had its effect, and the men value money as the means of buying the productions of civilization. The result is seen in a higher standard of living, greater intelligence and good methods. An indication of the care taken is the increasing sale of spraying machines. There is abundance of land available, but the quantity of labour will not go much further, and in this matter the extension of the railway will be a substantial help by setting free men who are engaged in the heavy work of carrying. No doubt on the whole a better article is produced on the big San Thomé plantations under European management, but we may be thankful that on the Gold Coast the industry remains in the hands of the natives, who are in every way directly benefited by it.

In Northern Nigeria the cessation of punitive expeditions testifies to the soundness of the principles on which the administration is carried on, and in particular to the prudence shown in the methods of taxation. In each native State a Treasury known as a "Beit-el-Mal" is established. The mode of assessment is varied to suit the character of the place. If there is a strong native authority, a village is assessed at a lump sum, and the apportionment of the amounts to be paid by individuals is left to the village head and his council. Where the society is less organised so that the work of apportionment could not be effectively performed by the natives, there is a fixed tax per caput. This is the case in the pagan districts. In the Emirate of Borneo a combination of the two methods is adopted, part of

the tax being in the form of a fixed rate per caput and part being collected by the headman according to the property of the individual. The taxes collected in each native unit are divided into four parts. Two of these form the Government share. The other two are paid into the "Beit-el-Mal." One of these goes to the Emir and his officials and thus covers local works, education and the administration of justice; the other is divided among the district and village heads in proportion to the rents and taxes for the collection of which they are responsible. The funds administered by the "Beit-el-Mal" in 1910-11 amounted to over £200,000.

The appointment of Sir Frederick Lugard as Governor of both Northern and Southern Nigeria comes at a very opportune time, as it is very difficult to settle the railway policy as between the Lagos and the Niger route unless there is one authority for both possessions. The union of the two administrations will no doubt follow in no long time, but the appointment of the Governor meets the immediate requirements and makes it possible to consider the scheme of amalgamation deliberately. No great difficulty was experienced in effecting the union of Southern Nigeria and Lagos, though the result has been to throw more responsibility on the Provincial Commissioners.

It does not often happen in our annals that a governor returns to a possession in the acquisition of which he has played a great part. The memory of the trying time when British and French troops faced each other in this territory is still recent, and Sir Frederick Lugard had a heavy task during this period and in inaugurating the administration of the country. He will see great changes now, but they, including the Baro-Kano Railway, have been the developments of his policy.

An interesting report has been written by Mr. E. T. Grannum on the trade statistics of Barbados for the period 1896-1910. The colony benefits to the extent of £64,000 a year from remittances from emigrants to Panama. The banana industry is kept back by the want of cold storage transport, and it is to be hoped that this will be provided. It is observed that cotton is indigenous, but the cultivation ceased to be remunerative when sugar realised £20 per ton and upwards, and no attention was paid to it until the Civil War in the United States stopped the exportation of the article from the Southern States. Then, owing to the cotton famine in Lancashire, the cultivation of the plant again received attention until the cessation of hostilities caused the blockade of the Southern ports to be raised

and the exportation from them to be resumed. From this time until 1902-3 the cultivation was discontinued. In 1902 and 1903 at the instigation and with the hearty co-operation of Sir Daniel Morris, the Imperial Commissioner of Agriculture, who, accompanied by Mr. John R. Bovell, had previously made a tour through the Southern States with the object of acquiring information on the subject and of selecting the best kind of seed, the cultivation was again resumed and continued steadily until the present time, with results which have placed cotton amongst the staple products of the Island. The total value of cotton shipped for the eight years 1903-10, is £275,743, the largest crop being in 1907, when the value of the cotton shipped was £83,362.

Grenada in 1910-11 attained a record revenue of £81,413. Substantial improvement was due to the measures taken for the suppression of smuggling. Very noticeable is the increase of trade with Canada, the figures rising from £7,943 in 1909 to £22,722. Cocoa is the staple product, and there is a large export to the United States and to France. The Land Settlement scheme in Carriacou has been a great success, and is being introduced in the Island of Grenada. The peasant proprietary of the colony is holding its own. It is to be hoped that it will extend its industries, as the devotion to cocoa is too great to be prudent.

In Jamaica steady if uneventful progress has gone on. The most noticeable industrial feature is the extension of the area devoted to bananas. As a result of the increased production of fruit and minor products a greater import occurs of flour and bread. The reductions of customs charges effected in 1910 led to considerably increased importation—thus the abolition of duty on wire fencing resulted in an increase of 118·9 per cent. In the classification of real property the largest number of holdings is of those which are valued at not over £20, showing the extent of the peasant proprietorate. The *Castilloa* rubber has given promising results. British shipping remains largely predominant, claiming a tonnage of 291,694 against 70,763 foreign. A surplus of £200,000 was anticipated for the financial year 1911-12, and proposals have been under consideration for a fast steamship service with Halifax, connecting there with a fast line to England. This scheme may fit well into the negotiations which have been going on, largely under Canadian auspices, for an improved "All-Red" route across the Atlantic and the Pacific.

The suggestion has been made by the Governor that before the Panama canal is opened Kingston should be made a free port.

It has been reported that an American syndicate is prepared to spend a large sum on the improvement of the harbour on this condition, but no definite proposal has been made.

A law has come into force in British Honduras, the object of which is to limit the extent to which labourers can become indebted to their employers. It is ancient history that the indebtedness of a labourer to his employer may set up a relation which is extremely objectionable, and where whatever indebtedness there is is substantially to the employer it is necessary to regulate the transactions to prevent the hold which the employer has from being abused. From the 1st April, 1911, it became illegal to advance more than two month's wages, and from the 1st April, 1912, one and a-half month's wages. Provision is made preventing a labourer from increasing his indebtedness to his employer during the term of his engagement. If a labourer is in debt to his employer he is entitled to receive in cash one-third of the wages earned so that he may be at liberty to purchase what he wants from any vendor he chooses. While the labourer is in debt to his employer at least half of his earnings must be applied to reducing the debt. The employer has to provide the labourer with a pass-book in which every transaction between the employer and labourer must be entered at the time.

In Bechuanaland, following advice given by Mr. E. B. Sargent, School Committees have been formed on which the Government, the Missions, and the people are all represented. The Resident Commissioner reports that these Committees consist of the Assistant Commissioner, as Chairman; the resident Missionary as Honorary Secretary; the Chief, and a member elected by the tribe. In each case the people have voluntarily taxed themselves to provide funds, the amount being collected by the Paramount Chiefs simultaneously with the collection of the Government hut tax. It is worthy of note that in each case the tribes when discussing the matter in their "kgotlas" unanimously resolved to request the Government to receive and hold the money produced by the tax. What the outcome of the experiment is likely to be it is impossible at present to say. In marks a distinct advance in the Protectorate, representing as it does the first step, however small a one, in the direction of local self-government. Interest in the matter is keen; whether it will last or gradually fade the future will show.

The state ownership of railways has been the subject of an interesting discussion organised by the Royal Economic Society.

Delegates attended from Germany, Belgium and France, and it appears that in the two former countries the state ownership is considered to be successful, while in France there are complaints that it works badly. In this country the opinions expressed were adverse to the idea, though the trend of circumstances in its direction was recognised. The addresses were somewhat vague and inconclusive, and no attempt was made to formulate general principles. It may, however, be deduced from general experience that the principle of state ownership is most in favour when it is the interest and policy of the country to stimulate the export trade. In Germany and Belgium the railways are used with the special object of granting low through rates in conjunction with the maritime trade. Generally speaking, the British colonies which have state railway systems have also been influenced by this motive, the lines having been built to feed the ports with produce for export. In such a country as the United States, where the home trade is enormous as compared with the foreign, the inducement to adopt the system is less. On the whole the tendency is towards state ownership, especially where there is little misgiving about the ability of the Government to control the staff. Where, as Professor Beaulieu stated was the case in France, unreasonable demands may be apprehended, there is no doubt some element of weakness in the system. On this point some remarks in the last South African railway report may be quoted.

"In a large Government department like the railway, which has to consider the claims of men in so many different grades, there is always a danger of concessions being gradually increased without due regard to their value; and unless the tendency on the part of the staff to press for greater privileges is carefully noted, and restrained where necessary, it will reflect on the financial results, which will compare unfavourably with those of railways in other parts of the world. At the present time it costs the Administration approximately £100,000 for annual vacation leave alone, apart from any other privileges to which the staff are entitled.

"I am in favour of privileges being accorded on a reasonably liberal basis to sections of the staff who are likely to remain in the service, as pension, leave of absence and other facilities have a salutary effect in promoting a feeling of satisfaction amongst the men. But what I fear is, that unless the Administration places some check on the constant demand for increased privileges of all kinds, the inevitable result will be that the whole position will have to be reconsidered. Pensions and gratuities especially should be confined to the permanent staff.

"As a whole, the scale of remuneration of the railway staff in South Africa is very high, compared with the rates of pay pre-

vailing on railways in other countries, and this is probably responsible for the tendency to dwell too much upon minor grievances, sometimes largely assumed, and generally much exaggerated. No one will say that cases of hardship do not exist, and it is the earnest endeavour of the Administration to check these and to remove legitimate grievances. In the case of a very large section of the daily-paid staff the scales of pay, taken in conjunction with travelling concessions and other benefits, e.g., pensions on retirement, provide terms of employment more generous than are obtainable outside the service. In fact, the agitation for re-employment on the part of those who have left the service voluntarily or at the instance of the Administration is a constant source of trouble."

In South Africa, however, the railway men are encouraged by the preference given by the Government in favour of white as against black labour. The Crown Colonies are as free as any places can be from difficulties of this sort.

The coal strike had the effect of stimulating the press to study the colonial examples of methods of preventing or dealing with strikes, and the British public should now be more or less familiar with the Australian and New Zealand arrangements for settling trade disputes without interruptions of industry. But, in considering whether these methods could be transplanted to this country, it is desirable to bear in mind that the Australasian measures are the work of labour ministries. When the working man is such a power in the land as he is in Australasia, he has more faith in parliamentary institutions and the efficiency of law than when he occupies a comparatively minor place in the administrative scheme. He is more disposed to let his claims be settled by legislative arrangements than by strikes. The New Zealander accepts a law which renders him liable to a fine for abetting a strike, not merely because the employer is also liable to a much larger fine for a lock-out, but because he relies on the Government and its instruments. It would presumably take a good deal of suffering and persuasion to induce the working classes of this country to entrust the same power to the Government. It is, however, a hopeful sign that the advance of democracy, which is inevitable in all progressive countries, tends in Australasia to substitute faith in parliament for deadlocks. There is no doubt in Australia as elsewhere much industrial "unrest," which means chiefly that a better education is training the masses to take a higher view of life, and occasionally an unruly section may rebel against the law, but on the whole it is clear that the parliamentary methods have, to say the least, a great influence in preserving

industrial tranquility. There are no signs, to take the other interest, that capital suffers materially from these arrangements. There are, as may be expected, complaints, but on the whole employers appear to accept the position with remarkable equanimity. Some of this is no doubt due to the great natural resources of the country and some to the protection of manufactures, but much results from the comparative freedom from anxiety about strikes. It is not without reason that here and everywhere else the one protecting provision that every contractor insists on is the strike clause, and if this danger were eliminated his business could be conducted much more securely.

Officials and others who wish to visit the Crown Agents' Office will before very long have to search for it in a locality which, while not lacking in dignity, is a little further away from the Colonial Office and West End resorts. Notice has been given that the Government propose to acquire Whitehall Gardens for new Government Offices. Recent legislation has largely increased the number of civil servants, and room must be found for them. In the neighbourhood of the large Government Offices, Whitehall Gardens are the only available vineyard on which the Office of Works can cast covetous eyes, and no doubt the site lends itself to a great building scheme. Many people will regret the disappearance of the historic house in which Peel died, but such memories cannot resist the tide of change, which has already transformed the character of the neighbourhood. The National Club, which, as the resort of many dignitaries of the Church, has long contributed an ecclesiastical character to the locality, will be another victim. Apparently the Banqueting Hall and Gwydyr House will not be touched, so that the Whitehall front will remain as now. The Crown Agents' Office will be removed to one of the London County Council sites fronting the Thames just beyond the Houses of Parliament. It is to be hoped that the change will not cause any diminution in the visits of colonial officers. The advantage of personal discussions is greatly appreciated.

A GERMAN VIEW OF NEW ZEALAND.

New Zealand : The Country and the People.—BY MAX
HERZ, M.D. (*T. Werner Laurie*, 12s. 6d. net.)

THE politics of New Zealand have an interest for every part of the Empire, from the youngest and least developed territories to the oldest and most organised, on account of the directness with which all the problems of administration are attacked. The Dominion is the acknowledged laboratory of experimental legislation. The work of treating human ills is there based on a wide spread confidence in the power of law. The New Zealand elector is not troubled by any of those doubts as to the efficiency of parliamentary schemes which it is, or at any rate was till lately, the academical custom to set before the rising youth of this country. Why should he be? He has a clear field. The ground is not cumbered with the failures of his forefathers. He knows what he wants, as for that matter most of us do in any place, but he has the rare advantage of being able to try some method of his own of getting it. There is, therefore, no sickly hue of irresolution about the proceedings of the New Zealand legislature. It is better to act than to theorise, and after all if a law is found unsatisfactory, all that has to be done is to alter it. Everything is plastic, and the needs of the day sway the popular vote. It is recognised that it is experience that teaches, but the quickest way of getting the experience is to go straight at the problem and try a scheme.

The political work is simplified by the fact that it practically all turns on economical questions which directly concern the public. The Dominion is free to take its own course. It is not troubled with foreign politics. It has no Northern Territory, and the native trouble is permanently settled. There are no internal divisions save those of money; the country is one family. The first evidence of this is that every woman, married or single, at twenty-one enjoys the franchise. The bill which carried this act

was passed by a small majority and with no great confidence. But the policy was thought worth a trial, and certainly seems now to be established. Its strength lies largely in the fact that it seems to have had no particular effect either one way or the other. There is no handle against it. The only obvious difference that can be noted is that since the franchise was granted to women there has been a substantial increase in the number of electors who exercise their right to vote. Previously it was about 60 per cent., now it is about 80. Probably domestic discussions, now that woman is personally interested, have stirred up the lethargic voter. This is so much to the good. But it is generally believed that the new franchise has not altered the balance. It is noted that the woman in most cases votes the same as her husband or brothers, and the inference is drawn that she simply doubles the vote. No doubt this is largely the case, but it may be doubted whether feminine influence is not really greater than is supposed. A woman may vote with her nearest male belonging, but she may have converted him first to her own way of thinking. The identity of opinion does not mean that the man has had it all his own way. The theory that the women's vote simply doubles the men's implies that either the intellectual character of women is an exact replica of that of men, which is obviously untrue, or that the women defer entirely to the men, which is exceedingly improbable, in New Zealand as in other civilised countries. The fact is that it is impossible to bring into an electorate a large new class without having some result due to this force. The popular opinion, which largely prevails in Australia as well as in New Zealand, that the admission of women has had no particular effect is due to the circumstance that nothing revolutionary has happened. While any political project is under discussion, there is inevitably a great amount of exaggeration on both sides, and this is specially true of the women's rights question; on the one hand, the advocates of the concession are tempted to dilate on the injustice and brutality of the present laws, which a gentler influence would render sympathetic and benign, and on the other its opponents dread the unpractical character and illogical methods which they ascribe to women reformers. At this stage of the matter, the controversy is between one sex and the other, and largely turns on a question of intellectual comparison. But when once the vote has been granted, the sex question, if New Zealand experience can be relied on, disappears. There is no movement on the part of the new voters to amend the scheme of things generally, but there may be a real, if latent, influence. "Of real influence upon legislation, justice and administration," says Dr. Herz, "there is

none." This strong conclusion is come to because the expected has not happened. If what we anticipate as a natural result does not come to pass, we are apt to ignore any other result. It is true that no situation arises in which one sex is banded against the other, and it is easy to see, especially in the light of some experience, that the political and social divisions of the world are not founded on the sex, but on the family and the class. But in some matters on which men are largely divided, there is a preponderating opinion amongst women which, when they possess the vote, may suffice to turn the scale. Thus it cannot be doubted that it is their influence which carried the liquor law, that is what is now the Licensing Amendment Act of 1910. The striking feature of the last settlement of this subject is that the moderate man, with his ideas of tinkering at the problem by reducing the number of licensed houses here and there, was put aside by both parties. Both the brewers and the abstainers agreed at a conference that the real issue should be that of National Prohibition. Every three years the voters have the right of saying whether there shall be local and also whether there shall be national prohibition. A majority of three-fifths is required to carry prohibition. Probably the brewers doubted whether so drastic a measure as prohibition would be much adopted, and in any case they preferred to take the chance to the certain losses which they would sustain if all the strength of the agitation went towards terminating individual licenses. However, the movement is all in the direction of prohibition. At every election some more districts are closed. The curious feature is that the drink bill all this time does not decrease. In the towns, at any rate, there is a good deal of drinking at bars, and it is said that the English custom of "shouting" has been brought to perfection. Drinking, however, as a pastime, is practically confined to men, and the influence which is gradually establishing prohibition is largely traceable to women voters.

In Australia it is generally believed that the women strengthen the Labour vote. There the process can be seen clearly as the Liberals and Labour are distinct parties. In New Zealand so far this separation has not come to pass. But there is reason to think that on the whole the vote supports Labour. There are no particular signs that in the higher circles of society the average woman prizes the vote or has given herself any special mission in politics, and her usual habits and tastes do not fit easily into the roughness of political agitation. The ladies of New Zealand remain what they were. But in the lower ranks the working woman appreciates and uses the vote because she has the practical object of endeavouring to better her position. It was anticipated by

some that the women would to some extent support the clergy in the matter of religious education—an idea which prevails in other countries. But this has not happened. The women have not set up a distinct party in this or other subjects.

The New Zealand legislation in which lookers-on are most interested is that which deals with labour troubles. The Act for the settlement of all differences between employer and workman by arbitration was passed in 1894. The prime object of such a policy is to prevent the paralysis of trade. The object can only be effected by giving the workman protection, and in practice this often means supporting demands for higher wages. But in New Zealand as elsewhere strikes occur, not for higher wages, but on points which seem inconsiderable in comparison with a stoppage of industry. Out of three great strikes which led to further legislation only one arose out of a demand for an increase of wages. The fact that these strikes occurred, notwithstanding the Arbitration Act, was considered to show, not that the scheme should be abandoned, but that it should be strengthened. In 1908 a further Act was passed which made both employers and workers liable to fines for striking, instigating a strike, or locking-out. It is noteworthy that the fines increase when industries are concerned which are necessary to the public, i.e., such articles as gas, milk, meat, coal or the working of railways or tramways. A union may be fined for supporting a strike. All this shows a determination to deal strongly with the mischief. Doubts may be felt whether the machinery would stand a great strain, but to say the least it is effective to most ordinary occasions. The economic position is excellent. There is no poverty in New Zealand, and the average wealth per caput is estimated at £280. This does not suggest that capital and industry have suffered from the restraints placed upon them.

Dr. Herz appears to regard the politics of New Zealand with mixed admiration and distrust. The whole law-making, he says, is indicative of a lust for experimenting, but he admits that everything is done in a businesslike manner. "Is a law found proven and workable, well and good? If not, it is soon altered or abolished." He thinks, however, that much is done without proper reasons. Thus he cannot see any occasion for the liquor legislation. The only explanation that he can suggest is that the New Zealander regards the law as a "Sunday School Teacher." "The confessors of this unbreakable faith went searching around the globe for reformatory laws, with which their country-men were to be changed into angels, whether they wanted or not, and hit upon the Prohibition Laws in America. These the diggers of the moral gold brought home to bear upon their

neighbours." No doubt the attempts made under Anglo-Saxon influences to deal legislatively with intemperance present something of a mystery to the German mind. Dr. Herz does not believe that drunkenness can be combated by laws, and very naturally instances the case of Germany, "where the exemption of liquor, which is almost harmless when compared with the strong whiskies and beers, is decreasing." His own remedy is to make life less dull. "To show the people higher aims, a better reality, to let culture and art enter every vein of public life, for I maintain that anyone who has filled his heart with the joy which Rembrandt and Titian, Bach, Beethoven, Wagner, Shakespeare, and Goethe, the Venus of Milo, the Winged Victory of Samothrace, and Mona Lisa can give, who has drunk from the cups of culture and wisdom, will keep away from bars and maids and drinks, without the help of a law." We cite this list of purifying influences with respect, but it is necessary to admit that they do not go far in such countries as New Zealand. The reason may be given in Dr. Herz' own words: "It must be remembered that nearly all came from the poorer citizen and peasant classes, whose burden of dull toil left them neither time nor opportunity to develop a higher culture, or deepen the æsthetic feelings. The people who came out here had to work, and to work hard. They had to wrestle with the soil, to clear the bush, to plough and to harvest, and to wage a battle of life and death with blood-thirsty Maoris." Such work makes a practical and virile race, and the New Zealander, braced by this training, faces the administrative problems with an abundance of buoyancy and optimism. Dr. Herz considers that he is a Philistine—"a shocking Philistine and Bœotian in matters of art." It may be admitted that German idealism cannot be at once transplanted to such a soil. National culture is the work of ages, and politics are concerned only with the actual facts and human nature as it is.

Dr. Herz observes that the political war in New Zealand is over purely material interests—higher wages and shorter hours. This is hardly peculiar to the Dominion, as this is the root question everywhere where the masses have votes. But he freely acknowledges that "to a German it is really refreshing to see how objectively the elections are fought here. There are no personal calumnies and offences, no washing of dirty linen in public, and no candidates need fear that he will emerge from the contest with mud clinging to his character. Fair play is the supreme law." Despite the devotion to "material interests," there is no doubt that there is a family feeling among the New Zealanders, which goes far to temper the austerities of political warfare. Despite

the freedom of talk, and nowhere are questions more freely discussed than in New Zealand, and the exuberance of legislation, the fact remains that there has been little disturbance of industry. The mental culture will come. "Always," to quote Dr. Herz' words, "when hunger has been stilled, art has come into blossom. Here, too, men will rise who will be the teachers of the people, and will lead the yearning masses in the right channels." In the meantime it is satisfactory to know that in the opinion of Dr. Herz the New Zealander leads "a right comfortable life."

A German view of New Zealand would hardly be complete without a reference to the defence question. Dr. Herz mentions the training in shooting. "This sort of Army will always raise a smile on German lips." No doubt it must seem very insufficient to the German citizen. "The rifle shooting of schoolboys, the volunteers, the forts at Auckland, Wellington, and Dunedin, the Defence Council, and even the big guns in Albert Park, will be insufficient, and will fail—fail miserably, when there is a real foe to be kept out. Something more is needed—above all, universal training, which, in imitation of Germany's example, will have to be introduced sooner or later." Pending this happy consummation it can only be hoped that the "real foe" will not get there. Whatever may be thought of this matter, every reader of Dr. Herz' book will enjoy a brightly written and suggestive description of the land and the manners of the New Zealanders.

THE DEFENCE OF SOUTH AFRICA.

The Union of South Africa is recognising the fact that self-government brings with it the obligation of making provision for self-defence. At present such provision on the part of the Union is conspicuously lacking, and a country which has seen so much warfare cannot feel satisfied with the position. The comparative smallness of the white population as compared with the native creates a special incentive to give the young men a military training, and on the whole the habits of life are fairly favourable for the purpose. The defence scheme, which has been under consideration and for which a bill has been prepared, contemplates a system resembling that of this country in that it would provide both a permanent or paid professional force and a citizen force which would be called upon in case of necessity. The latter force, however, would be on a much wider basis than our voluntary army.

The principle of compulsory and universal service between the ages of seventeen and sixty, to provide for very grave emergencies, is adopted. It is not, however, proposed to train the whole population. Such a course would embrace a greater number than it is reasonable to expect would be required, would impose too heavy a financial burden, and would probably not result in efficiency. The solution adopted is to require from every able-bodied person the proper knowledge of how to use a rifle, as a minimum. After this every citizen has the option of undergoing a certain course of training for four years, or of making an annual payment of £1 a year for twenty-four years; and if a ballot is necessary to obtain the force undergoing the four years' course he takes his chance of being drawn.

The period of training is to be carried out between the ages of seventeen and twenty-five, and in general will be as follows:—

(a) The course will start with an efficiency recruit training. Recruits will perform as many day and night drills as may be necessary to fit them for the ranks.

(b) After the recruit course the whole force will annually undergo a period of continuous training varying from eight to fifteen days in the different arms, and will fire an annual course of musketry.

(c) The time of year at which the continuous training will take place will be arranged in each locality with special regard to the seasons and general convenience.

(d) Mounted troops will perform almost the whole of their training continuously in camps, but trained men of other arms will have to perform a certain number of day drills throughout the year.

(e) Certain days only will be set apart for day drills and will be arranged so as to ensure a full attendance of the unit concerned on each occasion.

The defence requirements are stated as follows:—

(1) A trained citizen force of such numbers and so organized that a formidable and effective army can be put into the field before any danger can seriously menace the peace of South Africa. This force should constitute the First Line of Defence.

(2) Trained citizen reserves capable of heavily reinforcing the first line.

(3) A national reserve of all able-bodied citizens to meet an extremity.

It is, however, necessary in South Africa to supplement the first line in two important particulars: (a) by providing for a small nucleus of permanent forces, and (b) by making special provision for the defence of defending South African ports.

(a) A small permanent paid force is required for three purposes:—

Firstly, to provide a small but highly efficient and easily mobilized body of troops, which, without any dislocation of public and private business, can be rapidly moved to any spot where violence and disorder is threatened. This can be organized from the present mounted police forces into regiments called the South African Mounted Riflemen. They should continue to do police duty in time of peace, but should also be trained for military purposes.

Secondly, to furnish a highly efficient professional body of South Africans who will form the permanent administrative and instructional staff of the citizen forces. This is practically a new but a most important feature in South African defence.

Thirdly, to furnish a small number of complete units of artillery, an arm which depends for its utility in war on the maintenance of the highest standard of military efficiency.

With a small number of these permanent artillery units trained to the highest standard, it is hoped to form a nucleus by intimate association with which a satisfactory standard of efficiency can be reached in artillery units of the citizen forces. The artillery batteries will be incorporated in the South African Mounted Riflemen in the same way as the present organization of the Cape Mounted Riflemen provides for a battery of artillery.

(b) While the main defence of the South African coast line and the security of the South African shipping routes must necessarily rest with the maintenance of sea-power by the British Navy, provision must be made for the military defence of the most important of the Union harbours. For this purpose it is necessary to have a special force (the Coast Garrison Force) whose duty it will be to provide adequately for coast defence.

A weak point in such defence schemes is frequently the difficulty of providing competent officers. In South Africa there is at present available much valuable material for the purpose, and the establishment is contemplated of a South African Military College. A special class of instruction for six months will be instituted at once for the education of officers.

The first line will have a territorial organization, and a force of 20,000 to 25,000 men is contemplated, though probably this number will only be gradually attained. An interesting feature of the scheme is the modified ballot system. It is hoped that it will not be necessary to resort to compulsion in order to obtain the force, but the possibility of this is provided for. The objection to a ballot system is that it is haphazard, and accordingly the registering officer is to make up three rolls in each district in order to discriminate.

In the first class, or on the first provisional roll, he will place those who should find no difficulty in undergoing four years' training in the Active Citizen Force, e.g. men receiving a good salary or earning an adequate income, and able to get away for regular or occasional holidays.

On the second roll he will place those who will find it less easy to undergo that training, e.g. men drawing small salaries or making a bare living, with few opportunities for getting away, or having special domestic ties.

On the third roll he will place those who will find a real difficulty in giving up the time required for the training, e.g. daily paid artisans and labourers.

These rolls having been framed for a district, the shortage of numbers in that district to be made good by ballot is

notified by the Government, and after that notification a local revising court is appointed to revise the rolls and hear objections. When those objections are disposed of, the rolls become final, and in June the ballot is held by drawing from the rolls in sequence, first exhausting the numbers on the first roll, then the second roll, and finally the third roll.

An important provision is one requiring every employer to give all proper facilities to his employees for carrying out the prescribed training or service in a Rifle Association. Any failure to do so, or any attempt to penalize an employee or any person seeking employment from carrying out such training, will constitute an offence. This protection is of great value, as though no doubt it can be evaded in individual cases it will be effective where members are concerned.

It is evidently expected that the first line will be recruited primarily from the higher classes of the community. This is inevitable when the force is unpaid and no capitation grants are made. It is believed that the additional demand on Union revenues will not exceed £300,000 a year. For this additional outlay it is hoped that it will be possible not only to organize a citizen army at least three times the size of the present militia and volunteer forces and more highly trained and efficient, but in addition to secure a permanent striking force of about 2,500 mounted riflemen, a permanent artillery force of the highest standard, an adequate system of coastal defence, and finally a military college in which a sound technical training will be given to the future military leaders of South Africa.

The scheme so far as it puts the labouring class in the background would hardly command itself to countries when that class is the most numerous. But in South Africa the natives to a very great extent fill the room of that class, and the daily paid white labourers are a comparatively small section. With reference to the conditions of South Africa the scheme appears to have been carefully thought out, and it is to be hoped that the high results aimed at will be attained.

With this scheme may be compared that of New Zealand, where the principle of compulsory military training was adopted in 1909, and where the progress of the movement now admits of some examination. In the first instance the limits of age were 12 to 21, but in 1910 the latter was extended to 25 in order to meet Lord Kitchener's scheme. A certain amount of recalcitancy has been shown, as was to be expected; but at the most the proportion of defaulters does not exceed 25 per cent., and this will no doubt be reduced as the scheme is put into regular working order. The strength of the force is likely soon to reach 30,000, which is 10,000 above the proportion indicated in Lord Kitchener's report. The general support given to the scheme is of good omen.

PENSION SCHEMES FOR CIVIL SERVANTS.

The conditions on which Civil Servants in Great Britain may retire with pensions have now reached what appears to be a final stage, so far as this may be said of human institutions, but this state of stability has only been arrived at after a vast amount of discussion and repeated legislation. Past controversies in such matters are lightly forgotten when a settlement has been attained, but they retain a considerable interest for countries which have not attained to the same point. It has always been difficult to fix any principle in the matter, and the history of the legislative efforts shows a singular absence of any continuous policy. In fact, each successive enactment seems to have been passed to annul its predecessor. The first Act which granted pensions on retirement was in 1810, and was framed in a liberal spirit. But before long it came to be thought that the privilege was too great, and in 1822 another Act was passed making it necessary for civil servants to contribute. This arrangement had a short life, and in 1824 the provision for contributions was repealed and the contributions which had been collected were returned. This generous spirit lasted till 1829, when the contributing principle was restored, the amount being $2\frac{1}{2}$ per cent. on salaries up to a certain limit and 5 per cent. above it. This went on till 1859, when free pensions were granted, being one-sixtieth of the final salary for every year of service, not exceeding forty-sixtieths. The settlement on this footing remained undisturbed till lately, but the subject was frequently discussed. For a time the pensions were looked upon as a gift by the State which could only be gratefully accepted. The men already in office were of course directly benefited by the abandonment of the contribution. But as time went on and new men came in, the belief arose that the pension had an effect on the amount of salary paid to them, and was therefore in effect "deferred pay." It was, we believe, officially maintained that pensions were not "deferred pay," and this was correct in the sense that in fixing rates of

salary it was not the practice to base the sum in any case on what appeared to be a reasonable salary and then to lower it according to the value of the pension right; but in a larger sense, as the attraction to the service consisted in not merely the salary but the salary plus the pension, men were in fact obtained for a smaller salary than would have been the case if there had been no pension. In other words, whatever may have been the intention of the Treasury, the normal economical rule applied and the pension became part of the consideration offered to and accepted by the civil servant, and affected the amount of the other part of the consideration. That this was not merely theoretical but practical was shown by cases in which a higher rate of remuneration had to be paid when no pension was granted than was paid for the same class of work where one was granted. It may indeed be argued that, generally speaking, it is cheaper, provided the work to be done is of a permanent character, to grant salaries plus pensions than to grant salaries alone. The moral influence of the expectation of a pension is very great, apart from its purely economical value. A higher standard of integrity and conscientiousness is secured, for the State is virtually holding something back which will be forfeited by misconduct. But as this view grew that pensions were "deferred pay," two objections began to be felt to the system on which they were granted. One was that civil servants could themselves do better with the amount of their contributions than the State could, and the other that it was unjust that the whole of the amount should be forfeited by death or resignation before the age of retirement. These arguments resulted in the Superannuation Act of 1909, which provides for the payment of a year's salary on death whilst still in the service, for a cash payment on retirement of one-thirtieth of a year's salary for each year of service, and on the other hand for the reduction of the pension from one-sixtieth to one-eightieth for each year of service. This arrangement secures a possible provision for widows and orphans whether an officer (after five years' service) dies in harness or after retirement. There is, it is true, no obligation on the employé to leave the money in either case to his widow and children, and no doubt it was considered that any attempt to secure it to them would be too great an interference with domestic arrangements. The option of coming into the scheme has been generally accepted by present members of the service, and it is clear therefore that the desirability of having a provision in case of death has been widely appreciated.

In this way therefore the civil service pension is recognised as a deferred annuity corresponding more or less to the difference between the salary received and the salary which would be payable if there had been no pension. From this point of view the

system is really a contributory one, and it is so regarded in the report prepared for the United States Government by Mr. H. D. Brown (61st Congress, 2nd session, Senate Document, No. 290 of 1910). It is interesting to compare the experiences of that prolific hive of state systems, New Zealand. There pensions, without contributions, was granted in 1858. In 1871 they were abolished, but one month's pay was granted for each year of service. In 1886 a retirement fund was established, and in 1893 compulsory insurance was substituted. Both systems worked unsatisfactorily, and in 1908 an Act was passed setting up a contributory system, and providing for a pension on the British scale plus an annual allowance to widows and young children. This arrangement has given general satisfaction, and the press, though recognizing that a heavy charge would be laid on the revenue, was favourable to it. Here the contributory character of the system is open, but there is no material difference in principle between this and the British arrangement, except as regards the provision for widows and orphans.

This last provision is required to cover completely the requirements of the civil servant, and in the recently granted power of election and in the Widows' and Orphans' Fund established in several colonies the consideration is recognised. It must be admitted, however, that the case for such provision is not on all fours with that of ordinary pensions for the life of civil servants. Such pensions are really necessary to keep the service efficient. Without them many men would remain in office when long past the power to be of useful service, and in the government service of this or any country it would be impossible to prevent this. It is this difficulty which has brought up the question in the United States. Mr. Brown states: "There is one problem of the service, however, that the law (Civil Service Law) has not solved, and that is the problem of superannuation. Without provision for retirement of the aged officeholder a law which in practical operation insures him a permanent tenure of office works an injustice to the Government, since it permits the retention in the service of many who have outlived their usefulness. It is true that the law does specifically provide for the removal of the incompetent on the proper record of the existence of incompetency, but such a provision has proved to be inadequate where incompetency is the result of old age. The majority of executive officials are undoubtedly too tender-hearted to dismiss a subordinate whose only faults are attributed to his weight of years. The result is that he is allowed to remain, quite unfit to perform his duties, practically a pensioner, and the work he is unable to do is divided among the younger clerks. . . . Many of them are

past 80, and nonagenarians have occasionally been on the Government pay roll. Paralytics are sometimes brought to office in wheeled chairs, and it frequently happens that a wife or child escorts the head of the house to his desk each day."

These are no doubt extreme cases, but it is clear that government servants in large numbers remain on in the United States long after their efficiency has been seriously impaired. It may be suggested that there should be, as in this country, a compulsory age for retirement, with provision for extensions in instances where they are plainly desirable, but it is difficult to carry out this system when it would lead to severe hardship in great numbers of cases. The result is that in the United States the country pays as much and very likely a great deal more in the shape of salaries to employees who have outlived their usefulness than it would if it granted pensions. It has thus all the cost of pensions, with the inevitable defects of a vicious system. It is these considerations which prompted President Taft's observation on the subject in his congressional message in 1909, in the course of which he observed: "Every reform directed toward improvement in the average efficiency of Government employees must depend on the ability of the executive to eliminate from Government service those who are inefficient from any cause, and as the degree of efficiency in all the departments is much lessened by the retention of old employees who have outlived their energy and usefulness, it is indispensable to any proper system of economy that provision be made so that their separation from the service shall be easy and inevitable. It is impossible to make such provision unless there is adopted a plan of civil pensions." . . . "We can not, in view of the advancing prices of living, hope to save money by a reduction in the standard of salaries paid. Indeed, if any change is made in that regard, an increase rather than a decrease will be necessary; and the only means of economy will be in reducing the number of employees and in obtaining a greater average of efficiency from those retained in the service."

Mr. Brown's proposal for the United States contemplates a deduction of from about 4 to 11 per cent., to be invested at $3\frac{1}{2}$ per cent., from each payment of salary, without any contribution from the State, the accumulated amount to be paid over on retirement, or invested in a Government annuity. This would be similar to the Retirement Fund in Canada, where there is no superannuation measure. The objection to such schemes is that probably the civil servant could get a higher interest on his savings or has to pay more for anything he borrows; thus he may be paying 6 per cent. on a mortgage, and it is not pleasant to do this when he is putting by money which earns only $3\frac{1}{2}$ per cent. The "Civilian"

at Ottawa, which has discussed the subject in the interests of the Civil Service of the Dominion, objects to the arrangement on this ground. The objection is not felt so much if the State contributes, and, as the State in the long run really pays the same whether the employé nominally pays the whole or part, there seems no occasion to have an invidious system, at any rate for new-comers.

In British Guiana the Widows' and Orphans' Fund was established as early as 1873, when a superannuation fund, which had been in existence since 1860, was applied in this way. An abatement was made from salaries of 4 per cent., and the generous rate of 6 per cent. interest was allowed to the fund. Since then scales have been established fixing the amounts of pensions, and the pensions have been made chargeable on the revenues of the colony. A larger provision can now be secured by submitting to an abatement of 5 per cent. The system has been adopted in several Crown Colonies, and is undoubtedly well suited to places where climatic conditions increase the ordinary perils of life and makes insurance expensive.

REVIEWS AND NOTICES.

Through Timbuctoo and across the Great Sahara.—By CAPT.
A. H. W. HAYWOOD, F.R.G.S., Royal Artillery. (*Seeley,
Service & Co.* 16s. net.)

Captain Haywood spent a six months' leave in crossing from Freetown to Algiers, via Timbuctoo and Gao, and it is matter for regret that this difficult and interesting journey was hurried by the time limit. A very full and varied record of experiences and observations, however, resulted. Some account is given of Sierra Leone, but this is familiar ground, and the real interest begins when French territory is reached. It is always useful to compare the ways of similar peoples, and it may be noted that Captain Haywood was struck by two points—the presence of French women, the wives of officials and traders, in places remote from civilisation, and the universal practice of keeping gardens wherever there are any French. Both customs deserve imitation. In the Bend of the Niger the author had some good sport, and there is evidently a district here that will afford opportunities to the big game hunter for a long time to come. After this he made for Timbuctoo. This historic city is interesting, not so much on its own account, as because it is intimately connected with the explorations of Africa in the last century. Major Laing was killed near it, and Barth and René Caillé visited it. At one time it was the capital of a great black empire, the most powerful in West Africa till the Moorish invasion of 1482. The Moors drove the native races out, mostly to the Bend of the Niger, and were themselves, in the seventeenth century, expelled by the Tuaregs. The city was the centre of the traffic in slaves in this part of Africa, and was, no doubt, a much bigger place than it is now. Probably the Niger flowed past it. One reason for the change is that the desert has crept up to it. This advance is always going on. There is reason to believe that the Sahara has not always been an arid waste. There is an Arab tradition that in olden times certain oases were

islands in an inland sea, and there is a marked depression in the desert which countenances this. "When all the 'oueds' flowed," Captain Haywood observes, "as presumably they must at one time have done, the Adrar must have been a well-watered land, as must also the whole region between the Niger and the Ifora country." There are not wanting remains which show that there was once a large settled population where now the barren waste rules. As in many other hot and sandy countries, the sand remains the ultimate victor, and its triumph is certain when once the trees are doomed. The author concludes from his experiences that it will be impracticable to carry on the Algerian railway system across the Sahara. The project is still frequently discussed in France, not merely with the view of reaching the Niger, but in order to make Algiers the principal northern terminus of the lines which are working their way to the centre of Africa, but the engineering difficulties and the unproductiveness of the country for so vast a stretch make it somewhat of a chimæra for the present. However, the dry atmosphere has one advantage; it is healthy. At Timbuctoo "sickness of any sort is uncommon, and the natives are said to be remarkable for their longevity." The inhabitants of the desert take their character from it. They are very unsociable, and only welcome the approach of the stranger for the sake of loot. Even when sleeping in the Sahara, Captain Haywood remarks, it behoves the traveller to have one eye open. The only way, in fact, in which the denizen of such a country can live is by robbing the caravans which have to pass through it, and the modern Tuareg has been admirably evolved for this purpose. His animal, the camel, shares his sulky disposition. This was discovered in Egypt by Tommy Atkins, as has been explained in Mr. Rudyard Kipling's verse, and Captain Haywood's account may be quoted for closer description. "The camel never seems really happy unless he is absolutely left to himself. Far away from mankind and unobserved, he eats and eats until he is gorged, and then lies down to sleep. If man is at hand he will never eat as well as when by himself, and the presence of a human being seems to have a strange effect on him. . . . When near a man he constantly seems to sulk and not to make the best of himself. I have known camels in the Sahara, who had not had anything to eat for several days, refuse their food after being ill-treated, seemingly preferring to die than to accept any favour from the person who has beaten them." He is, in short, a sad animal, and takes no enjoyment in life. His strong point is his hump. This is his reserve, and when he is on the march he draws on it regularly, so that it steadily decreases in size.

At Insalah, some 936 miles from Gao, French civilisation is struck, this place being important as the junction of caravan routes going north, south and west. The French have done wonders here with artesian wells, but still the sand gains.

Altogether, Captain Haywood travelled 3,758 miles across Africa, 1,560 of which were through the Sahara, and is heartily to be congratulated on the success of his enterprise, and the very clear account which he has given of it.

The Tailed Head-hunters of Nigeria: An account of an official's seven years' experiences in the Northern Nigerian Pagan belt, and a description of the manners, habits and customs of the native tribes.—By MAJOR A. J. N. TREMEARNE, F.R.G.S., F.R.A.I. (*Seeley, Service & Co.* 16s. net.)

Major Tremearne is a noted anthropologist and in this work he has collected new materials of exceptional interest. The book has a wider range than the first part of the above title would imply, as the writer draws freely upon his personal experiences of life in various parts of Nigeria, and discusses many matters which will attract readers who have no particular taste for heads or tails customs. Many will, no doubt, read with a sympathy born of experience the remarks that "the discomfort and the amount of filth one eats are responsible for many more deaths and invalidings than is the infamous mosquito, and were it possible to give each man a two-roomed brick house to himself (something like those allotted to black clerks), and to encourage him to bring out wife or sister to look after it, there would not be the same necessity to work out wonderful schemes of soaking the ground—or himself, I forget which—in kerozene. Doubtless much can be done in cantonments by following rules laid down by the medical authorities, but it is quite impossible to keep a grass roofed and windowless mud hut mosquito-proof for very long, and I have yet to meet the official who can afford to fill up the holes in his compound with kerozene when it costs perhaps £2 a tin! Nor has any one in Northern Nigeria the chance to retire under mosquito curtains at sundown every night—the only time available for recreation is between 4 p.m. and 7 p.m., and even were one never to go out to dinner, he would often have work of some kind to do in the evening. Still, the local Government does its best for the officials, and the medical staff is a body composed of able and conscientious men (and having once been a medical student myself, I can sympathise with their aims, even though I may think their recommendations in some cases impracticable), for on the whole the doctors and nurses have worked wonders in West Africa. The

Colonial Office, too, is quite as anxious to improve the conditions, and, after all, most who go to West Africa expect a certain amount of discomfort and hardship."

A contribution may also be quoted to the ethical question of the nature of a black man's gratitude. "I remember at Sierra Leone receiving presents of bananas from a private of the West African Regiment who was always on the spot asking if he could not do something or other for me. I wanted to pay him for the fruit, but he refused to accept anything, saying that I was his father and mother and a few other people, and that his gifts were made solely on account of his natural love and affection for me. I was very much pleased to find a contradiction to the arguments of some of the officers who (having had more experience of the Coast) said that there was no such thing as gratitude in the negro's nature, but after a few days the man asked me when he was going to get his stripe, and I remembered that there was a vacancy for a lance-corporal. He did not get it, poor fellow—such disinterested concern for my wants seemed worthy of a better reward—but I paid him the full market price for what he had given me, and, strange to say, my relationship as father, mother, protector and a few other people seemed before long to have entirely faded from his mind."

There are head-hunters in several other countries, such as the Dyaks, but the West African tribes, which are fond of tails as well as heads, may now be unique, though the practice was at one time widespread. It is the married women who prize the tail, which is made of a palm fibre, very tightly drawn together and bound with string; usually it is decorated with beads. It is related of one tribe that they have tails about six inches long, for which they have to dig holes when they sit down, but this inconvenient length is exceptional. Major Tremearne recalls the cases in medieval Europe where legends describing certain races as having tails were believed in; in fact at one time it was widely believed on the continent that Englishmen possessed this mark of the beast. Bishop Bayle wrote that "an Englishman now cannot travayle in an other land, by way of merchandysse or any other honest occupyinge, but it is most contumeliously thrown in his tethe that all Englishmen have tales," and the legend was so persistent that until lately Devonians believed that Cornishmen had tails, and at Bannockburn the Scots are said to have sung songs about the tailed Englishmen. This idea seems to have had an ecclesiastical origin, but where the tail is really assumed it is either of phallic origin, or, more likely, an imitation of the animals. Major Tremearne's instances will probably not endure much longer. They are taken from districts in the neighbourhood of the newly

exploited tin districts, and the discovery of these base minerals will, it may be regretfully admitted, "soon render the people useless anthropologically."

The book, as might be expected, contains excellent chapters on the customs and superstitions of the natives. There is an account of food and drink, in which it is stated that "Of meats there are the small rat and mouse, and bat, all of which are said to be very good in soup," but probably this is meant to apply only to native tastes. There is also a chapter on music and dancing, and a praiseworthy attempt is made to reproduce some characteristic tunes. Native songs are, it is said, usually sad and have a "haunting note" in the melody. It will no doubt interest musicians to trace this note in the scores given. The book is in fact a wonderful collection of observations and studies, and a review can only lightly indicate the mass of material dealt with. It can certainly be read and re-read with profit by everyone interested in the country. Those officials who have not hitherto met the new Governor will be specially interested to read of him that "his knowledge of the details of every department was astonishing; and although he expected every official to do two men's work on half-a-man's pay, he set the example himself by covering an amount of ground that would keep six ordinary persons occupied even in a healthy country."

Through Polynesia and Papua wanderings with a camera in Southern Seas.—By F. BURNETT. (*Francis Griffiths*. 12s. 6d. net.)

Mr. Burnett, who is an expert describer of travel experiences, gives an observant and up-to-date account in this book of Tahiti, the Cook Islands, the Solomons, and New Guinea. The South Sea islands are in many respects rapidly changing, and the advent of the Panama canal will accentuate the process, but the climate and scenery will always retain their original attractiveness. Nor is there lacking the charm of a mysterious past. In various parts, notably at Easter Island, there are the monuments of a megalithic race, which, whatever it was, was certainly not the latter day Polynesian. There is a similarity between these giant sculptures and the cromlechs of Western Europe which indicates a common origin, though how the creators of the art divided is a matter of speculation. The sculptures found in the ruined cities of Central America support the theory that the islands were once larger and more closely connected with the American as well as the Asiatic continent.

Mr. Burnett is not an ordinary traveller, as he has studied the islands well and has views of his own on their administration. In particular he directs his criticisms against two bodies—the missionaries and the British officials. In many cases the missions have added to their legitimate functions commercial transactions which are in any case open to criticism and which in some cases have resulted in abuses. As regards the administration, Mr. Burnett severely arraigns the procedure of certain punitive expeditions, in which he alleges, the native “boys” employed committed brutal outrages. He attacks the officials for “monumental ignorance,” and in particular indicts them for not providing in the Solomons any hospital or government medical officer, though there was in 1909 a revenue of £10,603. No doubt it is good for any administration to be criticised, but in weighing the results of the administration it is only fair to bear in mind that the Solomon Islands are a peculiarly difficult place to govern. As Mr. Burnett explains, the Malaita native is “an unique specimen of humanity. He is ferocious and sometimes cruel. . . . He is a genial murderer. Hatred or malice towards his victims does not enter into his composition. Killing with him is merely a form of diversion, on a par with chewing betel nut and indulging in feasts.” Mr. Burnett, on the other hand, is fully satisfied with the administration of New Guinea, where he considers the white population is receiving good value for its contribution to the exchequer.

The British West Indies: Their History, Resources and Progress.—By ALGERNON E. ASPINALL. (*Sir Isaac Pitman & Sons, Limited.* 7s. 6d. net.)

No better qualified writer of an account of the West Indies for the “All Red” series could have been found than the able and energetic secretary of the West Indies Committee, and it goes without saying that such a volume will be thoroughly up-to-date in its facts and reasonable in its comments. The history of the group has often been told in recent compilations, and has certainly strong claims to attention, if only because it was in West Indian waters that the British navy achieved some of its most brilliant feats and British enterprise laid the foundation of the modern empire. Mr. Aspinall, however, has been well advised not to burden his work with too detailed a description of past events, but to devote most of his space to the existing features of the islands, and any one who wishes to understand the present position of their resources and products will find the facts fully and

clearly set out. Thus a connected explanation is given of the pitch lake and oil developments in Trinidad, in the course of which a well-merited tribute is paid to Mr. Randolph Rust, to whose energy and confidence the present position of the oil industry is in no small measure due. The last chapter is devoted to the question of federation, and despite the attractions of the idea Mr. Aspinall finally concludes that political federation is impracticable, though, as intimated in his preface, he is in favour of greater uniformity in all matters that concern the West Indies. The difficulty is to secure such uniformity without federation, and in considering the problem it must not be forgotten that attempts to carry federation have within recent memory been attended by strong opposition and serious disturbances. In all the varied matters treated of by Mr. Aspinall we only notice one omission. Jamaica, he remarks, has the great advantage of being the West Indian colony selected by the trustees of Mr. Rhodes to benefit from the scholarship scheme. The privilege was also given to Bermuda.

Unification : United West Indies. — By JOSEPH RIPPON.
(*Waterlow & Sons Ltd.*)

This is a collection of papers, including those contributed to this Journal by Dr. G. B. Mason, Mr. R. H. McCarthy and Mr. Rippon himself, dealing with proposals to unify the administration of the West Indies. Mr. Rippon, whose energy in stimulating discussion of the subject is well known, has done useful work in collecting these materials. He observes in his preface that "the trend of opinion in the colonies, upon which everything depends, is gradually towards a simple and economical way to provide for unification, so as to deal as a whole with commercial arrangements and other matters, such as judiciary, codification of laws, etc., most advantageously. In fact there seems to be no doubt that unification is being gradually and satisfactorily reached, as conferences of delegates from all the Islands and the United Kingdom have been held on various subjects at Trinidad and Barbados, and this should lead to the appointment, jointly by all the Legislatures, of a permanent Secretariat (of, say, two persons), whose duty would be to preserve records, to maintain continuity and activity, and to summon Conferences on subjects demanding consideration; the delegates to such Conferences, to be appointed by the Legislatures, would naturally be selected with a view of their qualification to discuss them." This seems to be a reasonable ideal, and is similar to the arrangement made by the Imperial Conference. It is no doubt

important that the present constitutions should not be interfered with, a point on which Mr. C. Gideon Murray has laid stress, but this is consistent with much concerted action, and, academically speaking, it would appear possible to specify certain subjects of common interest with which a Federal Council or Conference, or whatever it might be called, could deal. The main object is to further commerce, and in such a matter union is strength. It is, however, clear that the movement must come from the Islands themselves.

Report on Economic Entomology.—By F. P. JEPSON, Government Entomologist, Fiji.

Fiji probably enjoys a larger insect fauna than most countries similarly situated, and it was no doubt high time that an expert should be employed to report on the mischief. Insects are kept down by crop rotation, but this system is not much practised in Fiji. Another prevention is clean cultivation. Mr. Jepson observes: "That clean cultivation is one of the most important factors in the control of insect pests is an established fact of scientific agriculture. Unfortunately this is not as commonly practised in this Colony as it should be. It is not an uncommon thing to see refuse lying about plantations which should have been destroyed long before. Decaying refuse forms a refuge and breeding ground for all manner of insect pests. I have seen lying about plantations heaps of banana suckers which have been discarded as unfit for planting, owing to their being infested with borer. Such a heap constitutes a nursery where the borers can multiply, and from which they are distributed in their thousands all over the neighbouring plantations. It is most important that such discarded suckers should be destroyed. They are difficult to burn, but burying deeply between layers of lime should prove fatal to any insect fauna which they contain. As soon as a crop has been harvested any refuse in connection with the crop should be at once collected and destroyed, as it is in such refuse that many insects pass the time which elapses between the harvesting of one crop and the planting of the succeeding one. In all cases the remains of a diseased crop should be destroyed at once, and on no account should they be allowed to lie about on the ground."

Mr. Jepson states that mosquitoes never appear to bite the ankles through white stockings or socks. It is worth while to try this precaution. Dilute carbolic acid (3 per cent.) applied to mosquito bites is said to give instant relief. A very effective house trap is a box lined with dark green thick paper and exposed with the lid

open during the night on the verandah; in the morning the lid is closed and a few cc. of benzine introduced through a line in it. In this way a large bag of dead mosquitoes was regularly obtained.

A very clear account is given of insects injurious to man and crops.

Southern Nigeria Handbook, 1912.

This has been well revised and is a model of what such a handbook should be. It contains a detailed description of the waterways and means of transport which should be useful to traders, and is not, we think, obtainable elsewhere. Each district is separately described and the means of communication specified.

Southern Nigeria Survey : First Annual Report. (W. & A. K. Johnson, Ltd.)

The difficulties of a survey in such a country are very great, as a vast swamp and mangrove forest are and a dense forest belt have to be dealt with. The report explains how these difficulties were successfully grappled with, 4,640 square miles of major and minor triangulations were executed, at a cost working out at 9s. 10d. per square mile.

The Grenada Handbook, Directory and Almanac for 1912.— By the COLONIAL SECRETARY. (*Wyman & Sons, Ltd.*)

This Handbook gives all the usual information and comprises a very good history, which, however, would gain much in interest by being continued beyond the year 1906. It is to be hoped that the attractions of this favoured island will become better known among tourists.

Kanuri Readings, with Vocabulary.—By P. ASKELL BENTON. (*Henry Frowde, Oxford University Press. 6s. net.*)

This book contains several Kanuri stories, which are well selected for the purpose, with both word for word equivalents and translations, so that the work of understanding the language is made as easy as possible. There are some facsimiles of Kanuri writing. A compilation of this kind is no easy matter, and credit should be given to the officials who undertake such work. We trust that Mr. Benton may be encouraged to proceed with some of the smaller dialects of the Central Soudan.

Hausa Sayings and Folk-Lore: with a vocabulary of new words.—By R. S. FLETCHER, 5th Fusiliers. (*Henry Frowde, Oxford University Press.* 3s. 6d. net.)

This book contains a collection of popular Hausa sayings. Most of them have familiar equivalents in English, and no doubt the simple wisdom of the world is largely the same everywhere. The difference is in the style. In Hausa the reflection is generally expressed with reference to a particular form of illustration, and very frequently it is in the shape of an animal story, characteristic of a period when man saw little difference between himself and the brute. There is also an explanation of the meaning of gestures, which probably originated at a time when speech was undeveloped. The writer observes that "too much attention can hardly be paid to the proverbs, saws and riddles in common use. Properly used they add enormously to conversational effect, especially if introduced allusively." The present collection is certainly very interesting, and the author's comments on the sayings are always clear and to the point.

Rubber and Gutta Percha.

The Imperial Institute has issued a large number of reports on samples from the Colonies (Cd. 6022, price 9d.). It appears that in the wet zone of Southern Nigeria, Para rubber can be produced equal to that from Ceylon or Malaya. The same may be said of Dominica. Ceará trees do not give so good a yield, but can be grown in dry situations where Para does not thrive. They would do well for instance in the dry regions of East Africa. The best mode of coagulating the latex in this case seems to be by simply adding water. There are many observations on the subject of coagulation, but definite conclusions have not yet been reached and await further evidence. As to the use of Para seed as a source of oil the following remarks are made:—

"Lastly reference may be made to the investigations conducted at the Imperial Institute into the value of the seeds of the Para rubber tree as a source of oil, as to which reports are included in the present series. It is now some years ago since the oil contained in these seeds was first investigated as to its composition and uses at the Imperial Institute. It was shown that the kernel of this seed, which is easily removed from the thin shell, contains nearly half its weight of oil. This oil was found closely to resemble linseed oil in its composition and properties, falling into the class of drying oils, which are used in the manufacture of paints, of linoleum, and of other materials. It was shown that this oil would command about the same value as linseed oil, and that there would be a considerable demand for it as

a substitute for linseed oil. At first the matter did not seem to be of much immediate importance. Rubber was commanding a high price, and the planter was not inclined to devote attention to a bye-product. Moreover large quantities of seed were not then available, and all seeds were readily taken up at high prices for planting purposes. With the maturing of large rubber plantations all over the world the need for seed for planting is rapidly diminishing, and an enormous quantity of seeds is becoming available. At the same time the fall in the price of rubber and the circumstance that the cost of labour in the plantations will certainly increase has caused the planter to consider the question of finding a market for the seeds. The present time is favourable for the production of rubber seed oil, since it now will command a higher price than that originally quoted, owing to the scarcity and consequent greater value of linseed oil. The reports on this subject which are included in the "Appendix" summarise the present position of the question. The residue or cake left after expression of the oil would be of value as a manure and also possibly as a feeding stuff for animals, and trials on this subject have now been instituted by the Imperial Institute, whilst the question of the cost of collecting the seeds, and the possibility of expressing the oil on the spot, are engaging the attention of rubber planters in several Colonies."

Report on the Forests of Sierra Leone.—By C. E. LANE POOLE.
(*Waterlow & Sons.*)

This report gives a lucid description of tropical forests. There are two distinct forms, the Rain Forest and the Savannah Forest. Rain Forest is the name given to the characteristic tropical dense forest. It is recognizable by the height of the trees, reaching a hundred feet and over. The bark is thin as a rule, and offers no special protection against extremes of temperature. Lianes link up the trees one with another, while the branches and stems are covered with epiphytes.

Climbing figs are met with, and these entirely envelope the stems of their hosts. The base of certain species is enlarged into buttresses, while others are provided with prop-roots. The former is typical in the two Beles (*Piptadenia*), while excellent examples of the latter may be seen in the Screw Pine (*Pandanus Candellabrum*) and Cork-wood (*Musanga Smithii*). The shade is dense, and there is little or no wind felt in the heart of the Rain Forest.

A very large number of the trees are provided with the typical hygrophilous leaf with its "dripping point" and hydathodes which aid the plant in excreting water. The dripping that takes

place in the early mornings in the forest is due to this cause, though it is frequently erroneously ascribed to dew. Deciduous trees are the exception in the Rain Forest, and the few that lose their leaves do so only for a short time.

Savannah Forests are open woodlands, the trees standing at a distance from each other, while the intervening space is covered with grass and other herbaceous plants. The trees are tropophytes; they lose their leaves in the dry season, while their stems are covered with a thick protecting bark, which not only enables the tree to combat a long dry season, but actually to resist the fires that yearly rage through the part of the country where these forests occur. There are few evergreen xerophytes, but the vegetation is for the most part tropophilous. The height of the Savannah Forest rarely exceeds 30 feet, except in the case of single trees of the species *Adansonia digitata*, known to the natives as the monkey bread tree. Lianes are entirely absent in the Savannah Forest, and the trunks and branches of the trees are bare of ferns and epiphytes.

Mr. Lane Poole explains how greatly the country has suffered from the destruction of forests. This is a common evil, but Sierra Leone has suffered especially. He states that ninety-nine per cent. of the Rain Forests have been destroyed by the natives in their wasteful method of farming. In the past, tribal wars were of common occurrence, and it was difficult for the native to devote his whole attention to farming, so that the forests were given a sufficient interval of rest to enable them to grow up again. With the cessation of tribal wars, and the growth of peaceful prosperity, and the increase of the population, the farming rotation—the interval between two successive farming operations on the same forest area—has been reduced from nine to five, and even to four years.

When virgin Rain Forest is felled for farming purpose, there is always sufficient natural regeneration to re-establish the forest; but the forest that grows up differs from the virgin forest, in being composed of those species which are most favoured, such as trees that have heavy seeds or winged seeds, or seeds that are carried by birds, or trees that bear annually abundance of seed.

With the felling of the virgin forest there is a decrease of the relative humidity, and those trees that are inclined to be tropophilous, or those that are to a slight degree xerophilous, have a great advantage over the typical hygrophilous tree of the Rain Forest.

Ultimately under this process the grassland overcomes the woodland, and the Rain Forests in the end become pure Savannah. Once the conversion has been effected the relative humidity, moisture, precipitation and climate generally will be so altered and the soil will be so impoverished that the resulting Savannah country

will not support the same agricultural crops. The conversion from an agricultural to pastoral country will be followed by an exodus of a large number of the inhabitants.

The remedy is to form forest reserves, and the solution of the problem will be helped by the introduction of economic trees, such as cocoa and rubber. The difficulty is that the natives like to raise rice and other food crops, and it is this which has led to the destruction of the bush ; but it is clear that this practice should be checked, and the teaching of better agricultural methods will, no doubt, go far to effect this.

Gold Coast Concessions.

A collection of ordinances and regulations governing the grant of concessions in the Gold Coast has been printed and is published by Messrs. Wyman and Sons (1s.).

BUSINESS NOTES.

The third Congress of the International Association of Tropical Agriculturists will be held in London next year, and in 1914 a Cotton and Fibre Exhibition and a Rubber Exhibition are to take place. A vigorous plea has been published by Mr. S. Simpson for the establishment of a lectureship in this country of tropical agriculture. A great amount of material is available and is rapidly growing, but it cannot be said that there is at present satisfactory provision for the instruction of young men who are ready to go out to the colonies and take up agricultural work. The increasing importance of tropical produce makes the question an important one. "Great Britain," Mr. Simpson observes, "has willingly sent millions of money to develop estates in her own colonies and dependencies. She has also taken a foremost part in providing money and men in the territories of other powers. But up to the present time little has been done to provide facilities for training the men who are to conduct those over-seas operations.

"In the past this has meant great wastage, and much unnecessary loss. Absolute failure has been the result in many cases due entirely to lack of knowledge, whilst in others partial success only has been attained, owing to the cropping and treatment being unsuited to the prevailing conditions.

"The world's demands are rapidly increasing for every kind of produce, and with this increasing demand, there is a strong tendency for prices to rise permanently to a higher level.

"With our tremendous interests involved, every effort should be made to spread knowledge concerning the cultivation of these various crops which mean so much to mankind in general, and to this country with its ever expanding commerce, in particular."

Tin.—In 1911, the F.M.S. output of tin increased by about 400 tons, rather contrary to general anticipation. In June, a record price was reached in London, and no doubt the rise had an effect in stimulating the production, which in Malaya is more

than usually sensitive to changes of price, owing to the fact that there are other industries to which labour can turn if mining becomes less remunerative. The average price in 1911 was only a little above that in 1910, but a result of the record price was that the London Metal Exchange revised the form of the tin contract to bring it into harmony with the changed conditions of production. The revision is calculated to bring down the average price, a fact to be remembered in making comparisons. The Bauchi Railway and recent discoveries will cause a substantial increase in the Northern Nigeria export, which was about 1,387 tons in 1911, but this production will have to be largely increased to affect the price, the world's production being about 114,000 tons. Tin is rather peculiar in that for most purposes it forms only a small part of the article to which it goes; thus the price does not affect the demand so much as in the case of other metals, and movements depend on the state of the engineering industries. Recently steel and iron prices have been generally advanced by 5 to 10 per cent. and the rebate system has been introduced, but the prospects, subject to strikes, are good, and on the whole it seems likely that the demand will keep the price of tin up to a fairly high level. In Malaya there has been an increase of Chinese immigration and a further increase of the output is likely. In Nigeria it has been calculated that with the help of the railway the cost of transport from the mine to England will be under £20 per ton, and that with proper plant the whole cost of production and freight would be under £50, a very low figure with a market price of about £200 per ton.

Prospecting for Tin.

In the Rhodesian Mining Review some compact suggestions have been made to help prospectors. The general rule is that granite contacts should be kept to. Though no possibilities should be overlooked, it is better to keep inside the schist boundaries than outside the margin of the granite. Greisen may occur in both situations, but the tin-bearing stuff is more apt to be permanent when it occurs in dikes or lodes among the schists.

Cassiterite, the only important ore of tin, is an inconspicuous mineral usually black or brown in colour, and very difficult to detect in weathered rock services, though its grains or crystals tend to stick out, owing to its resistance to alteration. What should be sought in the first instance, perhaps, are dikes containing lithiamica (lepidolite), the striking pink or mauve colour of which is very conspicuous on a newly broken surface of rock. The tin

does not necessarily occur in the lepidolite-bearing rocks, but these are seldom far off. What should be done is to examine the beds of all the neighbouring streams, etc., by the pan, or perhaps even better by the sieve, for the heavy black grains of cassiterite; then try to trace them to their source, always working upstream and uphill. Outcrops of greisen (that is to say rocks made up chiefly of quartz and white or pink mica) should not be neglected, but the stream of deposits and rubble provide samples from much wider areas. Specimens of tin ores and tin-bearing rocks should be carefully studied.

Cassiterite is hard enough to scratch glass, and is extremely heavy—much heavier than pyrites or magnetite, though not quite as heavy as wolfram. Its colour is generally black or brown, and though reddish, yellowish and grey varieties are sometimes seen, these last are distinctly rare. The colour of the fine powder of even dark specimens is comparatively light, usually grey, and sometimes almost white. The streak may be obtained by rubbing on corundum, as the mineral is too hard to be tested on an ordinary piece of porcelain. It is nearly white. Before the blowpipe on charcoal metallic tin may be obtained, using cyanide as a flux, but the test is not much use save on actual pieces of pure cassiterite. Two or three times as much cyanide as ore should be used. Much the best test is with zinc and hydrochloric acid. For this purpose a fragment of the supposed ore, or some grain from the tail obtained by panning, are placed upon a small piece of zinc foil or sheet, say an inch square. If a fragment from a specimen is used it should be scrubbed clean with water; grains from panning are usually clean enough. The zinc is somewhat hollowed, so as to retain a few drops of liquid. A couple of drops of hydrochloric acid (say half acid and half water) are then allowed to fall upon the ore as it lies on the zinc. Brisk effervescence takes place; when this has subsided the grains can be seen (if they are really cassiterite) to have a rather dull coating of metallic tin, similar to that on ordinary galvanised iron. A lens may be used if the grains are small, but the naked eye is usually sufficient.

Rubber.

In Malaya more country was devoted to rubber in the last year, and it is computed that in 1916 the yield in the Far East alone will equal the present consumption of the world. Every possible place is now being exploited for the production of the product. There are undoubtedly strong points about it. The cultivation in proper places is remarkably free from the vicissitudes which beset

other tropical products; the work is fairly easy and healthy, and the demand is sure to expand. The danger to the producer is that the price may again fall, and the prospects are that it will eventually. The cause of this will of course be the increase of cultivation in a number of places; thus a French journal claims that Cochin-China will become a serious rival to the British and Dutch possessions, as shortly there will be 8,000,000 Heveas planted. On the other hand it is clear from the differences in the prices obtained that the manufacture varies greatly, and is much inferior in some cases to others in the same neighbourhood; much further study in fact is required before the best results are generally obtained, and no doubt also the mechanical appliances will be improved.

A clear, and on the whole encouraging account is given in "Grenier's Rubber Annual, 1911," of the position of Malayan Companies, many of which would be able to give good dividends at much lower prices. The complaint, however, is expressed that Mincing Lane has captured the trade and is a "veritable plague spot." It is feared that a fall to 2s. 6d. a pound or even 2s. is inevitable, and the opinion is put forward that the explanation is that Mincing Lane is "throttling" the industry. However, since the writing of the Annual the price has moved upwards and the immediate prospects are fairly favourable, whatever may happen later on. By this time the artificial element in the movement has evaporated, and the commodity has settled down to a value dependent on actual supply and demand.

Tea.

It is reported that the last coffee field in Ceylon, one of about forty-eight acres, has been converted into a tea plantation. The enormous development of the tea industry began from about 1884, and in the first instance was due to the failure of coffee. Latterly the progress has been arrested by the competition of rubber, and a very large area which has hitherto been devoted to rubber and tea simultaneously will, in future, be limited to the former. This, it is calculated, will reduce the production of Ceylon tea by 16,000,000 lbs. This will be to the benefit of India, where tea is the most prosperous industry, and where its rival, rubber, is not meeting with any great success.

Australia has given notice, with reference to the importation of tea, of which it takes a great quantity from Ceylon, that there is a fine of £500 for the introduction of any objectionable insect, and it appears that the ordinary Ceylon tea-chest is made of wood

(Tel-kekuna) which harbours great quantities of insects. In this country apparently we are not so particular.

Tobacco.

This product advances steadily in price and the value of Turkish leaf tobacco in particular has gone up abnormally. There is a demand which is sure to bring new sources of supply forward. Types vary with different soil and climates, and it is an advantage to any district to produce a uniform type which establishes a market value. The popular taste trends towards the lighter aromatic kinds, and these can only be grown on soils that are not very dark and rich, for the richer the soil the greater the nicotine and the more rank the tobacco.

Sterilizing Tobacco Seed-Beds.

It has been proven that a faster and healthier growth of seedlings is secured on properly sterilized soil. The reasons for this are due to the fact that after the soil has been heated it is dryer and can be worked into a better seed-bed, and because subjecting the soil to high temperatures helps to bring the plant food contained therein into a soluble condition so that it is readily available. Russell and Hutchinson, in an exhaustive series of experiments, have shown that when soil is heated to 98° C. and then moistened with water there is a rapid increase of ammonia in it, and also that the total amount in it, and also that the total amount of available nitrogen is increased by heating the soil to 91° C. If the soil is sterilized by burning wood, cotton stalks, or trash on it, plant food, such as potash salts, is left in the ashes of the burnt material. When these ashes are mixed with the soil all the plant food they contain, being in a water soluble form, is readily available for the young plants. Another good reason for sterilizing seed-beds is to kill the spores of parasitic fungi and to destroy weed and grass seeds usually lodged in the surface soil. If weeds and grass are allowed to grow in the seed-beds the young seedlings will certainly suffer.

There is a difference of opinion as to the methods, and the South African Agricultural Journal gives an account of experiments conducted by the Government experts with the view of ascertaining how the best results are obtained. Five methods were used :—

(1) *Open Fire Method.*—By this method the soil is sterilized by simply burning wood or other waste material on the top of it, thus providing sufficient heat to destroy weed seeds to a depth of 2 or 3 inches.

(2) *Boiling Water Process*.—When this process is used the seed-bed must first be properly prepared, then boiling water poured on it until the soil is wet 3 or 4 inches deep. In three or four days the operation must be repeated. After the second application of boiling water, do not sow the seed until the bed has dried out properly and the surface has been worked into condition.

(3) *Steaming Process*.—When this process is used the seed-bed is first prepared, and then a specially constructed steam-tight box of any convenient size is inverted over a portion of the bed. The steam is then conducted by means of an iron pipe, into the box, and each portion of the bed steamed for fifteen minutes. The bed should then be allowed to dry properly before the seeds are sown.

(4) *Roasting Process*.—In this method the soil for the seed-bed is dug up and placed in a large receptacle, where it is heated until the soil attains a temperature of approximately 212° F.; the soil is then returned to the place from which it was removed. In America a machine is manufactured and sold, under the name of the "Wyatt Tobacco-Bed Burner," which is a patent movable device especially designed for this sterilization work. The machine is constructed throughout of heavy sheet iron with adjustable wheel carriage, so that two men can move it. The soil pan over the furnace is 3 feet wide, 9 feet long, and 4 inches deep. The machine is placed at one end, in the middle of the strip of land to be used for seed-beds, and a fire of wood, brush, mealie stalks, or cotton stalks kept going under the front end of the furnace. A block of soil 3 feet wide, 9 feet long, and 3 inches deep, alongside the machine, is shovelled up and placed in the pan and baked for one hour. During the roasting process the soil is turned over two or three times with a long-handled shovel. When the soil is thoroughly roasted it is returned to its original place and another similar block from the other side is treated in a like manner. By this time the block of soil covered by the machine is also sterilized, and the machine can be pushed forward another 9 feet. Thus it will be seen that at each setting of the machine a space of 9 feet square is sterilized. Under ordinary circumstances two men can sterilize 40 to 50 square yards in one day. If a dry soil is being treated less time will be required for each operation, and consequently more ground can be covered in a day; while on the other hand, when dealing with a very wet soil a longer time will be required for each operation. In South Africa the principal advantage of the roasting method of sterilization would be the economical use of fuel.

(5) The fifth square was left untreated.

(6) *Formalin Treatment*.—When formalin is used as the sterilizing agent, the soil is first properly prepared and the seed-bed is then treated with formalin which has been properly diluted with water. One-half of the solution is applied, then after three days the

remaining half is added. After the second application three days are allowed to elapse, when the soil is again worked up and prepared for seeding.

COMPARATIVE RESULTS.

1. Open fire method.
2. Boiling water treatment.
3. Steaming process.
4. Roasting process.
5. Check or untreated plot.
6. Formalin treatment.

The open fire method of sterilizing gave the best results. The roasting process came second, and was almost as good as the open fire method. The steaming process came third, but was not quite as good as the roasting process. The formalin treatment came fourth, and was almost as good as the steaming process. The boiling water gave the poorest results of all, and was but little better than the check or untreated plot.

Flue-cured Tobacco.

The tobacco most in demand is that of the yellow or bright leaf, to produce which curing by heat is required. If the climate at the time is hot and dry, yellow leaf results from air-curing, but if the weather is very damp the leaf becomes dark. Thus the planter is at the mercy of the elements. To make the process certain flue-curing is necessary; this is largely practised in the United States, and might with considerable advantage be more widely adopted in the colonies, especially as the expense is not great. The flue-curing shed should be small, say, 16 ft. square by 20 high, as it should be filled in one day. It should be divided into four rooms, each of which contains five tiers; these will hold 480 laths, each carrying seven plants, or 3,360 in all. The shed can be filled three times a month. The furnace should be 5 ft. long, 2 ft. 6 ins. wide, and 2 ft. 9 ins. high; the flue should be 12 ins. in diameter, and should extend round the inside of the shed about 2 ft. from the wall. Full details of construction and management have been given in the South African Agricultural Journal.

Tobacco under Tents.

A great amount of tobacco is now being grown in America for cigars under cover. The object is to produce a wrapper leaf of thin texture and sound quality. A desirable subtropical effect is

insured by means of the enclosure inasmuch as it causes a moist condition of atmosphere combined with a more regular temperature. This makes for a greater rapidity of growth and more delicate flavour. Further, owing to the crop being enclosed with cheese cloth, the damage likely to ensue from the ravages of insect pests and wind is minimized. Sun spots are also avoided.

Yields vary from 1,000 lbs. to 1,400 lbs. per acre of cured leaf, and values from 2s. to 16s. per lb., averaging a return per acre of from £75 to £200, according to the proportion of high grade leaf in the crop.

According to the Journal of Agriculture, Victoria, experiments in that State have proved that leaf of better texture can be grown by this method, but so far the cost of covering the field would not be compensated for at the prices offered by manufacturers for the local product. Later on, when Victorian leaf gets a reputation for being high class, growing tobacco under these conditions may become more general, especially as it makes the industry possible in places where growing in the open field is not advisable.

The structure for the cover is made 9 ft. high and covered on the top and sides with cheese cloth. The frame can be built of poles of any diameter from 4 to 8 ins., and placed 12 ins. apart, with battens or galvanized wire stretched across the top to support the cloth and to prevent sagging. The widths of cheese cloth should be sewn together and sewn to the battens or wires. The whole cost will be from £60 to £80 per acre; though, where timber is plentiful and the owner's labour available, the cost will be lower. A cheap quality hessian will answer, but it is not as good as cheese cloth; it will have the effect of darkening the interior of the building which is detrimental to rapid growth. The life of the framework is from two to six years, according to the size and kind of posts used, and of the cheese cloth or hessian, two years.

The report of a leading cigar manufacturing firm on Victorian tent-grown leaf is decidedly encouraging. It reads as follows:—

"They are the best samples of Australian cigar leaf we have ever had submitted to us. We would be prepared to purchase immediately a large quantity of such leaf at a price which we believe would be profitable to the producer, allowing for the extra cost of growing under cover."

The harvesting of tent-grown leaf differs from that grown in the open, in that the evidences of maturity are not so plain, and if the crop is allowed to over-ripen the quality will suffer. A record of the dates of topping the plants should be kept, and the crop cut within eight weeks of the time the bud is removed; every additional day over that period the leaf will deteriorate in smoking and burning qualities.

Cotton.

The report of the Department of Agriculture, British East Africa, points out that some 500,000 acres along the south bank of the Juba River could be made suitable for cotton growing if put under irrigation, and that this area would make an appreciable addition to the world's output. There have been some commercial propositions for the development of this territory, but little has come of them so far. In the German West African possessions some crops have been spoilt by drought, and the subject of irrigation is being considered. Most of the planters there combine rubber trees with cotton growing, and this method is increasing in favour. The industry, however, suffers in all such places from the competition of coffee, copra and rubber, the two former of which have gone steadily upwards in value.

An interesting account has appeared in the *Southern Nigeria Gazette* of the dealings in locally grown cotton. Cotton is brought into Sokoto Province and sold wholesale to brokers for rather more than 1d. per lb. The brokers sell to women spinners at a profit of about one shilling per 100 lbs. The article is then spun and woven in strips to make a cloth about 7 ft. by 6 ft. 6 ins., and about 6d. worth of cotton is required to make such a strip. This strip is sold for 4,000 cowries, or just over 2s. 2½d. It is then dyed, and as the profit on this process is very great it is sold for 7,000 cowries (3s. 4d.) to a trader. The trader takes it to French territory, where he exchanges it for three sheep, which on his return he sells to a Lagos-Sokoto trader for 10s. The sheep are taken to Lagos, a journey of 15 days to three weeks, and are sold for 7s. each. With the proceeds the trader buys kola nuts, which he brings back to Sokoto and sells for 39s., making after payment of his expenses a profit of 21s. on the round trip. Thus the original 6d. worth of cotton has in about two months been converted into 39s., and in the manufacture and exchange it is estimated that the persons engaged have earned an average of 8d. per day.

As in the case of many ancient caravan systems, the process is one of some complexity, and it will be interesting to see how modern methods will affect it. For present purposes it is clear that cotton in such districts has a good local market.

The Fruit Trade.

The last season was remarkable for the high prices obtained for imported fruit, and growers in the colonies may well take encouragement from this fact. The reason is of course a greater demand, and this comes chiefly from Germany. In that country, it must be admitted, vendors got generally better prices than in this country; the explanation of this is, at any rate in part, a more

convenient system of marketing, the accommodation at Hamburg being much more convenient for intending buyers than it is at Covent Garden and other London markets. The trade has in fact outgrown the accommodation, and the natural solution will be to organise direct shipments to other distributing centres, such as Manchester and Hull. The demand is enormous, and fruit from any place will arrive in good condition provided (1) it is carefully picked, packed and handled (2) it is cooled before shipment (3) a low even temperature is maintained during transit.

Preservation of Perishables.

Our Ottawa contemporary the "Civilian" in its January number gives an account of the dairy and cold storage branch of the department of agriculture, "one of the genuinely interesting branches of government service." Not only does the department, by lectures and papers, spread the knowledge of scientific processes, but also it watches the transport of the produce from the start to the finish. There is no lapse in the vigilance of the branch after the fruit, butter and cheese have been shipped. Agents are at work observing, noting and keeping tab even down there in the lightless holds, but the agents are not human—in intelligence, in perseverance, in constant attention to their duty they are, in fact, almost superhuman. These little agents are known to science as thermographs. Like seismographs, they record by drawing an ink line over the graduated circumference of a slowly unwinding roll of paper. Unlike the seismograph, by which the rumblings of the earth are chronicled, they keep record of temperature in such a way that one of them taken out of its box at the end of the journey across the ocean bears evidence of the temperature in which the Canadian consignments have been stored from the beginning to the end of the journey. It is one of the most important factors in the sound arrival of fruit at its destined ports that a proper temperature should be maintained. If, through fault of the steamship employees, this is not done, the fact becomes evident at once when the thermograph record is taken from the hold by one of the branch's agents at Liverpool, London or Glasgow. In such a case the shipper is apprised of the fact that he may make complaint and the steamship company is also informed so that necessary improvements in the cold storage system may be made.

The fruit safely arrived at its English or Scotch destination, the vigilance of the branch does not cease. At Liverpool, at London, at Glasgow and at Bristol are agents who meet the incoming ships, observe, record and report on the unloading of

Canadian cargoes, see that they are not let lie too long on wharves or in storage, and advise the shippers if there is any laxity in this respect. These agents, besides, keep the home office at Ottawa advised as to the markets for fruit and dairy produce in Great Britain and on the Continent.

In South Africa a peculiar form of chamber has been introduced, known as the Mederer Preserving Chamber, which appears to preserve produce partly by low temperature and partly by germ destruction. The chamber is built with an air space below, and the outer wall is made of absorbent, perforated brick, which is kept in a sodden state; inside this wall are three or four others, with air spaces between. It is argued that this arrangement creates an atmosphere changed with positive electricity and possessing germicidal properties.

Great economical changes are being caused by the preservation of perishables, and probably there will be a vast extension of arrangements for this object.

Importation of Oil.

It is expensive to import oil in barrels as compared with supplies from tank steamers, but to get the advantage of the latter considerable quantities must be taken and there must be good anchorage for fairly large steamers. The same steamer can carry various products of petroleum, but not less than the contents of one tank will be discharged at any one port; the capacity of this can be put at from 600 to 1,000 tons; and a tank steamer will not visit a district unless it can dispose of a full cargo, which means several thousand tons. Discharge is best made direct into storage tanks from the ship lying alongside a deep water wharf; but if this cannot be done a floating life line can be used. The average draught of the large tank steamers belonging to the Shell Company, which come to Europe via the Cape, is 28 feet: the Anglo-American have one or two much smaller tankers, but the present tendency is towards the greater draught. At present there are not enough such vessels, but no doubt the deficiency will soon be made up. If the ship cannot get near the wharf, tank barges must be employed; they should be motor-driven and a convenient size is 200 tons. For the storage of fuel oil it is desirable to provide at least two 4,000 ton tanks at the place of discharge. For petroleum spirit tanks of about 300 tons capacity are sufficient, as in the tropics the loss due to evaporation is appreciable. Roughly speaking the cost of fuel oil in tankers is 40s. to 50s. o.i.f., and borneoline about £7 per ton. If importation in

bulk is impracticable, the most economical method is to ship in 50 gallon steel barrels, which when emptied into the storage tanks can be returned.

Clayton Disinfector.

The machine supplied to the Port of London Sanitary Committee for the disinfection of vessels in the Thames is the Clayton Company's dilute gas machine, type "C"; in this instance the machine is erected on a barge on which is also placed a boiler to supply steam to drive the Clayton engine. Or this type, as supplied to several Crown Colonies, is fitted with two cylinder oil motors to drive the Clayton blower, and this arrangement, besides taking up less room, avoids the cost of a boiler and fittings. The extra cost of the oil engine as compared with the steam engine is £50, and, allowing £25 for the gunmetal rotary pump to supply circulating water to the cooler, the total cost of this type is £500 net.

Bamboo Paper.

Experiments in making paper from bamboo seem to have been successful. Firms who have tried them, in Berkshire and Ireland, announce good results. It appears that $2\frac{1}{2}$ tons of bamboo yield one ton of paper. Where this product is abundant, and there is an ample supply of water, the industry might very well be remunerative.

Automatic Stamp Selling Machines.

These convenient machines are supplied at £12 12s. each, with a reduction on a quantity. They must be made specially to suit the exact dimensions of the stamps issued. Their life is said to be from 20 to 25 years. The necessary rolls of stamps can be made by hand if care is exercised, or a machine for the purpose can be bought for £8 8s., or they can be made up here for 3d. per roll of 1,200 stamps. The machine depends upon the perforation across the breadth of the stamp being accurate.

Ant Destroyer.

An enquiry has been received about the "Universal Ant Destroyer." This machine is obtainable at Pretoria, and costs £4 5s., including one tin of poisonous mixture. It has been strongly recommended by government entomologists and other officials. It consists of a brazier to hold a small charcoal fire, on

which the mixture is sprinkled, and provided with a wire hose, the muzzle of which is inserted into the ant hole; by means of a pump the fumes are blown into the hole or ant heap.

Automatic Pistol.

The Houndsditch crime has led to the adoption of an improved type of Webley automatic pistol for the use of the Metropolitan Police, and colonial enquiries have been received about the weapon. The new pistol is 6½ ins. long and weighs with the magazine 20 ozs. The recoil is largely absorbed by the moving parts, thus facilitating accurate shooting. The price for the 32 M.P. model is 35s.; cartridges, 47s. 6d. per 1,000. A semi-automatic target pistol is supplied for training purposes at 27s. 6d.

Ice Making.

Ice making as a general rule is a continuous operation, as it is necessary to work night and day to allow time for the ice to grow, and to minimise the loss which is constantly occurring through the loss of heat. If only an ordinary day's work is done on the plant, about two hours will be wasted in overcoming the heat which it gains while standing idle, and the ice would not be thick enough to be satisfactory. The machine should at least be run for 12 hours at a time.

Steel and Iron.

Numerous notices have been received of an advance in prices, from 5 to 10 per cent., for steel and iron goods. The rise is due to the increased cost of labour and raw materials, and is more or less general throughout the world. On the whole the colonies can hardly complain, as their products are benefiting greatly by the rise of prices. It is, speaking broadly, the increasing cost of agricultural products which is causing the demand for higher wages.

RAILWAY AND HARBOUR NOTES.

Australian Railways.

The bill for the construction of a railway from Kalgoorlie to Port Augusta was passed in December, thus at last deciding a scheme for which Western Australia has waited, not without some impatience, as the fruit of federation. The distance is about 1,063 miles, and the estimated cost £4,045,000. From the engineering point of view the important point is that the battle of the gauges, referred to in our last number, has been settled in favour of the 4 ft. 8½ ins gauge. This now becomes the standard of the continent, and the States other than New South Wales will have to undertake the conversion to it. It may be recalled that Earl Grey, then Secretary of State for the Colonies, shortly before constitutional government was granted to the Australian colonies, tried hard to induce them to adopt the standard gauge, and later on, when the Irish gauge of 5 ft. 3 ins. had been adopted in Victoria and South Australia, to accept this, so as to secure one gauge whatever it might be. He was, however, on the latter occasion too late, as New South Wales had ordered the material for the standard gauge. It was soon found that a serious blunder had been made in not having a uniform practice, and for some twenty years the matter has been frequently discussed, but it has taken a big scheme such as the Western Australian line to settle it. About 65·58 per cent. of the world's mileage is on the British gauge, which has a long lead over any other, the biggest contributor being the United States.

White and Native Labour.

It is calculated that the increased cost to the South African Railway administration caused by the policy of employing white men as far as possible in preference to natives is £45,000 a year. It is admitted that it would be difficult to defend this on economical grounds; but it is justified because the practice finds

employment for a large body of men for whom it is difficult to make provision in other ways, and because it has a "general effect on the social conditions of the community." It is also hoped that the employment of white labour will lead to the creation in course of time "of a class of white labour equal to the European unskilled labourer." This does not seem a particularly high ideal, and suggests that the present character of the white labour leaves much to be desired. There is also a tendency "to agitate and continuously to apply pressure in every possible way for increased pay." The difficulty, the General Manager observes, will be to avoid an increase out of proportion to the value of the work performed. It can hardly be expected that an avowed policy of preference for white labour tends to improve the standard of work or to prevent agitation for higher wages.

Southern Nigeria.

The building and equipment of the Forcados dockyard was practically complete by the end of 1910, and the slipway has been proceeded with. There are also schemes for water supply, lighting and a wet dock for repairing purposes. The town is growing rapidly and will probably become very important. The Transport Pier, recently completed, enables cargo steamers with heavy consignments to come alongside. The approach and the long T end form a smooth water basin for government craft. About 5,000 tons of coal and cargo were landed over this pier in 1910. A small public wharf is wanted for the use of trading firms and passengers. The machine shop is kept busy, and various stores have been brought from Akassa, which has been found to be a less convenient point.

At Calabar the dockyard has done good service, and a very creditable fact is that in 1910 there was no breakdown of any of the steam-driven vessels. A substantial amount of outside work was undertaken, and more could be done but for the difficulty of obtaining skilled labour. The Lagos youths prefer to apply for clerical posts rather than bind themselves for the necessary training period in engineering.

The Government runs a number of steamer services, which are increasingly patronised. The motor boats, of which there are some fifteen, have done well. The recent introduction of borneoline as a fuel, in place of paraffin, has made them more reliable and increased the speed. The cost of the light draught motor transport works out at 2s. 9½d. per mile—a very satisfactory figure, considering the dry season difficulties and the great wear and tear caused by the sand. Oil fuel has been tried on steam pinnaces, but

the cost per mile was found to average over 50 per cent. more than that of coal; but it is only right to consider that at present the freight and charges for oil amount to 120 per cent. of its price, and that if oil could be landed in bulk instead of in sealed drums this cost would be greatly reduced. The difficulty is that oil-carrying steamers are much too deep to enter such places as Forcados and Calabar, and at present the demand for such vessels exceeds the supply.

A scheme is under consideration for the utilisation of the Kwa Falls for electric lighting at Calabar.

Lagos Railway.

In the half-year ending June, 1911, the net revenue was £61,068 as against £56,076 for the same period in 1910. Better results were expected for the second half. The passenger traffic is growing rapidly. A sliding scale was introduced by which rates rise or fall in sympathy with the price of palm kernels, the idea being that the railway should get some small share of the high prices recently prevailing. This arrangement has had good results, and has to some extent relieved the railway of the strain caused by the, as yet, unproductive "political" lines. The cotton season was again a failure.

In December the south and north slipways were finished, not without much hard work, as at the north slipway the main pulley came away from its foundations the first time the sleeping coach began to be hauled up and the trial came to an unsuccessful end. On the 28th of the month the special train taking the Governor to Kano was taken across and raised without a hitch.

Lagos Harbour Works.

In the second half of last year the lineal advance of the East Mole was 761 feet, a satisfactory progress considering the demands for stone for the wharves. In all 280,242 tons of stone were despatched in the East Mole. By the end of December preparations were so far advanced as to make stone-tipping in the West Mole practicable at an early date. The total expenditure was about £285,000. Great changes are being produced at the entrance of the harbour by the advance of the works.

The erection of the Apapa Wharf proceeded satisfactorily. All the piles were screwed at the end of January. Reclamation at the back has been simultaneously carried on. The expenditure was about £13,600.

Baro-Kano Railway.

Merchants and others sending cargo to be taken up the Niger and to stations on the Baro-Kano Railway should consign the goods to the Government Transport Offices, Northern Nigeria Marine, Barutu, Southern Nigeria. Invoices should, if possible, be sent before shipment of the goods, to avoid any possibility of the cargo being held back by the Customs at Barutu, and warehouse rent being charged. The invoice should state clearly the destination of the goods.

The charges vary according to whether the river water is high or low, the high water period of course diminishing the higher up the river.

It is understood that the tariff is under revision.

Baro-Kano Stations.

The following are the stations on the Baro-Kano Railway, with the mileage:—Baro 0, Katcha 14, Badeggi 43, Eba 59, Katerigi 72, Shapa 97, Minna 111, She 130, Guni 147, Kogin Serikin Parva 169, Godani 186, Bakin Kasna 197, Kaduna 215, Rigaskikun 227, Birnin Yara 240, Dumbi 255, Zaria 266, Likoro 275, Girni 287, Faiki 311, Rajin Gora 334, Kano City 352, Kano Cantonment 355.

Accra-Akwapim.

There has been an extraordinary development of traffic; a great cocoa traffic has taken place and a large import of goods has responded. During the height of the season 200 tons of cocoa were sent down daily. Since September the contractor has worked the line at 50 per cent. of the gross earnings, and the passenger rates have been reduced to 1d. per mile. It is expected that the extension to Komfrodua would increase the cocoa traffic by 50 per cent.

Accra Railway Extension.

The country between Mangoase and Coomassie has been explored by Mr. Mee, with results that indicate that the most suitable line would approximate to that suggested by him in 1910. It would be practicable with 1 in 80 gradient, 10 chain curves and comparatively light works. It is questionable whether the Kibbi mining area would justify a railway to it, but if so a branch of about 16 miles would reach it. The line to Coomassie

would be about 150 miles. The advent of a railway would greatly stimulate the cocoa industry, and there are extensive palm oil, rubber, kola and gum copal districts.

Mr. Tower has proceeded to the Gold Coast to report the estimated cost of a line from the present terminus to Komfrodua, to be similar to the Sekondi-Kamasi line.

Accra Water Works.

It has been decided to set up a small trial installation of the Puech-Chabal system of filtration. Excellent results have been obtained from this system at Paris, Marseilles, Suez, and other towns. The system comprises a pre-filter, which is a layer 2 ft. 7 ins. thick, consisting of coarse sand resting on a bed of gravel which is carried on a false bottom of perforated ferro-concrete slabs; this pre-filter is cleaned by air. There is also a sand filter, composed of fine gravel, 4 in., coarse sand, 8 in., and fine sand, 2 ft. 4 in. A Didelon regulator secures a uniform speed of flow. This filter should be covered in. As many cascades as possible are provided to aerate the water and bring the amount of dissolved oxygen in it to the point of saturation. The complete installation for the Accra Works, requiring five pre-filters, six sand filters, and works constructed of ferro-concrete, would probably amount to about £12,000.

The railway was finished in October, and good progress has been made with the excavation, which was principally in rock.

Accra Harbour Works.

In December good progress was made with the removal of sand, an appreciable difference in the level of the sand being noticeable all round the jetty. The pumping plant was subsequently overhauled, and since it was restarted a considerable decrease in the sand has been reported.

Secondee Harbour Works.

By the end of January a length of 137 feet was completed on the breakwater. Both wing walls of jetty No. 3 were completed, 30,278 cubic yards had been tipped on the reclamation.

The survey for the water works railway was completed in December.

Mauritius.

The earnings in 1910 showed an increase of 14·31 per cent. A decrease in first class passengers is attributed to the number of private motor cars, which, at any rate, show increasing wealth. The total earnings were Rs. 2,761,529, against a working expenditure of 1,628,271, or 69·65 per cent. of the former. The net earnings represent 5·25 per cent. of the capital. These favourable results will facilitate much needed improvements.

Nyasaland.

The map of Central Africa has been likened to a huge market garden divided into allotments held by various tenants having no particular interests in common. Till lately the allotments had little connection with one another, and the railways were of a local character. This is gradually being altered by the extensions of the line. The latest instance of this is the scheme for the extension of the Shire Highlands Railway partly through Portuguese territory to the Zambesi and for the construction of a connected railway from the south side of that river to Beira. The great expansion of production in the Protectorate has made this work a necessity if progress is to be continued, and it is to be hoped that an extension will also be made in due course to Zomba and Lake Nyasa. This would mean a railway of about 440 miles, and steamer transport along the lake for 360 miles. The lake would, as experience elsewhere shows, be a magnificent feeder for the railway. The existing line is about 115 miles long, and the distance to the Zambesi is not much over 50. From the Zambesi to Beira is about 170 miles. The negotiations for the joint enterprise have been carried on for a considerable time, and both countries may congratulate themselves on their successful issue. An important feature of the arrangement is the recovery by the Protectorate of the lands to which the Railway Company was entitled under the original agreement, the proposal being that £180,000 should be paid for them to the British Central African Company to whom they have been assigned by the Railway Company. The Government will guarantee 4 per cent. interest for ten years on the capital required for the line to the Zambesi.

Jinja-Kakindu.

This double-barrelled name is now replaced by the name Busoga. The line was opened on New Year's Day before a large gathering. The total length is 61 miles; the construction was

accomplished in thirteen months, and the expenditure was within the estimate. This excellent start will no doubt be followed up by a good traffic and the development of a rich region.

Singapore Harbour Works.

Good progress was made to the end of January with driving the temporary staying at the Johnson pier at the north end and with the temporary staging required for strengthening the existing wall at the south end. The work at the quarry has improved. At the inner south mole 21,534 tons of rubble were deposited during January. The average number of men employed was 103 Europeans and 1,819 natives.

Federated Malay States.

On the Padang Java-Kuala Selangor line at the end of the year the rails were linked in for 11 miles.

On the Kedah Railway Extension to Alor Star location plans were completed for 17½ miles.

On the East Coast line a survey from Pahang-Kelantan Boundary northwards was carried for about 85 miles. Heavy country was not met with.

On the Semantan-Kuala Tembeling Railway the rails were linked in for 34½ miles.

It is expected that in six years through communication will be established from Singapore to Bangkok.

Trinidad.

The Guaracara-Cipero junction line has been staked out. This line begins about 42 miles from Port of Spain on the Guaracara or Princes Town branch of the Trinidad Government Railway. It is contemplated to acquire the Cipero tramway to make a short connecting link on the outskirts of Princes Town between the Cipero and Guaracara lines, but the tramway does not appear to be very suitable for railway working as the curves are sharp. Much increased accommodation is proposed at Princes Town station, enabling sugar traffic to be handled more conveniently.

On the Tabaquite Rio Claro extension railway about 192 acres have to be expropriated, of which 54 were private property and the rest Crown lands; the cost was estimated at \$3,820. By the end of January 76 acres were cleared, and several buildings erected.

St. George's Harbour, Bermuda.

The dredger "King George" commenced work in August, and in 111 days of work removed 13,250 tons of rock and 18,000 tons of mud, an average daily of 119 of the former and 162 of the latter. About one-fifth of the rock was very hard, and the removal of mud was hampered by large quantities of cedar roots. A rock drill and two tons of explosives have been ordered.

Locomotives in South Africa.

Five Hendrie "D" engines, known as the Superheater "D" type, have been erected in the Durban shops; these locomotives are of the 4-8-2 type that have done such good work in the Natal Province, and also proved their worth during trials on the Germiston-Witbank section, but with their value as hauling elements enormously enhanced by the addition of the Schmidt Superheater. The addition of the superheater has introduced certain modifications which are unavoidable and which can be briefly described as follows:—

(1) The cylinder arrangement has been altered "in toto," piston valves being substituted for the original Richardson balanced type the admission has also been rearranged, the principle of outside admission being superseded by inside, thus avoiding the contact of highly superheated steam to the outer walls and valve spindle packing in the steam chests.

This deviation from the original design, of course necessitates radical alterations to the valve gear, and the layman can readily recognise the difference between an inside and outside admission engine by looking at the connection between the valve connecting rod and the compensating lever; in the first mentioned case the connection is above the valve spindle, and in the second below.

(2) The outside appearance of the engine is entirely changed by reason of the necessity of raising the foot-plate to clear the steam chest and motion generally, whilst at the front end the original levels are adhered to; this causes the straight line of the foot-plate to be broken forward of the cylinders and at the cab front plate, dipping down at these points to the levels adopted on the former editions of this class of engine.

Mallet Engines.

It is stated by the General Manager of the South African Railways that it is not the use, as has been alleged, that these engines damage the track more than other types. Reports show

that in Natal the wheel flanges of the Mallet type of engine wear better than those of any other class, thus indicating that the friction between the flanges and the rail is less.

Dredgers.

A large and powerful dredger has been constructed on the Clyde for the Natal Government. It contains arrangements which have not been long used, but which have worked satisfactorily. It is fitted with a steel spiral cutting arrangement, thus dispensing with lockets, and this reduction of top gear causes the craft to be more seaworthy in bad weather. It is also fitted with a "drag" or shoe arrangement, adapted specially for mud or light sand deposits, and this appliance is more economical in working than the bucket chain arrangement.

Light Inspection Car.

A car constructed on motor bicycle lines has been brought out by the Humber Company. It weighs 224 lbs., and can easily be lifted by two men. The engine is $2\frac{1}{2}$ h.p. and can drive the trolley at 20 miles an hour. The gauge is 3 ft. 6 ins., but the machine can easily be adapted to any other.

Power Cars.

A motor car has been introduced in America designed to operate track and sleeper tools. The car is light and can be lifted by two men. The motor engine is applied to such work as boring the holes in new sleepers and driving in screwspikes.

Piles in Swamps.

A new American practice which might be followed wherever the ground is swamp or sandy is to use two steel tubes, one inside the other, so that when driven sufficiently deep the inner tube can be withdrawn and concrete poured in and rammed so that it is forced out of the inner tube at the bottom to form a bullion mass, there securing a hold. The outer tube is then also withdrawn.

Water Softening.

A water-softening process, originated in Germany and already in successful use on the Great Northern Railway in England, has recently been introduced into New York, and is arousing keen interest. The process has been installed on an experimental scale

at one of the Standard Oil Company's plants, and also at a point on the New York Central railroad. It appears to be successful. The process consists in allowing boiler-feed water to flow in a thin film down a steeply inclined aluminium plate, exposed to the full rays of the sun. No chemical change between top and bottom of the plate can be detected, but on evaporation in a boiler, the water thus treated forms an impalpable sediment instead of the usual hard scale, and not only this, but it will decompose any scale previously accumulated from untreated water. The causes of this phenomenon are obscure, but the aluminium plate and the sunshine seem to be essential elements. After treatment, the water can be stored over-night, or through a cloudy season, without loss of its virtues.

MEDICAL NOTES.

Consumption.

A Conference of Australian Medical Officers has reported on the measures which should be taken to combat this disease. They remark that there is some misunderstanding as to the conditions under which it is actually communicated. A large proportion of the public entertain entirely mistaken views on this subject. They appear to think that consumption is as likely to be "caught" as is smallpox or measles. This is an unfortunate but, it must be admitted, not an unnatural error. They are taught that consumption is communicable from man to man. The statement is true; but it is an exact statement of fact, no more. It says nothing as to the frequency with which it is so communicated, nor anything of the conditions under which this capability of being communicated takes effect—is made manifest by the infection of another person. The conditions are well known, are indispensable to effective infection, and are easily obviated. The fact is that the natural resistance of the normal man to this infection, his power to destroy it before it can hurt him when he has taken it into his body, is very great. Were it not so almost all men would die of consumption; for the infection is so widespread that almost all take it from time to time. But usually it is destroyed by the natural powers, so that we do not take the disease, although we have taken the infection. The conditions which enable the body to resist this infection are two, namely, the inherent power of destroying it (which almost all people possess), and smallness of the doses in which the infection is usually received. That which we successfully destroy when received in small quantities at long intervals would be too much for our powers were it massed and received in one dose, or were it received in small quantities frequently repeated during a long time. Now, consumptives constitute centres from which the infection is given off. But here we must discriminate: *some* consumptives give it off, but *some* only. Not all consumptives are infectious. No consumptive is infectious throughout the whole course of his disease. Many consumptives, it

may be said, are no danger to others. But it is admitted that, at some time or other in the course of their illness, most consumptives do become dangerous to others for a time at least. In what does this dangerousness consist? Only in the expectoration they give off. Their dangerousness is proportioned to the amount and virulence of their expectoration. Their capacity for causing harm is so proportioned; but the actual danger from them which others may consequently run depends entirely on the care they take of their expectoration. If they collect and destroy it, others are in no danger from them; but if they spit about carelessly, and soil their clothes, floors and handkerchiefs, and so forth, the danger to others is great, no doubt. It is in the power, then, of every consumptive to avoid danger to others; therefore, he has the grave duty of constantly conducting himself so as to avoid it. But those who are well have their obligations also. Habitual cleanliness of person, of habits, of feeding, and of air, especially while sleeping, go far towards avoiding the harm which otherwise might result from contact with careless consumptives, whose presence, be it noted, is not always known. Thus there is nothing mysterious about the infection of consumption. It took a long time to find out in what it consisted; but having been discovered, it is seen to be no mysterious thing, no invisible vapour, but a tangible material substance, easily managed with safety. A result of the practical application of this knowledge is that the members of the medical and nursing staffs of hospitals for consumptives, who are constantly exposed to infective patients, do not take the disease in any larger proportion than they would have taken it had they been living under the ordinary conditions of life. The reasons are that they cause the patients to behave carefully, and they act circumspectly themselves. Those who ignorantly magnify the danger from consumptives not merely cause them to be treated with a degree of hardship which in many known cases has amounted to inhuman cruelty, but assume an attitude which is by way of raising a very serious obstacle in the path of the better informed, who are endeavouring to diminish the prevalence of the disease, and to free the people from it, without causing hardship or even inconvenience to any person.

It follows that preventive measures, involving the administrative control of consumption, should include provision primarily for the education of the consumptive, and the awakening of a sense of responsibility in himself; and, secondly, for an intelligent demand on the part of the well that they shall be subjected to no needless risk because of the carelessness or apathy of the sick.

The more important of the measures recommended are:—

- (1) universal compulsory notification of all cases of consumption throughout the Commonwealth;

(2) facilities for the collection of detailed information—etiological, social, medical, hygienic, etc.—concerning each case of consumption, and the recording of such on a uniform plan;

(3) legal power to regulate the home management of consumptives;

(4) legal power to remove dangerous or infective consumptives into segregation;

(5) legal power to detain such consumptives in segregation;

(6) legal power to examine medically contacts and house-mates of consumptives;

(7) adequate accommodation for advanced cases;

(8) the establishment of sanatoria; and

(9) financial assistance to the wives and families of necessitous consumptives admitted to hospitals or to sanatoria.

Sleeping Sickness Bureau.

Bulletins Nos. 31 and 32 (Vol. 3) continue the record of observations and experiments. There is evidence that tsetse flies can live on the fluids of caterpillars, and this may be the explanation of the fact that there are swarms of flies in places when vertebrata are about or extremely few. If so, this is a further argument against the proposal to fight the disease by clearing off animals from certain areas.

It appears lately that the infection has come from the Congo, and that the main source is the native salt trade from Katwe; steps are being taken to deal with this region.

Numerous experiments have been made to discover the animal sources of infection. It appears probable that pigs and poultry are not much susceptible. With the exception of one monkey, no evidence was obtained that the Lake-shore wild animals, birds and reptiles harbour the virus of sleeping sickness.

Several cases of trypanosomiasis have been discovered at Baro, and the infected persons have been deported. Europeans in such districts are warned not to wear "shorts."

An article on the subject of quinine remarks that the condition of the quinine molecule while circulating with the blood is unknown, and there are no convincing proofs of the mechanism by which these salts exert their well-known destructive action on the malarial parasite. Both malaria and quinine are harmful, but the latter is the lesser evil. The continued use of quinine produced in many persons some of the following evils: diminished activity of hearing, premature onset of presbyopia, mental depression, dyspepsia and skin affections. It appears that the whole of

a dose of a salt of quinine cannot be recovered from the excretion during the first twenty-four hours after administration, so that there is a cumulative action of the drug.

Trypanosomiasis.

The Veterinary Bacteriologist in Nyasaland reports that three outbreaks of this disease have been encountered during 1910-11, two in Blantyre and one in Zomba District, and have caused very heavy mortality in the herds implicated. "Great difficulty has been experienced in locating the source or sources of infection and, admitting for the present that tsetse fly only transmits tsetse disease, in regard to the outbreaks now under consideration, we might say that tsetse fly has been conspicuous by its absence. In other countries where trypanosomiasis exists the source of infection in any given outbreak can as a rule be traced with very little difficulty, or at least the known transmitting agent of the disease (the tsetse fly) can usually be found, but not so with the outbreaks of the disease met with in Zomba and Blantyre Districts of Nyasaland, and one is almost forced to the belief that other than tsetse fly must be capable of transmitting the form of the disease we have got among stock in this country. In this connection it is scarcely necessary for me to mention the desirability of well conducted experiments being undertaken with a view to settling this point."

Yaws.

The Surgeon-General of Trinidad has reported on the use of "Salversan" as shown by a series of 500 cases of injection. The results secured by this method of treatment of a hitherto almost intractable disease are very striking. After allowing an interval of seven weeks for subsequent observation from the date of injection of the last cases, with of course very much longer intervals in the other cases of the series, this report records a definite cure of 498 cases of Yaws (82 per cent. of which were obtained with only one injection) equal to a percentage rate of recovery of 99.6 and Dr. Alston expects to convert this into a 100 per cent. rate of recovery by the use of third re-injections in two cases that already display amelioration of their symptoms from previous injections. Such brilliant results seem to amply justify the conclusion formed by Strong in the Philippine Islands that Salversan is as important a specific for Yaws as Quinine is for Malarial.

Leprosy.

Dr. Minett, of British Guiana, has reported on the use of Nastin and benzoyl chloride, and came to the following conclusions:—

1. That Nastin has apparently very little beneficial effect on cases of Leprosy.

2. A solution of benzoyl chloride in oil shows a slightly higher percentage of improvement than Nastin.

3. Anæsthetic cases of Leprosy run a definite course, after which the disease seems to die out, leaving the patient no longer infective.

4. These cases recover sensation after a time in areas previously anæsthetic, and after self-amputation only scars remain. This is a natural process and takes place without any treatment whatever; it is not, apparently, influenced by either Nastin or benzoyl chloride.

5. Nodular cases do not tend to improve naturally as above, except in very rare instances; nor do they appear to be affected appreciably by either Nastin or benzoyl chloride.

6. The so-called destruction of bacilli is a natural process varying considerably, and does not appear to be influenced by Nastin or benzoyl chloride.

7. Variation in the amount of destruction of bacilli observed is of limited value as an indication of the effects of treatment.

8. Benzoyl chloride in petroleum oil is extremely valuable as a nasal spray or a paint for ulcerating surfaces. It quickly renders the discharge free from the presence of bacilli.

9. Its regular use for this purpose is strongly recommended in leper asylums.

Annals of Tropical Medicine and Parasitology. (Vol. V., No. 3, Liverpool University Press.)

This issue contains an interesting article on the merits of petroleum and other substances as larvicides. At present the substance in most general use as a larvicide is petroleum, which acts by forming a thin film on the surface of the water, thereby drowning the larvæ when they rise to the surface to breathe. In the case of enclosed bodies of water, such as wells and tanks, this usually acts admirably at first, but in the course of a short time the film, unless very thick, gets broken. This happens much more readily in pools or stagnant places on river banks where

mosquitoes breed. The film of petroleum in these cases soon gets broken or blown to one side sufficiently to allow the mosquitoes to lay their eggs, and the larvæ to develop into mosquitoes. Moreover, the presence of grass or weeds on the banks of these pools prevents the formation of an unbroken film over the whole surface, and this permits the reproductive processes to go on more or less uninterruptedly. What is wanted is a solid substance which will be effective in the form of an extremely dilute solution. Good results were obtained from "Sanitas-Okol," an emulsion prepared by the "Sanitas" Company. Potassium cyanide is very effective, but we should presume that it is put out of court for ordinary purposes by the fact that it is extremely poisonous.

"Millions."

The Windward Islands Medical Report devotes some space to the "Millions" fish, which Dr. Nicholls regards as a great asset in anti-malarial work, being "beautifully adapted as destroyers of mosquito larvæ. They are as efficacious as kerosene treatment and cost nothing when once established. But of course they have limitations, and should always be combined with drainage in certain localities. It is, of course, impossible to place 'Millions' in all the myriads of small pools, and in many of them they cannot compete against the mosquito larvæ, for the pools continually dry up to liquid mud, in which the fish will not live, but the larvæ are able to lie on the hot, wet surface for at least forty-eight hours, waiting, as it were for fresh rainfall, and in the rainy season few days pass without rain. That they can exist for the period of time stated on the surface of liquid mud I have repeatedly proved by actual experiment.

"Fortunately these unhealthy marsh lands can easily, and at a fairly cheap cost, be drained, either by cutting open drains, which can be stocked with fish and kept clean, or by sub-soil drainage,—the latter is not always possible. In two places where I was at first unable to establish 'Millions' on account of the presence of 'mud fish,' dragon-fly larvæ, and crustaceans, I killed out these denizens by poison, and then when fresh rains had washed away the poison, I was able to introduce the fish, which have since flourished there; the poison used was 'cyllin,' but obviously methods of this sort have great limitations, as the presence of cattle or the possibility of contaminating drinking water completely prohibit it; yet 'cyllin,' which gives the water a strong scent and a milky appearance, is not likely to be drunk by man or animal."

Sierra Leone.

The medical report for 1910 reports 13 diagnosed cases of yellow fever with 10 deaths and 11 suspicious cases with one death. It used to be held that the disease did not exist on the West Coast, and among the native population if it does occur it seems to be of a mild form. Probably it is of rare occurrence in epidemic form in the Sierra Leone Protectorate.

Only one diagnosed and three suspicious cases of sleeping sickness were reported.

A public supply of pipe water in such towns as Freetown will help greatly to keep off malarial and yellow fever, as private wells and water are the main source of mosquito larvæ.

Nyasaland.

The medical report for 1910-11 states that in this Protectorate what are classed as general diseases are not very common with the exception of rheumatism and perhaps neurasthenia. The former is probably largely accounted for by the damp climate and great changes of temperature more especially in the hills. There are few Europeans who escape an attack in one or other of its forms.

Amongst Indians and Natives it is extremely common and often difficult to shake off. Reference to the returns will show that it is much the commonest general disease amongst natives. The muscular type is most frequently encountered but sciatica and chronic joint affections also occur. Neurasthenia is a well recognized sequela of malaria and residence in hot damp relaxing climates; in some cases overwork and worry in connection with their official duties has had a part in the production of neurasthenia; and insufficient nutrition from badly cooked food is also a factor, and once a neurasthenic condition is produced is certainly a factor in maintaining it. We cannot alter climatic conditions but the others, overwork and worry and malnutrition, are being largely eliminated.

The native does suffer from a type of neurasthenia, but not to the same extent as Europeans.

Report of the Advisory Committee for the Tropical Diseases Research Fund. (Cd. 6024: 2s. 6d.)

This paper contains reports from the Crown Colonies on the work done for the prevention of mosquito-borne diseases, and a number of valuable reports on work done in colonial laboratories.

Mosquito Legislation.

The numerous facilities which Georgetown has offered for the harbouring of mosquitoes have been described in the last journal of the Liverpool School of Tropical Medicine. An ordinance has recently been passed to enforce measures for the destruction of mosquitoes, which are now recognised as carriers of infection of some of the most dangerous tropical diseases. This Ordinance requires owners and occupiers of houses to keep in repair all water tanks, gutters, and pipes, so that they will not breed mosquitoes, and to keep their premises free from all bottles, tins, and such like receptacles which may hold stagnant water and breed mosquitoes. The presence of mosquito larvæ in any water on any premises is to be evidence that this duty has been neglected, and subjects the offender to a penalty.

It can hardly be expected that this kind of legislation will be popular with natives who do not understand the reasons for its importance. Thus a notice has been issued in the Gold Coast with regard to the use of pumps to water tanks or the application of kerosene, which the "Gold Coast Leader" deplures in pathetic style.

"Say what you will, this campaign on the poor mosquitoes is a perfect nuisance and humbug to all but those interested in it, but it must be kept up, at all events to give employment to some people, and a chance to others to add to their laurels! This game has been going on for some years now, and will it be too much to say, we are where we were. Can the officers in the Mosquito Brigade conscientiously say, that there are less of these pests in the land now because of their Big Toms they have been firing at them?

"To think that all this parade of arms against the poor creatures, will give us an extinction of mosquitoes in the country! Science is all right enough, and really performs wonders, but when wrongly applied it does far more harm and injury than we can think of because it will be working against Nature then. Are we to be told that this war against the mosquitoes must go on until we shall see little or nothing of them in our midst. If this is no delusion of the worst kind then we do not know what is; but the Powers that be are doing it, and they get the money too, and so the number of years to effect this, is of no consequence.

"Sanitary officers are seen here and there with enamelled soup ladles (in spite of a letter written by Dr. Beringer recently), entering into poor people's houses unceremoniously to see if they could find any mosquito larvæ in their water, and if any found, the poor women (always women) must be in court to be fined 5/- or 10/- or even a pound. For this reason some people would keep

no water at all in the house, unless wanted for immediate use and they have got to find it elsewhere."

It is to be hoped that the natives will learn from the examples of other places that the war against mosquitoes and malarial fever is not a medical fad, but can be made effective. Sanitary reform has always had a difficult task in combating ignorance, and the only remedy is to teach the reasons for the courses proposed.

Opium.

An international convention has been entered into by all the principal powers to regulate the trade in and control the use of opium. Each power is to prevent the export of raw opium to countries which have prohibited its import, and the import and export of prepared opium is to be prohibited altogether as soon as possible. Medicinal opium, which includes morphine and cocosaine, is to be confined to "medical and legitimate purposes."

COLONIAL STAMPS.

The following notes and illustrations will, it is hoped, be an assistance to those who wish to understand the use of the key-plates, which Messrs. De La Rue & Co. provide, free of charge, for the use of all colonies which wish to take advantage of them.

The present Universal Key-plate System of stamp printing, which was originated by Messrs. De La Rue & Co., was first introduced in 1888. It was designed to meet the requirements of colonies ordering stamps in small quantities, and was intended to obviate the expense of special dies and plates being manufactured for each issue or denomination. The three key-plates, A, B, and C (the original of which contained the head of Queen Victoria) were then made. Any colony requiring a small issue of stamps was thereby only put to the expense of buying an overprint plate of the character shown. From the process of manufacture, which entails overprinting, it will be obvious that any stamps produced by this system, or any if its modifications, would come into the schedule of prices under the heading of two printings.

The stamps of the 1888 design met with greater approval, and came into more general use, than was at first contemplated. It was therefore thought desirable to improve the designs, which led to the production in 1908 of a new key-plate G, which required, not an overprint, but a border-plate to complete the design. The necessary border die's plate cost about 25 per cent. more than overprint die and plate. Simultaneously a receipt-size key-plate H was made, also requiring a border-plate. The border-plates, while greatly improving the appearance of the stamp, also gave scope for better effects in the combination of colours; but, for the reasons set forth in the following paragraphs, the 1908 designs have not replaced those of 1888 to any material extent.

On examining the character of the key-plates of the 1888 designs, it will be seen that separate key-plates exist for stamps of the three different characters, according as they are to be

used for Postage purposes only, for Revenue purposes only, or for Postage and Revenue combined. A colony ordering an overprint plate would, therefore, at will, be able to obtain stamps of either of these three characters without additional expense for dies or plates.

Since in the 1908 designs the distinction between Postage and Revenue, or the combination of these two, is effected by the engraving of the border-plate itself, it follows that, once a colony has ordered an issue from these plates, they would be bound to adhere to the character of stamps, whether for Postage or Revenue, in accordance with their original order, or to incur the expense of fresh dies and plates.

This has given rise to a demand for a stamp of improved design on the 1888 model, which entails the cheaper die for overprint plates (as against dies for border-plates required for the 1908 issue), and which could be used by any colony desiring a variation of design.

This requirement has been met by the design of stamp having key-plates D, E, and F. It will be observed that the "Postage" and "Postage and Revenue" stamps are almost indistinguishable. The reason for this is that no colony would have both series concurrently, though it might have either concurrently with distinctive stamps for Revenue purposes.

One point in connection with the Keyplate system of printing stamps is of particular interest. The greatest reduction of prices has been in connection with stamps printed at two operations, with the result that, unless a very large number of stamps of any one value are required, it is not worth while to have a special plate made. Thus, the overprint or border plates, once bought, will continue in use and would be equally serviceable if it were decided at any future time to alter the portrait of H.M. the King.

It is possible for any Colony to adopt all four designs by purchasing some plates to fit each type of keyplate, instead of all plates for one design. Thus, $\frac{1}{2}$ to $2\frac{1}{2}$ could be the new design, the next three values of the Nyasaland type, the next three the old D.L.R. type, and the highest values could be printed from the large Nyasaland type of keyplate.

The following new designs and varieties have appeared since our last issue :—

BRUNEI.—The 5, 8, 10, 25 and 50 cents value have now appeared in the new colours.

CAYMAN ISLANDS.— $\frac{1}{2}$ d., 2d., 2s., and 3s. postage and revenue stamps have been supplied from the old D.L.R. Keyplate, but

1888 ISSUE.
Known as old **D. L. R.**

KEY PLATES.



ALTERNATIVE OVERPRINT PLATES.



COMPLETED STAMPS.



*The same overprint plate can be used for
"Postage & Revenue", "Postage", or "Revenue".*

1908 ISSUE. Known as Nyasaland type.

KEY PLATES

G



H



OVERPRINT PLATES



COMPLETED STAMPS



* These border plates show "Postage Revenue," but could be made "Postage" or "Revenue" only. border plates being required for each value and purpose.

PROPOSED 1912 ISSUE. Known as new **D. L. R.**

KEY PLATES



ALTERNATIVE OVERPRINT PLATES.



COMPLETED STAMPS.



*The same overprint plate can be used for
"Postage & Revenue", "Postage", or "Revenue".*

with the portrait of H.M. the King. The three last-named values are entirely new.

CYPRUS.—30 paras, $\frac{1}{2}$, 1, 4 and 6 piastre postage stamps with portrait of H.M. the King.

FIJI.— $\frac{1}{2}$ d. and 1s. postage and revenue stamps from the old D.L.R. Keyplate but with the new portrait have been despatched.

GILBERT AND ELLICE ISLANDS PROTECTORATE.—5d., 6d. and 1s. postage and revenue stamps from the old D.L.R. Keyplate, but with the portrait of H.M. the King.

MAURITIUS.—5 cents, 25 cents and 10 rupees postage and revenue stamps from the old D.L.R. Keyplate, but with the portrait of H.M. the King.

SEYCHELLES.—2, 3, 6 and 15 cents *postage* stamps from the old D.L.R. Keyplate, but with the portrait of H.M. the King. These are the first stamps printed from the new *postage* Keyplate.

SIERRA LEONE.—3d. postage and revenue stamp (King Edward's head) has now been supplied in singly fugitive ink on unsurfaced paper.

BAHAMAS.—We have been asked to call attention to the following notice which appeared in the Bahamas Official Gazette of the 17th February, 1912 :—

“Bahamas postage stamps bearing the head of Her late Majesty Queen Victoria will be withdrawn from circulation on the 1st day of June, 1912. The remainders will be destroyed.”

Books Received.

“THE STAMP COLLECTORS' ANNUAL” for 1912.—Edited by D. B. ARMSTRONG, and published by *H. F. Johnson*, 44, Fleet Street, E.C. Price 1s. net.

“THE STAMP YEAR 1912.”—Compiled by FRED. J. MELVILLE, and published by *W. H. Peckitt*, 47, Strand, W.C. Price 1s. net.

“THE POSTAGE STAMPS OF ANGLO-EGYPTIAN SUDAN.”—By D. B. ARMSTRONG (*Bright & Son*, 164, Strand, W.C.). 7d.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

Sir F. M. MAXWELL (Chief Justice, British Honduras), Chief Justice, Leeward Islands.

Mr. W. S. SHAW (Chief Justice, St. Vincent), Chief Justice, British Honduras.

Mr. E. C. WATSON (Attorney-General, Northern Nigeria), Puisne Judge, Gold Coast.

Mr. W. J. DOUGLAS (Magistrate, St. Lucia), Stipendiary Magistrate, British Guiana.

Dr. P. J. KELLY (Medical Officer, Hong Kong), Registrar of the Medical College, Ceylon.

Dr. J. H. PATERSON (late Medical Officer, Northern Nigeria), Colonial Surgeon, Falklands.

Mr. P. NOBLE, (District Engineer, British Guiana), Colonial Engineer, Dominica.

Captain G. J. L. GOLDING (Inspector of Police, Trinidad), Chief of Police, St. Lucia.

Lieutenant P. F. WHITTALL (late Lieutenant, Gold Coast Regt., West African Frontier Force), Assistant District Commissioner, Gold Coast.

Mr. L. T. H. LELAND (Second Clerk, Governor's Office, Grenada), Assistant District Commissioner, East Africa Protectorate.

Mr. H. T. MARCH (Accountant, Postal Department, Southern Nigeria), Postmaster-General, Sierra Leone.

Mr. G. STANLEY, P.A.S.I., Assistant Engineer, Public Works Department, Sierra Leone.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

GOLD COAST.

ATKINSON, Dr. A. W. ...	8 May, '12	ELKAN, C. J. ...	23 Apr., '12
AULD, A. ...	9 June, '12	New Club, 4, Grafton	
ABRAMS, A. B. ...		Street, W.	
ALLEN, E. G. L. ...	18 Apr., '12	FINLAY, A. C. C. ...	27 June, '12
BOSTOCK, J. E. ...	26 June, '12	FLEMING, J. F. ...	18 Apr., '12
BEAL, W. P. B. ...	3 July, '12	FOUNTAIN, J. T. ...	17 June, '12
BRABAZON, Dr. E. ...	23 June, '12	FRASER, J. B. ...	23 Apr., '12
BLADEN, L. M. W. ...	12 June, '12	FREEMAN, J. H. ...	9 June, '12
BUTT, G. K. ...	28 May, '12	GRANT, J. F. H. ...	11 Apr., '12
Junior Army and		GOULD, A. R. ...	21 Apr., '12
Navy Club, Whitehall		HUNT, C. E. ...	27 May, '12
Court, S.W.		HORNBY, C. G. ...	23 June, '12
BLT, W. A. ...	2 June, '12	HEARNshaw, W. ...	8 July, '12
BURTON, W. ...	13 May, '12	HARDINGHAM, A. G. M. ...	21 May, '12
BREHAM, P. H. ...	5 Apr., '12	HARRISON, Capt. M.C.C. ...	16 May, '12
BARROW, C. E. ...	15 Apr., '12	HEFFER, E. G. ...	5 Apr., '12
CONNAL, Dr. A. ...	25 Apr., '12	HILLS, A. J. ...	6 May, '12
CHALONER, Capt. C. W. ...	30 Apr., '12	HOLMES, H. G. ...	23 Apr., '12
CARNELLY, S. H. ...	12 May, '12	KILBY, R. N. ...	9 June, '12
CULLIP, J. A. ...	27 Apr., '12	LOCKE, H. ...	21 June, '12
COUZENS, S. ...	28 May, '12	LONG, L. W. S. ...	23 June, '12
CAMPBELL, H. E. M. ...	26 May, '12	LE FANU, Dr. G. E. R. ...	9 July, '12
COULDERY, A. C. ...	2 June, '12	LANOND, C. H. P. ...	9 Apr., '12
CREMER, A. S. ...	9 May, '12	LLOYD, A. G. ...	11 Apr., '12
CHURCH, A. C. ...	23 June, '12	LEAH, M. S. ...	8 June, '12
CASTELLAIN, L. ...	23 June, '12	LAST, W. ...	26 May, '12
DODD, J. ...	2 May, '12	McLAREN, H. ...	21 May, '12
DUNNE, M. F. ...	18 Apr., '12	MAGEE, D. H. ...	9 June, '12
DUNNE, Miss E. F. ...	7 Apr., '12	Junior Naval and	
ELLIS, G. ...	9 Apr., '12	Military Club, 96,	
EMERY, J. C. ...	21 May, '12	Piccadilly, W.	

GOLD COAST—continued.

MEB, G. H.	12 May, '12	READ, Capt. H.	27 July, '12
MAUDE, R. A.	15 Apr., '12	ROBERTS, L. L.	9 June, '12
MCGILL, D.	13 Apr., '12	c/o Messrs. Richardson	
MCLEOD, N. C.	4 May, '12	& Co., 22, Suffolk St.,	
MACKESY, Capt. P. J. ...	15 Apr., '12	Pall Mall, S.W.	
MAY, Dr. H. O'Hara ...	23 June, '12	ROBERTSON, J. P.	5 May, '12
MASSY, B. E.	23 June, '12	RAMSDEN, B. V....	27 Apr., '12
MICKLEWRIGHT, H. T. T.	23 June, '12	RIGHTON, F. L.	9 Apr., '12
OAKLEY, Dr. P. D.	23 June, '12	SIMMS, H.	
O'CONNELL, W.	18 Apr., '12	SHEPPARD, H. St. J. ...	9 June, '12
O'KELLY, Capt. E. J. de P.	13 Apr., '12	STUDHOLME, W....	12 July, '12
Junior Naval and		SHERIDAN, W. L.	18 Apr., '12
Military Club, 96,		SMITH, Dr. A. J.	23 June, '12
Piccadilly, W.		SHORT, Capt. P. H., D.S.O.	
O BRIEN, Dr. J. M. ...	13 July, '12	TIPLADY, C. E.	9 Apr., '12
Royal Societies Club,		UNDERHILL, W. A. ...	23 June, '12
St. James' Street, S.W.		VICAT, H. J.	27 Apr., '12
ORAM, Miss J.	23 Apr., '12	WITHERS, E. W.	30 Apr., '12
PHILBRICK, A. J.	17 Apr., '12	WHEELER, Capt. H. T. C.	30 May, '12
POOLE, Capt. G. A. E. ...	7 Apr., '12	Junior United Service	
Sports' Club, St. James'		Club, S.W.	
Square, S.W.		WEBB, C. T.	15 Apr., '12
PICKLES, G. A.	9 Apr., '12	WOOD, R. E.	6 July, '12
PHILLIPS, J.	27 Apr., '12	WOOLLEY, C. B....	9 June, '12
POER, H. C. C. de la ...	26 May, '12	WALE, W. C.	19 June, '12
PALK, D. S.	28 May, '12	YOUTHED, S. H....	27 Apr., '12

SIERRA LEONE.

ADDISON, W.	15 Apr., '12	HARDING, G.	23 Apr., '12
AYTON, H. R.	23 Apr., '12	JOHNSON, E. O.	22 May, '12
BRECKNELL, S.	15 Apr., '12	KREISER, S. W....	27 May, '12
BARKER, E. G.	30 Apr., '12	MAXWELL, Dr. J. C., C.M.G.	9 June, '12
FOSTER, C. W.	16 June, '12	MURPHY, Dr. J. C. ...	23 May, '12
FRKRE, N. G.	2 June, '12	McLAUCHLAN, G.	9 Apr., '12
Royal Colonial Insti-		NEWMAN, G. H.	9 June, '12
tute, Northumberland		NECK, F. A.	3 Apr., '12
Avenue, W.C.		ROLLASTON, Dr. G. ...	2 June, '13
FRASER, A. S.	26 May, '12	REANEY, C. T.	15 Apr., '12
HANSON, B. E.	12 May, '12	SIDNEY, J. B.	23 June, '12
HARLOW, F. G.	21 May, '12	STATON, L. J.	23 May, '12
HARRISON, J. G.	30 Apr., '12	WHEATLEY, L. H. ...	23 May, '12
HEARN, R. W.	19 Apr., '12	WARE, E. H.	9 Apr., '12
HODGSON, H. C....	13 July, '12		

GAMBIA.

DOBBS, Capt. H. T. ...	10 May, '12	GIBBS, T. J.	21 May, '12
FRANKLIN, Dr. J. C. ...	1 June, '12	KIRKPATRICK, Capt. E. H.	6 May, '12

SOUTHERN NIGERIA.

ANSON, F. C. M. ...	9 Apr., '12	EVANS, W. ...	15 Apr., '12
ADAM, Dr. T. B. ...	7 Apr., '12	FITZPATRICK, M. ...	30 Apr., '12
AINSCOUTH, F. ...	13 July, '12	FORAN, P. F. ...	29 June, '12
BIRCH, F. W. P. ...	20 May, '12	FAIRWEATHER, J. H. ...	14 May, '12
BATHGATE, J. D. ...	25 Apr., '12	FOWLER, F. D. ...	2 June, '12
BOBANQUET, G. A. I. ...	13 June, '12	FURLONG, A. E. ...	21 May, '12
BAKER, E. ...	13 May, '12	FINCHAM, R. ...	9 Apr., '12
BOOTH, J. ...	20 May, '12	FRANCEY, W. M. ...	23 June, '12
BLAIR, Capt. A. H. ...	15 Apr., '12	FIDDY, J. E. D. ...	13 May, '12
BAILEY, W. ...	2 July, '12	FRANKLIN, E. M. ...	21 May, '12
BAIRNSFATHER, G. ...	23 Apr., '12	GRAY, Comdr. G. S. B.,	17 July, '12
BERGERSON, S. H. ...	9 Apr., '12	R.N.R.	
BURGESS, Dr. H. L. ...	11 Apr., '12	GREY, C. G. ...	16 Apr., '12
BEAMISH, Capt. W. E. ...	23 June, '12	GILL, R. ...	23 June, '12
BURCHALL, J. A. ...	26 May, '12	GREENHOUGH, F. H. ...	30 Apr., '12
BYRNE, Capt. W. D. ...	20 May, '12	GREWER, Miss J. ...	6 May, '12
BOOTH, Dr. L. H. ...	9 June, '12	GIBSON, H. D. ...	6 May, '12
BOYLE, A. G., C.M.G. ...	23 June, '12	GREENWAY, J. A. ...	9 Apr., '12
BRODIE-SMITH, G. T. ...		HOUSTON, J. A. ...	30 Apr., '12
CUTBERTSON, W. R. D. ...	25 Apr., '12	HAMMOND, G. H. ...	12 June, '12
CHEETHAM, H. G. M. ...	13 May, '12	HADDON-SMITH, H. B. ...	15 June, '12
COAST, P. J. ...	25 Apr., '12	HILL, W. H. F. ...	6 June, '12
CUMMINS, E. O. ...	17 June, '12	HARVEY, G. L. ...	26 May, '12
CARRERAS, B. H. ...	9 Apr., '12	HARGROVE, R. ...	19 June, '12
CATT, A. W. ...	23 June, '12	Royal Societies Club,	
CHAPPLE, A. J. ...	27 June, '12	St. James' Street, S.W.	
CLEMENTS, S. U. L. ...	9 May, '12	HOPKINSON, G. St. L. ...	2 June, '12
CHAPMAN, H. F. ...	10 Apr., '12	HUGGINS, H. C. ...	23 Apr., '12
COOKE, W. H. ...	30 Apr., '12	HINCHCLIFFE, F. ...	17 June, '12
CRAIG, Dr. T. L. ...	21 May, '12	HOLMES, R. B. W. ...	30 Apr., '12
COOPER, C. J. ...	9 June, '12	JONES, H. ...	21 May, '12
CHISWELL, W. C. ...	30 Apr., '12	JONES, H. E. ...	20 June, '12
COURT, T. H. ...	13 May, '12	JOHNSON, F. E. G. ...	21 May, '12
CRAWFORD, H. R. H. ...	10 May, '12	JOHNSTON, Capt. O. A. ...	2 July, '12
Cavalry Club, 127,		KERR, D. L. ...	9 Apr., '12
Piccadilly, W.		LLOYD, L. E. ...	25 Apr., '12
COCKBURN, Maj. W. A. C. ...	12 June, '12	LANGLEY, Dr. W. H.,	23 July, '12
Cavalry Club, 127,		C.M.G., Sports Club,	
Piccadilly, W.		St. James' Square, S.W.	
CROSS, Dr. J. ...	2 June, '12	LAND, H. S. ...	23 May, '12
CLARKE, Dr. W. F. ...	19 May, '12	LUCAS, H. R. ...	12 July, '12
COX, P. ...	31 May, '12	LOCKYER, P. J. ...	24 May, '12
DUNCAN, N. C. ...	20 May, '12	LOMAX, F. ...	2 May, '12
DENSHAM, A. ...	15 Apr., '12	MEILANDT, H. S. ...	10 June, '12
DOYLE, J. H. ...	2 May, '12	Royal Colonial Institute,	
DAWSON, E. B. ...	2 July, '12	Northumberland	
DYSON, J. F. ...	2 June, '12	Avenue, W.C.	
DIGHT, A. E. ...	8 June, '12	McWHIRTER, R. C. ...	9 Apr., '12
DOYLE, H. ...	13 May, '12	MOORHOUSE, Lt.-Col. H.C.,	15 Apr., '12
DUNCAN, W. K. ...	6 May, '12	D.S.O.	
DANN, T. W. ...	3 July, '12	MANNION, J. ...	23 Apr., '12
DOWTHWAITE, V. ...	26 May, '12	MACLAREN, M. ...	19 June, '12
DAY, Miss F. M. ...	2 June, '12	MORRICE, F. W. W. ...	20 Apr., '12

SOUTHERN NIGERIA—continued.

MATHER, W. ...	23 Apr., '12	STEVENSON, W. G. ...	
MONTAGU, J. D. ...	15 Apr., '12	SNELL, Dr. J. P. B. ...	16 Apr., '12
NUNNS, R. D. ...	21 May, '12	TURNER, A. E. ...	15 June, '12
O'CALLAGHAN, F. H. ...	30 Apr., '12	THOMPSON, J. H. L. ...	5 Apr., '12
O'DEA, Dr. M. E. ...	9 Apr., '12	THOMAS, N. W. ...	16 May, '12
OMMANNEY, Capt. G. P. ...	6 May, '12	VEECCOCK, Miss R. M. ...	15 Apr., '12
POUSTY, W. C. ...	2 June, '12	WEIR, A. L. ...	13 May, '12
PACKE, G. ...	30 Apr., '12	WRIGHT, P. A. T. ...	8 July, '12
POPE, C. ...	9 May, '12	WILSON, G. ...	2 May, '12
PARKIN, A. W. ...	21 May, '12	WIMBERLEY, H. I. A. ...	9 Apr., '12
RAVEN, R. M. ...	2 June, '12	WESTON, E. A. ...	14 Apr., '12
RYDER, D. J. ...	31 May, '12	Royal Societies' Club, St. James' St., S.W.	
RIGBY, E. F. ...	10 May, '12	WARD, C. R. ...	4 Apr., '12
ROBERTS, F. M. ...	17 June, '12	WHIPPLE, H. C. ...	2 May, '12
ROSS, R. J. B. ...	10 May, '12	Junior United Service Club, Charles St., S.W.	
Royal Societies' Club, St. James' St., S.W.		WEEKLEY, C. ...	17 May, '12
RALSTON, W. ...	15 Apr., '12	WEBBER, G. P. ...	3 July, '12
SHERRIS, G. ...	21 May, '12	WADDELL, D. L. ...	23 June, '12
STURGESS, C. H. M. ...	26 May, '12	WATT, J. ...	23 Apr., '12
SMARTT, Maj. J. P. ...	10 June, '12	WATSON, Major H. F., D.S.O., Naval and Military Club, Picca- dilly, W.	6 May, '12
STATHAM, W. D. ...	2 June, '12	YOUNG, P. V. ...	10 June, '12
SHEARER, H. S. ...	21 May, '12		
SMITH, H. ...	2 June, '12		
SATER, Lieut. M. B., R.N.R.	14 May, '12		

NORTHERN NIGERIA.

NOTE.—An instruction has been issued, that Europeans and officials of the native staff proceeding to Northern Nigeria will usually be informed before the arrival of the steamer at Lagos whether they should disembark there and complete the journey by rail or proceed to Burutu. They should produce their orders or other credentials, showing that they are Government servants, in Lagos at the offices of the Lagos Railway, or in Burutu at the office of the Assistant Marine Superintendent. The necessary arrangements will then be made for the resumption of their journey to Northern Nigeria.

ANDERSON, E. ...	1 Aug., '12	BRADNEY, P. E. ...	11 Apr., '12
EVERY, W. H. ...	15 Apr., '12	BELL, F. W., V.C. ...	27 June, '12
BUCKLE, E. ...	18 Apr., '12	BYNG-HALL, Capt. F.F.W.	2 June, '12
United Empire Club, 117, Piccadilly.		CORFIELD, R. C. ...	20 June, '12
BROOKS, H. C. ...	10 June, '12	COVENEY, A. C. ...	9 Apr., '12
BOURNE, J. D. M. ...	15 Apr., '12	CHESNAYE, Dr. F. W. ...	16 Apr., '12
BERKELEY, H. S. ...	30 May, '12	COSTELLO, Dr. C. T. ...	24 May, '12
BRATT, J. H. D. ...	12 June, '12	c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.	
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		CRIPPS, Lt. A. E. W., R.N.R.	7 Apr., '12
BARNARDISTON, Capt., S. J. B., D.S.O.	23 June, '12	DOLMAN, A. J. ...	9 Apr., '12
BISHOP, W. W. ...	5 May, '12	EVATT, G. R. K. ...	4 May, '12
		EVANS, W. S. ...	23 June, '12

NORTHERN NIGERIA—continued.

FAGAN, DR. J. P. ...	7 July, '12	McLEAY, Dr. C. W. ...	21 July, '12
FITZPATRICK, Capt. J. F. ...	30 Apr., '12	Royal Societies' Club,	
J. L.		St. James' St., S.W.	
FOX, Capt. R. W. ...	2 May, '12	MALCOLM, G. ...	30 Apr., '12
FINDLAY, E. G. ...	6 May, '12	MACDONELL, Capt. D. H.,	21 May, '12
FOLLWELL, E. N. ...	15 Apr., '12	D.S.O.	
FOULKES, Capt. H. D. ...	30 May, '12	MIGEOD, G. E. H. ...	10 May, '12
FURST, G. W. ...	23 Apr., '12	Sports Club, St James'	
GLENNY, H. Cl. ...	30 May, '12	Square, S.W.	
GUTHRIE, R. A. ...	15 Apr., '12	MAXWELL-LYTE, J. M....	5 Apr., '12
GRIFFIN, F. ...	9 June, '12	McKEE, A. M. ...	7 Apr., '12
GRIER, S. M. ...	30 Apr., '12	MACKAY, J. B. I. ...	30 June, '12
GEPP, N. M. ...	15 June, '12	MARSH, W. J. ...	13 May, '12
HEWDY, W. P., C.M.G....	11 May, '12	NEILL, M. ...	12 June, '12
Royal Societies' Club,		NEWTON, T. C. ...	4 May, '12
St. James' Street, S.W.		POLLOCK, W. T. C. ...	3 Sept., '12
HIDES, Major E. C. ...	4 June, '12	PORCH, M. P. ...	15 June, '12
HANSON, F. B. ...	2 June, '12	PUGH, W. A. ...	15 Mar., '12
HUGHES, W. C. ...	6 Apr., '12	PRANKERD, H. A. ...	9 Apr., '12
Union Jack Club,		POLLARD, Dr. J. M. ...	13 Aug., '12
Waterloo Road, S.E.		ROBERTSON, Capt. N. B.	27 Apr., '12
HOLROYD, L. ...	1 Aug., '12	RADCLIFFE, J. ...	30 Apr., '12
INNESS, W. D. ...	12 May, '12	STEPHENSON, C. ...	15 Apr., '12
IRWIN, H. M. ...	21 May, '12	SMITH, J. N. ...	12 June, '12
JEFFERIES, S. T. ...	9 Apr., '12	SHEARING, M. ...	8 July, '12
JEFFREYS, D. H. C. ...	2 July, '12	SLANEY, E. R. ...	9 June, '12
Royal Thames Yacht		THOMSON, J. ...	
Club, 80, Piccadilly, W.		TAYLOR, Miss E. ...	15 June, '12
JOHNSON, H. W. ...	6 Apr., '12	TEMPLE, C. L., C.M.G....	11 Apr., '12
JONES, A. E. ...	25 Apr., '12	Royal Societies Club,	
KIRK, J. G. ...	9 June, '12	St. James St., S.W.	
KIRKPATRICK, Y. ...	17 Apr., '12	UNIAKE, Capt. G. L.	23 July, '12
LOBB, Dr. H. P....	1 Aug., '12	WEST, Capt. C. C. ...	19 May, '12
LINDBELL, H. O. ...	12 June, '12	WRENFORD, A. E. ...	17 Apr., '12
MIGEOD, C. O. ...	10 May, '12	WHITE, W. ...	19 Apr., '12

EAST AFRICA.

AINSWORTH, Dickson T.	25 July, '12	GARVEY, J. P. ...	30 June, '12
BOIS, Capt. J. ...	29 May, '12	GRAY, T. A. ...	9 Aug., '12
BALMER, F. E. ...	15 Apr., '12	HAMPSON, R. H. ...	18 July, '12
COODE, A. M. ...	29 July, '12	HANNIGAN, Dr. J. E. ...	2 June, '12
DOHERTY, A. G....	4 June, '12	HEMSTED, R. W. ...	6 June, '12
DAVIE, Lieut. E. G. ...	Due back	ISHERWOOD, W. ...,	Due back
	3 June, '12		13 June, '12
ELLIOT, J. A. G. ...	23 Apr., '12	JACKSON, W. B....	16 Apr., '12
EVANS, W. J. ...	13 May, '12	c/o National Bank of	
FARRANT, R. G....	19 June, '12	India, Ltd., 28, Bishope-	
FRY, J. M. ...	11 May, '12	gate, E.C.	
GRANT, R. ...	8 Apr., '12	KELL, Lieut. P. A. G.,	25 July, '12
GALBRAITH, T. H. ...	12 May, '12	R.N.R.	
c/o The National Bank		MOON, F. L. ...	20 May, '12
of India, Ltd., 28,		MARTELLI, C. W. ...	Due back
Bishopegate, E.C.			6 May, '12

EAST AFRICA—continued.

MINSALL, G. H. ...	11 Apr., '12	TRAILL, F. S. F. ...	18 Aug., '12
MOUAT, Dr. A. ...	29 Apr., '12	Sports Club, St. James'	
MURE, G. A. S. ...	23 May, '12	Square, S.W.	
ORDE-BROWN, G. St. J. ...		TURNBULL, Lieut. H. J.,	19 June, '12
PEARSON, E. L. ...	19 July, '12	R.N.R.	
PERCIVAL, A. B. ...	13 Apr., '12	WALLER, D. D. ...	7 June, '12
STORDY, R. J. ...	10 Aug., '12		

UGANDA.

COBBE, T. J. ...	11 Sept., '12	KNOLLYS, L. E. ...	20 May, '12
DALMEGE, J. de G. ...	22 May, '12	McCOMBIE, L. H. D. ...	12 June, '12
GIBBS, G. F. W. ...	1 July, '12	c/o Messrs. Grindlay	
HAILSTONE, Dr. J. E. ...	23 May, '12	& Co., 54, Parliament	
KEANE, Capt. G. J. ...	23 Aug., '12	Street, S.W.	
c/o Messrs. Holt & Co.,		SPIRE, F....	25 Apr., '12
3, Whitehall Place,		WILKINSON, R. J. ...	19 June, '12
S.W.			

NYASALAND.

BRACKENBURY, A. J. ...		OAKESHOTT, L. H. ...	8 June, '12
COSGROVE, E. R....	25 May, '12	WALKER, C. H. ...	8 July, '12
FIRR, T. F. ...	5 June, '12	Standard Bank of	
LETTIS, E. J. ...	20 Apr., '12	South Africa, Ltd., 10,	
MILTHORP, B. T. ...	18 May, '12	Clements Lane, E.C.	
MARSHALL, Dr. Mc. G.	29 Apr., '12	WALKER, A. H....	30 Apr., '12

BECHUANALAND.

BUTLER, E. O. ...	7 June, '12	HODSON, A. W ...	19 June, '12
-------------------	-------------	------------------	--------------

BASUTOLAND.

SINCLAIR, J. G.	12 Aug., '12
---------------------	-----	-----	--------------

SWAZILAND.

LAVERTY, Miss A. M.	31 July, '12
-------------------------	-----	-----	--------------

BRITISH HONDURAS.

BRUNTON, F. W. ...	7 June, '12	MACKAY, Dr. C....	31 Aug., '12
--------------------	-------------	-------------------	--------------

Fiji.

ANDERSON, Miss M. C....	21 Nov. '12	RAMSAY, Dr. W. M. ...	29 May, '12
MARSDEN, A. ...	...	WRIGHT, R. E. ...	5 Oct., '12

FALKLAND ISLANDS.

KIRWAN, A. C. 26 Apr., '12

LEEWARD ISLANDS.

SYDNEY, T. S., K.C., British Empire Club, 12, St. James' Sq., S.W. 20 May, '12

ST. LUCIA.

GRAY, F. 22 July, '12

ST. KITTS.

WILDERS, Capt. W. E. 13 July, '12

ANTIGUA.

MCDONALD, J. S. 17 Aug., '12

JAMAICA.

ADAM, W. P. C. ...		MARSDEN, A. ...
COX, E. F. H. ...	6 Aug., '12	

TRINIDAD.

BOWEN, H. T. ...	10 June, '12	PASHLEY, E. R. ...	7 May, '12
MARSDEN, A. ...			

BRITISH GUIANA.

BUGLE, C. W. H. ...	18 July, '12	LEGGE, C. H. C. ...	18 July, '12
BRUNKEB, H. M. ...	18 Aug., '12	Royal Colonial In-	
CRUICKSHANK, Miss V....	12 May, '12	stitute, Northumber-	
COX, N. ...	2 June, '12	land Avenue, W.C.	
KING, E. E. ...	31 May, '12	PRINGLE, Rev. Canon	30 June, '12
LA FREN AIS, Dr. A. C. L.	Steamer	F. S. S.	
	leaving	SLOMAN, Very Rev. Dean	30 Apr., '12
	24 Apr., '12	E.	

MAURITIUS.

BABBEAU, Dr. L. G. ...	25 July, '12	CÉBÉLIEU, Rev. J. C. ...	12 June, '12
BOUCHERAT, J. ...	23 Sept., '12	DYKES, A. J. ...	21 June, '12
BEAUGEARD, H. M. A....	21 May, '12	LE GUEN, H. ...	20 July, '12
CLINTON, Ven. Archdeacon	8 July, '12	POUGNET, G. ...	10 Oct., '12
T. W.		POUGNET, E. D. ...	30 Apr., '12

SEYCHELLES.

YOUNG, A. K., Isthmian Club, Piccadilly, W. 15 June, '12

STRAITS SETTLEMENTS.

ANTHONISZ, J. O. ...	15 May, '12	HARMER, F. E. ...	4 Nov., '12
BRACE, F. J. ...	16 Aug., '12	HOGAN, E. D. ...	1 Aug., '12
BUXTON, Miss M. A. ...	23 June, '12	LANGHER, H. ...	31 May, '12
BUTLER, W. ...	28 May, '12	MULCOCK, W. ...	13 June, '12
DAVID, P. A. F....	Steamer due 7 June, '12	NIALL, M. J. M. ...	23 Oct., '12
EDMONDS, R. C. ...	13 Nov., '12	SUTER, W. C. ...	21 June, '12
FRY, R. S. ...	25 Nov., '12	TALMA, E. L. ...	10 July, '12
FALSHAW, P. L....	2 July, '12	THRELFALL, W. H. ...	20 Oct., '12
GRAY, Dr. J. ...	Steamer due 7 June, '12	WILLIAMS, R. ...	10 May, '12

TANJONG PAGAR DOCK.

APPLETON, E. ...	SHARPE, A. ...	Due back
COX, A. H. ...		28 May, '12

WEI-HAI-WEI.

WALTER, R. ...	16 Feb., '13
----------------	--------------

HONG KONG.

BREWIN, A. W., C.M.G. ...	28 Nov., '12	JACKS, P. ...	26 Nov., '12
BRAYN, R. F. ...	23 May, '12	LEWIS, E. C. L. ...	17 Oct., '12
BARROW, Miss C. H. ...	Steamer due 23 May, '12	MOORE, Dr. W. B. A. ...	9 Aug., '12
CRAIG, R. H. A. ...	24 Oct., '12	MACKIE, A. J. ...	19 June, '12
FIGG, F. G. ...	13 June, '12	PEARSON, H. ...	9 Oct., '12
GOLDSMITH, H. E. ...	12 Sept., '12	RICHARDS, Miss A. ...	21 Oct., '12
Royal Colonial Institute, Northumberland Avenue, W.C.		TAYLOR, Comdr. B. R. H. R.N.	31 July, '12
HAZELAND, F. A. ...	14 Nov., '12	WEST, J. C. ...	5 Oct., '12
		WATT, G. ...	9 Oct., '12
		WARD, C. W. ...	9 Oct., '12

PERAK.

BARTLETT, R. J. ...	9 July, '12	PALMER, H. ...	10 July, '12
CANDLE, P. W. ...	15 Nov., '12	TOPLISS, J. ...	10 Aug., '12
DISHMAN, A. J. ...	21 May, '12	WINSTEDT, R. O. ...	26 Sept., '12
MAGER, F. W. ...	9 Sept., '12		

KEDAH.

HOOFS, Dr. A. L. ...	29 July, '12	MAXWELL, W. G. ...	8 Oct., '12
c/o Royal Bank of Ireland, Foster Place, Dublin.			

Colonial Officers on Leave.

369

KELANTAN.

MASON, J. S. ... 19 Oct., '12

SELANGOR.

HOSE, E. S. ... 19 Sept., '12	STOKOR, E. R. ... Steamer due
MILLS, Comm. J. F. ... Steamer due	7 June, '12
7 May, '12	WATSON, R. G., C.M.G. 14 Sept., '12

NEGRI SEMBILAN.

AMERY, G. J. ... 30 June, '12	MARTIN, V. J. ... Steamer due
	29 Apr., '12

FEDERATED MALAY STATES.

BAILEY, H. J. ... 6 Sept., '12	MILLARD, Dr. A. S. ... 19 June, '12
BELFIELD, F. ... 20 May, '12	MAGILL, G. S. ... Steamer due
Isthmian Club, Piccadilly, W.	about 18 Aug., '12
CURTIS, A. T. ... Steamer due	NATHAN, J. E. ... 28 June, '12
6 May, '12	PRATT, E. ... 21 Sept., '12
CORMAC, C. R. ... 24 Aug., '12	East Indian United
ELLIS, T. H. ... 8 Aug., '12	Service Club, 16, St. James' Square, S.W.
ENGLISH, F. H. ... 18 Sept., '12	POUNTNEY, A. M. ... 9 Aug., '12
FLOOD, P. ... 3 Sept., '12	RIDGWAY, A. E. A. ... 25 Oct., '12
FAIRBURN, H. ... 24 Aug., '12	REEVE, Miss G. R. ... 15 June, '12
GOGGIN, T. ... 29 June, '12	SHAW, H. R. ... 2 June, '12
HEREFORD, G. A. ... 5 Oct., '12	STEVENSON, A. M. ... 9 June, '12
HIGHET, D. J. ... 9 Aug., '12	TAYLOR, F. E. ... 25 Aug., '12
HENBREY, G. J. ... 24 Feb., '13	VOULES, A. B. ... 16 Aug., '12
HOLLYWOOD, M. J. ... 7 July, '12	WALKER, H. J. N. ... 28 May, '12
HANSON, W. H. ... 15 June, '12	New Oxford and Cam.
LAW, Sir A. F. G. ... 2 Oct., '12	Club, 60, Pall Mall, S.W.
LEE-WARNER, W. H. ... 8 June, '12	WYATT, E. W. N. ... 21 July, '12
MORRIS, B. ... 25 June, '12	WILLETT, J. ... 26 July, '12
MORLEY, A. ... 23 May, '12	WOOD, Capt. F. E. ... 4 Jan., '13
McCLOSKEY, Dr. A. G. ... 19 Aug., '12	WILSON, C. ... 10 Feb., '13
MACKENZIE, H. J. ... 26 Mar., '13	WOODWARD, L. M. ... 27 Apr., '12
MEAD, J. P. ... 16 Aug., '12	

CEYLON.

BAKER, C. F. S. ... 2 Oct., '12	EBELL, Dr. J. H. ...
BARNARD, H. O. ... 4 Aug., '12	FELIX, J. J. P. ... 28 Jan., '13
CONSTANTINE, B. ... 21 Dec., '12	FRASER, J. H. ... 26 Oct., '12
CREAST, H. T. ... 30 Dec., '12	FORREST, G. F. ... 9 Aug., '12
COCKSON, G. M. ... 9 Nov., '12	GREGGON, W. B. ... 18 Apr., '12
DICKMAN, A. C. H. ... 1 June, '12	c/o Messrs. T. Cook & Sons, Ludgate Circus, E.C.
DUTTON, B. J. ... 25 Apr., '12	
DE SARAM, Dr. A. ... 15 Oct., '12	

CEYLON—continued.

HELLINGS, R. B. ...	15 May, '12	PIETERS, Miss S. ...	14 June, '12
HALLILEY, C. F. W. ...	15 May, '12	POWELL, R. A. ...	28 Nov., '12
Junior Conservative Club, Albemarle St., W.		PRICE, N. J. ...	6 Aug., '12
HOWISON, J. ...	30 Apr., '12	PEIRIS, Dr. W. C. ...	15 Sept., '12
HARTLEY, C. ...	18 Aug., '12	ROBERTSON, A. N. ...	8 Apr., '13
JOSEPH, Professor O. F. ...	28 Apr., '12	ROBERTS, T. W. ...	4 June, '12
JACKSON, W. H. ...	11 Oct., '12	SEYMOUR, A. W. ...	28 Nov., '12
LOCKHART, J. ...	23 May, '12	SHANKS, M. ...	30 Sept., '12
LEES, H. B. ...	13 Feb., '13	TAYLOR, W. A. C. ...	3 Feb., '13
MURTE, J. O'K. ...	4 Oct., '12	TURNBULL, R. ...	7 Aug., '12
McNUNN, D. K. ...	13 Jan., '13	TURNER, F. J. S. ...	27 Sept., '12
MONTAGU, D. ...	26 Nov., '12	c/o Messrs. T. Cook & Sons, Ludgate Circus, E.C.	
McQUILLAN, P. ...	19 May, '12	WOOLF, L. S. ...	20 May, '12
MEADEN, B. G. ...	30 Apr., '12	WADDELL, G. ...	13 Sept., '12
OHLMUS, Dr. T. ...	24 Aug., '12		



NEW RULES AS TO LEAVE, PENSION, &c., IN HONG KONG.

1. Subject to the necessities of the service, leave of absence on half salary may be granted to members of the permanent Government service after a period of four and a half year's resident service without any special grounds. It may be given before the expiration of that period in cases of serious indisposition or of urgent private affairs. In the absence of special grounds, the leave in such case must not exceed one-sixth of the officer's resident service; on special grounds it may exceed that period by six months.

2. The Governor will not in any case grant leave on half salary for a period of more than nine months at a time, but that period may be extended by the Secretary of State on the ground of ill-health or of urgent private affairs or for such other reasons as may appear to him to be sufficient. In exceptional cases extensions of leave without pay may be granted.

3. In addition to the above, vacation leave on full pay may be granted, if no inconvenience or expense is caused thereby, not exceeding three months during, and in respect of, any two consecutive years.

4. At the request of any officer who may be eligible for the grant of any period of leave on half salary, the Governor may commute the whole or any portion of such leave into one-half the period of leave with full salary, provided that the total period of commuted and uncommuted leave, together with any period of vacation leave that may be granted, does not exceed ten months at a time. No officer can claim as a right to commute his leave in this manner, the decision whether commutation can or cannot be allowed being wholly within the discretion of the Governor.

5. Officers attached to an educational institution are not entitled to vacation leave under the rule stated above in paragraph 3. When in the Colony they enjoy the ordinary vacations of the

institution to which they are attached. When taking long leave outside the Colony they may be allowed to draw full pay during the first three months of their leave unless a school vacation has immediately preceded the grant of leave, in which case full pay may be drawn during two months only. The remainder of the leave in either case is on half salary, and half pay only can be drawn during any school vacation falling within the period of an extension of leave.

6. The present rule as to superannuation is that in the case of ill-health an officer holding a pensionable appointment may be allowed to retire on a pension after ten full years' resident service; otherwise he must have attained the age of 55. For ten full years' resident service fifteen-sixtieths of the average annual salary of the retiring officer's fixed appointments for three years prior to retirement may be awarded, to which one-sixtieth may be added for each additional year's service; but no addition will be made in respect of any service beyond 35 years. For pension purposes absence on vacation leave counts as full service, and leave on half pay as half service.

7. A deduction of 4 per cent. is made from the salaries of all members of the permanent Government Service, as a contribution towards the provision of pensions for the widows and orphans of Government officers.

8. The currency of Hong Kong is based on the silver dollar. For purposes of payments in the Colony salaries fixed in sterling are converted into dollars at a rate fixed by the Government, and based upon the average exchange value of the dollar during the month ending on the fifteenth of the month for which salary is to be paid. At present, however, if the average exchange rate for any month exceeds 2s., sterling salaries are converted at 2s. to the dollar.



THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,

AND

R. V. VERNON, of the Colonial Office.

VOL. V.

JULY, 1911.

No. I.

CONTENTS.

EDITORIAL NOTES

BALLADE OF OTTAWA CITY

LAND AND LABOUR LAWS IN NEW ZEALAND

THE ENCOURAGEMENT OF AGRICULTURE

THE RHIO AND LINGGA ARCHIPELAGO

BRITISH GUIANA UNDER DUTCH RULE

REVIEWS AND NOTICES

MEDICAL NOTES

BUSINESS NOTES

Cotton—Rubber—Tobacco—Concrete Buildings.

RAILWAY AND HARBOUR WORKS

Nigeria—Gold Coast—Trinidad—Ceylon.

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

institution to which they are attached. When taking long leave outside the Colony they may be allowed to draw full pay during the first three months of their leave unless a school vacation has immediately preceded the grant of leave, in which case full pay may be drawn during two months only. The remainder of the leave in either case is on half salary, and half pay only can be drawn during any school vacation falling within the period of an extension of leave.

6. The present rule as to superannuation is that in the case of ill-health an officer holding a pensionable appointment may be allowed to retire on a pension after ten full years' resident service; otherwise he must have attained the age of 55. For ten full years' resident service fifteen-sixtieths of the average annual salary of the retiring officer's fixed appointments for three years prior to retirement may be awarded, to which one-sixtieth may be added for each additional year's service; but no addition will be made in respect of any service beyond 35 years. For pension purposes absence on vacation leave counts as full service, and leave on half pay as half service.

7. A deduction of 4 per cent. is made from the salaries of all members of the permanent Government Service, as a contribution towards the provision of pensions for the widows and orphans of Government officers.

8. The currency of Hong Kong is based on the silver dollar. For purposes of payments in the Colony salaries fixed in sterling are converted into dollars at a rate fixed by the Government, and based upon the average exchange value of the dollar during the month ending on the fifteenth of the month for which salary is to be paid. At present, however, if the average exchange rate for any month exceeds 2s., sterling salaries are converted at 2s. to the dollar.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies,
AND
R. V. VERNON, of the Colonial Office.

VOL. V.

JULY, 1911.

No. I.

CONTENTS.

EDITORIAL NOTES

BALLADE OF OTTAWA CITY

LAND AND LABOUR LAWS IN NEW ZEALAND

THE ENCOURAGEMENT OF AGRICULTURE

THE RHIO AND LINGGA ARCHIPELAGO

BRITISH GUIANA UNDER DUTCH RULE

REVIEWS AND NOTICES

MEDICAL NOTES

BUSINESS NOTES

Cotton—Rubber—Tobacco—Concrete Buildings.

RAILWAY AND HARBOUR WORKS

Nigeria—Gold Coast—Trinidad—Ceylon.

COLONIAL STAMPS

RECENT APPOINTMENTS

COLONIAL OFFICERS ON LEAVE OF ABSENCE

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These TILES constitute a Permanent, Indestructible Roofing Material.
The SHEETS form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{16}$ in. thick.

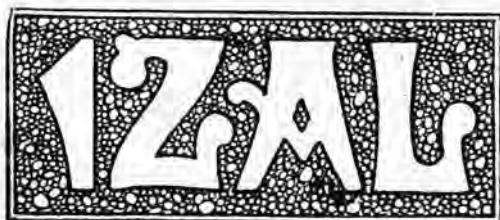
VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These TILES constitute a Permanent, Indestructible Roofing Material.
The SHEETS form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



UNIQUE SPECIALITIES:

ROOFING TILES $\frac{1}{2}$ in. thick, for
fixing at $13\frac{1}{2}$ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{8}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fired and Guaranteed by

BELL'S UNITED ASBESTOS CO. LTD.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,

Thorncliffe,

Near Sheffield.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
LONG BURNING
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

EDMUNDSONS LTD., STAFFORD WORKS, DUBLIN.

Cables, "EDMUNDSONS DUBLIN."

A.B.C. Code, 5th Edition.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plate and
Sheffield Cutlery.

A Service for 12 persons **£12 10s.**

(Others £3 to £100.)

"EMPIRE" or STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY,
AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble
plated on pure Nickel Silver. The
patterns are reproductions from fine
old Silver models, and have all the
beauty of line and form of the Silver
of 150 years ago; apart from the Hall
Mark no difference is visible.

As far back as the 1862 Exhibition,
"Empire" Plate was awarded Prize
Medals for Excellence of Manufacture,
and it still retains that pre-eminence
for which it was noted fifty years ago,
whilst the prices are, quality con-
sidered, strictly moderate, either for
Cash, or on "The Times" System
of Monthly Payments of £1.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles
for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.



35ft. Shallow Draught Paraffin Motor Launch
for Tropical Service.

Motors

(To use Petrol, Benzine, or Paraffin,
Kerosene, and similar fuels).
For Marine or Stationary purposes.

Motor Launches

Wood or Steel—Any type—
from 20ft. upwards, to suit
all classes of service.

Steam Vessels.

Screw, Stern or
Paddle Wheel,
of all Descrip-
tions.

Motor Vehicles

& Pleasure Cars

FOR TRANSPORT.
MAIL, PASSENGER.
OR OFFICIAL
SERVICE, &c.

SPECIALLY
SUITED FOR
COLONIAL SERVICE
AND CONDITIONS.



16 H.P. 2 Ton Petrol Lorry.

**Send for
CATALOGUES AND PRICES.**

CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams: "THORNYCROFT, LONDON."

Codes A.B.C. (5th), &c., &c.

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)
Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

For Locomotive, Marine and Stationary Engine Lubrication.

For Railway Carriage and Wagon Lubrication.

For Motor Carriage and Motor Boat Lubrication.

For Gas and Oil Engine, Dynamo, Turbine, Refrigerator and General Lubrication.

Special Oils and Greases for Tropical use and onerous conditions.

These Lubricants are used and approved in all parts of the world.

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

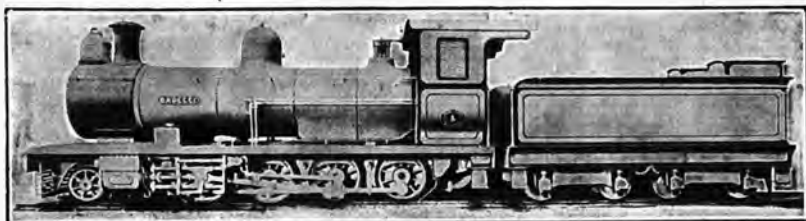
VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

NO DISINFECTANT

is so EMINENTLY SUITABLE for the use of
THE TROPICAL SANITARIAN

as

"SANITAS-OKOL"

(Emulsion).

"SANITAS-OKOL" has been largely adopted by Government Departments and Public Health Authorities throughout the Empire, and has been found the most suitable Disinfectant in every way. It can be used in all proportions and with all qualities of water, salt or fresh.

It has a high Guaranteed efficiency as a germicide, is non-toxic and non-corrosive, and retains, to a very marked extent, its efficiency in the presence of organic matter.

It is suited equally well for use by private persons as by Public Officials.

In addition to its germicidal character, it has marked value as a larvæcide and insecticide for use as a preventive measure against insect pests such as Flies, Fleas, Mosquitoes, and other disease carriers.

Special quotations given to Colonial Officials for large quantities.

SAMPLES AND FULL DETAILS FROM
SOLE MAKERS :

SANITAS CO., LONDON, E.

THE STANDARD ASBESTOS CEMENT TILE.



For Enduring Roofing Material
and Workmanship,

ARCHITECTS, ENGINEERS
AND SURVEYORS

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining

WALLS AND CEILINGS.

G. R. SPEAKER & CO.,
Contractors and Engineers,
29, MINCEING LANE, E.C.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp
Equipment, Medical Stores, Wines, Spirits, and
Mineral Waters, &c., for Exploring and Mining
Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and
made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { "COOMASSIE," LIVERPOOL
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; also to Captain Scott's
Expedition, 1910.

"KARRIER" CARS.

**15 CWT. TO 5 TON LOADS. 16 H.P.—40 H.P.
VANS, LORRIES, TIPPING WAGONS.
OFFICIAL CARS, MAIL CARS, CHAR-À-BANCS.**

Two Types: Type "A" as illustrated, with driver's seat over the engine, gives maximum platform area with least overall length. Type "B" with driver's seat behind the engine in usual manner.



Special Features :
HILL CLIMBING, RELIABILITY, SIMPLICITY, STRENGTH,
ACCESSIBILITY, WINDING GEAR.

**Specially designed and constructed for
STEEP HILLS and ROUGH ROADS.**

Paraffin Carburettors fitted if required.

CLAYTON & CO. HUDDERSFIELD LIMITED,

Union Works, Huddersfield. England;

68, VICTORIA STREET, WESTMINSTER, LONDON, S.W.

Telegrams: Eagle, Huddersfield.
Karriakar, London.

Code:
A.B.C. 5th Edition.

Telephones: 1441-1442 Hfd.
2246 Victoria.

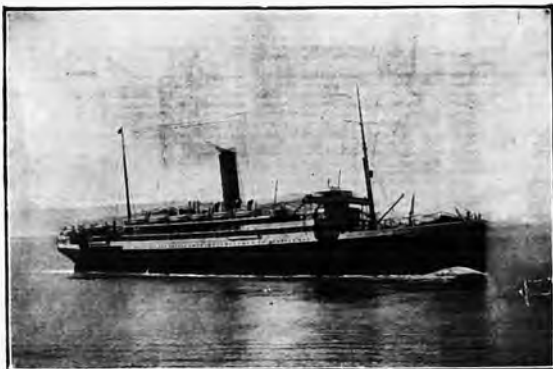
R.M.S.P.

THE ROYAL MAIL STEAM PACKET COMPANY.

(ROYAL CHARTER, DATED 1839.)

The Line for Luxurious Travel.

From
SOUTHAMPTON
& CHERBOURG
to
WEST INDIES
VENEZUELA,
COLOMBIA,
COLON,
ANTILLA (CUBA),
NEW YORK,
via The Azores.
+
BRAZIL
&
RIVER PLATE,
via Spain,
Portugal,
& Madeira.



From LONDON to
GIBRALTAR,
MOROCCO,
Canary Islands,
MADEIRA,
23 Days' Tour,
from £22.

From
SOUTHAMPTON
& CHERBOURG
to
THE AZORES,
19 Days' Tours
for £17.
Including Hotel
Accommodation

Cruises to Spain and Portugal from Southampton and Cherbourg, 8 DAYS AND UPWARDS,
FROM £12.

Norway Fjords and North Cape.

Cruises de Luxe by R.M.S.P. AVON.

July and August, 13 DAYS AND UPWARDS, FROM £1 A DAY.

For further particulars apply for Illustrated Handbooks "A. J."

London: 18, Moorgate St., E.C. and 32, Cockspur St., S.W.

UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,
Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

**DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.**

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;

AND

GRANT STREET, SOUTH MELBOURNE, AUSTRALIA.

Manufacturers of **OPEN HEARTH**

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS,

And **STRUCTURAL STEEL WORK** for all purposes.

Speciality: STEEL FRAME BUILDINGS,

FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
BSB 30	24 X 7½	100	ASB 17a	10 X 4 66	25
BSB 28	20 X 7½	89	BSB 16	9 X 7	58
ASB 29a	20 X 6½	65	DLB 16a	9½ X 3½	23.5
BSB 28	18 X 7	78	BSB 15	9 X 4	21
ASB 28a	18 X 6	55			
BSB 27	16 X 6	62	" 14	8 X 6	35
" 26	15 X 6	50	" 13	8 X 5	28
			" 12	8 X 4	18
" 25	15 X 5	42	" 11	7 X 4	16
" 24	14 X 6	57	" 10	6 X 5	25
" 23	14 X 6	46	" 9	6 X 4½	20
" 22	12 X 6	54	" 8	6 X 3	12
" 21	12 X 6	44	" 7	5 X 4½	18
DLB 20a	12 X 5	39	" 6	5 X 3	11
BSB 20	12 X 5	32			
			" 5	4½ X 1½	6.5
" 19	10 X 8	79	" 4	4 X 3	9.5
" 18	10 X 6	42	" 3	4 X 1½	5
DLB 17a	10 X 5	35	" 2	3 X 3	8.5
BSB 17	10 X 5	30	" 1	3 X 1½	4

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, ½ in. to 2½ in.; HALF-ROUNDS, 1½ in. to 3½ in.; SQUARES, ½ in. to 2½ in.; FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

**LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.**

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heya, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Flohardt & Daniele, BIDEFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim,) and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST MARY AXE, LONDON, E.C.

30, MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c., &c.

ADVERTISEMENTS.

BANK OF NIGERIA LIMITED.

Directors.

GEORGE MILLER, Esq.

CLIFFORD B. EDGAR, Esq., J.P.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—J. CADMAN, Esq.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agenoles in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, Calabar, and Warri.

NORTHERN NIGERIA—Lokoja Jebba, and } **FRENCH IVORY COAST**—Grand Bassam
Zungeru. } and Assinie.

Agencies in Nigeria.

NORTHERN—Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, &c., &c.

Also Agenoles at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Baro-Kano Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

BANK OF BRITISH WEST AFRICA, LIMITED. *(Established 1894.)*

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorized Capital	£1,000,000.	Called-Up Capital	£200,000.
Subscribed Capital	£500,000.	Reserve	£85,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G.
Geo. W. Neville, Esq.

Henry Coke, Esq.
O. Harrison Williams, Esq.

W. F. Moore, Esq.

Asst. Manager: G. A. Lester.

Chief Manager: Leslie Cooper.

Secy.: J. R. Bingham.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown, **GOLD COAST** and **ASHANTI**—Arim, Secomdee, Saltpond, Cape Coast Castle, Winnebah, Accra, Tarquah, Comassie.

LIBERIA—Monrovia. **NIGERIA**—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjan, Aboumea, Blama, Bonny, Bo, Dakar, Duskwa, Egwanga, Fernando Po, Grand Bassam, Haugha, Half Assinie, Koko, Lahou, Lounda, Madaira, Matadi, Obuassi, Opobo, Pendembu, Preston, Segbwema, Taseriffe, Warri.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

GOODLASS' "TRIUMPH" WASHABLE WATER PAINT

Is the very last word in Water Paint
and Superior to all.



Its Chief Points are:—

**MAXIMUM COVERING POWER,
DURABILITY AND PERMANENCY,
EASY WORKING, AND
MODERATION IN PRICE.**

OVER 60 STANDARD TINTS; ANY SHADE SUPPLIED TO ORDER.

Send for samples and prices to

**GOODLASS, WALL & CO., L^{td.},
LIVERPOOL.**

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand" **THE POST OFFICE MAGAZINE.**

21st Year of Publication.  **Published Quarterly.**

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERRARD. *Hon. Editor:* EDWARD BENNETT.
Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—
c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

ADVERTISEMENTS.

Telegrams: "Crown, Cardiff."	THE	ESTABLISHED 1860.
CROWN PRESERVED COAL Co., CARDIFF. Limited.		
MANUFACTURERS AND SHIPPERS OF	CROWN PATENT FUEL <small>USED BY</small> BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS. <i>Specially adapted for tropical climates and stores for any length of time without deterioration.</i> SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.	
 	AWARDS. London...1862 | Liverpool... 1886 | Royal Naval 1891 & 1905 | Bordeaux ...1895 Paris .....1875 | Jamaica ... 1891 | Chicago .....1893 | Mexican ...1908 Works : CARDIFF and PORT TALBOT.	

“HANDBOOK OF THE BRITISH COLONIAL EMPIRE.”

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

“ Whilst the ‘ Colonial Office List ’ is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts.”—*Journal of the Royal Colonial Institute.*

* * * * *

“The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular.”

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

ADVERTISEMENTS.

NORTH BRITISH & MERCANTILE INSURANCE COMPANY.

INCORPORATED 1809.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Total Funds £21,000,000.

Annual Income, £5,000,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

JULY, 1911.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A LACRE.

13
DISTINCT
MODELS.

Lacre
ALL BRITISH UTILITY VEHICLES

10 CWT.
TO
5 TONS.



**LACRE
COMMERCIAL
MOTOR
TRACTION.**



Lacre Vehicles are Manufactured in all sizes to meet all requirements, comprising :

18 DISTINCT MODELS. 12 H.P. to 50 H.P.

FOR LOADS OF

10 CWT. TO 5 TONS.

THE CURRENT TYPES ARE MADE AT THE COMPANY'S MODEL FACTORY
AT LETCHWORTH.

**VANS, LORRIES, CHAR-A-BANCS, MAIL CARS, TIPPING WAGGONS,
TRANSPORT WAGGONS, Etc.**

SPECIALLY CONSTRUCTED FOR ROUGH AND HILLY ROADS.



ORDERS RECEIVED FROM
NEW SOUTH WALES, VICTORIA,
QUEENSLAND, SOUTH AUSTRALIA,
WESTERN AUSTRALIA, NEW
ZEALAND, CANADA, RUSSIA,
JAPAN, TASMANIA, SIAM,
GERMANY, ETC.



THE LACRE COMPANY
ARE ON THE OFFICIAL
LIST OF THE
CROWN AGENTS FOR
THE COLONIES.



THE LACRE COMPANY'S MODEL FACTORY AT LETCHWORTH.

PARAFFIN
CARBURETTORS FITTED
IF
REQUIRED

THE LACRE MOTOR CAR CO. Ltd.

Principal Sales Office and Maintenance Depot :

78, YORK ROAD, KING'S CROSS, LONDON, ENGLAND.

Registered Offices and Works, LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot :

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,
DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,
ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD. have made a careful study of the Wines and Spirits most
suited for the Tropics. Their selected Wine List will be sent on application.
All goods are well packed for export.

LAMMS ARTIFICIAL CEMENT SLATES

Essential for Roofing, &c., in the Tropics.

Damp and Fire Resisting. COOL, Durable and Economical.

The "Handy-Cosy" Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become shaky.
It is very comfortable to sleep on. It can be changed into a hammock in twenty seconds.

*Very suitable for Ambulance purposes: can be used as a **STRETCHER**.*

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.
BLACK SHEETS.
WIRE NETTING.
CONSTRUCTIONAL WORK.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				£	d.
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY AND FARMER

LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. V.

OCTOBER, 1911.

No. 2.

CONTENTS.

EDITORIAL NOTES	105
The Imperial Conference—Steamship and Cable Communications— White Races in the Tropics—The Mauritius Riots—Game in East Africa—Labour in British Guiana, &c.	
AUSTRALIA'S ATTRACTIONS FOR IMMIGRANTS. By Henry Button.	126
THE NATIVES OF SOUTHERN RHODESIA	141
REVIEWS AND NOTICES	148
BUSINESS NOTES	162
RAILWAY AND HARBOUR NOTES	170
MEDICAL NOTES	174
COLONIAL STAMPS	179
RECENT APPOINTMENTS	182
COLONIAL OFFICERS ON LEAVE OF ABSENCE	183

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{5}{16}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ARCHITECTS, ENGINEERS AND SURVEYORS

Are recommended to specify

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

These TILES constitute a Permanent, Indestructible Roofing Material.
The SHEETS form the Best Material for Lining Walls and Ceilings—
Fireproof and Damp-proof.



Stock sizes 24 in. x 24 in., 12 in. x 12 in.,
12 in. x 24 in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{3}{8}$ in. thick, for
fixing at 13 $\frac{1}{2}$ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{2}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,

Near Sheffield.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { "**COOMASSIE,**" LIVERPOOL.
 { "**APPEASABLE,**" LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; also to Captain Scott's Expedition, 1910.

THE STANDARD ASBESTOS CEMENT TILE.

On the
War Office
List

On the
Admiralty
List.

For Enduring Roofing Material
and Workmanship,

**ARCHITECTS, ENGINEERS
AND SURVEYORS**

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining
WALLS AND CEILINGS.

G. R. SPEAKER & CO.,
Contractors and Engineers,

Tel.: 19174 CENTRAL
Telegrams: "ETERNITILE."

29, MINCING LANE, E.C.



ALBION

MOTORS

16 h.p. and 32 h.p.

15 cwt. to 3 ton loads.

**Manufactured in the World's
Greatest Engineering Centre.**

THE CAR
FOR
ROUGH
COLONIAL
ROADS.



OFFICIAL CARS.
MAIL WAGGONS.
CHAR - A - BANCS.
VANS.
LORRIES.
TIPPING WAGGONS.

SOME USERS:

WAR OFFICE.
INDIA OFFICE.
AUSTRALIAN GOVERNMENT.
CEYLON GOVERNMENT.
SOUTH AFRICAN GOVERNMENT.

NEW ZEALAND GOVERNMENT.
STRAITS SETTLEMENTS GOVERNMENT.
SOUTHERN NIGERIA GOVERNMENT.
CROWN AGENTS.
DUTCH EAST INDIES GOVERNMENT.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

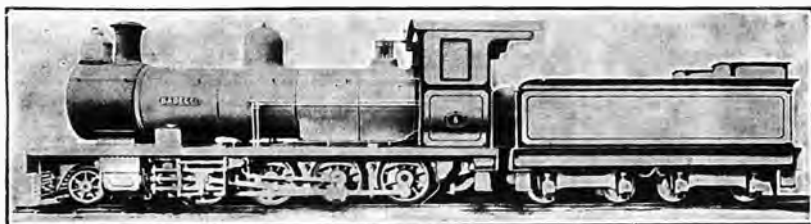
*Codes: A.B.C. 5th Edition,
and Liebers.*

*Telegrams:
"Automobile, Glasgow."*

ADVERTISEMENTS.

LOCOMOTIVES

OF EVERY DESCRIPTION
FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

VACUUM OILS.

Telephone No. 6840 Gerrard.

(Four Lines.)

Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

For Locomotive, Marine and Stationary
Engine Lubrication.

For Railway Carriage and Wagon Lubrication.

For Motor Carriage and Motor Boat
Lubrication.

For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.

Special Oils and Greases for Tropical use
and onerous conditions.

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

VACUUM OIL CO., LTD.,
Caxton House, WESTMINSTER, S.W.



40ft. Shallow Draught Paraffin Motor Launch,
for Tropical Service.

Motors

(To use Petrol, Benzine, or Paraffin,
Kerosene, and similar fuels).
For Marine or Stationary purposes.

Motor Launches

Wood or Steel—Any type—
from 20ft. upwards, to
suit all classes of service.

Steam Vessels.

Screw, Stern or Pad-
dle Wheel, of all
Descriptions.

Motor Vehicles

& Pleasure Cars

FOR TRANSPORT,
MAIL, PASSENGER,
OR OFFICIAL
SERVICE, &c.

SPECIALLY
SUITED FOR
COLONIAL SERVICE
AND CONDITIONS.



16 H.P. 2 Ton Petrol Lorry.

Send for
CATALOGUES AND PRICES.

CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams : "THORNYCROFT, LONDON."

Codes A.B.C. (51b), &c., &c.

BENSON'S



"EMPIRE" or STERLING SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY, AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver models, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

As far back as the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments of £1.

"THE EMPIRE" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons from £12 10s.
(Others £3 to £100.)

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
LONG BURNING
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS L^{TD}, STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."

A.B.C. Code, 5th Edition.

"KARRIER" CARS.

15 CWT. TO 5 TON LOADS. 16 H.P.—40 H.P.
VANS, LORRIES, TIPPING WAGONS.
OFFICIAL CARS, MAIL CARS, CHAR-À-BANCS.

Two Types: Type "A" as illustrated, with driver's seat over the engine, gives maximum platform area with least overall length. Type "B" with driver's seat behind the engine in usual manner.



Special Features :
HILL CLIMBING, RELIABILITY, SIMPLICITY, STRENGTH,
ACCESSIBILITY, WINDING GEAR.

Specially designed and constructed for
STEEP HILLS and ROUGH ROADS.

Paraffin Carburettors fitted if required.

CLAYTON & CO. HUDDERSFIELD LIMITED,

Union Works, Huddersfield, England;

68, VICTORIA STREET, WESTMINSTER, LONDON, S.W.

Telegrams: Eagle, Huddersfield.
Karriakar, London.

Code :
A.B.C. 5th Edition.

Telephones: 1441-1442 Hfd.
2248 Victoria.

R.M.S.P. & P.S.N.C. **THE ROYAL MAIL STEAM PACKET COMPANY**
(Royal Charter, dated 1839).
THE PACIFIC STEAM NAVIGATION COMPANY
(Royal Charter, dated 1840).

Frequent Regular Sailings from
SOUTHAMPTON, LIVERPOOL & GLASGOW,

TO

**BRAZIL, URUGUAY, ARGENTINA,
CHILE & PERU**

Via France, Spain, Portugal, Madeira, Canary
Islands, St. Vincent & Falkland Islands.

Fortnightly Sailings from SOUTHAMPTON &
CHERBOURG to

**WEST INDIES &
NEW YORK**

VENEZUELA, COLOMBIA, COLON, ANTILLA
(CUBA) & PACIFIC PORTS.

LONDON: 18, Moorgate St., E.C.
or 32, Cockspur St., S.W.
LIVERPOOL: 31, James St.



UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,
Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim,) and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST MARY AXE, LONDON, E.C.

30, MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c., &c.

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents :-

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Heys, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Danieles, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

THE WORKINGTON IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-Iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office 14, Sherborne Lane, King William Street, E.C.

Telegraphic Addresses "Mosbay, Workington," "Mosbay, London."

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA.

Manufacturers of **OPEN HEARTH**

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS,
And **STRUCTURAL STEEL WORK** for all purposes.

Speciality: **STEEL FRAME BUILDINGS,**
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
BBB 30	24 X 7½	100	ASB 17a	10 X 4-60	25
" 29	20 X 7½	88	BBB 16	9 X 7	58
ASB 28a	20 X 6½	85	DLB 15a	9½ X 3½	23½
BBB 28	18 X 7	75	BBB 15	9 X 4	21
ASB 28a	18 X 6	65	" 14	8 X 6	35
BBB 27	16 X 6	62	" 13	8 X 5	28
" 26	15 X 6	59	" 12	8 X 4	18
" 25	15 X 5	42	" 11	7 X 4	16
" 24	14 X 6	57	" 10	8 X 5	25
" 23	14 X 6	46	" 9	8 X 4½	20
" 22	12 X 6	54	" 8	8 X 3	13
" 21	12 X 6	44	" 7	5 X 4½	18
DLB 30a	12 X 5	39	" 6	5 X 3	11
BBB 20	12 X 5	32	" 5	4½ X 1½	6½
" 19	10 X 8	70	" 4	4 X 3	6½
" 18	10 X 6	42	" 3	4 X 1½	6
DLB 17a	10 X 5	35	" 2	3 X 3	8½
BBB 17	10 X 5	30	" 1	3 X 1½	4

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, ½ in. to 2½ in.; HALF-ROUNDS, 1½ in. to 3½ in.; SQUARES, ½ in. to 2½ in.; FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

ADVERTISEMENTS.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM:

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: GERR. 8282.

Code:—A.B.C. 4th and 5th Editions.

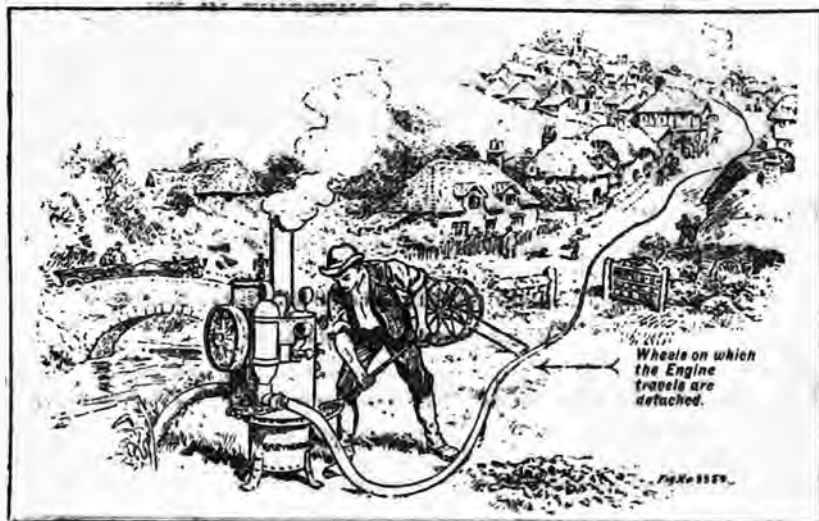
Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

ADVERTISEMENTS.

MERRYWEATHERS' Fire & Pumping Engine

"VALIANT" Pattern.



"VALIANT" PUMPING THROUGH 1,000 FT. OF HOSE WITH A RISE
IN THE GROUND OF 80 FT.

INVALUABLE FOR:—

Fire Protection. Water Supply. Irrigation.
One man only required to work it.
Weight, 6½ cwt., 4 men can carry it over rough roads.
Simple. Light. Strong.

AN ENGINEER writes:—

"The 'Valiant' has done excellent service in three large fires recently; and it has also been used as a pumping engine to drain foundations in connection with our works extensions, in which capacity it proved most useful."

WRITE FOR PAMPHLET No. 738M.O.O.

MERRYWEATHER & SONS,
FIRE ENGINE & HOSE WORKS, GREENWICH, S.E.,
LONDON.

ESTABLISHED OVER 200 YEARS

GOODLASS' "TRIUMPH" WASHABLE WATER PAINT



Is the very last word in Water Paint
and Superior to all.

Its Chief Points are:—

**MAXIMUM COVERING POWER,
DURABILITY AND PERMANENCY,
EASY WORKING, AND
MODERATION IN PRICE.**

OVER 60 STANDARD TINTS; ANY SHADE SUPPLIED TO ORDER.

Send for samples and prices to

GOODLASS, WALL & CO., L^{td.}
LIVERPOOL.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON. S.E.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED. *(Established 1894.)*

, Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	- £1,000,000.	Called-Up Capital	- £200,000.
Subscribed Capital	- £500,000.	Reserve	- £85,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B.,	G.C.M.G.	Henry Coke, Esq.	Wm. F. Moore, Esq.
Geo. W. Neville, Esq.	Sir Owen Phillips, K.C.M.G.	O. Harrison Williams, Esq.	
Chief Manager: Leslie Couper.			

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown. **GOLD COAST** and **ASHANTI**—Axim, Secondee, Saltpond, Cape Coast Castle, Winnebah, Accra, Tarquah, Coomassie.

LIBERIA—Monrovia. **NIGERIA**—Lagos, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonnema, Biama, Bonny, Bo, Dakar, Dunkwa, Egwanga, Fernando Po, Grand Bassam, Haugha, Half Assinie, Koko, Lahou, Loanda, Madeira, Matadi, Obuassi, Opobo, Pendembu, Prestea, Segbwema, Tengeriffe, Warri.

New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

BANK OF NIGERIA LIMITED.

Directors.

C. B. EDGAR, Esq., D.L., J.P.

GEORGE MILLER, Esq.

HARRY COTTERELL, Esq.

ALEXANDER MILLER, Esq.

MAZZINI STUART, Esq.

H. G. SHAVE, Esq.

Manager and Secretary—O. H. WILMOT.

Head Office: MOWBRAY HOUSE, NORFOLK STREET, STRAND, W.C.

Agencies in LIVERPOOL, HAMBURG, PARIS, BORDEAUX and MARSEILLES.

Branches.

SOUTHERN NIGERIA—Lagos, Burutu (Forcados), Onitsha, Calabar, and Warri.

NORTHERN NIGERIA—Lokoja, Jebba, and Zungeru. **FRENCH IVORY COAST**—Grand Bassam and Assinie.

Agencies in Nigeria.

NORTHERN—Ibi, &c.

SOUTHERN—Akassa, Asaba, Benin, Bonny, Brass, B'guma, Degama, Egwanga, Opobo, Sapelli, &c. &c.

Also Agencies at SIERRA LEONE, and the principal ports on the GOLD COAST.

Correspondents at all other main stations on the Coast of West Africa and inland. Bankers in Nigeria to the Southern Nigeria Government Railway (Northern Extension) and to the Northern Nigeria Government, Kano-Kaduna Railway.

Bills negotiated or sent for collection. Current and Deposit Accounts accepted at London and Branches. Mail and Cable transfers effected. Letters of Credit and Drafts issued. Stocks and Shares bought and sold, and Coupons collected. Banking business of every description transacted.

LAGOS



RAILWAY.

(SOUTHERN NIGERIA GOVERNMENT LINE.)

**QUICKEST, SHORTEST, and MOST COMFORTABLE route
to the TINFIELDS of NORTHERN NIGERIA.**

A THROUGH rail service will be inaugurated in the current year from the Port of Lagos, the capital of Southern Nigeria, to Minna (the junction with the Baro-Kano Railway, the time occupied in transit being about 30 hours. The weekly mail train, which will connect with both the outward and homeward mail steamers at Lagos, will consist of saloon carriages provided with every modern convenience, including comfortable sleeping accommodation, lavatories, and bathrooms, and fitted throughout with electric light and fans. A restaurant car will be a special feature in connection with this train.

2. The route is *via* :—

Abeokuta (60 miles)
Ibadan (123 miles)
Oshogbo (186 miles)
Ilorin (246 miles)

LAGOS LINE.

Jebba (306 miles)
Zungeru (429 miles)
Minna (467 miles)
Rigachikun (585 miles)

the present nearest point of the Nigerian railway system to the Tin Mines of Bauchi.

3. At Lagos, passengers and their luggage, &c., are conveyed to and from the Ocean Liner by a tender which lands them conveniently at the Customs wharf. Arrangements will be made to convey them from the Landing Stage to Iddo Station, the present terminus of the Lagos Railway, where they may at once entrain. The saving in time by this route will be from 8 to 10 days on each journey, in comparison to the Niger River route *via* Forcados.

4. Due notice will be given of the date of commencement of this service.

5. For further particulars apply to the General Manager, Lagos Railway, Lagos, or in London to M. Y. Grant, Traffic Superintendent, Lagos Railway, c/o the Crown Agents for the Colonies, Whitehall Gardens, S.W.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

... THE ...
Shrewsbury & Challiner
Tyre Co. Ltd.

ARDWICK GREEN, MANCHESTER.
PAGE STREET, WESTMINSTER, S.W.
VALMAR ROAD, CAMBERWELL, S.E.

Makers of **WORLD TYRES**
§ **GIANT TYRES.**

Solid Tyres for Commercial Motors with Loads
up to 12 Tons.

Challiner's Patent Detachable Rim for Pneumatic Tyres.

CROSSLEY & CO. LTD. (Established 1845.)

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the
advantages of any Colony inviting Emigration.
Lectures arranged.

Advice given gratis on all forms of advertising in Great
Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of
Newspapers, Periodicals and Magazines at minimum
rates.

Correspondence invited on all questions relating to newspaper
publicity.

Offices :—57, COLEMAN STREET, LONDON, E.C.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring accurate and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

ADVERTISEMENTS.

Asbestos Fireproof Paints for the protection of Wood-work. All colours, for inside or outside work, and suitable for Tropical climates.

Pure Ferric Oxide Paints for Ironwork; of great durability and covering power. Will effectually preserve metallic surfaces from rust and corrosion in any climate.

ECONOMICAL.

DURABLE.

SANITARY.

Manufacturers :

**THE ASBESTOS & GENERAL PAINT CO., LTD.,
BIRMINGHAM.**

Telegrams: "Crown, Cardiff."

THE

ESTABLISHED 1880.

**CROWN PRESERVED COAL CO.,
CARDIFF. Limited.**

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL



TRADE MARK.

USED BY
BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.

AWARDS.

London...1882 | Liverpool...1886 | Royal Naval 1891 & 1905 | Bordeaux ...1895
Paris1875 | Jamaica ...1891 | Chicago1893 | Mexican ...1908

Works : CARDIFF and PORT TALBOT.

**"St. Martin's-le-Grand"
THE POST OFFICE MAGAZINE.**

21st Year of Publication. & Published Quarterly.

DEVOTED TO

POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

ADVERTISEMENTS.

INCORPORATED 1809.

NORTH BRITISH & MERCANTILE

— INSURANCE COMPANY. —

In which are vested the shares of
The Ocean Marine Insurance Co., Ltd.
Railway Passengers' Assurance Co.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

During the past One hundred years
the *North British and Mercantile
Insurance Company* has built up
and maintained a world-wide re-
putation for promptitude and
liberality in dealing with all claims
made under its policies. Since its
establishment in 1809 the total
claims paid by the Company have

ACCIDENTS

EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Total Funds £21,000,000.

Annual Income, £5,000,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1911.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A LACRE.

18
DISTINCT
MODELS.

Lacre
ALL BRITISH UTILITY VEHICLES

10 CWT.
TO
5 TONS.



ANOTHER
1911 . . .
LACRE . .
SUCCESS.



We have pleasure in announcing that we have been favoured with another **REPEAT ORDER** from Messrs. ANTHONY HORDERN & SONS, of Sydney, for SEVEN 30 h.-p. 2-ton "LACRES," bringing their fleet of these famous Letchworth-built vehicles up to TWELVE. Messrs. Anthony Horderne have had thousands of miles of satisfactory service out of the first "Lacres" that they purchased, and the above order is ample testimony of the general efficiency and reliability of "Lacre" vehicles under Australian conditions.

SPECIALLY CONSTRUCTED FOR ROUGH
AND HILLY ROADS.

PARAFFIN CARBURETTORS FITTED
IF REQUIRED.

THE LACRE COMPANY ARE ON THE OFFICIAL LIST OF THE CROWN AGENTS FOR THE COLONIES.

**VANS, LORRIES,
CHAR-A-BANCS,
MAIL CARS,
TIPPING
WAGGONS,
TRANSPORT
WAGGONS, Etc.**



ORDERS RECEIVED FROM
NEW SOUTH WALES,
VICTORIA, QUEENSLAND,
SOUTH AUSTRALIA,
WESTERN AUSTRALIA,
NEW ZEALAND, CANADA,
RUSSIA, JAPAN, TASMANIA
SIAM, GERMANY, ETC.

THE LACRE COMPANY'S MOTOR FACTORY AT LETCHWORTH.

THE LACRE MOTOR CAR CO. Ltd.

Principal Sales Office and Maintenance Depot:
78, YORK ROAD, KING'S CROSS, LONDON, ENGLAND.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.
Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:
107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.
CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD., have made a careful study of the Wines and
Spirits most suited for the Tropics. Their selected Wine List
will be sent on application. All goods are well packed for
export.

The "Handy-Cosy" Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become
shaky. It is very comfortable to sleep on. It can be changed into a hammock
in twenty seconds.

Very suitable for Ambulance purposes : can be used as a STRETCHER.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				£	d.
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				£	s
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

**GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.**

JOHN LYSAGHT LIMITED.



BRISTOL.

**AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.
LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.
BUENOS AIRES, 1910.
ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—285, Westminster.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. V.

JANUARY, 1912.

No. 3.

CONTENTS.

EDITORIAL NOTES	197
BLACK AND WHITE IN SOUTH AFRICA	214
REVIEWS AND NOTICES	223
BUSINESS NOTES	238
RAILWAY AND HARBOUR NOTES	258
MEDICAL NOTES	265
COLONIAL STAMPS	268
RECENT APPOINTMENTS	270
COLONIAL OFFICERS ON LEAVE OF ABSENCE	271

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Lining Walls and Ceilings—
Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{4}$ in. thick.

VENBERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These TILES constitute a Permanent, Indestructible Roofing Material.
The SHEETS form the Best Material for Lining Walls and Ceilings—
Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 18 in. x 18 in.,
12 in. x 12 in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at $13\frac{1}{2}$ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{3}{16}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. LTD.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

ADVERTISEMENTS.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232. Code :—A.B.C. 4th and 5th Editions.
Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

ALBION

MOTORS

16 h.p. and 32 h.p.

15 cwt. to 3 ton loads.

New Touring Car Model—15 H.P. 4 Cylinders—
Worm Drive.

The Car for Rough Colonial Roads, suitable for
Official or Private Purposes.

Embodies the most up-to-date Features.

Built for Strength and Reliability.

Ample Ground Clearance.

The outcome of a Thorough Knowledge of Colonial
Conditions.

SOME USERS:

WAR OFFICE.

INDIA OFFICE.

AUSTRALIAN GOVERNMENT.

CEYLON GOVERNMENT.

SOUTH AFRICAN GOVERNMENT.

NEW ZEALAND GOVERNMENT.

STRAITS SETTLEMENTS GOVERNMENT.

SOUTHERN NIGERIA GOVERNMENT.

CROWN AGENTS.

DUTCH EAST INDIES GOVERNMENT.



MAIL VANS.	LORRIES.	CHAR-A-BANCS.
16 H.P.	—	32 H.P.
13 Cwt.	—	3 Ton Loads.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

Codes: A.B.C. 5th Edition,
and Liebers.

Telegrams:
"Automobile, Glasgow."

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)
Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

**For Locomotive, Marine and Stationary
Engine Lubrication.**

For Railway Carriage and Wagon Lubrication.

**For Motor Carriage and Motor Boat
Lubrication.**

**For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.**

**Special Oils and Greases for Tropical use
and onerous conditions.**

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

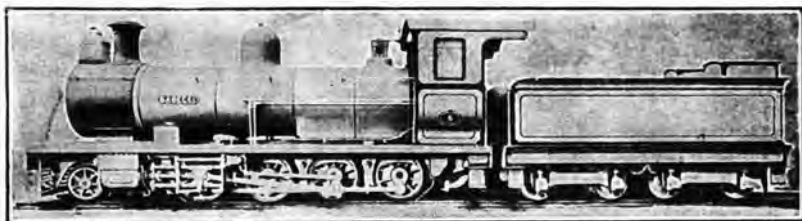
VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive. Newcastle-on-Tyne."

THORNYCROFT



10 ft. Shallow Draught Paraffin Motor Launch
for Tropical Service.

Motors

For Marine or
Stationary purposes.
using Petrol (Benzine)
or Paraffin (Kerosene)
up to 120 b.h.p.

Crude Oil Diesel
Engines up to 6,000
b.h.p.

Motor Launches

Any Type—Any Service—Any
purpose.
Wood or Steel, from 20 ft. upwards.

Steam Vessels

Of all descriptions—Screw, Stern-
wheel or Paddle-wheel propulsion.
Shallow draft a Speciality.

Motor Vehicles

AND

Touring Cars

For Colonial Transport.
Mail, Passenger or
Official Service.

Write for Marine
Motor or Motor
Vehicle Catalogues.



10 H.P. 2-Cylinder 2-Ton Petrol Lorry.

JOHN I. THORNYCROFT & CO., LIMITED,
CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams : "THORNYCROFT, LONDON."

Codes A.B.C. (5th), &c., &c.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
LONG BURNING
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS L^{TD.}, STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."
A.B.C. Code, 5th Edition.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays,
containing 110 pieces of "Empire" Plate and
Sheffield Cutlery.

A Service for 12 persons from **£12 10s.**
(Others £3 to £100.)

"EMPIRE" ELECTRO or SILVER PLATE

SPOONS, FORKS, CUTLERY, AND
OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble
plated on pure Nickel Silver. The
patterns are reproductions from fine
old Silver models, and have all the
beauty of line and form of the Silver
of 150 years ago; apart from the Hall
Mark no difference is visible.

As far back as the 1862 Exhibition,
"Empire" Plate was awarded Prize
Medals for Excellence of Manufacture,
and it still retains that pre-eminence
for which it was noted fifty years ago,
whilst the prices are, quality con-
sidered, strictly moderate, either for
Cash, or on "The Times" System
of Monthly Payments of £1.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and
Jewellery.
No. 2, of Clocks, "Empire" Plate,
Cutlery, and Silver Articles
for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

GOODS & PASSENGER MOTORS.

SPECIALLY CONSTRUCTED FOR STEEP HILLS and ROUGH ROADS, STRONG, SIMPLE, RELIABLE and ECONOMICAL.

The 'Karrier' Patent Winding Gear and Mechanical Tipping Gear save time and money in rapid loading and unloading.



'A' Type 'Karrier' Lorry.

Sole Representatives for India :

SPEYER & CO.,

(Post Box No. 115)

2, New China Bazar Street,
CALCUTTA.

Cable Address :

"Voltage, Calcutta."

Cables Used :

A.B.C., 5th Edition,
International.
Lieber's.



'B' Type 'Karrier' Van.

Sole Colonial Representative :

A. W. ROSLINGTON,

Lloyd's Avenue House, Lloyd's Avenue,
LONDON, E.C.

Cable Address :—"Ezisleh, London."

Cables Used :—A.B.C., 5th Edition ; Western Union ; Lieber's and Private.

CLAYTON & CO., HUDDERSFIELD, LIMITED,

UNION WORKS,

68, VICTORIA ST.,

HUDDERSFIELD and LONDON, S.W., Eng.

Cables :—"Karriakar, Huddersfield and London."

Cables Used :—A.B.C., 5th Edition and Private.

'KARRIER' CARS FOR 1 TO 5 TONS.

VANS,
LORRIES,
MAIL VANS,
TIP WAGONS,
CHARS A BANCS,
MUNICIPAL MOTORS,
OFFICIAL CARS, Etc.

R.M.S.P.

**THE ROYAL MAIL
STEAM PACKET COMPANY**

(Royal Charter, dated 1839).

P.S.N.C.

**THE PACIFIC
STEAM NAVIGATION COMPANY**

(Royal Charter, dated 1840).

Frequent Regular Sailings from
SOUTHAMPTON, LIVERPOOL & GLASGOW,

TO

**BRAZIL, URUGUAY, ARGENTINA,
CHILE & PERU**

Via France, Spain, Portugal, Madeira, Canary
Islands, St. Vincent & Falkland Islands.

Fortnightly Sailings from **SOUTHAMPTON &
CHERBOURG** to

**WEST INDIES &
NEW YORK**

VENEZUELA, COLOMBIA, COLON, ANTILLA
(CUBA) & PACIFIC PORTS.

LONDON: 18, Moorgate St., E.C.
or 32, Cockspur St., S.W.
LIVERPOOL: 31, James St.



UNION-CASTLE LINE.

Royal Mail Service

TO

SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,
Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

**DONALD CURRIE & CO., Managers,
LONDON and SOUTHAMPTON.**

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICE

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim,) and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST. MARY AXE, LONDON, E.C.

30, MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c., &c.

d

ADVERTISEMENTS.

THE STANDARD ASBESTOS CEMENT TILE.

On the
War Office
List.

On the
Admiralty
List.



For Enduring Roofing Material
and Workmanship,

**ARCHITECTS, ENGINEERS
AND SURVEYORS**

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining
WALLS AND CEILINGS.

G. R. SPEAKER & CO.,
Contractors and Engineers,

Tel.: 13174 CENTRAL
Telegrams: "ETERNITILE."

29, MINCING LANE, E.C.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.

14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses {"COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; also to Captain Scott's Expedition, 1910.

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of **OPEN HEARTH**

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS,
And **STRUCTURAL STEEL WORK** for all purposes.

Speciality: **STEEL FRAME BUILDINGS,**
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
BSB 30	24 X 7 1/2	100	ASB 17a	10 X 4 1/8	25
" 29	20 X 7 1/2	89	BSB 16	9 X 7	58
ASB 29a	20 X 6 1/2	85	DLB 15a	9 1/2 X 3 1/2	23 1/2
BSB 28	18 X 7	75	BSB 15	9 X 4	21
ASB 28a	18 X 6	55			
BSB 27	16 X 6	62	" 14	8 X 6	35
" 26	15 X 6	59	" 13	8 X 5	28
			" 12	8 X 4	18
" 25	15 X 5	48	" 11	7 X 4	16
" 24	14 X 6	57	" 10	6 X 5	25
" 23	14 X 6	46	" 9	6 X 4 1/2	20
" 22	13 X 6	54	" 8	6 X 3	12
" 21	12 X 6	44	" 7	5 X 4 1/2	18
DLB 20a	12 X 5	39	" 6	5 X 3	11
BSB 20	12 X 5	32			
			" 5	4 1/2 X 1 1/2	6 1/2
" 19	10 X 8	70	" 4	4 X 3	9 1/2
" 18	10 X 6	42	" 3	4 X 1 1/2	5
DLB 17a	10 X 5	35	" 2	3 X 3	8 1/2
BSB 17	10 X 5	30	" 1	3 X 1 1/2	4

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; HALF-ROUNDS, 1 1/2 in. to 3 1/2 in.; SQUARES, 1/2 in. to 2 1/2 in.; FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

THE WORKINGTON

IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-Iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office 14, Sherborne Lane, King William Street, E.C.

Telegraphic Addresses "Mosbay, Workington," "Mosbay, London."

SOUTH AFRICA.

THE ABERDEEN DIRECT LINE

FROM

Beira, Durban and Cape Town

OFFERS SPECIALLY REDUCED FARES TO

CIVIL SERVANTS.

Full Particulars from the Agents:—

The Rhodesia Trading Co., Ltd., SALISBURY; The African Lakes Corporation, Ltd., ZOMBA; F. T. Hays, PRETORIA; Parker, Wood and Co., Ltd., MARITZBURG and JOHANNESBURG; Fichardt & Daniels, BLOEMFONTEIN; Thomson, Watson & Co., CAPE TOWN; and John T. Rennie & Sons, DURBAN.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1900.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.

THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins. by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.

ROYAL DOULTON POTTERIES, LONDON, S.E.

GOODLASS' "TRIUMPH" WASHABLE WATER PAINT

Is the very last word in Water Paint
and Superior to all.



Its Chief Points are:—

**MAXIMUM COVERING POWER,
DURABILITY AND PERMANENCY,
EASY WORKING, AND
MODERATION IN PRICE.**

OVER 60 STANDARD TINTS; ANY SHADE SUPPLIED TO ORDER.

Send for samples and prices to

**GOODLASS, WALL & CO., L^{td.},
LIVERPOOL.**

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED. *(Established 1894.)*

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	· £1,000,000.	Called-Up Capital	· £240,000.
Subscribed Capital	· £600,000.	Reserve	· £100,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. D. Q. Henriques, Esq.
W. F. Moore, Esq. Geo. W. Neville, Esq. Sir Owen Philipps, K.C.M.G. O. Harrison Williams, Esq.
Chief Manager: Leslie Couper.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown and Sherbro. **GOLD COAST** and **ASHANTI**—Axim, Seccondoo, Saltpond, Cape Coast Castle, Winneba, Accra, Takorah, Comassie.

LIBERIA—Monrovia. **NIGERIA**—Lagos, Ibadan, Abeokuta, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjenn, Aboussouma, Biama, Bonny, Bo, Dakar, Dunkwa, Egwanga, Fernando Po, Grand Bassam, Haouga, Half Assinie, Koko, Lahou, Loanda, Madelra, Matadi, Nswam, Obuassi, Opobo, Pendembu, Prestea, Segbwema, Teneriffe, Warri. New York Agency, 74 Wall Street.

BANKERS.

Bank of England. **London Joint Stock Bank, Limited.** **Parr's Bank, Limited.**

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

9/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

LAGOS



RAILWAY.

(SOUTHERN NIGERIA GOVERNMENT LINE.)

QUICKEST, SHORTEST, and MOST COMFORTABLE route to the TINFIELDS of NORTHERN NIGERIA.

A THROUGH rail service will be shortly inaugurated from the Port of Lagos, the capital of Southern Nigeria, to Minna (the junction with the Baro-Kano Railway, the time occupied in transit being about 30 hours. The weekly mail train, which will connect with both the outward and homeward mail steamers at Lagos, will consist of saloon carriages provided with every modern convenience, including comfortable sleeping accommodation, lavatories, and bathrooms, and fitted throughout with electric light and fans. A restaurant car will be a special feature in connection with this train.

2. The route is via:—

Abeokuta (60 miles)
Ibadan (123 miles)
Oshogbo (186 miles)
Ilorin (246 miles)

LAGOS LINE.

Jebba (306 miles)
Zungeru (429 miles)
Minna (467 miles)
Rigachikun (585 miles)

the present nearest point of the Nigerian railway system to the Tin Mines of Bauchi.

3. At Lagos, passengers and their luggage, &c., are conveyed to and from the Ocean Liner by a tender which lands them conveniently at the Customs wharf. Arrangements will be made to convey them from the Landing Stage to Iddo Station, the present terminus of the Lagos Railway, where they may at once entrain. The saving in time by this route will be from 8 to 10 days on each journey, in comparison to the Niger River route via Forcados.

4. Due notice will be given of the date of commencement of this service.

5. For further particulars apply to the General Manager, Lagos Railway, Lagos, or to the Crown Agents for the Colonies, Whitehall Gardens, S.W.

CHALLINER'S PATENT WORLD & GIANT TYRES

are proving their remarkable wearing qualities daily on motor vans, lorries, buses, etc., from 1 to 12 tons. In use by all the largest British and Foreign Railway Companies. Send for particulars of them and also

CHALLINER'S (Patent) DETACHABLE RIMS

for pneumatic tyres. Over 10,000 sets now giving complete satisfaction to users.

Prices from . . .

**The Shrewsbury & Challiner Tyre
Company, Ltd.,**

Ardwick,
MANCHESTER.

Page St.,
WESTMINSTER.

Valmar Rd.,
CAMBERWELL, S.E.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	£1,000,000.	Called-Up Capital	£240,000.
Subscribed Capital	£600,000.	Reserve	£100,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. D. Q. Henriques, Esq.
W. F. Moore, Esq. Geo. W. Neville, Esq. Sir Owen Philipps, K.C.M.G. O. Harrison Williams, Esq.
Chief Manager: Leslie Couper.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown and Sherbro. **GOLD COAST AND ASHANTI**—Axim, Seccondoo, Saltpond, Cape Coast Castle, Winneba, Accra, Tarkwa, Coomassie.

LIBERIA—Monrovia. **NIGERIA**—Lagos, Ibadan, Abeokuta, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjan, Abonnema, Biama, Bonny, Bo, Dakar, Dunkwa, Edwanga, Fernando Po, Grand Bassam, Haugha, Half Assinie, Koko, Lahou, Loonda, Madefa, Matadi, Nswam, Obuassi, Opobo, Pongemba, Prestea, Segbwema, Tengeriffe, Warri.
New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

PACIFIC CABLE.

The ALL BRITISH ROUTE to

AUSTRALIA, NEW ZEALAND, AND FIJI,

Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

LAGOS



RAILWAY.

(SOUTHERN NIGERIA GOVERNMENT LINE.)

QUICKEST, SHORTEST, and MOST COMFORTABLE route to the TINFIELDS of NORTHERN NIGERIA.

A THROUGH rail service will be shortly inaugurated from the Port of Lagos, the capital of Southern Nigeria, to Minna (the junction with the Baro-Kano Railway, the time occupied in transit being about 30 hours. The weekly mail train, which will connect with both the outward and homeward mail steamers at Lagos, will consist of saloon carriages provided with every modern convenience, including comfortable sleeping accommodation, lavatories, and bathrooms, and fitted throughout with electric light and fans. A restaurant car will be a special feature in connection with this train.

2. The route is via:—

Abeokuta (60 miles)
Ibadan (123 miles)
Oshogbo (186 miles)
Ilorin (246 miles)

LAGOS LINE.

Jebba (306 miles)
Zungeru (429 miles)
Minna (467 miles)
Rigachikun (585 miles)

the present nearest point of the Nigerian railway system to the Tin Mines of Bauchi.

3. At Lagos, passengers and their luggage, &c., are conveyed to and from the Ocean Liner by a tender which lands them conveniently at the Customs wharf. Arrangements will be made to convey them from the Landing Stage to Iddo Station, the present terminus of the Lagos Railway, where they may at once embark. The saving in time by this route will be from 8 to 10 days on each journey, in comparison to the Niger River route via Forcados.

4. Due notice will be given of the date of commencement of this service.

5. For further particulars apply to the General Manager, Lagos Railway, Lagos, or to the Crown Agents for the Colonies, Whitehall Gardens, S.W.

CHALLINER'S PATENT WORLD & GIANT TYRES

are proving their remarkable wearing qualities daily on motor vans, lorries, 'buses, etc., from 1 to 12 tons. In use by all the largest British and Foreign Railway Companies. Send for particulars of them and also

CHALLINER'S (Patent) DETACHABLE RIMS

for pneumatic tyres. Over 10,000 sets now giving complete satisfaction to users.

Prices from . .

**The Shrewsbury & Challiner Tyre
Company, Ltd.,**

Ardwick,
MANCHESTER.

Page St.,
WESTMINSTER.

Valmar Rd.,
CAMBERWELL, S.E.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

ADVERTISEMENTS.

Telegrams: "Crown, Cardiff."	THE	ESTABLISHED 1860.						
<h1 style="margin: 0;">CROWN PRESERVED COAL CO.,</h1> <h2 style="margin: 0;">CARDIFF.</h2> Limited.								
MANUFACTURERS AND SHIPPERS OF	<h1 style="margin: 0;">CROWN PATENT FUEL</h1>							
 	<p style="text-align: center;"><i>USED BY</i></p> <p>BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.</p> <p style="text-align: center;"><i>Specially adapted for tropical climates and stores for any length of time without deterioration.</i></p> <p>SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.</p>							
AWARDS.								
<table style="width: 100%; border: none;"> <tr> <td style="border: none;">London...1862 Liverpool... 1886</td> <td style="border: none;">Royal Naval 1891 & 1905</td> <td style="border: none;">Bordeaux ...1895</td> </tr> <tr> <td style="border: none;">Paris1875 Jamaica ... 1891</td> <td style="border: none;">Chicago1893</td> <td style="border: none;">Mexican ...1908</td> </tr> </table>			London...1862 Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895	Paris1875 Jamaica ... 1891	Chicago1893	Mexican ...1908
London...1862 Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895						
Paris1875 Jamaica ... 1891	Chicago1893	Mexican ...1908						
Works: CARDIFF and PORT TALBOT.								

Asbestos Fireproof Paints for the protection of Wood-work. All colours, for inside or outside work, and suitable for Tropical climates.

Pure Ferric Oxide Paints for Ironwork; of great durability and covering power. Will effectually preserve metallic surfaces from rust and corrosion in any climate.

ECONOMICAL.

DURABLE.

SANITARY.

Manufacturers:

**THE ASBESTOS & GENERAL PAINT CO., LTD.,
BIRMINGHAM.**

**“St. Martin’s-le-Grand”
THE POST OFFICE MAGAZINE.**

21st Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.

Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Griffith & Sons.

ADVERTISEMENTS.

INCORPORATED 1809.

NORTH BRITISH & MERCANTILE

— INSURANCE COMPANY. —

In which are vested the shares of
The Ocean Marine Insurance Co., Ltd.
Railway Passengers' Assurance Co.

FIRE

ONE HUNDRED
YEARS' RECORD

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

— ♦ —
IMPORTANT ARRANGEMENT
FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Total Funds £21,000,000.

Annual Income, £5,000,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1912.

Issued Quarterly.

LONDON:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.

Lacre

UTILITY MOTOR VEHICLES

10 CWT.
TO
5 TONS.



HINGE-SIDED LORRY,
SIAM.

LACRE COMMERCIAL VEHICLES.



TANK WAGON,
SIAMESE WAR OFFICE.

The best means of Transportation under the most trying and adverse climatic conditions.

VANS, LORRIES, CHAR-A-BANCS, MAIL-CARS, TIPPING WAGONS, TRANSPORT WAGONS, MUNICIPAL WAGONS, TOWER WAGONS, TANK WAGONS, OMNI-BUSES, SINGLE DECK 'BUSES, SHOOTING BRAKES, FIRE ENGINES, Etc.



2 TON PLATFORM
LORRY.

NOTE.

THE LACRE COMPANY
ARE ON THE OFFICIAL
LIST OF THE
CROWN AGENTS FOR
THE COLONIES.



2 TON LOOSE TOP
SHEET VAN.

RECENT
ORDERS RECEIVED FROM
NEW SOUTH WALES, VICTORIA,
QUEENSLAND, SOUTH
AUSTRALIA, WESTERN
AUSTRALIA, NEW ZEALAND,
SOUTH AFRICA, RUSSIA,
JAPAN, TASMANIA, SIAM,
CANADA, AUSTRIA,
GERMANY, ETC.



5 TON COLONIAL LORRY.

LACRE VEHICLES
ARE
SPECIALLY CONSTRUCTED
FOR ROUGH AND HILLY
ROADS, AND ARE THEREFORE
PARTICULARLY ADAPTED
FOR
COLONIAL REQUIREMENTS.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

ADVERTISEMENTS.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, **Salaries** drawn, **Family** and other remittances made, and
general **Banking** facilities granted.

BAGGAGE, &c., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

"The African" Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD., have made a careful study of the **Wines** and
Spirits most suited for the **Tropics**. Their selected **Wine List**
will be sent on application. All goods are well packed for
export.

The "Handy-Cosy" Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become
shaky. It is very comfortable to sleep on. It can be changed into a hammock
in twenty seconds.

Very suitable for Ambulance purposes : can be used as a STRETCHER.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				£	d.
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.**

MANUFACTURERS OF

**Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).**

**Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.**

Galvanized Wire Netting.

**Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.**

*** CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS**

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

	s.	d.
United Kingdom - - -	6	6
Canada - - -	8	8
Other Colonies and Abroad -	13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA,
AND SOUTH AMERICA.**

MANUFACTURERS OF

**Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).**

**Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.**

Galvanized Wire Netting.

**Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.**

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

**AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.**

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY ^{AND} FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.
LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.
BUENOS AIRES, 1910.
ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—2285, Victoria.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. V.

APRIL, 1912.

No. 4.

CONTENTS.

EDITORIAL NOTES	281
A GERMAN VIEW OF NEW ZEALAND	297
THE DEFENCE OF SOUTH AFRICA	303
PENSION SCHEMES FOR CIVIL SERVANTS	307
REVIEWS AND NOTICES	312
BUSINESS NOTES	325
RAILWAY AND HARBOUR NOTES	338
MEDICAL NOTES	348
COLONIAL STAMPS	357
RECENT APPOINTMENTS	360
COLONIAL OFFICERS ON LEAVE OF ABSENCE	361
NEW RULES AS TO LEAVE &c., IN HONG KONG	371

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Lining Walls and Ceilings—
Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{1}{8}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

BELL'S POILITE

Asbestos Cement Tiles and Sheets

(Avoid all Substitutes)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS

These TILES contain a Permanent Indestructible Binding Material.
The SHEETS form the Best Material for Lining Walls and Ceilings—
Fire, Damp and Vermin Proof.



Each sheet is 4 ft. x 8 ft. and 1/2 in. thick.
(11 lb. weight)

UNIQUE SPECIALITIES:

ROOFING TILES 18 in. thick for
laid at 42 1/2 in. centres, for
Engineering Buildings and large
Halls.

SHEETS in any size up to
18 ft. x 4 ft. from 1/2 in. thick.

VERMIN PROOF for RAIL
and TRAM CAR CONSTRUCTION.
2 ft. x 4 ft.

COMPRESSION SHEETS, smooth
and thin plates, 2 ft. x 4 ft. and
2 in. thick.

By Special Appointment Architects and Engineers are invited to view
Samples at the Public Exhibition.

Colonial Agents are specially invited to send for all Particulars.

Manufactured in England. First and Best Quality.

BELL'S UNITED ASBESTOS CO. LTD.,
SMITHWANA STREET, LONDON E.C.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: Gerr. 3282.

Code:—A.B.C. 4th and 5th Editions.

Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

ALBION

UTILITY MOTORS

16 H.P.—32 H.P.
15 cwt. to 3 ton loads.

OFFICIAL CARS.
MAIL WAGGONS.
CHAR - A - BANCS.



32 H.P. ALBION.



16 H.P. ALBION.

VANS.
TIPPING WAGGONS.
LORRIES.

Extract from letter received from :

General Post Office, Wellington, New Zealand, 7th June, 1910.

"Since the (Albion) Lorry has been brought into use (October, 1909) only one Mail connection has been missed ; the expenditure on repairs has been 9/-

Trial has shown that the 'Albion' has been very reliable."

(Sgd.) D. ROBERTSON, Secretary.

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

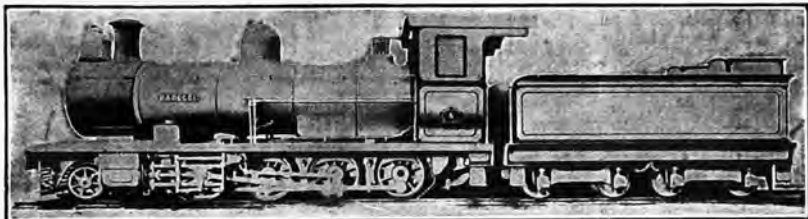
Codes: A.B.C., 5th Edition.
and Leibers.

Telegrams:
"Automobile, Glasgow."

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)

Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

**For Locomotive, Marine and Stationary
Engine Lubrication.**

For Railway Carriage and Wagon Lubrication.

**For Motor Carriage and Motor Boat
Lubrication.**

**For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.**

**Special Oils and Greases for Tropical use
and onerous conditions.**

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

THORNYCROFT



40 ft. Shallow Draught Paraffin Motor Launch
for Tropical Service.

Motors

For Marine or
Stationary purposes,
using Petrol (Benzine)
or Paraffin (Kerosene)
up to 120 b.h.p.

Crude Oil Diesel
Engines up to 6,000
b.h.p.

Motor Launches

Any Type—Any Service—Any
purpose.
Wood or Steel, from 20 ft. upwards.

Steam Vessels

Of all descriptions—Screw, Stern-
wheel or Paddle-wheel propulsion.
Shallow draft a Speciality.

Motor Vehicles

AND

Touring Cars

For Colonial Transport,
Mail, Passenger or
Official Service.

Write for Marine
Motor or Motor
Vehicle Catalogues.



16 H.P. 2-Cylinder 2-Ton Petrol Lorry.

JOHN I. THORNYCROFT & CO., LIMITED,
CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams: "THORNYCROFT, LONDON."

Codes A.B.C. (5th), &c., &c.

BENSON'S



"THE VILLA" Solid Oak Case, with Lift-out Trays, containing 110 pieces of "Empire" Plate and Sheffield Cutlery.

A Service for 12 persons from **£12 10s.**
(Others £3 to £100.)

"EMPIRE" ELECTRO or SILVER PLATE

SPOONS, FORKS, TABLE CUTLERY, AND OTHER HOUSEHOLD WARE.

"EMPIRE" PLATE is treble plated on pure Nickel Silver. The patterns are reproductions from fine old Silver models, and have all the beauty of line and form of the Silver of 150 years ago; apart from the Hall Mark no difference is visible.

As far back as the 1862 Exhibition, "Empire" Plate was awarded Prize Medals for Excellence of Manufacture, and it still retains that pre-eminence for which it was noted fifty years ago, whilst the prices are, quality considered, strictly moderate, either for Cash, or on "The Times" System of Monthly Payments of £1.

PRICE
LISTS
FREE.

No. 1, of Watches, Chains and Jewellery.
No. 2, of Clocks, "Empire" Plate, Cutlery, and Silver Articles for Presents.

Mention "Colonial Office Journal."

62 & 64, LUDGATE HILL, E.C.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
DUPLEX
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

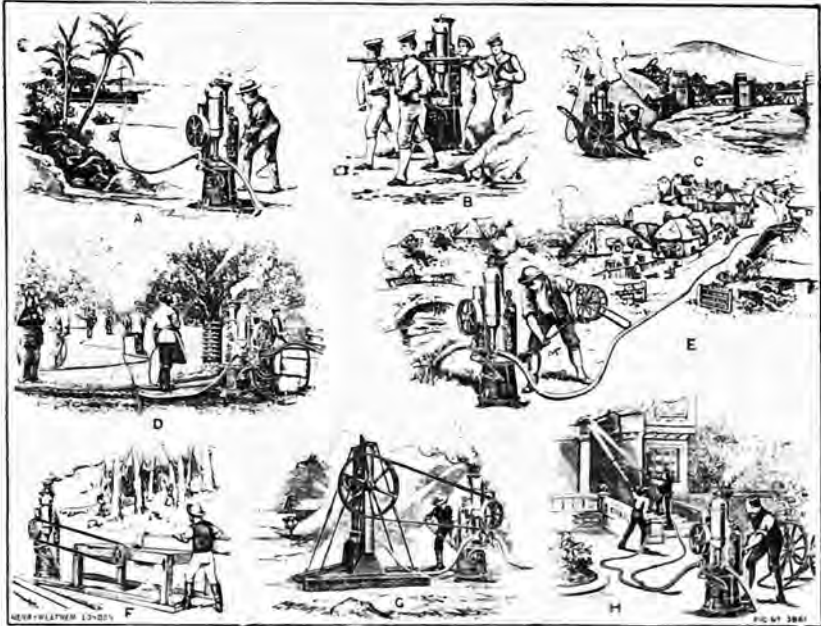
**EDMUNDSONS LTD., STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."
A.B.C. Code, 5th Edition.

MERRYWEATHERS'

"Valiant" Steam Pump and Boiler

AND ITS MANY USES.



A—Watering Ships.

B—Carried by 4 men.

C—Watering Troops at Tugela River.

D—Fruit Spraying.

E—Village Fire Engine.

F—Cutting Timber.

G—Driving Stamp Battery.

H—Extinguishing Fire.

FOR "UP-COUNTRY" WHERE RAILS AND ROADS DO NOT EXIST.

Weights only 6½ cwts.

Will pump through 3 miles of piping.

Strong, Simple, Efficient.

WRITE FOR PAMPHLET 733 M.C.O.

MERRYWEATHERS' PATENT LIGHT SECTIONAL BOILERS.

Invaluable for Prospectors.

FULL PARTICULARS ON APPLICATION.

MERRYWEATHER & SONS,

63, Long Acre, W.C.

Works . . . GREENWICH, S.E., LONDON.

ADVERTISEMENTS.

R.M.S.P. & P.S.N.C.

From SOUTHAMPTON, LIVERPOOL, & GLASGOW, to

SOUTH AMERICA,

Calling at BRAZIL, URUGUAY, ARGENTINA, CHILE & PERU.

Via France, Spain, Portugal, Canary Is, St. Vincent & Falkland Is.

FORTNIGHTLY

From SOUTHAMPTON & CHERBOURG to
WEST INDIES & NEW YORK,

Venezuela, Colombia, Colon, Antilla (Cuba)
& Pacific Ports.

Cruises-de-luxe to

**NORWAY, THE BALTIC, HOLY LAND,
EGYPT, MEDITERRANEAN, &c.**

By Ocean Yachting Steamer "ARCADIAN."

JUNE/NOV.

Fare from £1 a day.

The Royal Mail Steam Packet Company,
The Pacific Steam Navigation Company,
LONDON: 18, Moorgate St., E.C.
or 32, Cockspur St., S.W.
LIVERPOOL: 31, James St.



UNION-CASTLE LINE.

Royal Mail Service

TO

SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,

Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

THE HEAD OFFICE OF THE COMPANY,

At 3 & 4, FENCHURCH ST., LONDON, E.C.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICE

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4 ST. MARY AXE, LONDON, E.C.

30, MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c., &c.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL.**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; Captain Scott's Expedition, 1910, and Dr. Mawson's Expedition, 1911.

THE STANDARD ASBESTOS CEMENT TILE.

On the
War Office
List.

On the
Admiralty
List.

For Enduring Roofing Material
and Workmanship,

**ARCHITECTS, ENGINEERS
AND SURVEYORS**

are respectfully recommended to
SPECIFY

SPEAKER'S ETERNIT.

NO OTHER ROOFING TILE IS ETERNIT (Regd.)

ETERNIT SHEETS.

The best material for Lining
WALLS AND CEILINGS.



G. R. SPEAKER & CO.,
Contractors and Engineers,

Tel.: 18174 CENTRAL.
Telegrams: 'ETERNITILE.'

29, MINCING LANE, E.C.

Manufacturers of OPEN HEARTH

Speciality: STEEL FRAME BUILDINGS,
FOR BOTH HOME AND ABROAD.

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ROUNDS, $\frac{1}{2}$ in. to 2 $\frac{1}{2}$ in.; HALF-ROUNDS, 1 $\frac{1}{2}$ in. to 3 $\frac{1}{2}$ in.; SQUARES, $\frac{1}{2}$ in. to 2 $\frac{1}{2}$ in.
FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering,
Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

GOODLASS' "SWANSDOWN"



WHITE ENAMEL

*FOR THE HIGHEST
CLASS OF
DECORATIVE WORK*

is the very finest Enamel manufactured and produces a
surface like porcelain.

Sole Manufacturers :

GOODLASS, WALL & CO., L^{td}.
LIVERPOOL.

THE WORKINGTON
IRON AND STEEL COMPANY, LIMITED,
Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-Iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office 14, Sherborne Lane, King William Street, E.C
Telegraphic Addresses "Mosbay, Workington," "Mosbay, London."

CHALLINER'S PATENT WORLD & GIANT TYRES

are proving their remarkable wearing qualities daily on motor vans, lorries, 'buses, etc., from 1 to 12 tons. In use by all the largest British and Foreign Railway Companies. Send for particulars of them and also

CHALLINER'S (Patent) DETACHABLE RIMS

for pneumatic tyres. Over 10,000 sets now giving complete satisfaction to users.

Prices from . . .

**The Shrewsbury & Challiner Tyre
Company, Ltd.,**

Ardwick,
MANCHESTER.

Page St.,
WESTMINSTER.

Valmar Rd.,
CAMBERWELL, S.E.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE."

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT.

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

LAGOS



RAILWAY.

(SOUTHERN NIGERIA GOVERNMENT LINE.)

**QUICKEST, SHORTEST, and MOST COMFORTABLE route
to the TINFIELDS of NORTHERN NIGERIA.**

A THROUGH rail service is in operation from the Port of Lagos, the capital of Southern Nigeria, to Minna (the junction with the Baro-Kano Railway), the time occupied in transit being about 30 hours. The weekly mail train, which connects with both the outward and homeward mail steamers at Lagos, consists of saloon carriages provided with modern conveniences, including a restaurant car, comfortable sleeping accommodation, lavatories, and bathrooms, and fitted throughout with electric light and fans.

2. The route is *via* :—

Abeokuta (60 miles)
Ibadan (123 miles)
Oshogbo (186 miles)
Ilorin (246 miles)

Jebba (306 miles)
Zungeru (429 miles)
Minna (467 miles)
Rigachikun (585 miles)

Zaria (622 miles)

the present nearest point of the Nigerian railway system to the Tin Mines of Bauchi.

3. At Lagos, passengers and their luggage, &c., are conveyed to and from the Ocean Liner by a tender which lands them conveniently at the Customs wharf. Arrangements are made to convey them from the Landing Stage to Iddo Station, the present terminus of the Lagos Railway, where they may at once entrain. The saving in time by this route is from 8 to 10 days on each journey, in comparison to the Niger River route *via* Forcados.

4. For further particulars apply to the Traffic Superintendent, Lagos Railway, Lagos, or to the Crown Agents for the Colonies, Whitehall Gardens, London, S.W.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

ADVERTISEMENTS.

BANK OF BRITISH WEST AFRICA, LIMITED. *(Established 1894.)*

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Southern Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	• £1,000,000.	Called-Up Capital	• £240,000.
Subscribed Capital	• £800,000.	Reserve	• £100,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G.	Henry Coke, Esq.	D. Q. Henriques, Esq.
W. F. Moore, Esq.	Geo. W. Neville, Esq.	Sir Owen Phillips, K.C.M.G.
	Chief Manager: Leslie Cooper.	O. Harrison Williams, Esq.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown and Sherbro. **GOLD COAST** and **ASHANTI**—Axim, Seccondoo, Saltpond, Cape Coast Castle, Winnebah, Accra, Tarquah, Coomassie.

LIBERIA—Monrovia. **NIGERIA**—Lagos, Ibadan, Abeokuta, Zaria, Forcados, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Aldjean, Abouneema, Biama, Bonny, Bo, Dakar, Dunkwa, Edwanga, Fernando Po, Grand Bassam, Haugha, Half Assinie, Koko, Lahou, Loanda, Madeira, Matadi, Newam, Obassai, Opobo, Pseudembu, Prestea, Segbwema, Tenerife, Warri.

New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

CANADIAN PACIFIC

OCEAN AND RAIL SERVICES TO AND THROUGH CANADA.

TRANSATLANTIC—Fast Line to Canada from Liverpool. Only four days open sea by "Empress" Steamers. Unsurpassed Service at Moderate Fares.

TRANSCANADA—Luxurious Train Service from Atlantic to Pacific.

TRANS-PACIFIC—"Empress" Steamers to Japan and China. Canadian-Australian Mail Service via Vancouver to Australia and New Zealand.

APPLY FOR PARTICULARS TO

CANADIAN PACIFIC RAILWAY, 62-65, Charing Cross, London, S.W.

OR LOCAL AGENTS EVERYWHERE.

CROSSLEY & CO. LTD. *(Established 1845.)*

ADVERTISING CONTRACTORS.

Schemes prepared, without charge, for making known the advantages of any Colony inviting Emigration. Lectures arranged.

Advice given gratis on all forms of advertising in Great Britain, the Colonies or Foreign Countries.

Advertisements received for and inserted in all classes of Newspapers, Periodicals and Magazines at minimum rates.

Correspondence invited on all questions relating to newspaper publicity.

Offices: 57, COLEMAN STREET, LONDON, E.C.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

ADVERTISEMENTS.

Asbestos Fireproof Paints for the protection of Wood-work. All colours, for inside or outside work, and suitable for Tropical climates.

Pure Ferric Oxide Paints for Ironwork; of great durability and covering power. Will effectually preserve metallic surfaces from rust and corrosion in any climate.

ECONOMICAL

DURABLE

SANITARY

Manufacturers :

**THE ASBESTOS & GENERAL PAINT CO., LTD.,
BIRMINGHAM.**

Telegrams : "Crown, Cardiff."

THE

ESTABLISHED 1860.

**CROWN PRESERVED COAL CO.,
CARDIFF.** Limited.

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL

USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS



TRADE MARK



AWARDS.

London...1862 | Liverpool... 1866 | Royal Naval 1891 & 1905 | Bordeaux ...1895
Paris1875 | Jamaica ... 1891 | Chicago1893 | Mexican ...1906

Works : CARDIFF and PORT TALBOT.

"St. Martin's-le-Grand"
THE POST OFFICE MAGAZINE.

22nd Year of Publication. & Published Quarterly.

DEVOTED TO

POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.

Post Free.

N.B.—Any profit realising after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.O.

ADVERTISEMENTS.

INCORPORATED 1809.

NORTH BRITISH & MERCANTILE

— INSURANCE COMPANY. —

In which are vested the shares of
The Ocean Marine Insurance Co., Ltd.
Railway Passengers' Assurance Co.

FIRE

**ONE HUNDRED
YEARS' RECORD**

LIFE

MARINE

ANNUITIES

BURGLARY

ACCIDENTS

During the past One hundred years the *North British and Mercantile Insurance Company* has built up and maintained a world-wide reputation for promptitude and liberality in dealing with all claims made under its policies. Since its establishment in 1809 the total claims paid by the Company have
EXCEEDED 60 MILLION POUNDS

WORLD WIDE POLICIES

Giving exceptional freedom of Travel issued on specially favourable terms.

IMPORTANT ARRANGEMENT FOR

NAVAL AND MILITARY OFFICERS

TO Naval and Military Officers who are stationed in the United Kingdom, or at any Station in the Mediterranean, Canada, British South Africa, Bermuda, Australia, or New Zealand, and who are not under orders for service elsewhere, **The North British and Mercantile Insurance Company** offer, in time of peace, at the ordinary rate of premium for Civilians, Policies of Assurance which, from the date of issue, are free of all restrictions—the Assured being at liberty to proceed to, and reside in, any part of the World, and to engage in active service without payment of any additional premium. The Policies are issued in the participation class—but participation in profits does not commence until the date of permanent retirement from the Service.

An Officer holding such a Policy can never under any circumstances be called upon to pay an extra premium.

Total Funds £21,000,000.

Annual Income, £5,000,000.

The North British and Mercantile Insurance Company,

61, Threadneedle Street, LONDON, E.C.

64, Princes Street, EDINBURGH.

West End . . . 7, Waterloo Place, S.W.

THE
COLONIAL OFFICE
JOURNAL

APRIL, 1912.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.

Lacre

UTILITY MOTOR VEHICLES

10 CWT.
TO
6 TONS.



2 TON PLATFORM LORRY,
VICTORIA.

LACRE COMMERCIAL VEHICLES.



TANK WAGON,
SIAMESE WAR OFFICE.

SPECIAL COLONIAL FEATURES :

EXTRA LARGE GROUND CLEARANCE. STEERING ARM OVER AXLE. SPECIALLY LARGE RADIATOR. LARGE DIAMETER CAST STEEL WHEELS IF REQUIRED. HIGH POWER ENGINES. POWERFUL BRAKES. EXTRA LARGE TURNING LOCK. SIMPLICITY OF DESIGN.

Lacre vehicles are specially constructed for rough and hilly roads, and are therefore particularly adapted for Colonial requirements.



LOOSE TOP SHEET VAN,
BUENOS AIRES.

NOTE.

THE LACRE COMPANY ARE ON THE OFFICIAL LIST OF THE CROWN AGENTS FOR THE COLONIES.



SOLID TOP VAN,
JOHANNESBURG.

VANS, LORRIES,
MAIL CARS,
TIP WAGONS,
TRANSPORT
WAGONS,
CHAR-A-BANCS,
MUNICIPAL
WAGONS,
TANK WAGONS,
ETC.



5 TON COLONIAL LORRY,
NEW SOUTH WALES.

LACRE VEHICLES HAVE BEEN SHIPPED TO :
NEW SOUTH WALES, VICTORIA,
QUEENSLAND, SOUTH
AUSTRALIA, WESTERN
AUSTRALIA, NEW ZEALAND,
SOUTH AFRICA, SOUTH
AMERICA, RUSSIA,
JAPAN, TASMANIA, SIAM,
FEDERATED MALAY STATES,
CANADA, AUSTRIA,
GERMANY, ETC.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

Awarded Gold Medal, Paris, 1905, Grand Prix, Brussels, 1910.

SEMI **DAN** DIESEL

Marine Oil-Engines

Petroleum and Crude Oil Fuels.

The best for Native and Unskilled Hands.

**NO ELECTRIC IGNITION. NO CARBURETTER.
NO DELICATE PARTS.**

**In use in the West Indies, Honduras, South America, India, Ceylon,
Burma, Penang, South and West Africa, etc.**

*Contractors
to the
Crown
Agents
for the
Colonies.*



*On
British
Admiralty
List,
etc.*

**SPECIALISTS IN
STEEL MOTOR LIGHTERS
SHALLOW DRAUGHT VESSELS**

**and Launches of all descriptions, in sections or pieces
for re-erection abroad.**

**Dan Marine Motor Shipbuilding & Engineering Co. Ltd.
IPSWICH, ENGLAND.**

Cable Address:—"Albacore, Ipswich." Code A.B.C., 5th Ed.

G. GARNETT & SONS, Ld.,

WORSTED & WOOLLEN MANUFACTURERS,
APPERLEY BRIDGE, YORKSHIRE,
ENGLAND.

MANUFACTURERS OF
PURE INDIGO SERGES,
SUNPROOF SUITINGS
AND
FOREIGN SERVICE FLANNELS.

CONTRACTORS TO ALL
H.M. GOVERNMENT OFFICES.

THE HOME OF
"GARBIRNETT" AND
"GARBIRCORD" REGD.

The ideal cloth for hard wear, sports and all out-door purposes; made in white, cream, khaki, drabs, and all other up to date shades. Remarkable for strength and lightness. Rainproofed.

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &C., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

***Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.***

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

“The African” Liqueur Scotch and Irish Whisky,
SPECIALLY BLENDED FOR WAY & CO. LTD.

WAY & CO. LTD., have made a careful study of the Wines and
Spirits most suited for the Tropics. Their selected Wine List
will be sent on application. All goods are well packed for
export.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

It is a folding Portable Bed—Strong and Rigid. It does not squeak or become
shaky. It is very comfortable to sleep on. It can be changed into a hammock
in twenty seconds.

Very suitable for Ambulance purposes : can be used as a **STRETCHER.**

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

			s.	d.
United Kingdom	-	-	6	6
Canada	-	-	8	8
Other Colonies and Abroad	-		13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
208-209, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.
BLACK SHEETS.
WIRE NETTING.
CONSTRUCTIONAL WORK.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

			s.	d.
United Kingdom	-	-	6	6
Canada	-	-	8	8
Other Colonies and Abroad	-		13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

JOHN LYSAGHT LIMITED.
BRISTOL.

GALVANIZED SHEETS.

BLACK SHEETS.

WIRE NETTING.

CONSTRUCTIONAL WORK.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

SAXBY ^{AND} FARMER
LIMITED.

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

Wrought Iron and other Masts for Electric Light.

CONTRACTORS TO H.M. GOVERNMENT.

Gold Medals and Highest Awards.

PARIS, 1867, 1878, 1878, 1878,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.
LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.
BUENOS AIRES, 1910.
ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—2285, Victoria.
A.B.C. (5th Edition) and A1 Codes.





Exempted 1984

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. VI.

JULY, 1912.

No. 1.

CONTENTS.

EDITORIAL NOTES	I
TENDENCIES OF MODERN LEGISLATION	24
REVIEWS AND NOTICES	31
BUSINESS NOTES	38
RAILWAY AND HARBOUR NOTES	53
CAVENDISH BRIDGE, MAURITIUS	59
MEDICAL NOTES	64
COLONIAL STAMPS	70
RECENT APPOINTMENTS	72
COLONIAL OFFICERS ON LEAVE OF ABSENCE	73

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Forming Walls and Lining
Ceilings—Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{5}{8}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Forming Walls and Lining
Ceilings—Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 18 in. x 18 in.,
12 in. x 12 in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{5}{16}$ in. thick.

VENEERED SHEETS for Rail
and Tram Car Construction,
4 ft. x 4 ft.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for all Public Health Work. Retains its germicidal power in the presence of organic matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those who use "Izal" enjoy a happy freedom from many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

TORBAY PAINT.

THE MOST RELIABLE
PAINT FOR
TROPICAL CLIMATES.

One Quality Only.

The Best Paint for lasting, durability, and
covering power.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

The High Reputation

of the Albion is the direct result of our unique experience as the largest Manufacturers of Motor Vans in the British Empire. Every Albion leaving our Works is the product of 11 years' concentrated study of Motor Vehicle construction.



16 to 32 H.P.



15 to 70 Cwt. Loads.

ALBION

UTILITY MOTORS.

OFFICIAL CARS.
LORRIES.
VANS.

MAIL WAGGONS.
TIPPING WAGGONS.
CHARS-À-BANCS.



ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

Codes: A.B.C. 5th Edition,
and Liebers.

Telegrams:
"Automobile, Glasgow."

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)
Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

For Locomotive, Marine and Stationary
Engine Lubrication.

For Railway Carriage and Wagon Lubrication

For Motor Carriage and Motor Boat
Lubrication.

For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.

Special Oils and Greases for Tropical use
and onerous conditions.

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

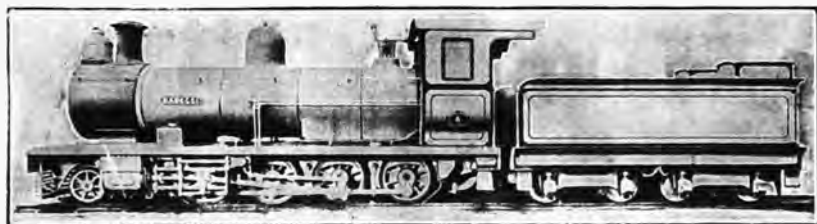
VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

THORNYCROFT

COMMERCIAL MOTOR BOATS,
Any Type—Any Service—Any Purpose.



Traders' Shallow Draught Motor Launch, for Service in China.

PASSENGER or CARGO BOATS
UP TO 2,000 TONS.

Shallow Draught, Screw, Stern-Wheel or
∴ ∴ Paddle-Wheel Propulsion. ∴ ∴

COMMERCIAL MOTOR VEHICLES

TO CARRY FROM 10 CWT. TO 4 TONS.

Specially Suitable for Colonial
Transport, Mail, Passenger
or Official Service.



30 H.P. Type "D" 4 Cylinder 2 Ton Lorry.

Write for Marine Motor or Motor Vehicle Catalogue.

JOHN I. THORNYCROFT & Co., Limited,
CAXTON HOUSE, WESTMINSTER, LONDON, S.W.

Telegrams: "THORNYCROFT, LONDON."

Codes A.B.C. (5th), &c., &c.

R.M.S.P. & P.S.N.C.

From Southampton, Liverpool, & Glasgow, to

SOUTH AMERICA,

BRAZIL, URUGUAY, ARGENTINA, CHILE & PERU.

Via France, Spain, Portugal, Madeira, Canary Is., St. Vincent & Falkland Is.

FORTNIGHTLY

From Southampton & Cherbourg to

WEST INDIES & NEW YORK,

Venezuela, Colombia, Colon, Antilla (Cuba)
& Pacific Ports.



"ARCADIAN" Cruises-de-luxe to
NORWAY, The Baltic, HOLY LAND, EGYPT,
MEDITERRANEAN, &c.

JUNE to NOV.

Fare from £1 a day.

**The Royal Mail Steam Packet Company,
The Pacific Steam Navigation Company,**

LONDON: 18, Moorgate St., E.C., or 32, Cockspur St., S.W.
LIVERPOOL: 31, James St.

UNION-CASTLE LINE.

Royal Mail Service

TO

SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,

Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

THE HEAD OFFICE OF THE COMPANY,

At 3 & 4, FENCHURCH ST., LONDON, E.C.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4, ST. MARY AXE, LONDON, E.C.

30 MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c. &c.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL.**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; Captain Scott's Expedition, 1910, and Dr. Mawson's Expedition, 1911.

"St. Martin's-le-Grand"

THE POST OFFICE MAGAZINE.

22nd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.

Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of OPEN HEARTH

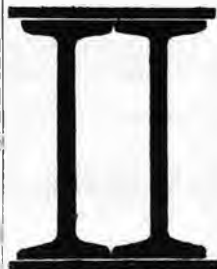
ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS,
And **STRUCTURAL STEEL WORK** for all purposes.

Speciality: STEEL FRAME BUILDINGS,
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.



Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
B8B 30	24 X 7 1/4	100	ASB 17 1/2	10 X 4 1/8	25
" 29	20 X 7 1/4	89	B8B 16	9 X 7	58
ASB 28 1/2	20 X 6 1/2	65	DLB 15 1/2	9 1/2 X 3 1/2	23 1/2
B8B 28	18 X 7	75	B8B 15	9 X 4	21
ASB 28 1/4	18 X 6	55			
B8B 27	16 X 6	62	" 14	8 X 6	35
" 26	15 X 6	59	" 13	8 X 5	28
			" 12	8 X 4	18
" 25	15 X 5	42	" 11	7 X 4	16
" 24	14 X 6	57	" 10	6 X 5	25
" 23	14 X 6	46	" 9	6 X 4 1/2	20
" 22	12 X 6	54	" 8	6 X 3	12
" 21	12 X 6	44	" 7	5 X 4 1/2	18
DLB 20 1/2	12 X 5	39	" 6	5 X 3	11
B8B 20	12 X 5	32			
			" 5	4 1/2 X 1 1/2	6 1/2
" 19	10 X 8	70	" 4	4 X 3	9 1/2
" 18	10 X 6	42	" 3	4 X 1 1/2	5
DLB 17 1/2	10 X 5	35	" 2	3 X 3	5 1/2
B8B 17	10 X 5	30	" 1	3 X 1 1/2	4



20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; HALF-ROUNDS, 1 1/2 in. to 3 1/2 in.; SQUARES, 1/2 in. to 2 1/2 in. FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

ADVERTISEMENTS.

THE WORKINGTON

IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-Iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office: 14, Sherborne Lane, King William Street, E.C.

Telegraphic Addresses: "Mosbay, Workington," "Mosbay, London."

GOODLASS' "SWANSDOWN"

WHITE ENAMEL



**FOR THE HIGHEST
CLASS OF
DECORATIVE WORK**

**is the very finest Enamel manufactured and produces a
surface like porcelain.**

Sole Manufacturers:

**GOODLASS, WALL & CO., L^{td}.
LIVERPOOL.**

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

CHALLINER'S PATENT WORLD & GIANT TYRES

are proving their remarkable wearing qualities daily
on motor vans, lorries, 'buses, etc., from 1 to 12 tons.
In use by all the largest British and Foreign Railway
Companies. Send for particulars, and also for

CHALLINER'S (Patent) DETACHABLE RIMS

for pneumatic tyres. Over 10,000 sets now giving
complete satisfaction to users.

Prices from . .

**The Shrewsbury & Challiner Tyre
Company, Ltd.,**

Ardwick,
MANCHESTER.

Page St.,
WESTMINSTER.

Valmar Rd.,
CAMBERWELL, S.E.

**THE TINFIELDS OF
via THE LAGOS**



**NORTHERN NIGERIA.
(STATE) RAILWAY.**

1. An all rail route is now open for both goods and passenger traffic from the port of Lagos, the capital of Southern Nigeria, to Rahama, the present terminus of the BAUCHI Light Railway, a total distance of 712 miles. A weekly BOAT EXPRESS connects with both the outward and homeward MAIL STEAMERS at LAGOS, and consists of saloon carriages provided with modern conveniences, including a Restaurant Car, comfortable sleeping accommodation, lavatories and bathrooms, and fitted throughout with electric light and fans. The train runs through to Minna Junction (467 miles) in about 30 hours, and passengers tranship there to the Baro-Kano Railway.

2. At Lagos passengers and their luggage, etc., are conveyed to and from the Ocean Liner by a tender which lands them at Iddo Wharf, where the Boat Express is drawn up. All meals and refreshments can be had in the Restaurant Car throughout the journey to Minna. The saving in time by the all rail route is from 8 to 10 days on each journey in comparison with the old Niger River route via Forcados.

3. The passenger fares from Lagos to Rahama are as under:—

1st Class	...	...	£9 14 7
3rd .. (Servants only)	...	...	0 19 0

There is no restriction on the quantity of baggage which can be taken by passengers by the Boat Express.

The rates to Zaria are as under:—

First 2 cwts.	...	Free.
Next 20 ..	...	9s. 3d. per cwt.
.. 20 ..	...	13s. 6d. ..

Any baggage in excess of 2 tons 2 cwts. will be charged at excess luggage rates.

On the Bauchi Light Railway the luggage rates from Zaria to Rahama are:—

2 cwts.	...	Free.
Any baggage in excess of 2 cwts.	5s. 11d. per cwt.	

4. All goods are carried from Iddo (Lagos) to Zaria Rahama and Kano at the same rates as from Forcados by the river and rail route, and every facility is provided at Iddo for the handling of heavy and bulky articles of machinery, etc.

The rate per ton for machinery from Lagos to Rahama or from Forcados to Rahama is £18 3s. 5d. and for tin ore from Rahama to Lagos or Forcados £13 17s. 6d.

For further particulars apply to—

**Traffic Superintendent,
Lagos Railway, Lagos;**

**Traffic Superintendent,
Baro-Kano Railway, Minna;**

**Crown Agents for the Colonies,
Whitehall Gardens, London, S.W.**

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	- £1,000,000.	Called-Up Capital	- £240,000.
Subscribed Capital	- £600,000.	Reserve	- £100,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. D. Q. Henriques, Esq.
W. P. Moore, Esq. Geo. W. Neville, Esq. Sir Owen Philipps, K.C.M.G. O. Harrison Williams, Esq.
Chief Manager: Leslie Cooper.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). GAMBIA—Bathurst. SIERRA LEONE—Freetown and Sherbro. GOLD COAST and ASHANTI—Axim, Secondee, Saltpond, Cape Coast Castle, Winnebah, Accra, Tarquah, Coomassie.

LIBERIA—Monrovia. FRENCH IVORY COAST—Grand Bassam, Assinie. NIGERIA—Lagos, Ibadan, Abeokuta, Zungeru, Zaria, Forcados, Burutu, Warri, Onitsha, Lokoja, Calabar.
Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonemma, Benin, Brass, Buguma, Blama, Bonny, Bo, Dakar, Degama, Dunkwa, Egwanga, Fernando Po, Hanga, Half Assinie, Koko, Lahou, Loanda, Madeira, Matadi, Nswam, Obuassi, Opobo, Pendembu, Prestea, Sapelli, Segbwema, Tenerife, Warri.
New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

Asbestos Fireproof Paints for the protection of Wood-work. All colours, for inside or outside work, and suitable for Tropical climates.

Pure Ferric Oxide Paints for Ironwork; of great durability and covering power. Will effectually preserve metallic surfaces from rust and corrosion in any climate.

ECONOMICAL.

DURABLE.

SANITARY.

Manufacturers:

**THE ASBESTOS & GENERAL PAINT CO., LTD.,
BIRMINGHAM.**

CANADIAN PACIFIC

OCEAN AND RAIL SERVICES TO AND THROUGH CANADA.

TRANSATLANTIC—Fast Line to Canada from Liverpool. Only four days open sea by "Empress" Steamers. Unsurpassed Service at Moderate Fares.

TRANSOANADA—Luxurious Train Service from Atlantic to Pacific.

TRANS-PACIFIC—"Empress" Steamers to Japan and China. Canadian-Australian Mail Service via Vancouver to Australia and New Zealand.

APPLY FOR PARTICULARS TO

CANADIAN PACIFIC RAILWAY, 62-65, Charing Cross, London, S.W.

OR LOCAL AGENTS EVERYWHERE.

ADVERTISEMENTS.

Telegrams: "Crown, Cardiff."	THE	ESTABLISHED 1860.								
<h2 style="margin: 0;">CROWN PRESERVED COAL CO., CARDIFF.</h2> <p style="text-align: right; margin: 0;">Limited.</p>										
MANUFACTURERS AND SHIPPERS OF	<h2 style="margin: 0;">CROWN PATENT FUEL</h2>									
<i>USED BY</i>										
BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.										
<i>Specially adapted for tropical climates and stores for any length of time without deterioration.</i>										
SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.										
<hr style="width: 20%; margin: 0 auto;"/> AWARDS.										
<table style="width: 100%; font-size: small;"> <tr> <td>London...1862</td> <td>Liverpool... 1886</td> <td>Royal Naval 1891 & 1905</td> <td>Bordeaux ...1895</td> </tr> <tr> <td>Paris1875</td> <td>Jamaica ... 1891</td> <td>Chicago1893</td> <td>Mexican ...1908</td> </tr> </table>			London...1862	Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895	Paris1875	Jamaica ... 1891	Chicago1893	Mexican ...1908
London...1862	Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895							
Paris1875	Jamaica ... 1891	Chicago1893	Mexican ...1908							
Works: CARDIFF and PORT TALBOT.										

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

THE
COLONIAL OFFICE
JOURNAL

JULY, 1912.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.
Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.



10 CWT.
TO
6 TONS.

LACRE COMMERCIAL VEHICLES

ARE PROVING THEIR
WORTH
THROUGHOUT THE WORLD.

SPECIAL COLONIAL FEATURES :

EXTRA LARGE GROUND CLEARANCE. STEERING ARM OVER AXLE. SPECIALLY LARGE CAST ALUMINIUM RADIATOR. LARGE DIAMETER CAST STEEL WHEELS IF REQUIRED. HIGH POWER ENGINES. SPECIAL FORM OF SPRING DRIVE. POWERFUL BRAKES. EXTRA LARGE TURNING LOCK. SIMPLICITY OF DESIGN.

THE
LACRE
COMPANY
ARE ON
THE
OFFICIAL
LIST
OF THE
CROWN
AGENTS
FOR THE
COLONIES.



VANS,
LORRIES,
MAIL CARS,
TIP
WAGGONS,
CHARS-A-BANCS,
MUNICIPAL
WAGGONS,
TANK
WAGGONS,
FIRE
ENGINES, Etc.

4-TON STEEL TIPPING REFUSE WAGGON,
AS SUPPLIED TO THE JOHANNESBURG MUNICIPALITY.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot :

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot :

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

THE COLONIAL OFFICE JOURNAL.

VOL. VI.

JULY, 1912.

No. 1.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE Secretary of State for the Colonies has appointed a Commission to inquire into the natural resources of the Dominions. It is anticipated that the travels of the Commission will take three years. Some complaints have been made that the Crown Colonies are not included in the scope of the reference and are therefore treated as negligible quantities. Such an inference is wholly unwarranted. The Colonial Office watches with particular interest and pride the progress of the Crown Colonies. But the object of the Commission is, we imagine, not so much to ascertain facts as to supply convenient means of discussion. Any facts which may be collected by such a body are already on record in the countless body of official and semi-official publications. But there is wanted in the intervals between the Imperial Conferences an organisation for the selection and discussion of commercial matters in which the self-governing colonies are interested, and this want the travelling Commission supplies. It is, in fact, part of the machinery of those Conferences, and stands apart *ab initio* from the Crown Colonies. The discussion of the questions of these possessions can be arranged much more readily and conveniently by direct methods. The machinery in this case works continually, and whatever criticism

VOL. VI., No. 1.

may be directed to the results it cannot be said that there is any lack of attention to the subjects which call for consideration.

In emigration the most striking feature of last year was the increase of the number going to Australia. The departures rose from 35,813 in 1910 to 68,631. Those to Canada rose from 156,990 to 184,891, and to South Africa from 27,297 to 30,770. The United States figures fell from 132,192 to 121,829. For the first time in the history of this class of emigration, the number of persons sent out to Australia under the Unemployed Workmen Act, 1905, exceeded (being nearly double) the number sent to Canada. The competition of Australia therefore with Canada, which till lately was hardly appreciable, has now become strong, and no doubt the assisted passages which all the Australian States, except Tasmania, are now giving secure picked emigrants who are suitable for the particular purposes in view. The report of the Emigrants' Information Office states that the greater interest now being shewn by Australian Governments and people in immigration was evidenced by the large increase in the passenger movement from the United Kingdom to the Commonwealth. Everywhere there was a great demand for labour and a rush of emigrants to meet it. New South Wales, Queensland, Victoria, and Western Australia continued to give certain assistance towards the cost of passages, and South Australia revived the policy of assistance after a discontinuance for some thirty years. Tasmania alone among the State Governments adhered to the policy of giving no money assistance. The passenger accommodation on the vessels plying to Australia was insufficient to meet the demand, and in the latter part of the year immediate passages were very difficult to obtain.

Free passages were offered for a time by the Queensland Government to railway workers, as several hundreds of miles of new railways were being constructed. The free passages to Queensland for female servants and contract labourers were suspended at the end of the year. Victoria continued the assistance given to emigrants taking up Government irrigated farms. The New South Wales Government continued the plan of receiving boys from the United Kingdom for a short training in agricultural work on Government farms prior to their distribution for work on private farms.

The chief Government assistance given was to farm hands and female servants, but there were evident symptoms of a recognition of the demand for labour in other directions also. A Commission in New South Wales reported a distinct need for more labour of the artizan and mechanic class, and Victoria took action in the matter to the extent of offering assisted passages to a specified number of mechanics and female operatives, thus reintroducing a form of assisted immigration unknown for many years.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
DUPLEX
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

EDMUNDSONS ^L^{TD.}, STAFFORD WORKS, DUBLIN.

Cables, "EDMUNDSONS DUBLIN."

A B C Code, 5th Edition.

BENSON'S

NEW MODEL—EXTRA THIN

"FIELD" WATCH.

BEST LONDON MADE HALF CHRONOMETER.

Bréguet Sprung and Adjusted for all climates. The Best Watch for Travellers, with improvements only to be found in Benson's make. 18-carat Gold Cases, any style, rich monogram included.

£25; in Silver, £15.

An owner writes: "It is a watch of incomparable excellence."

For men of active life the "Field" is the Watch beyond all others.

The Economical and Equitable

"Times" Monthly Payment System

IS AVAILABLE.

Illustrated Book No. 1 of Watches from £2. Chains and Rings (with size card), &c., post free.

62 & 64, LUDGATE HILL, E.C.

AND 25, OLD BOND STREET, W.



G. GARNETT & SONS, Ld.,

WORSTED & WOOLLEN MANUFACTURERS,
APPERLEY BRIDGE, YORKSHIRE,
ENGLAND.

MANUFACTURERS OF
PURE INDIGO SERGES,
SUNPROOF SUITINGS
AND
FOREIGN SERVICE FLANNELS.

CONTRACTORS TO ALL
H.M. GOVERNMENT OFFICES.

THE HOME OF
“GARBIRNETT” AND
“GARBIRCORD” REGD.

The ideal cloth for hard wear, sports and all out-door purposes; made in white, cream, khaki, drabs, and all other up to date shades. Remarkable for strength and lightness. Rainproofed.

In the case of assisted passages the difference in the cost of getting to Canada and to Australia is not substantial. But in business circles the distance of Australia still operates as a serious commercial disadvantage. It is hardly realised that there is a countervailing factor. In Australia the haulage of agricultural products to the ports practically does not extend beyond fifty miles, while in competing countries it runs into thousands of miles, and railway transport is a much more serious matter than sea carriage, the cost of which per mile diminishes rapidly with the distance. Thus Australia actually delivers her agricultural products into the London market at a lower rate than most of North America does. This explains the leaping figures of the exports of beef and mutton, fruit and wine, butter and cheese.

On the other hand the transportation difficulties of Canada are increasing every year. Here, not only are the haulages from the Middle West extremely long, but the work of the railways is cut short by the close of the navigation. It is calculated that not more than 40 per cent. of this year's crop will be removed before this period arrives. The lines are being rapidly increased, but the best relief will be given by the Panama Canal, which will divert a great amount of traffic to the Pacific coast.

The recent celebration in America of the memory of Champlain was a fitting tribute to one of the most able and attractive figures in the annals of colonisation. Champlain was not merely an explorer and a founder of colonies: he was the ideal Frenchman of high and chivalrous character. In French Canada he is revered as a good Catholic, and it has been a labour of love of several ecclesiastical historians to write of his career with close attention to this feature. He has become, in fact, to Quebec what Virgil's pious hero was to Rome. Apart from this, there is no doubt that Champlain had the genius of a coloniser. He was a geographer, a sailor, a naturalist, and a surveyor. His foresight was remarkable. He suggested the Panama Canal. He picked out from a vast expanse of territory the sites of Quebec, Montreal and Ottawa, and in a reconnaissance to the south of Acadia he marked the potential ports which are now Portland, Providence and Boston. He sketched out, as M. Hanotaux has remarked, the future United States.

In particular he traced the natural road, by the lake to which his name was given, between the St. Lawrence and the modest settlement of New Amsterdam which became New York. Most important of all, he recognised the fertility of the country. There was no proof of this at the time, as the natives practised only the chase and fishing, and France at home utterly refused to believe

that regions which were covered with snow and ice in the winter, could be of any value for French settlers. Champlain, however, was fortunate enough to secure the support of Henry IV. and Richelieu; not that he got much from them, but their favour secured respect for his authority. He began his small settlement in the spirit of a missionary. He is reported to have said that "the conversion of an infidel is worth more than the conquest of a kingdom." Certainly he had a very strong sympathy with the Indians, whose life in winter was often extremely hard, though he was quite aware of their cruel and treacherous attributes. The influence which Champlain won over them has left traces down to the present day.

The increase of the exports of butter from Australia has been phenomenal. Fifteen years ago there was hardly enough for local consumption; in 1910-11 the export was 45,716 tons, treble the quantity of two years before. The taking up of this industry is largely due to the policy of the Government in providing irrigation on a great scale, as this removes the one danger which the Australian cattle-owner had to fear. Also the returns are quick, and therefore the industry is attractive to recent immigrants who want to make money more quickly than they would by planting or sowing. It is greatly in their favour that cattle diseases are comparatively rare in Australia, and the mildness of the climate which allows cattle to graze all the year round is an immense advantage. Co-operation is practised on a continually increasing scale and with much Government assistance. Machinery is so largely employed now in the making of butter that manual labour is almost abolished. These methods enable Australia to compete in the United Kingdom against Denmark and other continental countries, and as its supplies are still only about one-quarter of the total import there is ample room for a great development. Meantime, the Danes have one undeniable advantage—their butter is better.

In the Northern Territory of Australia nearly all the attempts to cultivate the land have ended in disastrous failures. In one case £20,000 was spent on a sugar plantation, which produced in one year seven tons of sugar and in the next five. Other enterprises in coffee, rubber, and other products have been similarly unfortunate. But this is not the fault of the land or the climate. There are hundreds of thousands of acres of land well suited for agricultural purposes and for stock raising within a reasonable distance of railway and water communication with Port Darwin. At present the land is simply a waste. The main cause of failure is want of knowledge and experience. Experimental gardens have been established, but in view of the policy of a white Australia the work is directed

so as to ascertain what products are fitted for European labour. In 1909 two farm hands and set of implements arrived in the Territory from Adelaide, whence they had been despatched by the Government, for the cultivation of an experimental plot of 12 acres near the Katherine. The instructions were that about one-third an acre each of wheat, oats, and barley should be planted each successive month for twelve months. The work carried out at this "experimental plot" was a complete failure, and could not have been otherwise, owing to the manner in which the experiments were carried out, and it was evident that those who were intrusted with the experiments were quite ignorant of any method or principle upon which to work. The value of this paltry effort was nothing whatever; and the work was ridiculed by those persons who happened to visit the "Experimental Farm."

It is hoped that this practically uninhabited country will become occupied by a thriving white population, but it must be admitted that only trifling progress has been made so far. The competition of countries which possess and use native labour is a serious difficulty for a territory to which the Restriction Act applies.

The mining industry has fared even worse than the agricultural. It is said that over a million has been spent, but everywhere from Port Darwin to Pine Creek there are decaying batteries and rusting machinery. There are patches of rich minerals, but except in rare cases they will not pay till there is railway communication. It is curious that in a country offering such safe opportunities as Australia does there has been so much speculation in the Northern Territory, but a gamble has always had attractions.

The Ready-made Farm idea which is being taken up in Canada is recent, but it clearly meets a want. The best immigrant is the farmer who has saved a few hundred pounds and is ready to move with his family to a place where he can employ his money profitably. But it is too much to expect that men of this class will settle on a trackless prairie where there are no buildings and the land has to be broken up. Some improvements on the natural face of things are required to make the situation attractive to men who do not want to go beyond the pale of civilization, and the C.P.R. with its usual adaptability is providing accordingly. It possesses 3,000,000 acres in one block, east of Calgary, and is spending over £5,000,000 in irrigating it. Here farms are being made of 80 acres, irrigated, ready to be taken up, and there is an enormous demand for them. Each has a cottage, barn and fencing, which cost £400, while the land, irrigated, costs £6 an acre, or, unirrigated, £3 12s. Ten years are allowed for payment, so that a small sum will put the buyer in

possession of a property where the roughest work is done. In the Eastern Provinces the provincial governments are providing ready-made farms or financing approved immigrants. Ready-made houses are also a feature of the "closer settlement" schemes in Australia.

The world generally is being much exercised at present by the increased "cost of living," and the newer countries are apparently feeling the pinch as much as the old. Our Ottawa contemporary, the "Civilian," states that the Dominion Department of labour has been engaged on the task of making an average of wholesale prices for the decade 1890-99, this average to be used as an "index number" for comparison with present prices. The "Civilian" observes that the report for 1911 does not bring much comfort to the salaried man. It breaks the news to him gently by opening with these words: "Wholesale prices in Canada reached during 1911 a general level higher probably than in any previous year within the present generation." The statisticians find that they have to go back to 1882-4 or possibly to 1892-3 to find a condition similar to that now prevailing.

And the latest returns to the Department, instead of affording any consolation, show that the advance was maintained during the present year. The prices according to these reports are 34 per cent. higher than the index number. Every group of articles but two showed an increase for the year over the index number; the two exceptions being silks (14 per cent.) and fuel and lighting (0.6 per cent.). The highest increase was furs (204 per cent.). Other great increases were lumber (65 per cent.), liquors and tobacco (51.2 per cent.), and hides and tallow (58.4 per cent.)

The battle of free trade and protection is fought, on much the usual lines, in the report of the South African Commission on trade and industries. The Government have taken no action on it during the present session, but will consider it during the recess. It is common ground that the cost of living is excessive, and that industries cannot thrive where the every-day requirements of living are expensive. It is recognised by all parties that another drawback is the immense size of the country, the want of a large consuming population and the great distances between markets, which make it almost impossible for any one factory to supply anything but a very limited area. This handicap also acts in another way, as it very often increases the cost of raw materials that are obtainable in the country to such an extent that it is cheaper to import them. It is further agreed that as long as the country continues to import so large a proportion of the necessities of life as it does at present they

will remain expensive and the successful establishment of industrial enterprise will be impossible because wages must in consequence be high. Thus of the bread consumed in South Africa two-thirds are imported, on which freight, customs duty, shipping and landing charges, and railway carriage have to be paid. Flour, which costs £7 10s. a ton in Australia, is sold in Johannesburg wholesale at £14 10s., and over and above this the margin between baker and consumer is enormous, the difference being about 150 per cent. In this country the cost of 4 lbs. of bread is from 4½d. to 5½d.; in South Africa it is 1s. The obvious remedy is to develop agriculture, and it is fully realised by the Commission that this is necessary before industry can be improved. But after this point the familiar controversial difficulties arise. It is quite possible to stimulate agriculture by protecting it, but only at the risk of still further increasing the cost of food. The Commission recommends that the customs duty on wheat be raised to 2s. per 100 lbs., but on the other hand that the preferential railway rate should be abolished, and in other cases the increases proposed are not important. The conflict of opinion does not become acute until the question of protection of manufactures is reached. On the one side it is claimed that it is in the best interests of the country as a whole that adequate protection should be given to industrial undertakings. This is said to be founded on "economic and national considerations," and it appears from instances given that these are different and that "economic" considerations may be sacrificed in favour of "national" considerations, as in the case of the duties recommended on wheat and flour. It is to be regretted that this distinction is not further explained, but apparently the idea is that some sacrifices of money may be made to increase the white population, and to find employment for it in the country as far as possible. The Commission recommends a number of substantial increases of duty, but there are two dissentient reports. All parties appear to agree that the development of agriculture is the predominant requirement, but at present mining is the principal industry, and this wants no protection but a reduction of working expenses. Mr. Martin observes that "Whilst the cost of living is so high—especially that of the white man with a family—the development of the country must necessarily be retarded. It is certain that no material reduction can be effected so long as the necessaries of life are heavily taxed as at present. The first consideration, therefore, should be a substantial cheapening of foodstuffs and other necessaries by the removal therefrom of all customs duties. This would undoubtedly result in a reduction in the cost of production, thereby enabling manufacture to be carried on more cheaply, and thus increase the opportunities for labour. The extension of the list of raw materials for manufacturing purposes to be admitted free of duty or at the

3 per cent. tariff, and particularly the reduction in railway rates on raw materials, would also immensely assist local industries in their competition against the imported article. Indeed, those manufacturing industries which under the present tariff do not enjoy special protection would be much better off than they are at present, and with perhaps two or three exceptions the industries whose protection under the present tariff it is proposed should be reduced would benefit to a greater extent than they would suffer."

There will no doubt be strong opposition from the mining interests to the recommendations, and in South Africa the "consumer" is a much more important element than he is in countries where manufactures are carried on on an extensive scale. It is calculated that the produce of the mines last year amounted to about £45,000,000, and besides this the other produce of the country is very small. It is difficult to see how the smaller part of the trade can be stimulated without injuring the larger. South Africa is the land of dear labour, and this is why she buys so much in foreign markets. But so long as she exports on a greater scale there is not much to complain of, and the exports, which were nearly all in the shape of raw materials, last year exceed the imports by some 50 per cent. The trouble is not so much economical as racial. The problem is to provide white men with work in a country where white men are tempted by the abundance of natives to despise work. But it will be an enormously difficult and costly task to provide manufactures in such a country to such an extent as to counteract the growing preponderance of the black element, and the last hope lies with development of agriculture on up-to-date methods.

The coal strike brought into the field the question of supplies for the Colonies from other countries. Australia is a large exporter, but in the matter of price the Transvaal was much lower and will probably in no long time be a formidable bidder for eastern orders. The annual production there is about five and a quarter million tons. Most of this is consumed locally, but the Colony will, as the output increases, probably capture much of the Indian and neighbouring market. The strike and its results are in favour of the companies engaged in the industry. India alone takes between three and four million tons annually.

In South Africa perhaps more than anywhere else it is important to give technical education to boys, because of the strong local idea that manual work is for the black man. If, as Mr. Malan observed at a conference held at Pretoria on technical education, this goes on, South Africa will gradually be training the native to do skilled as well as unskilled work and the white man will suffer. This process is in fact going on. Not only are considerable numbers of natives learning

skilled trades, but the ominous fact is making itself apparent that white boys are to a great extent taking up employment of the "blind alley" character. It is most difficult to obtain apprentices, as the boys on leaving school easily obtain posts which are well remunerated for the time but lead to no good position in life and give no good training. This mischief is a growing one in all civilized countries, but it is particularly serious where it has the effect of debasing the white race in comparison with the black. Fortunately, recent ideas on the education of the masses are all in favour of more practical methods than have hitherto been in vogue, with a view to the early development of certain centres of the brain, of manual dexterity, and of constructive faculty. One difficulty is that labour is so highly specialised that a young man is kept to one machine more or less permanently so that the commercial shop gives him no opportunity of understanding his trade generally. It does not pay his employer to divert him from a work on which he has become competent to another which he has still to learn. An apprentice or pupil is supposed to go through the works, but this system is breaking down everywhere, for the time-honoured method of taking a large premium and then leaving the pupil to do much as he likes is not applicable to modern conditions except in comparatively rare cases. The only way out is the technical school. It is satisfactory to find that a conference convened by Mr. Malan pronounced strongly in favour of "vocational" schools, in which indentured apprentices should spend at least the first two years of their apprenticeship, and attend technical classes for the remainder of the period. The scheme recommended comprises power to compel apprentices or pupils to go through the prescribed school course. As regards education generally, it is recommended that the instruction given shall be "adapted to environment," or in other words that textbooks on history, geography, botany, etc., should have local reference. This is undoubtedly sound and by no means superfluous advice, as a comparatively new country is apt to borrow the educational books of older countries for which alone they have been written.

The scheme for connecting a very large part of the Empire by wireless telegraphy will be a triumph of science and the realisation of an Imperial idea which seemed beyond hope a few years ago. An instance of the magnitude of the change is that London will, it is expected, be able to correspond with Pretoria via Aden, the messages going direct between the two last places, a distance of 2,450 miles. Canada and Australia have for a long time taken great interest in the subject of wireless telegraphy, and in Australia a circle of stations is being established round the coast. A similar scheme for communication with the Colonies is contemplated in France, and is likely to be actively taken up in connection with the budget of next year. It need hardly be said

that the starting point is the Eiffel Tower, an imposing monument which the British scheme lacks, and connection will be made with Cotonou, Pondichéry, Saigon, Djibouti, and eventually Martinique and New Caledonia. This system would embrace Hong-Kong and Singapore, and will help to make British communications more extensive. The scheme is estimated to cost 6,600,000 francs. It is partly stimulated by the approaching opening of the Panama Canal, and France hopes to speak to Tahiti, where great designs are on foot, via Martinique. Charges for wireless messages would be greatly lower than those over submarine cables, but probably the latter would not be seriously affected, as the wireless system cannot compete with them in speed, secrecy, accuracy and certainty. The business done would be nearly all new, as in the case of installations on board ships. A new cable is being laid by the Pacific Cable Board between Australia and New Zealand, and it is understood that the Australian wireless preparations are not meant for competition with the cables but for defence and emergencies.

The announcement of the wireless scheme had the effect of discouraging the proposal for a state trans-Atlantic cable. The object of this proposal is not so much to reduce the cost of telegraphy between this country and Canada as to reduce still further the cost of communication with Australia, which, however reasonable for the distance, is relatively high. The leasing of the British trans-Atlantic cables to United States companies naturally excited some misgivings, but whatever may be thought of this operation commercially the fact remains that all the cables land on British territory and the General Post Office, from which a licence has to be obtained, has complete control and is now exercising it as licences fall in by stipulating that it shall have control of the rates charged. This matter may therefore be put aside, and the project of a state cable considered on its merits. The difficulty is, as we have previously pointed out, that the collecting business is practically in the hands of the land telegraph companies which are now leagued with all the cables, and there would be little opening for a state cable except for the through traffic to Australasia, which would be very far from sufficient to support the line. The advent of another means of communicating with Australia, at rates of which there would be no reason to complain, will no doubt do much to prevent the further advocacy of the state cable.

The preparation of the return of lands in Crown Colonies and Protectorates must have caused a great amount of work. Probably,

the object was not so much to get a tabulation of the "assets" of all the Colonies as to have the conditions of alienation of native lands set out. The first question appears to present the alternatives of land being, or not being, vested in "private persons, or chiefs or corporations," but none of these heads cover the case of lands held by native tenure of the communal type. In Northern Nigeria, where the subject is of special interest at the present time, except as to some 40 acres held by the Niger Company, the Government recognises a kind of leasehold interest vested in every occupier, which is practically a non-transferable freehold subject to divestment in case of non-performance of statutory obligations; no proprietary rights are recognised, and land cannot be alienated by chiefs or tribes, all rights being vested in the Government as trustees for the natives. Areas may be granted by Government for prospecting and mining purposes under the Minerals Proclamation, 1910. An exclusive prospecting licence is tantamount to a lease for one year renewable annually up to three years, conditional on certain regulations as to *bonâ fide* prospecting being observed. The duration of a mining lease is 21 years, determinable in case of breach of regulation or of discontinuance of working, and renewable on certain conditions as to the exercise of *bonâ fide* mining operations for further periods of 21 years indefinitely. Exclusive prospecting licences and mining leases confer certain rights of user of the surface of the land covered by such licences or leases to the holders. They confer, however, no exclusive rights of user over the surface; that is to say, the holders are not entitled by virtue of such licences or leases to prevent others from using the surface of the land, except in so far as by such use the prospecting or mining operations of the holders may be interfered with.

In East Africa native chiefs, are, by a similar idea, considered as tenants under Government of the areas occupied by their people, but here when land is not occupied and not required by the natives the Government acts as the owner. In Nyasaland no chief or tribe is now recognised as the owner of any land. In the older possessions, such as Sierra Leone and the Gold Coast, the land is with comparatively small exceptions considered vested in the chiefs and tribal authorities, but conditions have been laid down by statutes governing the manner in which they can dispose of it. The first question in such cases is one of fact, viz., whether the land has native owners, or whether it can be regarded as unclaimed and so treated as the property of the Crown. This question was much discussed in the case of the Gold Coast when Sir W. Maxwell was Governor and the advent of the gold mining companies make it important to have a clear understanding of the matter; at one time it was thought that it would be possible to claim a great amount of land for the Crown, but investigation

showed that practically all land had native owners. The second question is one of policy, viz., how should the Government protect native owners from being made the victims of unconscionable or improvident bargains, or violation of customary laws, while providing for legitimate European enterprises. In the Gold Coast Colony a Concessions Court was set up, and all native concessions had to be validated by it. The later model, by vesting native lands in the Government as trustee, establishes control by the administration instead of by the courts; and it may be argued that in this way the land policy can be carried out with greater elasticity and adaptation to circumstances, than when it is dealt with judicially, or, in other words, under regulations which must be taken as they stand, and with little reference to the intention of the legislature, except so far as is shown therein. But it does not follow that the same freedom can safely be taken with an old Colony, where customs of sale have had time to grow, as with a new territory. We do not want the natives to be alarmed by the idea that the Government means to confiscate their land. Many of them are already very uneasy, as may be seen, for instance, from the following letter to the Lagos "Standard":—"Sir, the community seems confused and downcast with regard to the Government notices placarded constantly and without cessation on the lands question, and I fear the European merchants, too, are all looking over their books, for much of the trade of this Colony depends on what merchants call the rolling system, and it depends much on house and land security. Crowds of people attend the weekly Thursday meeting of the Auxiliary of the Anti-Slavery and Aborigines Protection Society; all other business is suspended, as the people will not listen to you, except you talk on the lands question. From time to time the same plaintive cry is heard: 'You the Creoles do beg the King (meaning his Majesty the King of England) to leave our lands to us, we never insult the King's authority. It is our very life that they want to take; what will we live by?' One could easily see how native idea runs through in all our actions, for the native idea is that the King has power to confiscate a citizen's landed property if he insults his authority or tries to be disloyal, and therefore the people see no reason for all talk about lands question so long as their loyalty to the Crown and Government remains unspottedly unimpeached. Heaven's grant us all a merciful ear. The land's expropriation ordinance is sickening enough. Why more worry?"

We are all familiar with the fact that the easiest way to rule native tribes is to do so through their chiefs, and it is frequently found that mischief results if the authority of the chief is weakened. Contact with the white race, however, has this effect, and the

question then arises how the traditional authority can be strengthened or replaced. The problem has been solved in Papua by a courageous measure. The annual report explains that there had to be a form of chieftainship, and, as the native himself was found wanting in this respect, the Government gave them chiefs, by dividing the Territory into Divisions and putting in charge of each a Resident Magistrate, and those Caucasian Resident Magistrates are at the present day the paramount chiefs who control, guide and care for the three or four hundred thousands of Papuan natives. It seems almost incredible to realize how naturally the people have accepted this substitution; how readily they give their obedience and respect to this re-incarnation of chieftainship, and accept the government, control, and leadership of a chief who is not of their own race or colour.

"The solution is simply that the love of respect and authority that was for decades becoming slowly deadened and decadent, to all appearances, was in reality only lying dormant, had become only a smouldering spark; and with the re-establishment of chieftainship with power and authority made manifest to them, that dormant respect, that smouldering spark of obedience has burst forth in all the power and vigour that must have characterised it in those bygone days when a Papuan chief was a power and influence in his own land.

The Resident Magistrate is the centre of the national life, and it is through his existence as a chief that each individual tribe is conscious of its own unity. It matters not to them that he is the chief of numerous other tribes. It is sufficient that they know he is the one that their individual tribe must obey, that they receive the same care and attention from him as if no other tribe existed. As a father is to a family, so is the Resident Magistrate to the tribes of his Division. They look to him as their final court of appeal. In reality, they have the right of appeal to higher authority, but they do not desire it. They are satisfied with the judgment of their chief—the Resident Magistrate. His word to them is law, and is obeyed without question. They know that his respect for the majority of their customs is as great as their own, and no change is made in the traditional customs of the tribe without his knowledge and sanction. He is the peacemaker in all domestic troubles and quarrels. In fact, he is the pivot on which their tribal life revolves. He is their strength, their safety, and their refuge, and without him they would be bewildered and lost, and their life chaotic.

On the face of this, it appears that the power of the Resident Magistrate in the minds of the natives is absolute, and, with the exception of the more civilised natives in the vicinity of the

towns, the natives believe his power is absolute, and they are quite content that it should be so, and it is a very rare occurrence where a native prefers to have his case taken to a higher authority than the Magistrate to be dealt with."

This is an admirable result. But before trying the same experiment elsewhere it would be advisable to consider whether the natives are as unsophisticated as they are apparently in Papua.

The most troublesome matter to the Papuan Magistrates is the remarkable number of sorcery cases. The Papuan, like many other natives of low civilisation, attributes natural processes to human action. If his friend dies, he believes that some one has murdered him by magical means. This leads to trouble and sometimes sets tribe against tribe. Fortunately a pig is satisfactory compensation for a murder, and the dispute may be peacefully settled. Most of such beliefs do little harm and unless the sorcerer is using his art deliberately to cause fear or extort presents the best policy perhaps is to ignore them as far as possible, so far as official action is concerned. Action by the Government is likely to be considered proof that the sorcerers actually committed the miraculous acts. Secondly, failure to convict would often have a bad effect, as evidence which no magistrate would think anything of might be absolutely conclusive to the native mind. The native lives in a world of spirits, and his actions and beliefs are influenced accordingly. Thus a curious story is told of the funeral of a middle-aged man. The body, wrapped up in native mats, was being carried to the grave. The mats were tied in position by three cords, one round the neck, one round the body, and one round the ankles. Just before reaching the burial ground there was a weak but indignant voice from the midst of the mats. The bearers were considerably astonished, and halted while the nearer relatives were consulted. (No relative takes any active part in a Trobriand funeral, it is all part and parcel of the Totem ceremony.) It was ultimately decided to bring the supposed corpse back to the house. Arrived there, the mats were unfastened, and pulled away from the man's face. He was raised to a sitting position, after which he asked for a banana. It was given to him, and he slowly ate it, and asked for another. He ate this also. He then made signs indicating that he wished to recline. This was done. After some little time he was examined again, and found to be dead. The delayed interment was accordingly resumed. This time the grave was reached without any unforeseen occurrence, and the body placed within it. The first handfuls of soil had been thrown upon the mats when there were again sounds of indignation from the midst of them. This time the bearers were considerably annoyed. What was the good of their having a decent funeral at all if each attempt was spoiled by the lack of consideration on the part of the

deceased? The general feeling was that the burial should be proceeded with. At this point the local policeman comes on the scene. Now the constable's sympathies were with the bearers and relatives, who had been put to such "shame." At the same time he pointed out to those assembled round the grave that, richly as the deceased deserved their anger, if the Government heard that they had buried a living man there would surely be trouble. The body was accordingly taken up and back again to the house. This time he had a drink of water, and altogether seemed more cheerful. Meanwhile a meeting of relatives and friends was taking place in a neighbouring house. After many expressions of regret, in which the feeling of their great shame was uppermost, the question which had to be solved was, "How long was this thing to be continued?" The unusualness of the occasion which caused the meeting left the majority without power to make suggestions, but finally it was arranged that a cord should next time be tightly wound round the throat. Twice the spirit of the man had attempted to get away, but had been prevented by the body. It was their duty to help the spirit. First, however, it was decided to consult the constable. He, much again to his regret, had to say that, if they used the rope for the purpose specified, the Government would be annoyed. Why it would be annoyed he could not exactly say, but he felt sure it would be. Better wait, was his advice. Later on word was brought to them that the sick man was again sinking. The funeral eventually took place the following day. They took the constable's advice, and awaited the convenience of the deceased. The idea in such a case is that the spirit wishes to go, but the body holds it back.

There is one intellectual quality which is seldom lacking among the populations which are expansively referred to as native races. This is fluency of speech. The paucity of the vocabularies has something to do with it, as with educated classes it is largely the embarrassment of choice that leads to halting and confused speech, but the chief cause is probably that the critical faculty is less advanced than among Europeans, so that the speaker proceeds in a style natural to him without inward questionings or fear of his audience. The last Basutoland report remarks that "it would seem that nervousness is a product of civilisation, for in this Council, whose members have only comparatively lately come into contact with European forms and procedure, every member speaks fluently and easily and it is practically unknown for a speaker to stammer, hesitate, or repeat himself unconsciously. The principal fault to be found with the debates is their tendency to drag on to undue lengths, and as a result it has been found that there is always business left unfinished at the close of the session." The tendency, therefore, to protracted talking is not a characteristic

of modern institutions. Any one who remembers the long-winded character of various ancient discourses which have unfortunately survived will appreciate this.

At a time when there is considerable effervescence in West Africa over the question of the native tenure of land, it is interesting to recall the fact that the present Prime Minister of this country has taken an important part in the matter. The occasion began by the introduction in the Gold Coast in 1894 of an ordinance to vest waste lands, forest lands and minerals in the Queen. This appeared to assume that there were waste and unowned lands in the Colony, but, when the question was gone into thoroughly, as it was, it was clearly established that there was no land without an owner, and that the traditions of ownership had been well kept. This bill therefore was not proceeded with, but in 1897 a Lands Ordinance was introduced, the main object of which was to prevent the improvident creation of interests in land; it was provided however that the Government should administer all "public land," and this proposal at once caused great opposition, with the result that petitions to the Queen in Council were settled by Mr. Asquith. Eventually a deputation of native kings and chiefs was received by Mr. Secretary Chamberlain, who explained that the main object, almost the sole object, was to protect the chiefs against the action of speculators, who, in many cases, got hold of the land for insufficient consideration and without regard to the various interests in the land. The bill was withdrawn and subsequently the Concessions Ordinance, 1900, was passed as a simply regulative measure for the protection of native owners against unreasonable transactions.

The Southern Nigeria Trade Statistical Abstract, No. 2, is like its predecessor, a remarkable instance of prompt and thorough work. An energetic department, which can issue its own report separately and get it printed and issued locally, secures an expedition which, it must be admitted, is by no means characteristic of the reports prepared with a view to presentation to Parliament, which have to run a long gauntlet before they are finally sanctioned for this august purpose. It is interesting to notice that, while the British Empire supplies Nigeria with commodities to the value of £4,200,000 a year, and foreign countries to the value of £1,500,000, the duties on British goods amount only to £320,000, while the foreign goods pay £1,122,000. This phenomenon is mostly due to the spirits from continental ports, which produce some £900,000. A careful discrimination can no doubt produce striking results without resorting to any formal preferential treatment. Thus it is observed: "The Customs Authorities have suggested that the duties on cotton goods should be removed, and

the revenue reimbursed by the imposition of a specific export duty or royalty on palm products as this produce is derived from the forests, and the removal of the cotton duties will tend to increase the demand for cotton goods in Northern Nigeria and set free the raw cotton for export, now used there uneconomically. The export duty on palm produce required for the purpose is small comparatively, and the position of Nigeria as a supplier of palm produce to the markets of the world so strong that the export trade will be in no way affected by the adoption of the proposal. If this proposal were accepted almost the whole of the goods supplied by the British Empire will be admitted free of duty into Nigeria while the bulk of exports taken by foreign countries will be liable to a small duty which will to some extent fall on those countries, as Nigeria is the largest supplier of palm produce in the market."

The inspection of produce, which is being adopted all over the world with satisfactory results, has been in the last few years rapidly extended in Southern Nigeria, where there are now 138 men employed at from £2 to £5 a month. The system maintains a standard of purity, and at the same time provides for instruction to the natives as to the preparation of the produce. One advantage of the large revenue from spirits and tobacco is that no foodstuffs are taxed except salt and kola nuts. The importation of sugar is curiously small, and as the natives become acquainted with this luxury a large market may be opened, from which it may be hoped that the West Indies will profit. Some day, perhaps we shall see the High Commissioner for all the West Indies conferring, under the watchful eye of the Colonial Office, with the High Commissioner for Nigeria with a view to reciprocal arrangements. With all deference to Canada, a population of eighteen millions (more or less) is well worth cultivating. It is unsatisfactory to find that Germany takes almost the whole of the palm kernels—valued at more than half the produce exported. It is estimated that over one hundred thousand persons are engaged in cracking kernels, and several times that number in preparing palm oil; some attempts have been made to invent machinery for both processes, but with no marked success, and effective machinery would be a great gain. A great impetus will be given to railway development, on which everything else hangs, if the discovery of coal at Udi results in a good yield. The deposits are reported to be extensive, and a survey from Udi to Onitsha, a distance of under 60 miles, is being made. For the present the most urgent want appears to be the extension of the railway from Iddo into Lagos. Alternative routes for this extension to the proposed new wharves at Wilmot Point have been under consideration. At Iddo there are no sheds and the place is not well suited for them, so that goods have to be unshipped into trucks.

This, with an increase of trade, will soon be found intolerable. The situation recalls the long discussion which went on when the construction of the railway was under consideration and opinions differed as to whether Lagos, Iddo or Ebute-Metta should be made the terminus. The commercial element largely favoured Lagos, and the shipping element Ebute-Metta, and eventually the island was settled upon in a spirit of compromise—with the usual result.

It is brought out in the report on the Sierra Leone census that the creoles, or descendants of liberated Africans who were brought into the Colony under the Slave-trade Abolition Acts, are decreasing seriously in numbers. The explanation appears to be that more vigorous races, at any rate for the purpose of agricultural labour, are coming into the Colony, which is a comparatively small area, from the Protectorate, and displacing the older inhabitants. It is pointed out that in the report of the Committee on Indian emigration it was shown that in many West Indian and other Colonies, where there is a considerable native population, whether indigenous or creole, who show a disinclination for agricultural labour, thus rendering the importation of immigrant labour an absolute necessity, indigenous or creole population has shown a tendency to diminish in numbers or to remain stationary, or perhaps to increase very slowly. In Sierra Leone we have a creole population who show a marked aversion to tilling the soil; we have also a considerable aboriginal population invading the Colony from the Protectorate, as the census report of 1901 and the table of birth-places in this report show, and settling upon and cultivating land once occupied by creoles. It is suggested that much the same process is going on in this Colony as is going on in other parts of the world, and that the principle to be deduced appears to be that when a nationality declines to cultivate the earth, the first industry of life, that nationality has a tendency to decrease.

One effect of the change has been to stop the strides made by Christianity; the Christian denominations show serious declines, while Mohammedanism has greatly increased.

The British and German possessions are very much bound up with one another, both historically and commercially. The products are similar, and the experience of one place is valuable to another. Even the Magadi Salt Lake, considered to be the peculiar and unique property of British East Africa, has, it appears, a counterpart in the German territory. These similarities lead to a great amount of exchange of information, and on both sides a remarkable friendliness has been shown. It would, in fact, be difficult to find another case where two nations in adjoining territories have

maintained such pleasant personal relations. There is, of course, some competition, but on the whole the spirit of combination is stronger; and this shows wisdom on both sides, for the real competition is not against one another, but against other parts of the world. One circumstance which tends to keep the two possessions in close touch is that the Germans have to pass by Mombasa on their way to and from German East Africa, and many officers go through British East Africa and make a stay at Nairobi or elsewhere. It is rather to be regretted that the practice is all on one side. No British Governor has gone on to Daressalam. When one does he will have to admit that the German capital is greatly more attractive than Mombasa. Our iron bungalows are poor things beside the German villas. This advantage might, perhaps, be conceded complacently if we kept level in trade, but here Germany is a long way ahead. Probably she secured the best territory in the deal of 1890. The hinterland of Mombasa is inferior to that of Daressalam, as the route passes through a waterless region. The interest taken in this country in Uganda was originally unconnected with commercial considerations; it was inspired by the missionaries, and the Uganda railway was decided upon largely under their influence and as an acceptance of the responsibilities created by the Brussels Conference of 1890. The really important place in the eighties was Zanzibar, and Great Britain was believed to have obtained a great advantage when the treaty of 1890, under which Heligoland was ceded, enabled her to establish a protectorate there. But it was well understood in Germany, where the Government showed no little foresight in the matter, that this importance of Zanzibar rested on a very insecure foundation. Zanzibar was excellent as a basis for slave raiding, but when that time-honoured custom was displaced it became clear that the trade was with the mainland and that it was a waste of time and money to go round by Zanzibar if ports on the Continent could be found. The growth of Mombasa and Daressalam is the result. So far Germany has directed herself mostly to the coast region, while Great Britain, able to reach the highlands by rail, and seeing in that country a magnificent opening for her own race, has somewhat postponed using her opportunities in her corresponding territory. One consequence of this difference is that each country can profit by the experiences of the other.

It is natural that a desire should be felt wherever there is an English community to encourage the employment of Englishmen, but it should be remembered that the more this is done the less attractive the service becomes to natives, as it leaves them less to look forward to in the way of promotion to superior posts. The Postmaster-General of East Africa and Uganda has remarked that local

political bodies who agitate for an increased proportion of European employees do not fully realise that the giving effect to their proposals must, at least at the outset, impair to a certain extent the efficiency of the public service in that Asiatics of good calibre will be unwilling to serve in a Department in which practically all the appointments with salaries above, say, £120 per annum are reserved for Europeans.

In April, a step which has been long looked for was reached by the signing of the agreement between representatives of Canada and the British West Indies for a mutual preference to one another's products and for corporation for improved steamship and telegraphic communication. The agreement is subject to the approval of the Secretary of State for the Colonies, and the Legislatures of the parties. The West Indian Colonies which have joined in the agreement are Trinidad, British Guiana, Barbados, St. Lucia, St. Kitts, Dominica, Montserrat, and Antigua. Provision is made for the inclusion of the others if they should elect to come in. At present the American millers command the supply of flour to the West Indies, and in this quarter opposition has been expressed to the scheme, but having regard to the policy of the United States themselves as to their own over-seas possessions it seems very unlikely that the Government would take objection to an arrangement confined to British possessions. The agreement will probably be the precursor of others, and whatever opinion may be held of its economic character there is a true spirit of unity in it. The success, however, of any reciprocal arrangement must depend largely on the improvement of means of communication, as the conference fully realised.

The prosperous position of Jamaica has enabled the Government to arrange for the repayment of the balance of the Imperial Earthquake Loan, which was made on the 8th July, 1908. Thus the last trace of that event may be said to be wiped away. As in other cases of the kind, a vastly improved city has risen from the ruins of Kingston, and the improvement is so great as to suggest the reflection that a catastrophe of this sort, if it could be confined to property, would be a boon in many places. What opportunities for municipal reform would be afforded by the engulfment of a few of our most active industrial quarters. Unfortunately the volcanic energies of these islands have exhausted their capacities for usefulness.

In Antigua in 1911-12 the assets showed a surplus of over £5,000 over the liabilities, and, considering that the annual expenditure of the Presidency exceeded the revenue in many recent years, the result is very encouraging, not merely as a local matter but as a definite proof of the increasing prosperity in the West Indies. The Central Sugar Factory has played a large part in the improvement, and out of an export worth £164,813 sugar represented

£132,225. Antigua is looking forward to the establishment of closer trade relation with Canada, as its large interest in sugar and fruit make it desirable to encourage reciprocal trade.

The opening of the Panama Canal will cause the Caribbean Sea to be crossed by new trade routes, but it seems still very uncertain how traffic will be carried on. Probably the lack of labour and the climatic conditions will handicap Colon and Panama severely, and the West Indies, with their good harbours and favourable situations, will have the advantage. On the route from New York and other Atlantic ports of North America, Jamaica has the best position. St. Thomas is on the track from Europe to the Pacific. When trade springs up between South America and Africa on the one side and the Pacific on the other, Curacao, with one of the best natural harbours of the West Indies, will come into prominence. No doubt many routes will be created, and all the West Indies lying on them will be benefited.

Malta is suffering from want of employment, due to the loss of its ship-building business, the reduction of the number of steamers which call for coal, and the reduction of the Imperial garrison. Malta never has been for centuries self-supporting in the sense that her own requirements have provided enough work. Much of the expenditure has been on objects in which the island itself had no direct interest, but which were connected with the policy of a foreign government. This kind of additional work is all very well while it lasts, but a nemesis follows when it is given up. "The cessation of the construction of public works by the Imperial Government, coupled with the sudden reduction of the Mediterranean fleet and the Malta garrison, has brought upon the industrial classes in Malta a crisis which they are almost helpless to meet. An ordinary commercial and financial crisis in an ordinary commercial and industrial population is a phenomenon which is expected to be, and in generally actually proves to be, of a temporary character. It is a disease which bears with it the seeds of its own cure. The crisis in Malta is of a different character. It is purely industrial; it does not consist in the temporary slackening of the demand for employment, but in the blotting out of a large measure of the employment of the people. Wages of workmen, skilled and unskilled, have been reduced by one-half from the highest rates payable during the period of inflation, while the population unemployed is much greater. At the same time the people of Malta, in common with other populations, have to face the general increase in cost of living." The ordinary remedy for such a state of things, especially when, as in Malta, it is coupled with a high birth-rate, would be emigration,

but for this the Maltese show no liking and the language they speak makes a difficulty. The Royal Commission made some recommendations, but not with much confidence, as a satisfactory solution can only be arrived at after much enquiry and negotiation. The problem should not be insoluble, as at a time when the Colonies generally are clamouring for labour a country which has much to spare is a rarity. The Commission recommended, *inter alia*, that the Imperial contribution towards the construction and maintenance of public works affecting the health and comfort of the military and naval forces should be increased, and the recent instructions by high authorities at Malta gives hope that the value attached to this naval base and the work to be given to the dockyard will help substantially.

There was an extraordinary increase in the import trade of Ceylon in 1910-11 which seems to have been largely due to a special way of doing business. The increase considerably exceeded the increase of exports, though this was large, and a striking feature was that the importation of the staple food, rice, increased by 42 per cent., or three times the rate of the increase of the population. A commercial change was taking place during the period which had no doubt much to do with these facts, viz., the adaptation of the "D/A" (document against acceptance) system in place of the "D/P" (document against payment). Under the "D/P" system, documents of title forwarded by exporters to bankers in Ceylon are handed to the local importers only upon immediate payment by them of the value of the goods. This system is, therefore, available only to those who have capital enough to redeem the documents as soon as the goods arrive. The importer without such capital is obliged to borrow the necessary money, often at ruinous rates of interest. Under the "D/A" system, on the other hand, if the drawee-importer's financial reputation is sound, though he may have little actual capital, he will nevertheless be able to obtain the documents of title by undertaking to meet the exporter's bill of exchange (together with a reasonable interest) within a fixed period. Owing to the stringency of the financial situation in 1908, and the consequent difficulties experienced by some importers in meeting their acceptances, the direct dealings of exporters with buyers on this system received a check, but there has grown in its place a healthy adaptation of it by big local indenting firms. Being on the spot, and having knowledge of local conditions and of the variations of the markets, these latter can watch the progress of those to whom they allow the concession of payment two, three, or four months after delivery, and can regulate the terms of their concession in

accordance with their knowledge. It is the facilities and encouragements allowed by this system, the safety of its liberal use by local firms of standing and experience, and the ease with which engagements under it can be met by local importers, that, according to a report by the Chief Appraiser of the Ceylon Customs, has largely enabled the extraordinary growth of trade. It will, no doubt, be extended in other Colonies as credit is established, but on the other side there is the danger of merchants being tempted by long credits to carry their business beyond a safe point, as has been for instance experienced lately in the East Africa Protectorate.

TENDENCIES OF MODERN LEGISLATION.

THERE is a growing desire among civilised communities to put their houses in order. They do not put up with evident evils as inevitable. The triumphs of science have shown that innumerable things till lately deemed impossible are possible and even easy, and this education has set up a conviction that problems shall and can be solved. Where there is a general feeling of this character, State action follows naturally. The average individual may see clearly what is wrong and what sort of remedy is required, but he is conscious that by himself he is helpless. The employer is to a great extent as helpless as the employé. He cannot usually better the conditions of life among his people unless his rivals do the same. Co-operation by private arrangements is exceedingly difficult in any large district, and the labour of years may be upset any day by a single rebel. It is felt to be intolerable that conditions by which the great majority are ready to abide should be defeated in this way, and the next step is to protect them by law. Much as commercial men desire to reduce costs, a still more important object is to secure that they will not violently fluctuate. Thus a general arrangement which establishes a bed-rock for all relieves the employer from his principal care. It has been observed by the Premier of South Australia that Wages Boards have become so popular that it is now usually the employer who asks for the appointment, either as a means of securing industrial peace or for the purpose of protecting himself against unscrupulous competitors. When all producers are treated alike, the burdens of any conditions tending to increase costs will eventually be put on the general public. The weak point in such legislative schemes is, not that the employers rebel against them, but that the workers do so occasionally. So long as there is a great bulk of poverty in any country, this is inevitable, and the current tendency is in the direction of extending the control of the state to the fixing of minimum rate of wages, by whatever machinery this is done. It is generally accepted that the vast scale of modern organisations sets up problems which can only be dealt with by the community, and every big industrial turmoil brings us nearer to the settlement by the State of the essential questions on which tranquillity and security depends. The middle class in any country is the most

difficult to move and offers the strongest resistance to legislative change. But commercial developments are rendering this class less powerful. In proportion as trade is organised the number of employés increases in proportion to that of employers, and the line between the two classes grows sharper. There is less and less chance of the humble worker becoming a master or working independently. While this vastly increases the financial strength of the class on the top, it also produces an irresistible demand in democratic communities for legislative remedies for any grievances which are widely felt. In many leaders of men's minds the impulse has the force of a religion. The extension of Government activities has been largely due to ethical influences. At no distant time the abuses of private prisons, asylums and schools forced the hands of the authorities. In recent times the health of the nation has made it necessary to supply water and drainage, and the convenience of State action has been found so great that the movement for providing common necessities has steadily grown stronger. Now in proportion as politics are secularised the State takes over the spirit of the Churches in protecting the weak and upholding the moral character. It may be far from certain whether a measure prompted by ethical considerations will be effective for good, but there is a disposition to make the attempt, to learn the means by experience, and to judge the policy by its possibilities for good rather than by its shortcomings.

The doctrine of *laissez faire* has been defended on the philosophical grounds that law is an evil in so far as it curtails liberty, and that it creates effects which are not foreseen. In actual fact it originated from the conviction that State action was equivalent to class tyranny. It is easy to quote examples of such legislation. Practically all the statutes relating to labourers in the middle ages were framed with a view to the interests of the governing classes. Thus the Statute of Apprentices in the reign of Queen Elizabeth aimed at a sort of industrial slavery. Every artificer was to work at the trade to which he had been brought up, and no workman could leave his parish without a testimonial. The minimum day's work was approximately twelve hours. Unmarried women between twelve and forty could be ordered by a magistrate to serve in any way or for such wages as he thought fit. This statute was not finally repealed till 1875. It would be easy to multiply such cases. After these monuments of class legislation it is not surprising that the lower classes regarded law as an instrument of oppression. But these statutes were a special type, which disappears with a change of constitutional forces. Given fair play, the working classes of this and other countries do not now, and never did, believe in the principle of *laissez faire*. Democratic communities are notably ready to embark on more or less experimental legislation,

and so long as the immediate object is a clear gain they are not likely to be disturbed by doubts of ultimate effects. Moreover, the very bedrock of the doctrine of non-interference has been rudely disturbed by modern industrial methods. It used to be the first article of faith among orthodox economists that free competition made for the good of all, and might be relied on to cure ultimately the ills and wrongs of the social system. It is now seen that this view was based on an erroneous psychology. It was natural enough for the energetic manufacturers of past generations to look upon competition as the breath of life, and no one would doubt the many beneficial results of the combative spirit. But the world in general does not want to combat if it can help it; it realises the waste of unregulated competition, and is busily engaged in substituting other methods. Consolidation of interests is the leading note, the object being to abolish competition in each field of industry. The competition which is left, so far as this object is achieved, is not generally that between producers of the same things, but that between different economic classes. On the side of the capitalist, the great company, on the side of the labourer, the trade union, are devised to displace rivalry by amalgamation. Within these ranks there remains room for competition; the companies are at least as ready to encourage merit as small employers, and the desire to get on in life will always be a strong force among wage-earners. But the difference is that this sort of competition is not necessarily destructive. It is not, except in special cases, aimed against the existence of rival organisations, as are such methods as rate cutting and sweating. It is internal, and the primary object is to make a real improvement in the business. An example of success in this way is more likely to raise the standard of competitors than to crush them out of existence. On the other hand it is clear that competition alone does not remove common mischiefs or lead to an elevated form of life. The doctrine that the sacrifice of the weak is in the interests of the future of humanity has been discredited. The great mass of weak persons are weak because they have been sacrificed—not because they were incapable of better things, but because they were placed in surroundings which gave no chance of proper development. It is not a question between the strong and the weak, because all types are influenced for the worse by unwholesome conditions, but between healthy and unhealthy circumstances. Any improvement of these circumstances benefits humanity generally. It is almost superfluous to remark that when the conditions are bad the tendency of a race is downwards, and that a point is soon reached when it is clearly desirable to use the power of the State to isolate the vicious and diseased members of

the community. It would be idle to talk of the stimulating effect of competition among such classes. Degradation kills effort, and society finds it necessary to make rules which will prevent it by stopping practices which are opposed to a reasonable conception of life. This does not by any means militate against the sphere of individual action. "We are all socialists to-day" in the sense that State enterprise is more and more developed, but the vastness of individual enterprise has grown at least equally. Organisation, of which the State has a share, but only a share, has developed commerce to an extent that was not dreamt of in the past, and the part played by the State must be judged not in isolation but side by side with the vast expansion of private activity. There is a great gulf still between the field of State works, which have been almost entirely undertaken because private enterprise has not stepped in or has failed, and that of experimental socialism. In short, the functions of the State and the individual have grown together, and undertakings by the former which involve some displacement of private enterprise are balanced by the greater field which has been opened to the latter.

There is, however, a point at which private combination becomes injurious to the general interests, and that is when it seeks to establish monopolies and to control production in order to raise prices. The policy of some combines is one of unrelenting war against all competitors, and there is a real moral difference between an endeavour to get as much as possible by improving quality or reducing price and a systematic practice of crushing opposition by underselling for the time being or cutting off necessary assistance. The central control of a vast industry makes it possible to reduce the cost of administration, and this is so much to the good; but on the other hand the possession of a monopoly gives a great power over the employes, who cannot take their qualifications elsewhere and are therefore at the mercy of the trust. It is natural therefore that the working classes should everywhere regard the growth of the system with apprehension. A further evil is that it is within the power of the trusts to put up the price to an unreasonable extent. The doctrine of free competition in fact ends in these cases in no competition at all. A third evil is that an artificial and dangerous character is given to savings. When profits are made on a moderate scale and with a wide distribution through a community, the standard of life rises generally and the money saved is largely used in a natural and steady increase of local production. But when immense profits are absorbed by a few individuals, at the expense of the general community, the ordinary consumers have less money to put into the industries which they conduct and understand, while the participators in the trusts are compelled to send capital abroad for

investment and are tempted to embark into speculative undertakings. This evil attaches to any commercial system under which capital falls into comparatively few hands. In such cases large blocks of capital are continually being detached from the capital actively employed in the country, and follow the international demand wherever that may be. It may be seen in this country or anywhere else when capital becomes concentrated, but it is greatly intensified by the operations of big trusts. It is frequently argued that the great amount of capital which is sent abroad for investment indicates that opportunities for investment at home are lacking, and this is true in the sense that the few persons who own this capital cannot find sufficient opportunities at hand. But what prevents the local absorption is not a plethora of capital but its inadequate distribution. It is probable that if the gains in an industry passed to the whole body of workers, as in a genuine case of co-operation, they would, like a gentle rain, mostly remain on the ground, and be employed on local production to meet increased demands. All these things point to a State control of such systems. It must be recognised that the amalgamation of enterprises tends to greater economy and efficiency, and so long as the door is left open to competition this is to the advantage of the public. The mischief becomes serious when a virtual monopoly over a great space is secured, and it is to this point that the weapons of modern State action will be directed.

In Australia the "anti-trust" law enacts that:—"Every person who enters into a combination with other persons with the intent to restrain trade or commerce to the detriment of the public, or with intent to injure Australian industries by unfair competition, is liable to a penalty of £500. Contracts entered into in pursuance of such a combination are illegal and void. Competition is *prima facie* unfair when it implies an inadequate remuneration for labour, or a disorganisation of industry, or an increase of unemployment, or any system of rebates offered upon the condition of exclusive trading. Any person who endeavours to gain a monopoly in any trade or commerce with the intent of controlling prices to the detriment of the public is liable to a penalty of £500. Contracts entered into in pursuance of such a monopoly are illegal and void."

Much doubt has been expressed whether these provisions could be worked effectively, but the recent Coal Vend case is strong evidence that they can. There it was shown that forty colliery owners and shipowners had combined together to prevent competition and raise the prices of coal, and the revelation that such things are possible has had a profound effect on public opinion.

In 1911 a proposal to empower the Commonwealth Government to nationalise trusts was submitted to a referendum and rejected,

but this was apparently not so much due to opposition to the principle of public ownership in such cases as to the jealousy of the States as against the Federal Government. The general tendency in America is in the direction of further curtailing the powers of companies to acquire monopolies, and a proposal which has shown some favour is to limit their capital. The questions which the increase and concentration of capital create are likely in the future to prove a fertile field of legislative action.

It may easily be apprehended that the facility with which State action can be invoked may lead to extravagant demands and injudicious measures. But when demands for better treatment are made the workers rely largely on themselves and not on the State. To quote DR. JETHRO BROWN, of the *University of Adelaide*, whose recent work on the principles of legislation admirably sets out the ideas suggested by recent Australian movements.

"In Australia the organisation of workers of all classes has advanced with great rapidity, and the force of collective opinion among the workers is at times irresistible. At the present moment strikes are very frequent; and, whether legal or illegal, they are generally successful in leading to increased wages. While a powerful party in England are fighting for the Wages Board, an advanced wing of the Labour Party in Australia, where experience has been gained of the working of that institution, is speaking of it with contempt. A strike is much more exciting and picturesque; and it is proving a more immediately effective means of raising the rate of wages." The Labour Party is pledged to favour constitutional methods, but there is always a body in such cases which does not look beyond the immediate occasion. When it is fully recognised that the Government provides means for settling disputes, the conclusion is near that there must be effective penalties for disobedience. This point has been reached in Australia, where fines are imposed for disobeying awards, and for these union funds are liable, and if they are insufficient a *pro rata* levy may be made on the members; in some cases there may be imprisonment for instigating a strike. In this country the latest scheme in this direction is that the workers concerned in the dispute should put up a sum of money as a security for obedience to an award, and it seems probable that a development of this nature will eventually be recorded in the statute book.

If by means of State action wages are increased, directly or indirectly, the next step which may be demanded is to protect them against competition from outside which employs labour more poorly paid or uses unfair methods. This is the reason, or at any rate part of the reason, for the "dumping clause." It is a difficult matter to compare real rates of wages in different countries, but it is easy to

see whether an article is being sold cheaper abroad than in the country of origin. The term "dumping" is and is usually meant to be offensive, but there can be no doubt that many articles can be and are sold abroad at lower prices than at home, partly as a result of the greater competition in a more neutral place, and partly because the expenses of management and advertising are chiefly borne at home, so that agents abroad can make a lower price and still keep a profit. The working classes, however, readily believe that it is unfair to them as producers to sell in their country goods below the prices charged in the country of origin, and as on this point employers and employed agree a wide movement to secure industries against prices so lowered may be looked for. The last example of the "dumping clause" is contained in the Customs Management Bill of South Africa: "In the case of articles imported into the Union of a class or kind made or produced in the Union if the export price or the actual selling price to an importer be, at the time of its exportation to the Union, less than the current value, as defined above, of the same article when sold for home consumption in the usual and ordinary course in the country whence they were exported to the Union, there shall, in addition to the duties otherwise prescribed be levied, collected and paid on such articles on importation into the Union, a special duty (or dumping duty) equal to the difference between the said selling price of the article for export and the said current value thereof for home consumption."

It is feared by many that these legislative movements, promoted as they largely are by what has been termed in New Zealand the "class consciousness" of the workers, tend to set class against class. But the opposition between class and class is no new thing; the only new feature is that the lower class now organises itself. No doubt, to some extent the organisation protects the weaker members, but this may be more than balanced by the general improvement. On the other hand, the improvements in the conditions of industrial life may avert demands for more drastic remedies. The main reason for the idea of the nationalisation of the means of production is the desire to provide good wages, and so far as this object is secured by these measures more revolutionary proposals will recede. The general opinion, even among the working classes, is that Government officials cannot manage industrial undertakings efficiently, and whether this view is correct or not it has strength. Even if the State could produce cheaply, it is extremely doubtful whether it could sell well or regulate production to the varying requirements, and the vast army of intermediaries in commerce would oppose any encroachment on their ground.

REVIEWS AND NOTICES.

"Canada To-day."—(*Stanley Paul & Co.*, 1s. net.)

This volume, the second of the kind brought out by the weekly *Canada* contains a very comprehensive account of the present position of the Dominion, and the mass of information is so well relieved by illustrations that the descriptions have the aspect of a sort of pictorial survey. It is wonderful value for a shilling. Explanations are given to the intending emigrant as to how to get to Canada, and what to do when there, and the only difficulty seems to be that the opportunities are so numerous and the prospects so bright that he may find it difficult to decide how to choose. The explanations are supplemented by various memoirs of successful settlers, to show how it is done, and a pleasing moral effect is given by the demonstration that energy is always successful. The Provinces receive full individual treatment. There is only one drawback to the abounding activity of Canada, and that is the rise of the price of Western land, which is so great as to invite a set-back if present methods are continued. It is also questionable whether the municipal authorities in some cases are not overloading the future by issuing debentures for periods which are much longer than the life of the improvements to be effected. These, however, are the inevitable accompaniments of rapid movement, and harm may be avoided if progress is kept up.

British and German East Africa.—By DR. H. BRODE (*E. Arnold*).

This book gives a detailed account of the commercial relations between the two possessions. A comparison is made between the charges on the Uganda and the Usambara railways, showing that on all goods except ivory the difference is greatly in favour of the former. German traders therefore prefer the British line, but of course as the Usambara line progresses into the interior its advantages grow. The Daressalam railway to Lake Tanganyika

will further cut into the transit trade through British East Africa, but the rapid development of the Lake districts will probably prevent any actual decrease. The tariffs of the two countries are practically identical. An instructive account is given of German cultivation in the tropical belt, which will be of service to British planters. The only matter in which some difference of policy between the two administrations can be seen is the treatment of slavery, and the following remarks may be quoted to show how Dr. Brode discusses the subject from the German point of view:—

“It has been ordained in German East Africa that every slave has the right to purchase his freedom at a just and reasonable price, which is fixed by the local authorities. They have also to give their permission, if a master wishes to sell his slaves to another owner, and this is only possible if the slave himself agrees to it, care being taken that members of the same family are not separated one from another by these transfers. Finally, according to an ordinance dated December 24, 1904, all children of domestic slaves, born after December 31, 1905, are free in German East Africa.

In the British possessions slavery has been recognised as a legal status only on the coast-belt belonging to the Sultan of Zanzibar, who in a decree of the 15th El Haj, 1307 (August 1, 1890), interdicted all future ‘exchange, sale, or purchase of slaves, domestic or otherwise.’ Children of slaves born since 1890 were declared free.

So, in British and in German territory, slavery seemed to be condemned to a natural death; but in home circles in England, influenced by a wrong humanity, this seemed still insufficient. It was declared shameful that in a dependency of the United Kingdom this institution should still be admitted in even a mild form. And so quite suddenly, October 1, 1907, was fixed as the date for the total abolition of slavery; a sum of £40,000 was voted by Parliament to compensate slave-owners; and it was ordained that no claims referring to slavery were to be entertained after the end of 1911. Money could hardly ever have been spent for a more unwise purpose. The slaves did not wish to be freed, and the masters did not like to part with their slaves. The money had to be pressed upon them; and the freed slaves, who by-and-by learned that they did not need to work if they did not like it, became idlers and criminals; the patriarchal ties which connected them with their masters were severed; in cases of disease they received no assistance; the number of marriages, and therewith the chance for future native offspring, decreased. The disastrous results on the side of the slave-owners are still more obvious. They lose their old labourers, and find, even if they are willing and able to pay wages, no recruits. The sums which they receive in compensation just help them through the first

stage of the calamity, but when these have been dissipated with Oriental indolence, they have not energy enough to adopt a new economic system, and are bound to sink into poverty.

It is to be hoped that our Government will not alter the present status, according to which the last slaves will die out in a few decades. Meantime the tie of slavery is becoming lighter and lighter, and sufficient opportunity is given to the present slaveholders to insure the survival of the fittest. Those Orientals who can justify their existence in a civilized country have meanwhile time enough to become familiar with the changed economic conditions."

It may be added that Dr. Brode admits that the general impression amongst the natives is that their treatment is not so good in German as in British territory. "It is true that the way in which the natives are dealt with is a good deal stricter in German East Africa than in the British colony, and the farmers would be the last to blame our Government for it."

The book is clearly written and contains a great amount of information in a small space. There is an excellent map.

The Sea Road to the East.—By A. J. SARGENT (*George Philip & Son.*, 1s. net).

This little book contains six lectures, prepared for the Visual Instruction Committee of the Colonial Office, and intended to be illustrated with lantern slides, sets of which can be purchased. The letters are graphically written, and not only is the descriptive matter clear and ample, but there are numerous observations of value on the character and prospect of our possessions. Thus Mr. Sargent observes of Cyprus: "The great railway, already in progress, from the Bosphorus to the Persian Gulf, must approach the sea at one point only in its course, where it comes down over the Taurus range beyond the head of the gulf of Antioch. The railway, when completed, will provide a route towards India roughly parallel to that through the Suez Canal, and may lead to a revival of agriculture in the rich valleys of the Euphrates and Tigris. The natural approach to this route from the Mediterranean is not by way of the Sea of Marmora but by the Gulf of Antioch, and there will be a branch from the main line to Alexandretta or some other port near. Cyprus will then once again be on the line of a great trade route and must have a share in its prosperity; at present it is side-tracked, and has suffered like an English town avoided by some great line of railway; its importance has declined as that of Egypt has increased. We may realize how far Cyprus is off the main line of traffic by the difficulty of getting back to

our route; as it may take us a week to reach Egypt, travelling by slow steamer and touching at ports on the Syrian coast on our way." Mr. Sargent concludes, on finishing his tour at Hong Kong, with the following epitome of the great lines of British commerce:—"South of us lies the route which we have traced from Singapore and India; while another route, as yet in its infancy, leads past Borneo to Australia. Across the Pacific, from the eastward, come the steamers from British Columbia and San Francisco; and soon, when the Panama Canal is finished, there will be direct communication from the Atlantic seaboard of the United States. So we see a great concentration of routes on our Eastern Empire, in the region where the influences of India and China meet and overlap. The key to this frontier region is in Singapore, but behind Singapore lies India. We have approached India from the north-west, by the passage of the Mediterranean and the Suez Canal; and we have seen how our interests in the Mediterranean, at first purely European, have become more and more related to the control of the seaway to India. South-west is the older route, by way of the Atlantic and the Cape, a route still valuable for some purposes. Here the control of the route led us on to the occupation of the neighbouring mainland of Africa. South-east again we reach Australia, either directly across the ocean or threading the island group of Malaya; while the Indian Ocean has its own system of minor local routes. So we have lines of traffic from every part of the world converging on the Indian region, with its vast trade and swarming population; the natural junction of all these sea roads, great and small, is Colombo, close to the mainland of the Peninsula, yet at the same time well out in the open sea, the centre of control from which India reaches out in every direction and dominates the Indian Ocean."

The Barbados Handbook.—By E. G. SINCKLER (*Duckworth & Co.*, 2s. 6d. net.)

Barbados, being the most eastern of the West Indian Islands, attracted English settlers from an early period, and as it lies far out to sea and possesses a soil which rapidly absorbs the rain it has proved more healthy for Europeans than most of the islands. In a passage quoted by Mr. Sinckler, Sir Charles Lucas observed that "In tropical lands Englishmen, as a rule, cannot settle, live and thrive. In Barbados they can and could, and the history of the island, with its long generations of English inhabitants, is the most striking exception to the rule that the tropics must be peopled by other than the nations of northern Europe." The whites in Barbados number 15,613 out of a population of 182,306, a much higher proportion

than elsewhere in the West Indies; thus in Jamaica the rate is under 2 per cent. Still the number of whites is hardly large enough to establish, without other evidence, the suitability of Barbados, and it would be interesting to have Mr. Sinckler's views on the effects of the climate on European families which have been long settled in the island. In any case it is a very pleasant and interesting place, as many visitors are discovering, and abundant information for the purposes of both business and pleasure is contained in this well got-up Handbook.

Fruit Farming on the "Dry Belt" of British Columbia.—By J. S. REDMAYNE (*Tunis Book Club*, 2s. 6d. net).

Lord Strathcona, in a prefatory note to this book, remarks that the nature of the industry treated of—in small holdings of ten acres with intensive culture—tends to promote "close settlement," in other words, the establishment of small fruit-farming townships with the social advantages attaching thereto, and that a considerable number of young men from the English Public Schools are now set up as fruit-farmers on the "Dry Belt" of British Columbia. Young men of this class are found in every new country which offers a career away from the office stool, and often in hopeless positions; but there is little chance of missing the mark in the fruit industry of British Columbia, for it is one of the safest in the world. The cultivation came up the coast from Washington and Oregon, but now it is claimed that at least equal opportunities can be found in British Columbia. The soil in the "Dry Belt" is a rich volcanic loam of great depth, and for land of this kind, irrigated, a price of from \$300 per acre upwards must be paid; cheap but unsuitable land only invites failure. The results of cultivation are undoubtedly magnificent. Particulars are given of an average 10-acre apple orchard, which in the sixth year produced 96,800 lbs. of apples from 484 trees, or a value of £726. Labour is of course scarce, as everyone wants to be his own master, and this militates against large estates, but this is in favour of the small grower. Mr. Redmayne understands the difficulties and dangers of the new arrival, and gives him plenty of excellent advice.

Handbook of the Southern Nigeria Survey and text-book of topographical Surveying in tropical Africa.—(*W. and A. K. Johnston*, 3s. 6d.)

This handbook contains the rules and regulations governing the administration of the Southern Nigeria Survey and also explains the principles on which topographical Surveying is carried out. It is an

adaptation of the ordinary text-book to the special conditions of such a country as Southern Nigeria, and will be found useful by surveyors working in any similar places.

"Cocoa." By W. H. JOHNSON, F.L.S., Director of Agriculture in Southern Nigeria (*Imperial Institute Handbook: John Murray, 5s. net*).

Cocoa or Cacao of commerce is made from the beans of two or three species of small trees indigenous in Central America, and was cultivated there before Columbus' discovery. It became a very fashionable (and very dear) beverage in Europe early in the eighteenth century, but made no great progress till well on in the nineteenth. Brazil is still the largest producer and Ecuador the second, and now nearly every tropical country is exporting it. The tree requires a hot, equable, moist climate, and a well-distributed rainfall, and the best results are got from soils that are rich in potash.

The increasing importance of the product makes an authoritative work on it welcome, and Mr. Johnson has carried out his task thoroughly. He explains how to lay out a plantation, how to provide shade, and how to propagate and cultivate. The methods of fermentation are described, and calculation given of yield and expenditure in various countries. To quote an instance, it is estimated that a bag of cocoa (165 lb.) can be produced in Tobago for £1 15s. Crown land costs £2 per acre. Labourers are paid from 10d. to 1s. 2d. per day and women from 6d. to 8d. per day. Abandoned sugar-cane estates may be cleared, planted, drained, and kept clear of weeds during the first year for £5 per acre; this sum likewise includes the purchase of bananas, cassava, cocoa beans, and nursery. When a cocoa estate is established on such lands the total cost for eight years is estimated at £12 10s. per acre, exclusive of superintendence. In heavy forest land an expenditure of £7 10s. per acre is considered sufficient to fell, clear, plant, drain, and keep clear of weeds for the first year, including purchase of bananas, cassava, cocoa beans and nursery. The total cost for eight years, in this case, is estimated at £15 per acre, exclusive of superintendence.

It is pointed out that the above figures are for actual outlay on cultivation alone, and do not allow for expenditure on road-making or fencing. Cocoa estates are frequently established by the contract system. At the expiration of the period of contract the cocoa trees are counted, 1s. is paid for each full-bearing tree, 6d. for each tree not full bearing, but over three years of age, and 3d. each for trees under three years of age.

Bulletin of the Imperial Institute.

The quarterly *Bulletin* is now enlarged and is published by Mr. John Murray, Albemarle Street, W. It will be the means of publishing the results of the chief investigations of new raw materials from the Colonies and India carried out at the Institute and recent information regarding developments in tropical agriculture and planting industries, and in the commercial utilisation of natural resources, especially those of the Tropics.

The great activity shown in tropical planting enterprise in recent years has resulted in a large demand for this *Bulletin* and to meet this demand the enlarged publication has been decided on. The price of the *Bulletin* is 2s. 6d. per number or 2s. 9d. (post free). The annual subscription will be 10s. or 11s. (post free).

BUSINESS NOTES.

Rubber.

The battle between the wild and the cultivated rubber has gone heavily against the former, and Brazil is waking up to the gravity of the situation. A recent commission there has recommended various measures, including reduction of the export duties and experimental gardens. The resources of the country are of course vast, in the sense that there are enormous areas in which rubber grows abundantly, but the distances over which the collectors have to travel in search of wild rubber, coupled with the dangers of the work and the great mortality, must inevitably make collecting expensive, and it is impossible to prevent wholesale waste by improper tapping. There are a number of Brazilian companies which were floated with most attractive pretensions, but it would be difficult to discover one which has paid a dividend. Everything points to the conclusion that the future rests with the undertakings devoted to cultivation, and in which the means of transport and the supply of labour have been borne in mind.

The drop in price, however, has had its natural effect on production, and many plantations which were started in an optimistic spirit are now being somewhat neglected. Many as are the uses of rubber, the demand and price are practically determined by automobilism, and this means that they are settled by the state of things in the United States, where there are some 400,000 motor vehicles, and 60 per cent. of the world's consumption of rubber is taken. It is difficult to believe that a great expansion will go on in the United States considering that the supply of cars is already so large, but large markets are being opened up in South America, which is probably at present expanding more rapidly than any other part of the world, and it is reassuring to find that the increase in Germany of late has been 50 to 60 per cent. a year. The price is now steady and prospects good.

The need for not neglecting any possible source of profit from plantations will no doubt cause more attention to be given to the utilisation of rubber seeds for oil extraction. Decorticated

seeds fetch about £10 per ton in this country, and nearly a ton is produced by ten acres of hevea trees when developed. The kernel contains nearly half its weight of oil resembling linseed oil and suitable as a dryer in the manufacture of paints.

It is possible to weed rubber plantations too well in comparatively dry localities. A complete clearance leaves the soil to be dried up by the sun and wind, so that not only is moisture not retained, but when the rain does come the soil is denuded. On a small scale the results of the destruction of woods are shown. The following remarks have been made by the Director of Agriculture in Nyasaland on the subject:—

“It has been proved that the flow of latex from a rubber tree is affected by endosmotic pressure, which practically means the amount of water in the plant roots. It is the practice to tap rubber in the early morning and evening and to discontinue during the heat of midday and early afternoon. During the heat of the day much water is evaporated by the leaves, and latex flows slowly, but in the early morning and evening water wishes to enter by the root quicker than it is evaporated, with the result that there is an internal pressure which helps the flow of latex; therefore it is practical to assume that there is an intimate connection between the presence of water in the surface soil surrounding the roots, and the flow of latex from the rubber tree. For half the year in Nyasaland there is no rain, and daily the sun is strong enough to evaporate water from the plants and from the soil. The question arises, where does this water come from? The answer is from the lower layers or subsoil, by the rising to the surface in the form of water vapour and water liquid (capillarity). In the surface soil of a clean-weeded estate the water during the day is principally in the form of water vapour, the water being vaporized to a considerable depth by the direct overhead rays of the tropical sun. In the surface soil of an estate growing a green manure crop, there is a large proportion of the water in the liquid form, as the covering of the vegetation reduces the temperature of the surface soil, and prevents the direct penetration of the sun's rays. Therefore, when rubber is growing surrounded with vegetation, its roots have actual access to liquid water through the greater part of the day. If we examine the same soils during the dry seasons after the green manure crop is dead, we still find more moisture in the latter, as the dead remains of the green manure crop absorb and retain water more firmly than ordinary soil, but deliver it freely to the rubber roots, although not as freely as to the atmosphere.”

Dr. Unwin reports very good results in Togoland from Ceara. It will grow in almost any soil, and when it is more established thousands of self-sown seedlings spring up everywhere. The natives find that the seeds germinate soon and the seedlings grow quickly, not suffering from damping off as do the Funtumia or Iroko. The quick growth makes the species very suitable for native plantations, as when a tree can be tapped to death it is soon replaced.

It is still arguable what system of incision gives the best results, but in the case of *Castilloa* the cuts should be at an angle of about 25 degrees from the channel, as at this angle almost all the rubber flows down; but if the cuts are more acute clots of rubber constantly drop off and there is a great loss of latex. In the Journal of the Jamaica Agricultural Society it is recommended that a tree should not be tapped more than twice a year if regular and continuous returns are wanted for a number of years. "At twice a year therefore the lower portion of the tree would give tappings over five or possibly six years if carefully done, always making the cuts two feet apart. After this period the next six feet up the tree might be tapped in the same way which would give another three or four years. This would give ten years for the first cuts to recover, and tapping these might be resumed. My reason for thinking tapping should only be done twice a year, is that otherwise if done say three or four times, though the returns would be larger for two or three years, yet the tapping surface would be as quickly reduced to nothing before the new bark had time to grow.

It is true that even the injured bark will bleed if cut, but it is not possible to collect it or even cut it cleanly under these conditions as it tears out. It must be borne in mind moreover that as tapping is the chief expense incurred unless the returns are proportionate, it cannot be profitable to increase the number of times we tap."

Cotton.

The last American crop was a very heavy one, and the price of cotton went down to below 5d. per lb. This is calculated to discourage cotton growing in West Africa, and the British Cotton Association, which pays a fixed price of 1d. per lb. of seed cotton in Northern Nigeria, in order to encourage steady production by establishing a minimum rate, will on this occasion hardly fare well. Nearly 4 lbs. of this seed cotton are required to produce 1 lb. of lint, and when transport, ginning and other charges have been met the above market price leaves no room for profit. It is, on the other

hand, impossible to reduce the price paid for cotton seed in Northern Nigeria without crippling production, as other crops would then be preferred. It is no doubt possible to improve on native methods of cultivation, but much time and trouble will be necessary to effect this. What is wanted is a cotton variety which will yield a larger percentage of lint than the native kinds. Some success in this direction has been obtained on the Gold Coast. Recently prices have advanced, and though a large American crop may temporarily reduce prices the rate is not likely to go down again to as low a point as has been touched in recent years. The Cotton Growing Association estimates that the present crop will amount to over 2,000 bales, and looks forward to over 5,000 next year and 10,000 in 1914. The ginnery at Zaria is being run by a gas producer plant on cotton seed, with excellent results.

In South Africa some remarkable results have been obtained at the Government Cotton Farm, Rustenburg. Last season eight varieties were tried and gave more than 1,100 lbs. of seed cotton per acre; one variety gave 1,684. Each variety gave more than 400 lbs. of lint per acre, the highest giving 658. This is far better than in the United States, where the average yield of lint is some 174 lbs. per acre. The care taken in such a place is of course exceptional, but it is clear that the climate is suitable, as there is plenty of sunshine, a good rainfall during the growing period, and (an important requisite) little or no rain during maturing. The Transvaal is likely to produce one of the greatest cotton regions in the world.

In the West Indies it does not seem likely that this crop will be much increased for some time to come. The islands have confined themselves almost entirely to Sea Island cotton, and this is strong in the staple, which is the most desirable quality in the eyes of spinners. But at the same time West Indian cotton contains a great many immature fibres or neps, and this is a serious fault. The defect is probably due to irregular growth, caused by alternations of drought and rain. Egyptian cotton is much superior in this respect, and in that country under irrigation the plants are nourished in a more regular manner. The result is that spinners often only get half as much good yarn from West Indian cotton as from the same quantity of Egyptian. This, however, is making a comparison with a very high standard. The tendency is, on the whole, for the demand to grow and the price to rise. The world price is fixed by the American production, and this is likely not merely not to keep pace with the demand, but to fall off, as the United States planter is

turning his attention to other products which pay better. Wherever irrigation can be practised, the cotton will probably grow cleaner and healthier. Much can also be done by plant selection, an progress has been made with the study of this matter.

St. Vincent has the reputation of producing the best cotton in the West Indies. The success of the industry there is largely due to the Cotton Ginnery, which is under the management of the Imperial Department of Agriculture. There is practically no estates cultivation and the cotton produced by the peasants is bought, ginned and exported by the Government. The Ginnery charges 1d. per pound for ginning and baling, and makes a profit of some £400 a year. Cotton is bought by the Ginnery from the peasants on a profit-sharing basis, and this system has proved very popular and has given a great impetus to cultivation. The Ginnery possesses a disintegrator by which cotton seed is crushed for manuring cotton lands. The average sale price for Sea Island cotton has been 17d. to 20d. a pound. The introduction of cotton however is limited to the coastal lands, and will not oust arrowroot elsewhere. With the latter product St. Vincent has no rival in the world, and an association there has taken advantage of this to fix a minimum price for sale in the United Kingdom. The result has been that the price rose from about 1½d. to 3¼d. per pound.

Cotton growing gives widely different results in different districts, and much attention is being given to the suitability of the seeds; the nature of the soil, however, is an important factor. The *Bulletin* of the Imperial Institute states that a good cotton soil should contain a large proportion of sand in a finely divided state, and thoroughly incorporated with the other soil constituents. A soil which is very rich in humus is unsatisfactory, as the plants are induced to make luxuriant vegetative growth at the expense of the fruit. Stiff clay soils are quite unsuitable, since they are too retentive of moisture. In general, it may be said that the ideal soil for the cotton plant is a deep, sandy loam, of fairly permeable character, but capable of retaining sufficient moisture for the needs of the plant. The best types of soil for Upland cotton in South Carolina contain from 25 to 30 per cent. of clay and 40 per cent. of silt, and during the growing season maintain a degree of moisture of about 10 to 12 per cent. In the case of Sea Island cotton, however, the most suitable soils are composed of 4 to 8 per cent. of clay, 4 to 6 per cent. of silt, and 75 to 90 per cent. of fine sand, and are capable of retaining about 5 per cent. of moisture.

Sugar Cane Cultivation.

In countries where there is a plentiful rainfall, soluble artificial manures, such as sulphate of ammonia, can be used, but where this is not the case organic manures are the best. Besides supplying nitrogen, they increase the power of the soil to retain moisture. In dry regions only the narrow-leaved canes, which resist drought, should be grown. Green-manuring is a useful way of providing nitrogen as well as holding moisture; the stuff should be allowed to rot on the ground at least a month before being ploughed in.

Moisture is necessary to enable the flowers of sugar cane to open, and arrows which are at all dried do not flower. Infertile pollen can be detected by the iodine test. If there is no starch in the grains they are infertile.

The success of the central factory system is remarkable, and the Leeward Islands Report remarks that it has superseded the old-fashioned and wasteful muscovado process by modern and economical methods of manufacture. The system was introduced in 1904 when the present factories at Gunthorpes and Bendals in Antigua were erected, grants in aid of their construction being made by the Imperial Government. Seven years' experience has conclusively shown the value of the innovation, and the past year marks a period of further expansion in this direction. In Antigua considerable additions and extensions have been made to the Gunthorpes Factory, thereby increasing its manufacturing capacity to about 8,000 tons of grey crystals in a crop; a further considerable number of estates have, in consequence, abandoned the muscovado process and now sell canes to the factory. In St. Kitts negotiations were completed during the year for the erection of a central sugar factory near Basseterre; the factory is in course of construction at the time of writing, and it is expected will be completed in time to deal with the crop to be reaped in the early part of 1912. When completed, it will have a maximum output of 10,000 tons of crystals. When working to their full capacity the central factories in St. Kitts and Antigua will be able to deal with more than half the total sugar output in these Islands. The firm of Henckell du Buisson & Co., of the Gunthorpes Factory in Antigua, are also responsible for the promotion and erection of the St. Kitts Factory. The success so far achieved prompts the hope that acceptable plans may be put forward for the erection of further factories at an early date, and if this bears fruition the almost complete supersession of antiquated methods of manufacture may be hoped for in the course of the next few years. On the first occasion Government aid was necessary, and rarely has it

been given with such beneficent results. The St. Kitts Factory has been established without any such assistance. In Queensland the establishment of central mills has proved very successful ; one result, as in the West Indies, is to encourage small holders, and growing is gradually passing from big plantations to small proprietors. Barbados, where there is no co-operative factory, has made provision for loans to groups of planters who can supply at least 1,200 acres of cane annually to each factory.

Coconuts.

There is not exactly a boom in coconuts, perhaps because the experiences of late investors in rubber are too recent, but the value of the product is being more and more appreciated. It is, of course, necessary to bear in mind that the time of waiting is long, and the various prospectuses which set out the amount of land devoted to the trees do not always mention that fact. Generally, trees begin to bear in six years and are in full bearing in ten. The yield varies greatly according to species and climate, so that any estimate of profit on a plantation is more uncertain than even in the case of rubber, but if the trees do well the profit on the capital cost is very great, in some cases 50 per cent. or even more. Trinidad alone exports a value of nearly a quarter of a million per annum. The Leeward Islands have begun to plant, and if the result is good large areas of land now in waste will be utilised. The increase in the value is due largely to militarism on the continent of Europe, an immense quantity of copra being turned into vegetable butter for the soldiers. To get a proper price care must be taken that the copra arrives in Europe in good condition, without mildew and decomposition. The Philippine planters have lost very heavily by inattention to this. The *Bulletin* of the Imperial Institute has an article on the cultivation which planters will do well to study. The following extract describes the situation which is found most suitable:—
“The coconut palm is a light-loving species, intolerant of shade, delighting in a maritime climate where the light is strong and there is a constant breeze. It is essentially a tropical plant, requiring a considerable amount of heat and moisture to attain full development. An average mean temperature of about 80° Fahr., with little variation throughout the year, is perhaps the most suitable. An average annual rainfall of from 60 to 80 in. is advantageous, but as low a rainfall as 40 in., evenly distributed throughout the year, is found to suffice when the palm is growing on fertile, moisture-retaining soils. If less than 40 in. is received artificial irrigation becomes necessary. On poor, sandy soils a rainfall of not less than 70 in. is essential.

The soil best suited to the coconut palm is a deep and fertile sandy loam, such as is found in alluvial flats along the sea coast, at the mouths of rivers, or in wide river valleys. It is in such situations and on such soils that the coconut palm is most commonly found to flourish, but it can be grown on a variety of other soils and also in inland situations, especially near villages or towns, provided care and attention are bestowed on its cultivation. It has a preference for soils of a calcareous nature, and lime in the form of decomposed sea-shells is usually present in the soil of coastal regions and small oceanic islands. The presence of humus or decayed organic matter in the soil is also essential, and this is found in greatest abundance at the mouths of rivers or on land subject to flooding. The situation of the soil is also of importance, as in low-lying localities, such as those indicated above, the subsoil moisture which comes from higher levels will be charged with plant food in solution. The roots of the coconut palm, in a free and porous soil, penetrate to a depth of 6 ft. or more, and the palm is thus enabled to obtain an abundant supply of nourishment from the subsoil; it is probably this fact that accounts for the flourishing condition of palms that are apparently growing in a very poor and sandy soil."

Rice.

Last year there was a great falling off in the production of rice and the price went up accordingly, a very serious matter in the East. Rice is the greatest agricultural product of the world, and the greatest export. Usually the production shows a regular increase, not because rice displaces other industries, but because every year fresh land is used. In 1911 the crops, in consequence of drought, were poor over a large portion of the East, and from September last the exportation of rice from Cochin China was prohibited. It is largely by the produce of that country and of Tonkin that the international price is determined.

Preservation of Fruit.

The exhibition of fruit makes an attractive advertisement, and its preservation for this or other purposes can be secured by simple methods. The Idaho Experiment Station (United States) gives the following rules:—Selection and handling of the specimens are of first importance. They should never be fully matured, should be in the best possible condition and without blemish of any kind. After washing in pure cold water, place carefully in the receiving jar with as little handling as possible and fill with the preserving

fluid after straining it through several layers of cheesecloth. Make the lid air-tight and place the jars in a dark room at a temperature of from 30 to 40 degrees Fahrenheit. Examine every few days to detect any fermenting, which would necessitate the use of fresh liquor after rinsing the fruit.

For fruit in general, use one pint of glycerine and five ounces of powdered borax to every gallon of water; after fifteen days add two ounces of formaldehyde to each gallon for dark fruit, and two ounces of sulphurous acid for light-coloured fruit. For apples use one and a half ounces of formaldehyde to every gallon of water; for pears, peaches, and prunes one quart of glucose and one and a half ounces of formaldehyde to every gallon of water. For small fruit use clean water. For vegetables dissolve a pint of pure table salt in each gallon of water used, allow it to stand twelve hours, then strain through several layers of cheesecloth and pour over.

Tin.

Stocks are low and high prices have been reached. The exports from Malaya have improved. A considerable Chinese immigration has taken place and a further increase of production is likely. The Chinaman has not interested himself particularly in the mineral resources of his own country, but this is probably due to respect for the remains of his ancestors; in other countries to which this consideration does not apply he is a most enterprising prospector and works well as a tributor or under contract. Nigerian tin is not coming in yet so fast as some have expected, but when the railway to Naraguta is completed work will be pushed on more rapidly and a large number of labourers will be liberated and available for mining. There will in any case be an ample supply of labour, and at the ruling rate of 9d. a day it will be cheap. The areas under examination are very large, and much more time should be allowed for prospecting and preparations than has generally been given.

Tropical Plantations.

Dr. A. H. Unwin, Conservator of Forests in the Eastern Province of Southern Nigeria, has reported on a visit which he has paid to Togoland. A comparison with another country is always useful, and Dr. Unwin made good use of his opportunities. An important matter in tropical towns is the provision of shade, and Dr. Unwin remarks that the *Casuarina equisetifolia* seems a very useful tree for

seaside planting, as it grows rapidly and stands the ocean wind well. On the Government plantations large quantities of *Exythrophleum* seedlings have been planted, the object being to obtain a supply of hard and durable timber for public works. The timber of this tree has been used for piles and trestles, and has proved termite resisting. The wood has been used in Southern Nigeria, but apparently did not find favour with the native carpenters as they had to sharpen their tools more often than when working on European woods. Seven hundred and sixty acres are thoroughly planted with various trees each year—a very creditable performance. The cost works out at £4 4s. per acre in the first year and diminishes rapidly afterwards. Sixty-two men after a few days' work planted 12,830 plants in a day. In every case seeds were sown in nurseries and transplanted. About a million Ceara seeds were distributed to natives in 1907, and the trees are growing fast; this species seems more suitable than others in a dry climate. There is a great quantity of teak, which should be judiciously mixed with other trees. Large pure forests of teak do not exist in nature, and generally forests of trees of one kind, except oil palms, suffer from insects and parasitic growths, as such pests easily spread. The study of suitable combinations is, therefore, very important. It is found that the yield from oil palms planted is greater than that from the wild trees, which is natural, as the former are properly weeded and cultivated and are protected from animal and plant pests. Cultivation will probably in this case, as in that of rubber, give satisfactory results; the native forest must in fact eventually give way in all products to the plantation.

Coconuts.

A Bill has been brought before the United States legislature which *inter alia* imposes an import duty of $\frac{1}{4}$ c. per lb. on cocoa-nut oil and palm kernel oil, which have hitherto been duty free. This is intended to allow the crushing of copra in the United States, and would probably stop the importation of cocoa-nut oil, and eventually that of palm oil. The importation of palm oil has grown enormously lately, and no doubt has invited attention. More than half has been sent from this country. The duty is likely to affect Ceylon and other Colonies.

Irrigation.

Irrigation is of special value when the rivers of the country contain salts. This is the case for instance in South Africa, where in many parts the salt pans are a frequent feature. In other cases the salt has gradually collected in depressions guarded by trees and

rushes, and in the course of ages has often reached a great quantity. Much salt of this kind would be carried over the land by irrigation, much to its improvement.

Tent Material.

Cotton duck canvas has been known to rot quickly, and a recent chemical analysis shows that this was not due to proofing by the ammonia copper process, but to the fact that the canvas contained chlorine and iron, in small quantities, but sufficient to cause the trouble. The chlorine comes from the magnesium chloride used in sizing. Iron, which is an active catalyst, and causes oxidation of the fabric, presumably was due to the water in the mills. It is advisable to use flax duck, which is a stronger and harder fabric, and less likely to contain deleterious substances, as it is boiled in the course of manufacture and not sized like cotton materials.

Protection against Lightning.

Iron roofs can be connected with the rain-water pipes for this purpose, but every projection above them should be covered with wire (barbed galvanized iron wire), which is joined with the roof. The roof should be connected with the ground by means of drain-pipes or wires at each corner, and where the wires enter the ground it is well to join them on to empty paraffin tins which will retain moisture and so form a good "earth." For lightning conductors iron is better than copper, and there is nothing better than galvanized iron wire.

Landing Arrangements.

So much depends on the proper handling of cargo, especially when the Government is itself a large importer, that a method recently adopted by the Customs Department of Southern Nigeria, as explained by Mr. T. F. Burrowes, may be cited. In the latter months of 1911 the Customs Authorities took over the provision and supervision of the labour on the wharf for handling cargo from the steamship companies, to insure more expeditious delivery of the goods and to avoid the confusion which existed in stowing the goods. Although hampered by the limited shed accommodation it has been contrived that each ship's cargo should be stored in the sheds separately, and consignments divided with marks facing outwards and the whole cargo stacked so that each consignment can be checked. No delivery is made until the ship has completed the discharge or a consignment is completely landed. At a meeting of the merchants in October last it was

suggested that delivery should be made as each hold of a ship was emptied, but it was not practicable to give effect to this suggestion. Isolated instances of delay in delivery may occur where the merchant's clerk is ignorant of the ordinary procedure, but where in the past a ship took two or three weeks at least to deliver the whole of the general cargo, at the present time seven days is the maximum period for which a merchant may have to wait for delivery of his goods after the ship arrives in Lagos, and this only occurs in the case of the larger branch steamers where attention has not been given to stowing the goods. The system has worked satisfactorily, except at the inception when the commercial community were not acquainted with the procedure. Claims for shortage and damage against the steamship companies have been considerably reduced, and consignments of general cargo delivered as a whole at least seven days quicker than in the past, when the branch steamers sorted the cargo in the holds and delivered even small lots at each importer's landing stage. Strict supervision is exercised over the labour. The Agents of the Steamship Companies have co-operated in expediting the discharge of the ships, but at times some delay is caused by the manner in which the branch steamer's cargo is stowed, the bad stowage being attributed to the way in which the main liner's cargo has been stowed in Liverpool, where attempts it is understood are now being made to introduce more method into the lading of the ships for Nigerian ports. The defects in stowage are possibly due to want of local knowledge on the part of the responsible authorities at Liverpool, and the fact that it has not been realized that the extent and conditions of the trade now require more careful attention to details than perhaps was necessary seven or eight years ago. When the defects in stowage are remedied it is confidently expected that the cargo will be more expeditiously delivered, though there is no doubt that the present arrangements mark considerable progress in the method of handling and delivering the cargo.

Coal.

The Coal Strike caused numerous enquiries from the Colonies about foreign coals, but it is satisfactory to find that in quality the British article is hard to beat. The following is an account of a comparison with American coal made on the Stann Creek railway, British Honduras:—

“The trial of the Pittsburg coal as compared with the English coal we used to get for the railway was carried out and is very interesting.

"The trial was made on the same engine (No. 2.) by the same driver (Burgess) and the same stoker, and they were given to understand they were to use their best effort on both occasions.

"The trial on each occasion was from the Friday morning till the Friday evening of the following week, or eight days in all.

"In the case of the Pittsburg the traffic was comparatively light that week, and the usual four cars were used for fruit and passengers, no stone being transported at all.

"She ran 115 miles and used 35 bags of coal, each bag containing approximately 100 lbs. The tubes were very dirty and required constant cleaning and attention.

"The traffic was considerably heavier the week in which English coal was used. Stone and ballast were required, and she ran 210 miles in the period, and only used 15 bags of the same size and weight. The usual clean through in the evening of the tubes was all that was necessary.

"The difference in consumption is very pronounced, and it is desirable to resume shipments from England as soon as can be arranged.

"The Alabama Coal is out of the reckoning altogether, as it is worse than Pittsburg."

Electrically Driven Air Pump.

In connection with a pneumatic cesspool emptying intallation for service at a large hospital abroad, Messrs. Merryweather & Sons, of Greenwich, have recently supplied a new type of air pump, arranged to be driven by a small electric motor. The motor and pump are mounted on the same bed-plate, forming a very compact set. The service of the pump will be requisitioned for exhausting the air from two portable tank vans, each of 350 gallons capacity, enabling the contents of the cesspool to be drawn up into the tanks through suction hose. The pump, which is known as the "Ravensbourne" pattern, is of the double barrel type, constructed entirely of gun metal, with rubber disc valves arranged under separate covers so as to be instantly accessible. The pump barrels are placed opposite each other, and the plungers are driven by means of a crank and connecting rod. The electric motor gives 2 B.H.P. at 950 R.P.M. In view of the fact that the plant was required for a hospital, special precautions have been taken in order to ensure noiseless working as far as possible, and the drive from the electric motor to the pump is therefore transmitted through a special worm wheel gearing, which is enclosed in a gun metal casing forming an oil

bath. This arrangement is so effectual that the appliance is absolutely noiseless in working. The pump can be operated alternatively by means of hand gearing, with detachable winch handles, this gearing being put in and out of action by means of a small lever.

White Ants in Houses.

The Entomological Division in South Africa has advised as to the best way of dealing with this pest. Where the termites are working in the flooring the floor should be taken up and the nest, or galleries leading into it, will be found underneath. Into these galleries arsenical fumes should be pumped by means of the Universal Ant Destroyer, the most satisfactory machine for this purpose now procurable in South Africa. This will not only destroy the inmates of the nest, but lines the galleries with a coating of arsenic which will make it uninhabitable for any termites in the future. The wood which is being eaten by the termites should be replaced by new timber which has been soaked previously in an arsenical solution, or painted with an arsenical paint, or treated with some white ant preservative which can be obtained from dealers in building materials. If the termites are working in the walls, part of it should be broken down so as to find a fair-sized gallery which leads into the nest, and the ant pump should then be applied. Often the entrances to the nest can be located by digging a hole just outside the wall. Or if no galleries are found by this means, the white ants can be trapped by burying a piece of deal about two feet by six inches in the neighbourhood of the place where they are working. After a short time this wood will be found to be attacked and galleries leading into the nest can thus be located. When putting up a new building the following methods of prevention will be found effective. In a badly infested ant district the house should be elevated on pieces of stone or of well burnt brick, so that the floor is over two feet from the ground, as the ants will rarely build on a stone or brick pier more than one and a half to two feet. If the supports are made of wood, the wood should be of an ant resistant kind, or have been specially treated with an ant preservative. Pieces of galvanized iron should be placed on top of the posts so that they project a few inches beyond the support, or an iron cap shaped like a mushroom should be fixed upon the post on which the joists of the floor rest. A cement floor would also be effective in preventing the ants from entering a house, but it should be well made so that no cracks occur, and it should extend beyond the base of the walls for about eight inches.

Trade enquiries.

A large number of enquiries are addressed by colonial officials to His Majesty's consular officers about industrial matters, such as products or manufactures in the particular consular district, and no doubt this often appears to be the most convenient mode of obtaining the information. It has, however, been decided that the practice should be discouraged as much as possible. In many cases the information desired can be supplied by the Commercial Intelligence Branch of the Board of Trade, or by the Commercial Attachés at the Foreign Office, or at His Majesty's Diplomatic Missions abroad. Further, His Majesty's Government are as a rule unable to benefit from any information that may be obtained by direct application.

RAILWAY AND HARBOUR NOTES.

The end of the coal strike left manufacturers full of accumulated orders, and in many cases further orders have been refused. An order from Australia for 135,000 tons of rails, another from South Africa for 89,000 tons, and others are likely to occupy makers for the rest of the year. Prices have naturally gone up.

Ceylon.

The Railway Traffic Commission have recommended that all passenger carriages should be built in the railway workshops, but do not recommend any further extensions at present, so as not to encroach on the funds which, for the next few years, will be required to place the existing lines in a thorough state of efficiency. The phenomenal increase of traffic during the last few years has made the present equipment inadequate.

On the 1st of May the Governor of Ceylon laid the last stone of the Colombo Harbour Works, which have been under construction for 37 years. A telegram was sent to Messrs. Coode, Son and Matthews expressing in warm terms appreciation of their services in connection with this great work. The works from first to last have occupied 37 years.

The Ratnapura extension was officially opened in April. It had already secured a large amount of the goods traffic.

The progress of the Mannar extension has been retarded by the scarcity of labour during the rice harvest and ill health among the staff and labour force. Rail head in April was 19 miles 14 chains from Madawachchi.

Messrs. Mansergh and Sons have been engaged to prepare plans and estimates for a drainage scheme for the southern portion of the Colombo Municipality and a report on the extension of the municipal limits further south.

Malay States.

Kedah extension : the survey starts at Bukit Mertajam, a station on the main line in Province Wellesley, and proceeds due north to Alor Star. The line will be 60 miles long. By the end of March, 28 miles had been located. From this point to Alor Star the country is all cultivated and densely populated.

On the Padang Java-Kuala Selangor line the rails were linked in for $22\frac{1}{2}$ miles.

Fiji.

It is proposed to substitute an iron pontoon ferry, with an oil engine, for the present wooden ferry across the Rewa river. In such cases it is desirable to stretch two ropes across the river, one on each side of the pontoon, and to increase the breadth of the pontoon as a long broadside offers a great resistance and necessitates heavy warping gear. The cost of a pontoon 45 feet long, 20 feet wide, and 3 feet 9 inches deep at side, is about £2,000. If the expense of shipping in sections is very heavy, it may be better in such a case to ship in plates and angles and send out a man to re-erect.

Seccondree Harbour Works.

By the end of March, 182 feet of breakwater had been completed. On the reclamation, 32,631 cubic yards had been tipped.

Lagos.

On the Northern Extension excellent progress was made in February on the Taraji and Ebba bridges, and the Pimmi and Igberri bridges were opened for traffic.

The bank at the Jebba end of the Ebba bridge is completed and the stream diverted and flowing through the centre span of the bridge and new channel.

The following regulations are in force for the carriage of passengers' baggage between Iddo (Lagos) and Kano (or intermediate stations) by the boat trains which now run in connection with outward and homeward passenger steamers:—First 2 cwts. carried free; next 20 cwts. at second class goods rate; next 20 cwts. at third class goods rate; any excess is charged for at full luggage rates. There is no restriction as to the quantity of luggage allowed. The rates per cwt. from Iddo to Zaria and Kano are:—Zaria, second class, 9s. 3d.; third class, 13s. 3d. Kano, second class, 9s. 11d.; third class, 14s. 6d.

By the end of March the staging on the Niger (South Channel) Bridge was completed to Pier 5, in the Decauville tracks. The bore at Pier 2 reached rock 39 feet below river bed. It is expected that the bridge will be completed at the end of 1913 or early in 1914.

The next railway extension will probably be through the oil palm country of the Eastern Province.

A survey is being made for a line from Onitsha on the Niger to the Udi coalfields, about fifty miles from Onitsha.

The route is under consideration by which the railway is to be brought into Lagos by the new wharves.

On the harbour works lineal progress on the East Mole has been retarded by the diversion of stone to the Apapa West Mole wharves. Satisfactory progress has been made with the East Mole wharf.

Fifty open goods wagons, twenty third class coaches and nine composite coaches have been ordered. Seats in first class compartments to fold down into beds. Coaches to be Hale Coaches and fastened to floor. Lighting, Ridsdale roof lamps. Three sleeping saloons and four Improved Emir class locomotives are also on order.

It is understood that the proposal to erect a power station at the Kwa Falls for lighting the town of Calabar with electricity has been found to entail a prohibitive expense. An alternative proposal to run a power house by Diesel engines is under consideration.

The use of Diesel engines will be greatly encouraged in West Africa if, as is reported, they can be run on ground nut oil.

Northern Nigeria.

By the boat express from Lagos passengers arrive at Kano, 712 miles from Lagos, within three days. At present passengers have to change at Minna Junction (467 miles), but it is hoped before long to run the Lagos train de luxe through to Zaria. For the present passengers for points beyond Minna must be provided with their own "chopbox" and camp beds. Zaria is the station for the tinfields, and here the Bauchi Light Railway takes passengers ninety miles on their way to Rahama. The fare to this place is £9 14s. 7d., and to Kano £9 14s. 10d.

Baro-Kano.

Now that the line has been built, some regret will be felt that the important town of Bida, with some 30,000 inhabitants, was passed by. To touch at this point would have involved a much more costly bridge. Possibly a short branch line will eventually be laid. The gradients of the railway have been kept very flat so as to render running economical, but the adoption of 1 in 145 and 1 in 165 between Minna and Baro has had the effect of lengthening the line, the length being 42 per cent. over the distance, and greater gradients might have been preferable. Great care was shown in selecting good sites for the bridges, six of which remained to be built while the traffic was carried on deviations. From Zaria to Kano better ballasting is required, as the sleepers are only packed with the earth from which the banks have been thrown up and when any rain falls the road will rapidly get into a very bad state.

Zaria is likely to become a very important station. It stands high, 2,100 feet above the sea and in open country, it is also the junction for the Bauchi plateau. The city is at mile 263. It may become the headquarters of the Government on the ground of health.

The work of construction has been admirably done, but further capital outlay is necessary to make the line efficient, and an expenditure of £100,000, or £300 per mile, would still leave the total cost low, less than £4,000 per mile.

The Navigability of the Niger.

It was anticipated that one, or at most two dredgers would be able to keep open nine miles of 6 feet channel 150 feet wide, the estimated maximum obstruction, this calculation being based partly on the work done on the Mississippi. But probably the comparison does not fairly apply to a river like the Niger, which has long periods of low water and a very lively sandy bed. During low river the volume of water passing down is small and probably not sufficient to maintain such a channel as the above without a reduction of velocity and deposit of silt. The results of the dredging operations of the "Quorra" have been disappointing. In 1911 the maximum depth of channel rendered available was from 3 feet 3 inches to 3 feet 9 inches, and of this 6 inches may be attributed to the dredging.

Sierra Leone.

The branch from Boia to Roruks is being extended to Rowalla, another 50 miles, and a further extension in a northerly direction across the Rokell river for about 20 miles has been sanctioned. This branch will tap a very rich palm belt. Other branches are pro-

posed with a view to this traffic. The wharves and railway sidings at Freetown are cramped and a Fourah Bay scheme has been projected to provide suitable accommodation for ocean-going steamers.

Proposals have been made for the utilization of the Sewa River Falls for the production of electrical power. The Baykongo Falls, 55 miles from the railway, would provide ample power, and the project includes a transmission line for $227\frac{1}{2}$ miles along the railway from Pendembu to Freetown, the supply of electric light, power and tramways to Freetown, the electrification of the mountain railway, and supply of power to industries. It is considered that with cheap electric power available oil mills could be erected, so that the labour employed in the drudgery of cracking palm nuts by hand would be set free for the work of collection. The promoters of the scheme make it a condition that the Government should pay the cost of a section of the transmission line.

It is calculated that at the Falls there is a net head of water available at lowest level of 200 feet in a distance of 900 feet; the quantity of water measured was 4,000 cubic feet per second at almost low water period; the minimum power is put at 70,000 B.H.P. and at high water about 500,000 B.H.P.

It is, however, questionable whether the proposal is the best plan for the Government requirements.

Uganda.

The monorail between Kampala and Port Bell has been found costly and inefficient, and motor vans have been employed to supplement it. Proposals have been made for the construction of a tramway. The traffic over the route is estimated at 967 tons per month. There is a feeling in favour of Entebbe being made the port for Kampala, but Port Bell is considered the natural outlet.

Trinidad.

The Cipero tramway agreement has been settled.

Good progress has been made with the earthwork of the Siparia line. The progress on the Tabaquite Rio Claro line has also been more satisfactory this year.

Mallet Engines.

The first of the Mallet type engines, built by the North British Locomotive Company, recently arrived in South Africa. This locomotive presents several different features in outline to the earlier types built by the American Locomotive Company, the appearance

generally being more in keeping with the accepted type of British manufacture.

The sand boxes, instead of being placed on the top of the boiler, as is usual in the American type of locomotive, are arranged on an entirely different system, the boxes for the trailing or high pressure engine being fixed on the footplate, just to the back of the high pressure cylinders, whilst the sand boxes for the front engine are placed on the side of the boiler, just behind the smoke box; the result being that the outline of the engine becomes similar to that of the usual South African type, whilst the sand boxes are more accessible.

A notable feature of the Mallet type of engine built by the North British Locomotive Company is the band fixed round the boiler just behind the smoke box, to which is fixed a lifting link, giving increased facilities for lifting the boiler, particularly when the low pressure engine has to be uncoupled and removed.

Hill Railways.

Rope railways necessitate two or more sections, if the length is considerable, and the resulting changes. If the ground is unfavourable, the expense of the sub-structure is necessarily great. Rack railways can go from point to point, and can follow the lie of the land, so that the cost of the sub-structure may be reduced to a minimum. The stations can also be arranged at more convenient points, and the traffic capacities adjusted to the demands. In some places, owing to meteorological conditions, the rope system has the further disadvantage that the traction cable is liable to slacken; thus near the sea compounds of chlorine are injurious to it. The alignment should be straight, as the introduction of horizontal curves increases the wear on all parts of the line and necessitates greater power, but this may cause expensive work. On the other hand, the rack railway must be longer, and the amount of protective work is larger than in the case of a cable railway, and when the traffic is fairly uniform and not considerable motor driving is probably cheaper than locomotives.

CAVENDISH BRIDGE, MAURITIUS.

By P. LE JUGE DE SEGRAIS, M.INST.C.E., Director of Public Works,
Mauritius.

PREVIOUS to 1905, most of the road bridges of the Colony were built in timber, 19 only out of 189 being constructed in masonry or steel. The sums spent annually for maintaining these timber bridges in good state of repair have amounted to about £4,000, and, with the object of doing away with this large recurrent expenditure, the policy of replacing gradually all the timber structures in material of a durable character has, on the suggestion of the author, been adopted by the Colonial Government.

As a result, three bridges have been entirely re-built in masonry (arches) and three with steel super-structures. Over thirty have been re-built in reinforced concrete, which has proved cheaper than either masonry or steel, and practically requires no maintenance. All the ferro-concrete bridges are periodically examined and show no sign of cracking anywhere.

The existing abutments or piers of the timber bridges are generally of substantial basalt masonry, so that the super-structure only requires renewal, and this is done by blocking the road, if there is another road available within some reasonable distance, or the work is carried by halves, which is naturally not so satisfactory, and more costly also.

In some cases, however, it is necessary to re-build the bridge entirely, either because there are no satisfactory abutments or piers, or because the position of the existing bridge is dangerous and difficult of approach, especially with the motor traffic, which is daily largely increasing.

The bridge just completed and called CAVENDISH BRIDGE, after Sir Cavendish Boyle, K.C.M.G., the Governor of Mauritius, whose services expired in August last year, is the longest road bridge in the Island.

The old structure, built about the year 1856, consisted of 35 pairs of timber piles, spaced 18 to 20 feet apart, across the

estuary of River "La Chaux," to connect the town of Mahebourg with its suburb called "Ville Noire," and establish communication between Mahebourg and an important section of the district of Grand Port; Mahebourg being the head centre of that district and formerly the main port of the Island.

The cross section of this old timber bridge shows how the work was carried out, the timber piles, 10 to 12 inches square, driven about 20 feet in unsafe ground, being connected top and bottom by horizontal timber ties and struts, on which the timber platform, 4 inches thick, was laid across longitudinals fixed in the top horizontal member. It will be understood that a structure of this description, measuring 533 feet from end to end (there being no masonry abutments, but piles driven at each end were secured in dry walling to form the abutments), was not very satisfactory as regards stability; in fact, it was so shaky that it was with difficulty that the author could use his level while standing on the bridge, the spirit bulb being thrown out of level by any person passing the instrument.

Only light traffic, such as carts and carriages, was permissible, and now and then a roller, not exceeding 5 tons in weight, was allowed to be dragged over the bridge by men with the greatest precautions.

Traction Engines were, of course, prohibited from going over, so that those conveying sugar from three sugar factories had to stop at the end of the bridge and transfer their loads from trailers into light carts carrying half a ton, which took the sugars across the bridge, either to a wharf on the opposite bank of the river for shipment in coasters to Port Louis, or to the Railway Station for conveyance by rail to the same place.

The same process had to be gone through again for all the Estate's stores and provisions coming from Port Louis.

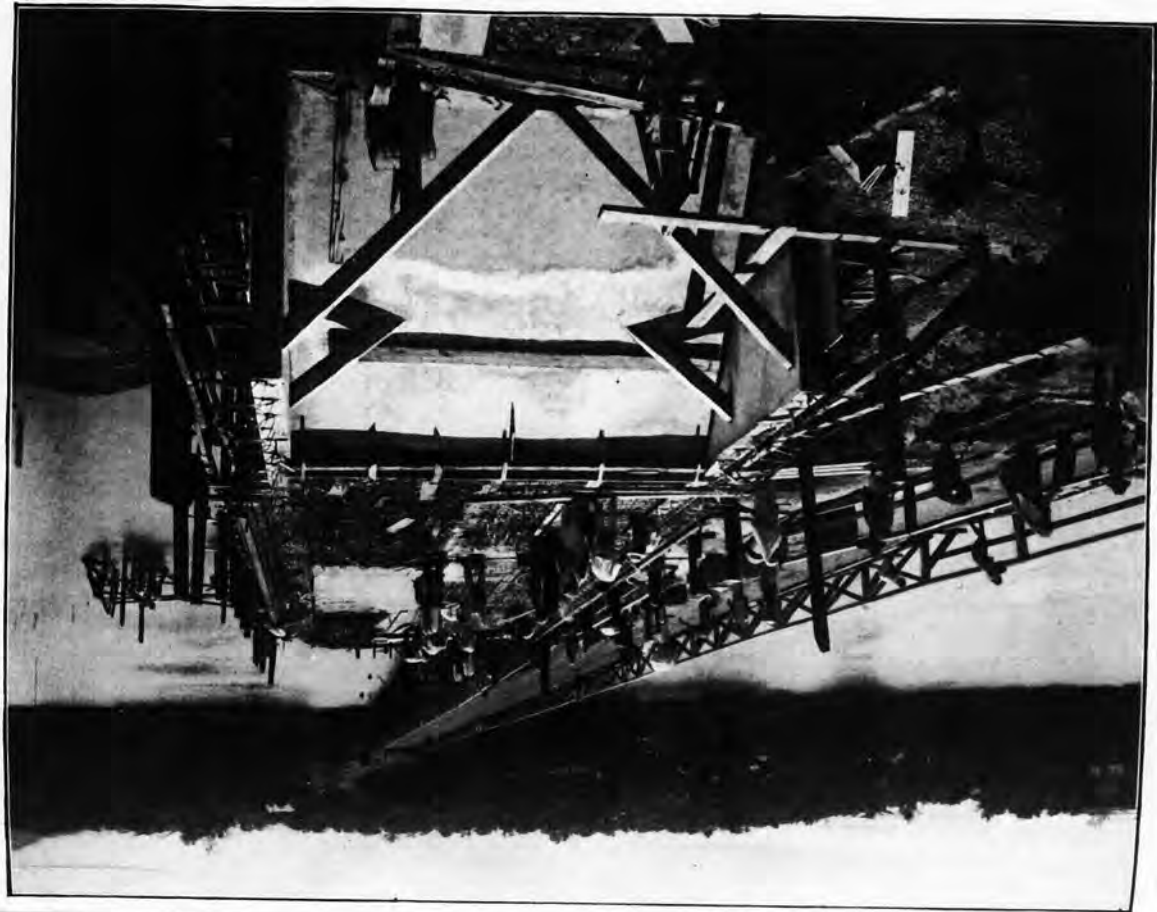
The new bridge was designed with a view to facilitate the traffic, and to carry a moving load of one ton per foot run, which is more than ample for the local requirements.

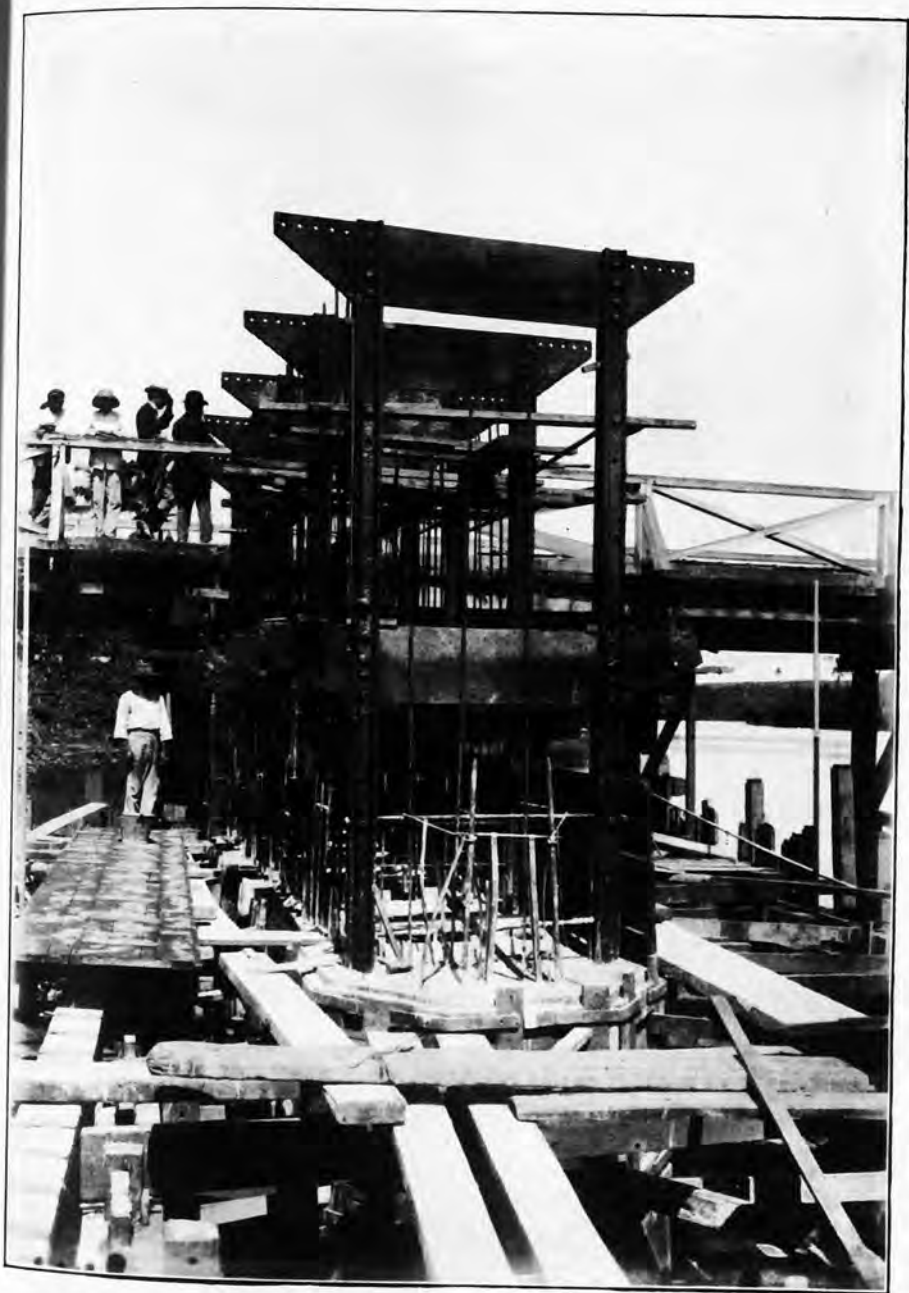
A good view of the bridge is given by the photograph taken on the down stream side. There are seven flat arches span 62 feet 6 inches and rise $\frac{1}{10}$ of the span or 6 feet 3 inches, the piers at the springings of the arches being 5 feet thick, and the abutments 20 feet deep, giving a total length of 507 feet 6 inches for the portion of the work done in reinforced concrete. The approaches, measuring 82 feet and 177 feet respectively, are made in coursed rubble masonry with a finely dressed ashlar parapet.

Abutments.—The southern abutment on the Mahebourg side rests on 20 teak piles, 10 inches square, driven in the solid 10 to 20 feet; these piles support a reinforced concrete base, 2 feet thick, by means of $1\frac{1}{2}$ -in. round steel bars fixed on the top of the piles, to









which a lattice work of $\frac{5}{8}$ -in. and $\frac{1}{2}$ -in. round steels fixed 6 inches apart are connected.

Light walls of ferro-concrete were then built one foot thick, leaving hollows which were filled up with coral sand.

The abutment has the shape of a trapezium, with the exception of the two outside walls, which are tied by reinforced beams into the central wall.

This is shown by the photographs of the abutment. The light walls are reinforced by vertical $\frac{5}{8}$ -in. round steel bars placed 8 inches apart, and horizontal $\frac{1}{2}$ -in. round steel bars similarly spaced.

The walls are further reinforced by 5 pairs of unserviceable rails where the arch reinforcements are attached, and also a second line of 10 old rails at the back which serve for further anchoring the arch reinforcements by means of 2 pairs of $1\frac{1}{2}$ -in. round steel bars.

Some difficulty was experienced in making the foundations. It was first of all anticipated that it would be possible to find solid ground from trial pits previously made, but water percolating made the excavation very difficult, especially at high tide, and steam pumping had to be resorted to. It was then found preferable to drive piles to support the concrete.

The northern abutment in "Ville Noire" was built in the river bed as well as a part of the masonry approach wall, and a cofferdam was first of all made; fifteen ferro-concrete piles were driven to support the abutment, which was, in other respects, the reproduction of the southern one. Below water, these piles were connected together in the same manner as those for the piers, as explained further on. Sixteen ferro-concrete piles were subsequently driven to support the masonry walls of the approach on that side, the piles being spaced 18 feet and 4 feet centres, and connected by a ferro-concrete base 6 feet wide and 1 foot thick, on which the masonry walls, 17 feet high at the deepest part on each side, were built without difficulty.

Each pile was reinforced with four $1\frac{1}{2}$ -in. round mild steel bars, tied with $\frac{3}{16}$ -in. wire spaced close at the point and end, and nowhere less than 6 inches apart.

The piles were moulded horizontally always two months in advance; they were driven by a $1\frac{1}{2}$ -ton cast iron monkey with a drop not exceeding 7 feet until the piles reached the firm ground, that is when the penetration per blow did not exceed $\frac{1}{8}$ of an inch. No difficulty was experienced in driving the piles with the interposition of a wooden dolly and a steel square box fitted on top of the pile and filled with sawdust and wooden shavings.

Piers.—A cofferdam had to be made for each pier. Ten ferro-concrete piles were driven from 15 to 24 feet. In one case the piles had to be lengthened, and in others they had to be cut off.

These piles were connected by short ferro-concrete walls, 1 foot thick and 2 to 3 feet deep, *i.e.*, about 5 feet below low water level, to protect the piles further down in case of erosion. The ferro-concrete base, 26 feet long, 7 feet wide, and 27 inches thick, resting on the piles, is reinforced by two $1\frac{1}{2}$ -in. steel bars resting on the tops of the piles lengthwise and crosswise, the intervals being fitted up with a netting of $\frac{3}{8}$ -in. and $\frac{1}{2}$ -in. round steels, spaced 6 inches apart. When a foot of concrete had been laid the old rails were fixed in proper alignment, these being fixed in pairs 5 feet centres, and the remaining 15 inches of concrete were then laid. Each pier has four hollows 4 feet 0 inches by 3 feet 6 inches; these were left empty to save weight on the piles and give more elasticity to the pier. The walls were reinforced in the same way as those of the abutment. The photo of the pier gives a good idea of its construction.

Arches.—Each span consists of 5 beams, the 3 central ones 15 inches thick, and the outside ones $13\frac{1}{2}$ inches; the depth of each beam is 1 foot 0 inches at the centre and 7 feet 3 inches at the haunches.

The concrete platform is tied on the top of these beams, which are connected crosswise by 9 cross beams 9 inches thick and 12 inches deep. These beams form continuous beams from one end of the bridge to the other, and are firmly tied into the abutments as already explained. The reinforcement consists of two $3\frac{1}{2}$ -in. by $3\frac{1}{2}$ -in. by $\frac{1}{2}$ -in. mild steel angles forming two inverted tees top and bottom, which are connected by vertical and diagonal bracings bolted to the steel angles by $\frac{3}{4}$ -in. bolts spaced 2 feet 1 inch apart.

The lower angles are placed 2 inches below the intrados, and the upper ones project 3 inches into the 6-in. platform.

The cross beams are reinforced by five 1-in. round mild steel bars, one of each passes over the upper steel angles and is inclined towards the centre of each bay to provide against shearing. The platform consists of a series of $\frac{3}{8}$ -in. and $\frac{1}{2}$ -in. round mild steel bars forming a square of 8 inches with stirrups (made of cement casks steel bands) at each intersection.

The concreting of each beam took one day, and that of the platform three days on each occasion; a rendering of $\frac{3}{4}$ inch of cement mortar 1 to 1 was laid immediately after, and the whole kept moist for a fortnight.

The cornice on which the handrail is built was next concreted.

A small footpath is provided, which serves as cover for a channel to hold the C.I. water pipes which supply the town of Mahebourg.

Each span was made in succession, and it is to be noticed that there is no crack noticeable where new work was laid against old on six different occasions at intervals of 4 to 6 months.

The composition of the concrete used was a mixture of 12 parts by volume of carefully cleaned and washed basalt macadam of $\frac{3}{4}$ inch and $1\frac{1}{2}$ inch in size, 6 parts of screened coral sand, and 2 parts of Portland cement for all the walls in compression, and 3 parts of cement for the super-structures.

All the outside work was carefully rendered and polished with fine cement mortar 1 to 1, and by fixing small wedge-shaped battens inside the moulds to imitate masonry joints the work has the appearance of being made of blocks of marble.

It took a little over three years to build the bridge. The work was started on the 17th February, 1908, and the bridge tested on the 28th March, 1911, when, on passing a traction engine weighing 17 tons and 3 trailers loaded with bags of sugar each weighing 9 tons, a maximum deflection of $\frac{1}{4}$ of an inch was obtained.

The calculations were made in the same manner as those adopted for the Trianon Bridge, a description of which is to be found in Volume clxxxiii. of the minutes of proceedings of the Institution of Civil Engineers.

The cost of the work is given below. The old timber bridge was built originally for a contract price of 47,000 dollars, equivalent to £9,400; the timber was naturally periodically renewed. The sums spent for repairs to the bridge for a period of nine years, from 1896 to 1904, amounted to Rs. 36,425, giving an average sum of Rs. 4,000 in round figures, or £266, for annual maintenance.

The following is the detailed schedule of cost:—

		£	s.	d.	£	s.	d.
1. Reinforced Concrete Work:—							
Portland cement from England	1,296	4	7				
Mild steel from England.....	1,272	3	10				
Timber for false work.....	248	12	4				
Labour	3,456	18	8				
Sand	63	5	4				
Cartage, dressed stones for caps of parapets, edge of roadway, inci- dentals	380	18	7				
					6,718	3	4
2. Masonry Approaches:—							
Portland cement from England	281	11	9				
Steel from England.....	82	0	11				
Labour	1,098	0	3				
Sand	11	11	10				
Cartage, dressed stones, and incidentals	445	10	4				
					1,918	15	1
Total...					£8,636	18	5

P. LE J. DE SEGRAIS.

25th March, 1912.

MEDICAL NOTES.

FROM July 1st the Sleeping Sickness Bureau will be incorporated in a Tropical Diseases Bureau. Appalling as Sleeping Sickness is in some places, it can hardly be said to be widespread, and the attention given to it should not be allowed to detract from the study of other more representative diseases. The Bureau, which will be at the Imperial Institute, will issue at frequent intervals a Tropical Diseases Bulletin, and thus the result of recent researches and methods will quickly become available throughout the Empire. The present library is expected to grow rapidly and to be of great use to medical officers who are at home on leave from the tropics.

The *Sleeping Sickness Bulletin* No. 37 (vol. 4) records the discovery that *Glossina Morsitans*, caught in nature in the Luangua Valley, Northern Rhodesia, can transmit the human trypanosome to monkeys and other mammals, and presumably therefore to man.

Tuberculosis.

The situation disclosed by the Bermuda statistics is most disquieting, and Mr. R. Popham Lobb has some strong remarks on the grave character of the evil and the need of teaching the elementary laws of health to the young. He states that among the European population the mortality from Tuberculosis is distinctly low, 3·7 deaths to every 100 births, or only 2·8 per cent. if the deaths of non-Bermudians are excluded, as against a percentage, for instance, of 5·9 for England and Wales in the year 1909.

In the case of the coloured population, on the other hand, the mortality is more than twice as great, and it must be remembered that the coloured inhabitants outnumber the white by nearly 2 to 1.

The recorded deaths from Tuberculosis were in the proportion of 104 per 1,000 deaths; if the same ratio held good in the case of 514 uncertified deaths, or even of a majority of them, it follows

that the mortality as given in the Tables has been understated. There are no means of verifying this hypothesis, but the Registrar-General has little doubt that it is to a large extent correct.

Tuberculosis is responsible for more coloured deaths than any other form of disease. During the 10 years under review the deaths from this cause formed 15 per cent. of the total coloured deaths from disease of all kinds, as compared with a percentage of only 7.0 in the case of Europeans. In each of the two worst areas, Tuckers Town and Warwick Parish, out of every 5 coloured deaths from disease, 1 was due to Tuberculosis.

If the Coloured population lived entirely apart from the European community, the prevalence among them of Tuberculosis would lose one at any rate of its most serious aspects. This, however, is very far from being the case. With the solitary exception of the Tuckers Town peninsula, the most remote spot in the Colony, which has an entirely coloured population, the coloured inhabitants throughout the Island live in close proximity to, and sometimes, in the urban districts, in houses adjoining those of Europeans.

It is not generally realized that Bermuda is one of the most thickly populated islands in the world. The density of the resident civil population is approximately 1,150 to the square mile, varying from 360 in Smiths to 1,350 in Sandys and 3,400 in Pembroke.

A second and more significant circumstance is that the whole of the domestic servant class, excepting a few West Indians, is drawn from the local coloured inhabitants.

Taking into account the firm hold which the disease has already obtained over the coloured inhabitants, the fact that they constitute a large majority of the population in every parish, that they live and, as domestic servants and in other capacities, work in close proximity to Europeans and are wholly ignorant of the elements of hygiene and ordinary precautions against infectious disease, it must be admitted that the conditions for the spread of Tuberculosis among all classes of the community are distinctly favourable.

Against these disadvantages however must be placed two distinctly beneficial circumstances, namely, the absence of overcrowding, in the sense in which the term is understood in European countries or America, and the fact that the great majority of the population, European and coloured, follow out-of-door occupations. There is no industrialism in the Colony and consequently no factories, mines or crowded workshops. Excepting in a few streets in St. George's and Hamilton, almost every household, White or coloured, occupies a detached stone-built cottage open on all sides to the sun and air and generally standing in its own patch of garden,

and the middle and lower classes are probably better housed here than in any other part of the world. These factors are undoubtedly of great value in counteracting the spread of infectious or contagious disease of all kinds.

The prevalence of this disease among the natives of a densely populated island only 19 square miles in extent, frequented annually by some 30,000 Europeans and enjoying a wide reputation as a health resort, and the certainty that unless timely steps are taken it will increase, are circumstances which cannot be disregarded and they call for the adoption of active measures of prevention without delay.

The mortality from this cause may or may not be less here than in other countries but even if it were the lowest, the fact remains that it is capable of being very greatly reduced and public policy and humanity alike dictate that steps to that end should be taken.

Few persons outside the medical profession have had any opportunity hitherto of realizing the full extent of the evil and the steady drain which it makes upon the population, and for this reason little has so far been done to check it.

With a magic lantern, provided by the General Board of Health, Dr. R. R. Higinbotham, Health Officer of the East End, gave a series of free lectures on Tuberculosis throughout the Island in the winter of 1910-11. Two very useful pamphlets on the nature and prevention of the disease, prepared respectively by the same officer and Dr. Eldon Harvey, Medical Officer of Health, were printed and widely distributed by the Board in 1909 and 1910.

Since 1907 the Board of Education has provided an annual course of free lectures on Hygiene for school teachers but it goes no further. Hygiene is not a compulsory subject in the aided schools, and apparently it is never taught voluntarily, not even in the best European schools.

The Colony spends on an average £2,400 a year on education, 94 per cent. of which goes in grants to the teachers, and attendance at school is compulsory. In no case however does the curriculum in any school include what from the standpoint of the individual, and therefore of the community, is assuredly the most vital subject of all, namely the laws of health.

For want of this elementary and essential knowledge the great majority of children are destined in all probability to undergo unnecessary physical suffering in later years, and a considerable number must inevitably die in early youth or manhood. Each new generation of parents not only remains as incapable of instructing its offspring as the last but is increasingly liable to transmit the disease which this ignorance directly fosters.

The child of to-day is the parent and citizen of to-morrow and upon his efficiency, both of body and mind, depend the efficiency and prosperity of the community. A State which permits its members to grow up without taking any steps to ensure that they are taught how to avoid the diseases most fatal to human life resembles an owner who allows his ships to go to sea in charge of officers wholly ignorant of navigation and seamanship. Under such conditions the individual has almost as little chance of attaining a useful old age as the ship of reaching port.

The Colony cannot in its own interests continue to allow each rising generation to go adrift without any guidance in such matters, and if the exciting evils are to be checked and reduced to a minimum, systematic measures must be put in force to dispel this ignorance.

When it is remembered for instance that the Colony has for some years past expended £500 a year in exterminating an insect pest which destroys fruit and *nothing* in combatting a preventable disease which is responsible for more deaths than any other cause and a growing menace to residents and visitors alike, the Registrar-General submits that it will be recognized that there is room for a more equitable and reasoned application of public energies and funds. Bermuda is by no means the only place of which this can be said.

The main obstacles standing in the way of any reduction in the mortality from Tuberculosis are ignorance, poverty and distance from medical aid.

The first of these, ignorance, though the chief preventable cause of the disease and practically universal, is fortunately one which can be easily attacked and almost wholly overcome; poverty and the distribution of medical practitioners are economic factors and consequently less susceptible to amendment by State action.

The schools are the only means by which Government can reach practically every child in the Colony, and the machinery controlled by the Board of Education should be utilised for the purpose.

What is thoroughly learnt in youth is seldom forgotten in later life, and if the curriculum of every school included the teaching of hygiene and the laws of bodily health, with especial reference to the prevention of Tuberculosis, a marked reduction in the death rate could hardly fail to follow.

Every teacher, whether in receipt of a Government grant or not, should be required by law to qualify in hygiene within a reasonable time; regular courses should be provided for them at the public expense, and instruction in the subject should be made compulsory in every school, aided or otherwise.

The poorest section of the inhabitants, who are also the most ignorant, are to be found in the rural parishes, Hamilton parish and Tucker's Town, Warwick, Southampton and Sandys. It is in this group that the mortality from Tuberculosis is highest among the coloured population, who form over 70 per cent. of their combined inhabitants, namely 48 per 1,000 of mean population. In the rest of the Colony the rate is only 29 per 1,000. Stated in another way, the deaths number 103 per 1,000 living births in this group and only 70 per 1,000 elsewhere.

In the poor districts medical attendance is difficult to get, and if the evil is to be combated State assistance and organisation is necessary. At present Bermuda has only two medical officers, and compares badly in this respect with other West Indian Islands.

Leprosy.

An article in the South African Journal of Tropical Medicine and Hygiene suggests that the leprosy bacillus is transmitted by bed-bugs. The cause of the transmission of the disease has never hitherto been traced, but the discovery that plague is spread by fleas indicates that other diseases may be communicated in a similar way. Leprosy, apparently, is not contagious, but some of the people who live in close association with lepers become lepers too. The following story is told to confirm the suggestion as to the cause of this. A native residing in a village about three miles from Maseru, presented himself as an out-patient about three months ago with some well-marked tubercular leprous patches on the face. They had appeared about six weeks previously. There are no lepers in his village, and none of his relatives are lepers. Inquiries as to how he had spent his time and where he had been during the preceding year elicited the fact that he had during that period visited on three or four occasions a village about 50 miles away where there was one leper, who was, however, driven from the village during the period in question. He had been in the leper's hut, but had never partaken of food there. After the leper had been driven away, X spent one night in the hut and was severely bitten by bugs there. The closest questioning failed to elicit any further evidence of contact with lepers or their dwellings, and one is almost forced to the conclusion that X was inoculated by leprosy infected bugs or other parasites on the one night he spent in the infected hut.

Mortality of European Officials in West Africa.

In the "Returns for 1911" (Cd. 6089) it is observed that in that year the total death-rate was 13.9 per 1,000, a decrease

of 6·5 on 1910; or excluding deaths not due to disease, 11·7, a decrease of 5·0. This is a considerable fall, and must be regarded as very satisfactory, especially as there were serious outbreaks of yellow fever in the Gold Coast and Gambia. There was also a decrease in the invaliding rate. It is mentioned, "As supporting the view that a man quickly recovers from the effects of the West African climate, that officials invalided from the service are not infrequently found fit for re-employment after residence of a year or so in this country. Also officials pensioned generally enjoy their pensions for many years; in one or two cases the period on pension has been as much as 40 years."

Lest, however, these last cases should be unduly relied on, it may be pointed out that the average length of service shewn in these returns is still very short—last year it was 4 years 4 months. The statistics given are therefore based on the records of men who are only a comparatively short time in the country.

Transport of Lymph.

A form of "Thermos" flask is being used for this purpose in tropical countries, and satisfactory results have been obtained.

COLONIAL STAMPS.

THE following new designs and varieties have appeared since our last issue :—

BAHAMAS.— $\frac{1}{2}$ d., $2\frac{1}{2}$ d., 4d., 6d., 1s., 5s. and £1, new portrait.

CEYLON.—3, 6, 10 and 15 cents., new portrait, old D.L.R. type of keyplate.

EAST AFRICA AND UGANDA PROTECTORATES.—3 and 6 cents. stamps from a new keyplate to fit the existing border plates.

FALKLAND ISLANDS.— $\frac{1}{2}$ d., 1d., 2d., $2\frac{1}{2}$ d., 6d., 1s., 3s. and 5s., new portrait.

Fiji.—1d., 5s. and £1, new portrait.

GAMBIA.— $\frac{1}{2}$ d., 1d., $1\frac{1}{2}$ d., 2d., $2\frac{1}{2}$ d., 3d., 4d., 5d., 6d., $7\frac{1}{2}$ d., 10d., 1s., 1s. 6d., 2s., 2s. 6d. and 3s., with new portrait. The $1\frac{1}{2}$ d. is a new value.

GIBRALTAR.— $\frac{1}{2}$ d., 1d., 2d., $2\frac{1}{2}$ d., 6d. and 1s., from a new keyplate to fit the existing overprint plates.

GILBERT AND ELLICE ISLANDS PROTECTORATE.— $\frac{1}{2}$ d. stamps, portrait of H.M. the King. The word "Protectorate" is omitted from the inscription for the sake of brevity.

KEDAH.—Three designs have been used in the production of this series by the copper plate process :—Shock of Padi, 1, 3, 4, 5 and 8 cents.; Malay ploughing with a pair of bullocks, 10, 20, 30, 40 and 50 cents.; The Council Chamber, 1, 2, 3 and 5 dollars. The first five values are of the ordinary postage size; all the rest are of the revenue size, the design being horizontal and not vertical.

LEEWARD ISLANDS.— $\frac{1}{4}$ d., $\frac{1}{2}$ d., 1d. and $2\frac{1}{2}$ d., new portrait.

MALTA.—1s. stamp bearing King Edward's head overprinted "Revenue."

NEW HEBRIDES CONDOMINIUM FRENCH SERIES.—The latest issue of the stamps of this series in which denominations were represented was printed on paper each sheet of which contained the letters

"R. F." once only in large characters. The result of this is that some of the stamps will be found to be unwatermarked while others will contain unrecognizable portions of one of the letters. The stamps were despatched to Paris early in April. This paper will naturally only be used for the French series.

ST. LUCIA.— $\frac{1}{2}$ d., 1d., $2\frac{1}{2}$ d., 3d., 6d., 1s. and 5s., for the first time with the new portrait. Old D.L.R. Universal design.

SIERRA LEONE.—1d. and 2d., new portrait.

SOUTHERN NIGERIA.—2d., new portrait.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. P. M. C. SHERIFF (Chief Justice, St. Lucia), Chief Justice, Bermuda.
- Mr. J. A. S. BUCKNILL (King's Advocate, Cyprus), Attorney-General, Hong Kong.
- Mr. J. M. M. DUNLOP (Police Magistrate, Southern Nigeria), Attorney-General, Northern Nigeria.
- Mr. A. E. CRUICKSHANK (Traffic Manager, Uganda Railway), General Manager of Railways, Gold Coast.
- Mr. N. FARRAR (Postmaster-General, Nyasaland), Postmaster-General, British Guiana.
- Mr. S. SIMPSON (late Cotton Expert, Nyasaland), Director of Agriculture, Uganda.
- Dr. L. D. PARSONS (Assistant Surgeon, Colonial Hospital, Gibraltar), Medical Superintendent of Lunatic Asylum, Ceylon.
- Mr. E. B. JARVIS (Assistant Colonial Secretary, Leewards), First Assistant Secretary, Uganda.
- Major W. H. ROBINSON (Inspector of Police, Mauritius), First Assistant Superintendent of Prisons, Ceylon.
- Mr. A. W. HODSON (Assistant Resident Magistrate, Bechuanaland Protectorate), District Commissioner, Somaliland.
- Dr. W. R. W. JAMES (late Medical Officer, Bechuanaland Protectorate), Medical Officer, Gilbert and Ellice Islands Protectorate.
- Mr. W. H. PATTERSON (Resident Master, Agricultural School, St. Vincent), Entomologist, Agricultural Department, Gold Coast.
- Mr. W. H. G. THORNE (Sub-Inspector of Constabulary, Trinidad), Sub-Inspector of Police, Barbados.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

GOLD COAST.

AULIFF, H. ...	28 Aug., '12	DONNELLY, DR. J. ...	18 July, '12
ATKINSON, J. ...	4 Sept., '12	EVANS, A. E. ...	29 July, '12
ARTHUR, S. H. ...	23 Aug., '12	FLETCHER, H. ...	23 Sept., '12
BARTLETT, H. E. G. ...	1 Oct., '12	FENWICK, H. E. ...	12 Aug., '12
BARTON, P. F. ...	4 Oct., '12	United Empire Club, 117, Piccadilly, W.	
BRANCH, H. C. ...	28 Aug., '12		
BRITTON, H. ...	5 Aug., '12	FITZGERALD, B. ...	5 Aug., '12
BOND, H. H. ...	29 July, '12	FERGUSON, B. ...	8 July, '12
BECKLEY, A. J. ...	20 Aug., '12	GREY, D. ...	30 July, '12
BAIN, W., ...	30 July, '12	GOODWIN, H. ...	28 Aug., '12
BEAL, W. P. B. ...	3 July, '12	Cocoa Tree Club, 64, St. James' St., S.W.	
BECK, G. ...	13 Aug., '12		
BRANCH, H. G. S. ...	18 July, '12	GRIFFITH, G. RISELEY ...	20 Sept., '12
BRENT, R. W. ...	18 July, '12	HENRY, C. ...	...
COGILL, F. ...	17 Aug., '12	HUDSON, A., K.C. ...	25 July, '12
CORSER, R. B. ...	30 July, '12	HOOD, S. J. ...	18 Sept., '12
COLLINS, E. V. ...	5 Aug., '12	HAMILTON, DR. H. F. ...	12 Oct., '12
CRAIG, R. ...	24 Aug., '12	HALL, T. L. ...	2 Oct., '12
CRAVEN, C. S. ...	Sailing	HIBBERT, J. H. ...	26 July, '12
	17 July, '12	HORNAGOLD, J. H. ...	19 July, '12
CLARKE, R. A. ...	22 Aug., '12	HOPKINS, DR. F. G. ...	20 Sept., '12
DOWNES, LT.-COL. E.	...	HINSON, D. B. ...	20 Aug., '12
PANTER ...	23 Sept., '12	HALL, E. ...	8 Aug., '12
Junior Naval and	...	HOOD, T. ...	30 July '12
Military Club, 96,	...	HEARNshaw, W. ...	8 July, '12
Piccadilly, W.	...	JEFFREY, J. ...	29 July, '12
DARBY, J. ...	19 July, '12	JONES, A. J. ...	28 Sept., '12
DALEY, J. H. ...	30 July, '12	JENSEN, O. J. L. ...	28 Sept., '12

GOLD COAST—*continued.*

KILBY, R. N.	1 Aug., '12	PALFREMAN, L. R.	22 Sept., '12
KING, T. E. J.	9 July, '12	PHILLIPS, R. G.	
LAKE, F.	29 Aug., '12	READ, H.	27 July, '12
LAMB, H. L.	29 July, '12	RICE, DR. T. E.	
LAMB, E.	16 July, '12	ROBERTSON, W. C. F.	28 Sept., '12
LEES, CAPT. E. F. W.	7 Oct., '12	RUTHERFORD, A.	20 Aug., '12
LE FANU, DR. G. E. H.	9 July, '12	RUBERY, C.	20 Aug., '12
MAY, DR. H. O'HARA	20 Aug., '12	RALPH, DR. C. H. D.	24 Aug., '12
MONTGOMERY, DR. H. B. S.	14 Sept., '12	REECE, M. D.	5 Aug., '12
MANNERS, G. R.	28 Aug., '12	SYMONDS, J. E.	30 July, '12
MCDONNELL, M. F. J.	28 Aug., '12	STANTON, MISS M. W.	20 Aug., '12
MUSS, L. J.	20 Sept., '12	STARK, J.	20 Aug., '12
Junior Constitutional Club, Piccadilly, W.		STANLEY, A.	5 Aug., '12
MOORE, G. F. H.	20 Aug., '12	SAWYER, W. H.	23 July, '12
MCDONALL, DR. J. C. S.	10 Oct., '12	SEDDON, T. R.	22 Aug., '12
MESSUM, S. R.	14 Aug., '12	SMITH, R. A. B.	5 Sept., '12
MILNE, R.	13 July, '12	STUDHOLME, W.	12 July, '12
MILLER, W.	24 July, '12	SHORT, CAPT. P. H.	23 July, '12
NASH, G. W.	30 July, '12	TURNER, A. D.	18 July, '12
NORRIS, A. W.	4 Sept., '12	TAPLIN, B. B. M.	18 Sept., '12
O'BRIEN, DR. J. M.	13 July, '12	VICAT, H. J.	20 Aug., '12
Royal Societies Club, St. James' Street, S.W.		WADE, DR. W. M.	18 Sept., '12
OKELL, G.	1 Oct., '12	WEBB, C. E.	7 Oct., '12
OUCHTERLONG, J. P. H.	28 July, '12	WATTS, DR. W. G.	18 Sept., '12
c/o Messrs. Cox & Co., 16, Charing Cross, S.W.		WADE, H. J. SEATON	14 Sept., '12
POPE, P. N.	24 July, '12	WALKER, DR. G. C.	8 Aug., '12
POWLES, T.	29 July, '12	WELLS, A. G.	19 July, '12
		WHITE, A.	31 Aug., '12
		WOOD, R. E.	6 July, '12

SIERRA LEONE.

ANDREWS, E.	5 Aug., '12	MIREMONT, G. E. R. DE	25 Sept., '12
ALLAN, DR. C. H.	18 Sept., '12	NEWTON, J. J.	13 Sept., '12
BUTLER, DR. G. G.	13 Sept., '12	PAGE, G. W.	28 Sept., '12
BURROWES, DR. D.	18 July, '12	ROSS-HUME, A.	30 July, '12
CORNER, G. H.	30 July, '12	STANLEY, CAPT. W. B.	30 Sept., '12
COGHILL, CAPT. H. B. M.	12 Aug., '12	SMITH, H.	13 Sept., '12
CROFT, CAPT. W. D.	13 July, '12	SCOTLAND, D. W.	18 Sept., '12
FARRAR, A.	24 July, '12	SHELDRAKE, J. H.	25 Sept., '12
FISHER, H. C. F.	25 Sept., '12	STANLEY, G.	11 Oct., '12
HODGSON, H. C.	13 July, '12	TWELLS, J.	13 Sept., '12
HATTON, T.	12 Aug., '12	THOMPSON, H. H.	12 Aug., '12
HESLIP, CAPT. I.	18 July, '12	VARLEY, G.	24 July, '12
JOHNSTONE, R. M.	6 July, '12	VERGETTE, E. D.	20 Aug., '12
KRUGER, MRS. E. C.	18 Sept., '12	Royal Societies Club, St. James' Street, S.W.	
MARTIN, J. D.	30 July, '12	WILBRAHAM, D. F.	22 Aug., '12
MEREWETHER, Sir E. M., K.C.V.O., C.M.G.	13 Sept., '12	WOOD-MASON, DR. E. W.	21 Aug., '12
MILES, W. J.	25 Sept., '12	WHITE, R.	

GAMBIA.

HOPKINSON, Dr. E., D.S.O.	29 Oct., '12	PICKERING, W. ...	20 Sept., '12
O'BRIEN, Lt.-Col. C. R. M.	27 July, '12	THURSTON, Capt. V. B....	9 Oct., '12

SOUTHERN NIGERIA.

ADAMS, F. B. ...	9 Aug., '12	CLARK, Dr. W. S. ...	23 Sept., '12
ANDERSON, M. E. M. ...	30 July, '12	COLLINS, J. G. ...	18 Sept., '12
ANSON, F. C. M. ...	19 Aug., '12	DUNDAS, R. W. M. ...	27 Aug., '12
ARTHUR, T. M. ...	20 July, '12	DUNCOMBE, H. F. ...	25 Sept., '12
ALLISON, W. F. ...	1 Oct., '12	Constitutional Club, Northumberland Avenue, W.C.	
AINSCOUTH, F. ...	13 July, '12	DENE, H....	24 July, '12
ALLIN, Dr. J. R. P. ...	15 Aug., '12	DALE, C. E. ...	17 July, '12
ARCHER, P. L. H. ...	29 Sept., '12	DAVIDSON, J. ...	25 Sept., '12
AVELING, H. G. ...	27 Aug., '12	DAVIDSON, H. J. ...	18 Sept., '12
ASHTON, D. A. ...	27 Aug., '12	DAVIS, H. R. H. ...	15 Aug., '12
BROWN, G. A. ...	23 July, '12	DOWERS, H. ...	18 Sept., '12
Primrose Club, Park Place, St. James, S.W.		DYER, H....	27 Aug., '12
BOWKER-BOOKER, H. T... 14 Aug., '12		DAVIDSON, C. E....	1 Aug., '12
BURROWES, T. F. ...	26 Nov., '12	DAY-BARKER, F. ...	14 July, '12
BINNY, J. M. ...	5 Aug., '12	DERRIMAN, F. H. ...	30 July, '12
Royal Automobile Club, Piccadilly, S.W.		DITCH, G. B. ...	15 Aug., '12
BONELL, T. H. M. ...	26 July, '12	DUNNE, M. ...	27 July, '12
BOURNE, A. ...	3 Aug., '12	DENMAN, C. ...	12 Aug., '12
BUCHANAN, G. A. ...	1 Oct., '12	DEAN, A. J. ...	18 July, '12
BURRELL, W. J....	25 Sept., '12	DARBY, F. J. d'E. ...	10 July, '12
BRIGGS, Miss E....	25 July, '12	DUNCOMBE, W. K. ...	25 Sept., '12
BROOKS, J. B. ...	18 Sept., '12	Royal Colonial Insti- tute, Northumberland Avenue, W.C.	
BAULCH, A. ...	27 Aug., '12	ELGEE, Capt. C. H. ...	31 Aug., '12
BRODIE-SMITH, G. T. ...	8 July, '12	ELLIS, Dr. H. R. ...	19 Aug., '12
BEACH, E. ...	24 July, '12	EMERY, R. B. ...	1 Oct., '12
BODEN, H. ...	23 Aug., '12	FINLAY, Dr. J. D. ...	9 July, '12
BICKEL, W. H. ...	24 July, '12	FROST, A. ...	17 Sept., '12
BUTLER, S. J. ...	18 Aug., '12	FRANKLIN, Dr. E. M. ...	21 July, '12
BAILEY, Dr. J. C. M. ...	4 Oct., '12	FAIRHURST, W. C. ...	23 Oct., '12
BRIDGMAN, A. H. ...	18 Sept., '12	FINNEY, F. J. ...	15 Aug., '12
BROWN, A. W. ...	9 Aug., '12	FREEMAN, F. R....	20 Aug., '12
BUTLER, H. B. ...	4 Sept., '12	FRANKAU, G. N. ...	14 Sept., '12
BROOKES, R. B. ...	4 Sept., '12	FRANCEY, W. M. ...	23 June, '12
CORRY-SMITH, Capt. G. C. 13 Aug., '12		GRAHAM, Miss M. M. ...	8 Oct., '12
CLARK, F. B. ...	23 Sept., '12	GREHAN, P. L. ...	18 Aug., '12
CHELU, H. R. A... ...	30 July, '12	GARVEY, F. W. ...	20 Aug., '12
COOK, A. ...	23 Aug., '12	GORDON, W. ...	24 July, '12
CHICHESTER, C. R. ...	20 Aug., '12	GREEN, C. H. ...	18 July, '12
CRICKMAR, G. R. ...	24 July, '12	GILL, J. O. ...	14 Oct., '12
CULLEN, C. S. ...	4 Sept., '12	GOODWIN, A. J. ...	4 Sept., '12
CUNLIFFE, Lt.-Col. F. H. G. 29 Aug., '12		GALLOWAY, W. ...	1 Sept., '12
CHILD, Lt. H. A., R.N., 5 Aug., '12		GRAHAM, T. P. ...	1 Aug., '12
C.M.G.		GLAISTER, J. ...	8 July, '12
COPLAND - CRAWFORD, 27 Aug., '12		GRAY, G. S. B. ...	17 July, '12
W. E. B.			
CHAMBERS, C. H. ...	1 Oct., '12		

SOUTHERN NIGERIA—continued.

HACKETT, W. W. ...	24 Aug., '12	O'SHAUGHNESSY, Maj. J. ...	9 Aug., '12
HUGHES, Lt. A. W., R.N.R.	5 Sept., '12	J. F., Royal Automobile Club, Pall Mall, S.W.	
HOBROUGH, R. T. ...	18 July, '12	O'KEEFE, Dr. C. W. ...	
HAY, M. J. ...	14 Sept., '12	O'DRISCOLL, R. P. F. ...	14 Aug., '12
HUGHES, G. S. ...	13 Sept., '12	O'BRIEN, W. H....	<i>Due back</i>
HENDERSON, S. V. ...	2 Oct., '12		6 Aug., '12
HALES, G. L. ...	5 Sept., '12	PARRY, T. F. R. ...	8 July, '12
HALLAHAN, H. ...		PERROTT, E. ...	14 Aug., '12
HAUGHTON, H. M. S. ...	11 Oct., '12	PEDDER, G. H. ...	6 Aug., '12
HOOD-RANKIN, Dr. T. ...	30 July, '12	PETERSEN, C. ...	7 Sept., '12
HYDE-JOHNSON, H. J. ...	25 Sept., '12	PEET, H. F. ...	6 Aug., '12
HOLE, W. F. ...	<i>Due back</i>	PIPER, J. H. ...	8 July, '12
	6 Aug., '12	Pöe, Capt. J. H. L. ...	13 July, '12
HIPWELL, Dr. A... ..	3 Aug., '12	PICKWOOD, C. A. ...	18 Sept., '12
INGLES, F. H. ...	13 Sept., '12	Sports Club, St. James' Square, S.W.	
INMAN, C. D. ...	22 Aug., '12	ROBINSON, F. S....	20 Aug., '12
IVATT, A. E. ...	3 Aug., '12	RIMMER, J. D. ...	30 July, '12
INGLES, R. J. ...	14 July, '12	RYAN, J. R. ...	28 July, '12
JONES, R. ...	30 July, '12	SHEFFIELD, Maj. G. N....	27 Aug., '12
KING-CHURCH, L. A. ...	14 Aug., '12	Junior Naval and Military Club, 96, Piccadilly, W.	
KELTIE, A. ...	5 Aug., '12	SWANSTON, Maj. H. O....	7 July, '12
KENNELLY, M. M. ...	18 July, '12	Junior United Service Club, Charles St., S.W.	
LUCAS, H. R. ...	12 July, '12	STEWART, W. ...	6 July, '12
LAYTON, R. C. ...	8 July, '12	SMITH, W. J. ...	14 Aug., '12
LAPPER, W. J. ...	1 Oct., '12	STEEL, G. E. ...	4 Oct., '12
LAWSON, A. ...	14 Sept., '12	SMITH, C. ...	18 Aug., '12
LAUGHLIN, R. H. ...	27 Aug., '12	STATEN, J. T. ...	8 July, '12
LANGLEY, Dr. W. H., C.M.G., Sports Club, St. James' Square, S.W.	23 July, '12	STEVENSON, W. F. ...	29 Sept., '12
LOMAX, J. F. ...	13 Sept., '12	SIMPSON, E. D. ...	8 July, '12
MANSERGH, Capt. W. G., Sports' Club, St. James' Square, S.W.	28 July, '12	SIEGER, Dr. E. L. ...	4 Sept., '12
MARTIN, K. S. ...	24 July, '12	SAVAGE, J. A. ...	5 Aug., '12
MANN, Capt. G. D. ...	13 Sept., '12	SAYER, Lt. M. B., R.N.R.	14 July, '12
MATTHEWS, J. G. ...	5 Aug., '12	TYSON, D. ...	3 Aug., '12
MACDONALD, Dr. P. H... ..	18 Aug., '12	TYNAN, Dr. E. J. ...	15 Aug., '12
MURPHY, W. F....		TROUSDELL, W. H. C. ...	15 Aug., '12
MCCREATH, J. ...	24 Sept., '12	TALBOT, P. A. ...	13 Sept., '12
MUIRHEAD, J. ...	13 Sept., '12	TAYLOR, Capt. B. H. W.	12 Oct., '12
MCCALLUM, R. ...	2 Aug., '12	Junior Naval and Military Club, 96, Piccadilly, W.	
MARSLAND, C. ...	8 July, '12	TABOR, F. L. ...	17 Oct., '12
MCLAREN, W. P. ...	1 Sept., '12	TROWBRIDGE, H. ...	<i>Due back</i>
MACFARLANE, J. ...	18 July, '12		6 Aug., '12
MCCOTTER, Miss J. ...	14 Aug., '12	TABERER, C. H....	5 Aug., '12
MONTAGUE, E. H. ...	18 July, '12	THOMAS, N. W....	16 July, '12
MATHER, W. J. ...	<i>Due back</i>	TAYLOR, Dr. W. I. ...	20 Aug., '12
	26 July, '12	WEBER, A. F. C. ...	13 Sept., '12
MCMAMARA, S. P. ...	5 Aug., '12		
NOBES, A. ...	19 July, '12		
NEAL, Capt. H. V., D.S.O.	31 Aug., '12		

SOUTHERN NIGERIA—continued.

WANTON, E. B. ...	25 Sept., '12	WINTER, J. ...	5 Aug., '12
Sports Club, St. James'		WRIGHT, P. A. T. ...	8 July, '12
Square, S.W.		WREN, A. C. ...	4 July, '12
WILLIAMSON, A. ...	18 July, '12	WHILES, E. P. ...	4 Sept., '12
WILLIAMS, W. ...	13 Sept., '12	WHEELWRIGHT, J. C. ...	25 Sept., '12
WOOD, J. A. ...	30 July, '12	WRIGHT, W. ...	7 Aug., '12
WHITAKER, T. H. ...		WALKER, Capt. G. H.,	
WADE, F. W. ...	4 Oct., '12	D.S.O. ...	13 Aug., '12
WEAVER-SMITH, F. ...	2 Aug., '12	YOUNG, W. ...	13 Sept., '12

NORTHERN NIGERIA.

ADAMSON, W. J. ...	18 July, '12	DUNN, C. M. ...	16 July, '12
ADAMS, Dr. E. C. ...	12 July, '12	DICKER, W. F. ...	13 Sept., '12
Sports Club, St. James'		ELLIOTT, C. ...	18 Sept., '12
Square, S.W.		ELLIS, Capt. R. F. ...	13 July, '12
AUBIN, Capt. A. C. ...	10 Sept., '12	EAGLESOME, J., C.M.G.	27 Aug., '12
BRICE-SMITH, H. M. ...	6 Oct., '12	ELDER, J. H. C. ...	17 Aug., '12
BACKWELL, H. F. ...	7 Aug., '12	FENWICK, J. W....	30 July, '12
BRODIE, Capt. L. C. ...	18 July, '12	FAGAN, Dr. J. P. ...	7 July, '12
Cavalry Club, Piccadilly, W.		FOY, Dr. H. A. ...	27 Aug., '12
BRACKEN, Capt. R. B. ...	29 Aug., '12	c/o Messrs. T. Cook &	
BRIDGES, H. C. ...	25 Sept., '12	Sons, Ludgate Circus,	
BURNSIDE, Capt. G. H....	28 Sept., '12	E.C.	
c/o Messrs. Cox & Co.,		FIDLER, J. ...	7 Aug., '12
16, Charing Cross, S.W.		GIBBS, G. W. ...	14 Aug., '12
BOULDERSON, J. W. E. ...	12 July, '12	GARRATT, J. C. ...	25 July, '12
Junior Naval and Military Club, 96, Piccadilly, W.		GIBBS, J. T. ...	14 Sept., '12
BELL, F. W., V.C. ...	17 Sept., '12	Cavalry Club, Piccadilly, W.	
Sports Club, St. James'		GORRING, C. ...	15 Sept., '12
Square, S.W.		GALL, F. B. ...	25 Sept., '12
BELMAN, F. le C. ...	23 Sept., '12	GRAHAM, A. ...	9 Sept., '12
BEAUMONT, T. ...	13 Sept., '12	GOSLING, C. H. ...	27 Aug., '12
COWPER, H. W. ...	20 Sept., '12	GOODWIN, G. E. ...	15 Aug., '12
COLLEY, Capt. A. W. ...	4 Sept., '12	HAYDON, F. W. J. ...	3 Aug., '12
CARLYLE, T. F. ...	17 Sept., '12	HERMITAGE, A. J. ...	3 Aug., '12
CREIGHTON, H. ...	15 Aug., '12	HALL, A. E. ...	4 Sept., '12
COLQUHOUN, A. G. C. ...	27 Aug., '12	HEDLEY, W. W. ...	16 July, '12
CROOK, C. C. ...	18 Sept., '12	HALL, Capt. H. C. ...	1 Oct., '12
CARD, L. O. C. ...	9 July, '12	Sports Club, St. James'	
CAMERON, J. ...	7 Aug., '12	Square, S.W.	
COLLINS, A. T. ...	30 July, '12	HOPKINS, F. F. ...	14 Aug., '12
CHAPMAN, H. J. ...	13 Sept., '12	c/o Messrs. Way & Co.,	
CAHILL, J. F. ...	30 July, '12	11, Haymarket, S.W.	
DEERING, Miss E. M. ...	14 Aug., '12	HOWELL, H. G. ...	19 Sept., '12
DWYER, F. ...	12 July, '12	Sports Club, St. James'	
DYER, Capt. T. W. P. ...	20 Aug., '12	Square, S.W.	
c/o Messrs. H.S. King &		HENDERSON, W. ...	19 Aug., '12
Co., 9, Pall Mall, S.W.		HAY, C. S. ...	24 Sept., '12
		JEFFREYS, H. C. ...	22 July, '12
		JONES, Mrs. H. M. ...	31 Aug., '12

NORTHERN NIGERIA—*continued.*

JARVIS, A. M.	5 Aug., '12	POLLOCK, W. T. C. ...	3 Sept., '12
KNIGHT, Capt. R. B. ...	12 Aug., '12	PARSONS, DR. A. C. ...	5 Sept., '12
KEWLEY, T. E.	18 July, '12	PEARSON, J.	27 Aug., '12
KITCHEN, W.	9 Aug., '12	PIKE, F.	19 Aug., '12
LETHEM, G. J.	4 Sept., '12	POMEROY, G. G. ...	14 Sept., '12
LLOYD, R. A.	5 Aug., '12	REYNOLDS, C. G. ...	5 Aug., '12
LIDDARD, M. L.	14 Sept., '12	c/o Messrs. Cox & Co.,	
Royal Societies' Club,		16, Charing Cross, S.W.	
St. James' St., S.W.		RUXTON, Capt. F. H. ...	15 Oct., '12
LATMAN, E. H. C. ...	29 Aug., '12	SPEED, Sir E. A. ...	17 Aug., '12
LOBB, Dr. H. P.	1 Aug., '12	STEED, R.	6 Oct., '12
LINSELL, H. O.	20 Aug., '12	STACEY, R.	4 Sept., '12
MOORE, J.	13 Sept., '12	SHAW, R.	18 July, '12
MCGAHEY, Dr. K. ...	28 Sept., '12	SMITH, J. N.	12 Sept., '12
c/o Messrs. H. S. King		SYMONS, H. W.	4 Sept., '12
& Co., 65, Cornhill,		c/o Messrs. Cox & Co.,	
E.C.		16, Charing Cross, S.W.	
MACDONNELL, Capt. D.H.		STEWART, J.	27 Aug., '12
D.S.O.	21 July, '12	SIMPSON, Capt. J. N. ...	11 Oct., '12
MATTHEWS, H.	3 Sept., '12	SHEARING, M.	8 July, '12
MERRICK, Capt. F. S. ...	4 Sept., '12	TOMLINSON, G. J. F. ...	10 Sept., '12
MAPP, H.	18 Sept., '12	Union Club, Trafalgar	
MCLEAY, Dr. C. W. ...	21 July, '12	Square, S.W.	
Connaught Club,		TWOMEY, G. R.	24 Sept., '12
Marble Arch, W.		c/o Messrs. H. S. King	
MCDONALL, Lt-Col. R.,		& Co., 9, Pall Mall,	
D.S.O.	18 July, '12	S.W.	
MATHEWS, H. F.	5 Sept., '12	UNIACKE, Capt. G. L. ...	23 July, '12
MOOREHEAD, Miss E. ...	14 Aug., '12	UNIACKE, Capt. A. G.,	
NUGENT, Capt. G. O. ...	8 Aug., '12	D.S.O.	14 Sept., '12
NOSWORTHY, E. P. ...	15 Aug., '12	WILLIAMS, G. F.	13 Aug., '12
NOOTT, P. G.	5 Aug., '12	WALKER, J. C.	13 July, '12
ORME, T. H.	5 Aug., '12	WILLIAMS, T.	17 Aug., '12
PRINCE, G. F.	6 July, '12	WATERS, T. J.	11 Nov., '12
c/o London City &		WICKHAM, Capt. T. S. ...	
Midland Bank, Ltd.,		D.S.O.	14 Aug., '12
Temple Row, Birmingham		WALTON, Capt. W. T. ...	14 Oct., '12
POWTER, J.	27 Aug., '12	WILLOUGHBY-OSBORNE,	
POLLAND, Dr. J. McF. W.	13 Aug., '12	D. A.	15 Aug., '12
PYE, Capt. F. J.	7 Sept., '12	Junior Naval & Military	
c/o Lloyd's Bank, Ltd.,		Club, 96, Piccadilly, W.	
Sandgate, Kent		YOUNG, J., jun.	30 July, '12

EAST AFRICA.

AINSWORTH-DICKSON, T.	25 July, '12	COODE, A. M. ...	Steamer leaving
AKERS, W. S.	9 Nov., '12		19 July, '12
BRAMWELL, W. J.	25 Oct., '12	CHAMPION, A. M. ...	13 Sept., '12
BARLOW, W.	29 Oct., '12	CREIGHTON, J. K. ...	11 Sept., '12
BROWN, L.	2 Oct., '12	CUMBERBATCH, H. C. ...	12 Nov., '12
BIGGS, E. K.	4 Sept., '12	CHALK, C. H.	7 Oct., '12

EAST AFRICA—continued.

CURRIE, H. A. F., C.M.G. East India, Limited, Service Club, St. James' Square, S. W.			LOWSELY, DR. L. D. ...	18 Nov., '12
CAMERON, E. J. ...	21 Sept., '12		MACDONALD, A. C. ...	26 July, '12
DOBBS, C. M. ...	20 Oct., '12		MARSTON, Miss A. M. ...	9 Oct., '12
DEACON, P. L. ...	6 Sept., '12		MACDOUGALL, K. ...	8 Nov., '12
DUNDAS, Hon. K. R. ...	11 Sept., '12		NEILAN, N. B. ...	20 Aug., '12
ELLIOT, J. A. G. ...	23 July, '12		NOTLEY, W. K. ...	17 Sept., '12
EDMONDSON, R. ...	14 Oct., '12		ORDE-BROWNE, G. St. J.	23 July, '12
FOAKER, F. G. ...	6 Nov., '12		O'BRIEN, Capt. A. K. ...	8 Aug., '12
Sports Club, St. James' Square, S. W.			Cavalry Club, 127, Piccadilly, W.	
FITZGERALD, Capt. T. O.	23 July, '12		PEARSON, E. L. ...	19 July, '12
GRAY, T. A. ...	9 Aug., '12		PEARSON, J. M. ...	12 Sept., '12
GREISS, W. M. ...	18 Aug., '12		PARKINSON, J. W. H. ...	6 Oct., '12
GREGORY, C. W. ...	8 Nov., '12		PICKFORD, W. ...	6 Oct., '12
GILKS, Dr. J. L. ...			PHILLIPS, Capt. G. F. ...	21 Aug., '12
HOPTON, H. C. ...	21 Oct., '12		PLATTS, W. A. F. ...	7 Oct., '12
Sports Club, St. James' Square, S. W.			ROSE, R. M. T. ...	
HAMILTON, R. W. ...	13 Oct., '12		ROBERTSON, J. S. ...	27 Oct., '12
HORNE, H. H. ...	19 Sept., '12		RICHARDS, E. C. ...	7 Oct., '12
HERNE, D. E. ...	Due back 21 Oct., '12		STORDY, R. J. ...	10 Aug., '12
HUMPHERY, R. W. ...	7 Oct., '12		STOLLARD, Miss K. E. ...	11 Sept., '12
HEMSTED, C. S. ...	21 July, '12		TANNAHILL, A. C. ...	6 Dec., '12
HIGGINS, E. SCOTT ...	11 Aug., '12		TAYLOR, C. E. ...	14 Oct., '12
c/o Messrs. H. S. King & Co., 9, Pall Mall, S. W.			TANNER, W. H. ...	14 Oct., '12
HINDE, S. L. ...	14 July, '12		THOMAS, T. S. ...	13 Aug., '12
c/o Sir C. R. McGregor, Bart., & Co., 25, Charles Street, S. W.			TELL, Lieut. P. A. G., R.N.R.	25 July, '12
HAMPSON, R. H. ...	18 July, '12		TRAILL, F. S. F. ...	18 Aug., '12
ISAAC, F. W. ...	31 Oct., '12		Sports Club, St. James' Square, S. W.	
JAMES, G. A. ...	25 Aug., '12		VILLIERS, Capt. P. F. ...	Due back 21 Oct., '12
KILLINGBECK, J. J. ...	21 Sept., '12		WILLIAMS, J. H. ...	7 Oct., '12
KNAPMAN, G. W. ...	12 Oct., '12		WALKER, H. ...	4 Aug., '12
			WOLFFE, P. E. ...	9 Oct., '12
			WALTON, J. E. LAWSON	14 Aug., '12
			WOODRUFF, G. ...	15 Aug., '12
			YOUNG, H. A. ...	7 Oct., '12

UGANDA.

APTHORPE, Capt. A. E. ...	Due back 21 Oct., '12	FLINT, Capt. F. A. ...	29 Oct., '12
c/o Messrs. Grindlay & Co., 54, Parliament Street, S. W.		c/o Messrs. Cox & Co., 16, Charing Cross, S. W.	
ALLEN, R. C. ...	25 Oct., '12	HUTCHINS, E. ...	29 Oct., '12
BROWNING, S. ...	8 Nov., '12	ISAACS, J. O. R. ...	17 Aug., '12
COOPER, P. W. ...	19 Oct., '12	JOHNSTON, Capt. R. H. ...	24 July, '12
COBBE, T. J. ...	11 Sept., '12	KEANE, Capt. G. J. ...	23 Aug., '12
DUGDALE, Capt. G. F. ...	16 Feb., '13	c/o Messrs. Holt & Co., 3, Whitehall Place, S. W.	
ELLIS, G. P. ...	6 Nov., '12		

UGANDA—continued.

LIANE, Dr. G.	17 Oct., '12	REYNOLDS, F.	6 Nov., '12
Sports Club, St. James'		REID, Capt. E. H.	<i>Due back</i>
Square, S.W.			27 Aug., '12
LAWRENCE, Capt. E. H. T.	6 Nov., '12	RUSSELL, J. P.	8 Nov., '12
Junior Naval and		SMITH, Capt. G. D., C.M.G.	19 Oct., '12
Military Club, 96,		STRATHAIRN, Dr. G. C....	27 Sept., '12
Piccadilly, W.		SCOTT, E. L.	6 Nov., '12
LYALL, G. W.	20 Nov., '12	TAYLOR, R. W.	14 Aug., '12
McCLURE, A.		TOLLAND, J. P.	25 Oct., '12
MANARA, V. M....	30 Sept., '12	United Empire Club,	
McCOMBIE, L. H. D. ...	14 Aug., '12	117, Piccadilly, W.	
c/o Messrs. Grindlay		THOMLINSON, Miss M. A.	11 Aug., '12
& Co., 54, Parliament		VAN DER VELDE, M.A.'M.	
Street, S.W.		WESTRAY, F. E....	6 Nov., '12
PEARCE, C. F.	6 Nov., '12	WATSON, A. H.	11 Sept., '12

NYASALAND.

ANDERSON, G. B.	12 Nov., '12	SANDER, F. W.	9 Sept., '12
BARCLAY, Dr. A. H. H.	6 Nov., '12	c/o Messrs. H. S. King	
BRACKENBURY, A. J. ...	18 July, '12	& Co., 9, Pall Mall, S.W.	
COSGROVE, E. R....	17 July, '12	VERRY, C. T.	4 Nov., '12
CRUISE, H. R.	24 Aug., '12	WEBB, F.	13 Oct., '12
FARRAR, N.		WALKER, C. H.	8 July, '12
FYSON, P. W.	25 Sept., '12	c/o Standard Bank of	
MURRAY, R. H.	19 Oct., '12	South Africa, Ltd., 10,	
MARSHALL, Dr. Mc. G.	17 July, '12	Clements Lane, E.C.	
SANDERSON, Dr. G. M. ...	23 Sept., '12		

SOMALILAND.

DOBBS, H. C.	31 July, '12	PAGET, Dr. A. J. M. ...	29 Aug., '12
c/o Messrs. H. S. King			
& Co., 9, Pall Mall, S.W.			

BECHUANALAND.

BRADLEY, G. A....	30 Sept., '12	SURMON, Capt. W. B. ...	31 Oct., '12
FAULKNER, C. R. ...	30 Sept., '12		

BASUTOLAND.

MOORE, J.	30 Sept., '12	TOMBLESON, Miss E. J....	31 Oct., '12
SINCLAIR, R. G....	12 Aug., '12		

SWAZILAND.

MARWICK, A. G....	31 Oct., '12
-------------------	-----	-----	--------------

BRITISH HONDURAS.

BRUNTON, F. W....	...	7 Dec., '12	STRANGE, H. P. C.	...	14 Nov., '12
MACKEY, Dr. C....	...	31 Aug., '12			

FIJI.

ANDERSON, Miss M. C....	21 Nov., '12	McCAW, G. T.	...	7 Sept., '12
MONTAGUE, Dr. A.	... 19 Feb., '13	WRIGHT, R. E.	...	5 Oct., '12

FALKLAND ISLANDS.

KIRWAN, A. C.	26 July, '12
---------------	-----	-----	-----	-----	--------------

GIBRALTAR.

PARSONS, Dr. L. D.	18 Aug., '12
--------------------	-----	-----	-----	-----	--------------

CYPRUS.

BEVAN, W.	...	12 Sept., '12	WODEHOUSE, C. B.	...	2 Nov., '12
BROS, H. A.	...	2 Aug., '12	c/o Messrs. Glyn, Mills,		
ORR, Capt. C. W. J.	...	23 Aug., '12	Currie & Co., 67, Lombard street, E.C.		

BARBADOS.

BURDON, Maj. J. A., C.M.G.	29 July, '12	BRIGGS, Rev. F. J.	...	18 Nov., '12
Naval & Military Club, 94, Piccadilly, W.		RODEN, R. B.	...	16 Aug., '12

ANTIGUA.

MCDONALD, J. S.	17 Aug., '12
-----------------	-----	-----	-----	-----	--------------

MONTSERRAT.

ROBSON, W.	28 Sept., '12
------------	-----	-----	-----	-----	---------------

DOMINICA.

O'FARRELL, P.	31 Oct., '12
---------------	-----	-----	-----	-----	--------------

ST. LUCIA.

CAMERON, E. J., C.M.G....	11 Aug., '12	GRAY, F....	...	22 July, '12
---------------------------	--------------	-------------	-----	--------------

ST. VINCENT.

SHAW, W. S.	30 Sept., '12
-------------	-----	-----	-----	-----	---------------

GRENADA.

COMMISSIONG, T. M. ... 28 Oct., '12 | O'NEALE, Dr. R. D. ... 12 Nov., '12

TURKS ISLANDS.

DOWSE, Dr. T. A. ... 31 July, '12

GILBERT AND ELLICE ISLANDS.

WAKEMAN, C. ... 28 Sept., '12

BRITISH SOLOMON ISLANDS PROTECTORATE.

EDGE-PARTINGTON, T. W. ... 22 Nov., '12

JAMAICA.

BROWNE, P. J. ...	14 Nov., '12	KERSHAW, A. E....	2 Aug., '12
BRENNAN, J. F. ...	1 Aug., '12	Junior United Service	
BURKE, J. M. ...	2 Nov., '12	Club, Charles st., S.W.	
COLL, Sir A. M....	2 Aug., '12	PULLAR, A. T. ...	10 Oct., '12
COX, E. F. H. ...	6 Aug., '12	WORTLEY, G. M. ...	3 Oct., '12
DIGNUM, C. B. ...	13 Oct., '12	YOUNG, A. ...	8 Oct., '12
HAUGHTON, R. S. ...	10 Aug., '12		

TRINIDAD.

BROWN, J. ...	18 Nov., '12	EAKIN, Dr. J. W. ...	18 Aug., '12
BOWEN, H. T. ...	Steamer leaving	ROBINSON, Dr. A. A. ...	24 Sept., '12
	31 July, '12	SLYNE, D. ...	18 Oct., '12
COOMBS, Comm. W. H.,	8 Nov., '12	SMITH, W. B. ...	21 Oct., '12
R.N.		SMART, E. R. ...	7 Oct., '12
CORDER, Miss G. ...	29 July '12		

BRITISH GUIANA.

BOWHILL, J. A. P. ...	6 Nov., '12	MOULDER, E. R. D. ...	15 Jan., '13
BOOTH, J. R. ...	6 Nov., '12	POOK, R. C. ...	20 Feb., '13
BRUNKER, Capt. H. M...	18 Aug., '12	PARKER, W. A. ...	15 Dec., '12
COX, N. ...	2 Sept., '12	VON WINCKLER, Dr. W. J.	27 Nov., '12
CRAIGEN, Dr. A. J. ...	30 Dec., '12	West Indian Club,	
DE FREITAS, Dr. G. B.	31 Mar., '13	Howard Hotel, Nor-	
HODGE, L. P. ...	17 Sept., '12	folk Street, W.C.	
LEGGE, C. H. E....	Steamer due		
Royal Colonial Insti-	1 Aug., '12		
tute, Northumberland			
Avenue, W.C.			

MAURITIUS.

BERNON, E.	29 Sept., '12	POUGNET, G.	10 Oct., '12
BOUCHERAT, J.	23 Sept., '12	ROCHERY, L. G.	29 Mar., '13
BEAUGEARD, H. M. A. ...	21 Oct., '12	STOCKDALE, R. H.	
FOSTER, C.	14 Feb., '13	YARDEN, M.	29 Jan., '13

SEYCHELLES.

SMITH, W. H.	8 Nov., '12	YOUNG, A. K.	15 Aug., '12
WILLIAMSON, A.	25 Sept., '12		

STRAITS SETTLEMENTS.

BRACE, F. J.	16 Aug., '12	MURPHY, P. M.	12 Dec., '12
BOURNE, F. G.	20 Mar., '13	NIALL, M. J. M.	23 Oct., '12
BROWN, D.	22 Mar., '13	NICOL, C. H.	18 Feb., '13
BADDELEY, F. M.	21 Jan., '13	PERRETT, H. F.	26 Mar., '13
BAILEY, A. W.	11 Dec., '12	ROBERTS, E.	24 Nov., '12
COWAGE, J. C.	10 Nov., '12	SAUNDERS, C. J.	29 Apr., '13
CRAIG, W.	19 Feb., '13	SMITH, Miss S. B.	12 Dec., '12
CODRINGTON, S.	2 May, '13	THORNTON, S. L.	25 Oct., '12
CROUCHER, DR. F.	29 Aug., '12	THRELFALL, W. H.	20 Oct., '12
FRY, R. S.	25 Nov., '12	WILKINSON, R. J., c/o	24 Jan., '12
HARMER, F. E.	4 Nov., '12	Messrs. Grindlay & Co.,	
HILL, Miss D.	11 Sept., '12	54, Parliament Street,	
KING, N. T.	8 Apr., '13	S.W.	
MOODY, J. A.	8 Apr., '13		

TANJONG PAGAR DOCK.

BARRETT, W. S.	7 Nov., '12	RAISON, H.	28 Feb., '13
PAXTON, W.	6 Mar., '13		

WEI HAI WEI.

WALTER, R.	16 Feb., '13
-------------------	--------------

HONG KONG.

ATKINSON, Dr. J. M., Royal Colonial Institute, Northumberland Avenue, W.C.	7 Nov., '12	BRETT, L. E.	30 Dec., '12
		BREWIN, A. W., C.M.G., c/o The Bank of Liver- pool, Settle, Yorks	28 Nov., '12

HONG KONG—continued.

BLACKMAN, W. F.	... 5 Dec., '12	O'SULLIVAN, E.	... 2 Jan., '13
BOND, E. L.	... 15 Dec., '12	O'REGAN, J.	... 16 Jan., '13
COYSE, G. W.	... 2 Jan., '13	PEARSON, H.	... 9 Oct., '12
CLARKE, H. G.	... 16 Jan., '13	PIERPOINT, E. J.	... 7 Mar., '13
CLARKE, S. J.	... 16 Jan., '13	RALPH, E.	... 12 Mar., '13
COLEMAN, F. A.	... 31 Jan., '13	RICHARDS, Miss A.	... 21 Oct., '12
CRAIG, R. H. A.	... 24 Oct., '13	SLOAN, Miss M.	... 15 Dec., '12
GIBSON, G.	... 16 Jan., '13	TOOKER, H. P.	... 21 Aug., '12
GIBSON, A.	... 26 Mar., '13	TAYLOR, Comm. B. R. H.,	31 July, '12
GOLDSMITH, H. E.	... 12 Sept., '12	R. N.	
GARRETT, H. L.	... 23 Dec., '12	TUTCHER, W. J.	... 8 Apr., '13
HAZELAND, F. A.	... 14 Nov., '12	TUTCHER, Mrs. E.	... 8 Apr., '13
JACKS, P.	... 26 Nov., '12	UNWIN, W. J.	... 16 Jan., '13
KYNOCH, G. W.	... 31 Jan., '13	WEST, J. C.	... 5 Oct., '12
LEWIS, E. C. L.	... 17 Oct., '12	WATT, G.	... 9 Oct., '12
MOODY, J.	... 15 Dec., '12	WARD, C. W.	... 9 Oct., '12
NOLAN, N. G.	... 2 Apr., '13		

PERAK.

BELFIELD, H. C., C.M.G.	<i>Steamer leaving</i> 12 July, '12	HUNTER, R. N.	... 18 Dec., '12
BOWEN, L.	... 12 Mar., '13	MOIR, W. H.	... 10 Dec., '12
CANDLE, P. W.	... 15 Nov., '12	MAGER, F. W.	... 9 Sept., '12
HARGREAVES, W.	... 10 Oct., '12	TOPLIS, J.	... 10 Aug., '12
		WINSTEDT, R. O.	... 26 Sept., '12

PAHANG.

BREWSTER, E. J.	... 24 Nov., '12	DE Vos, A. E. E.	... 31 Jan., '13
DREW, J. S.	... 12 July, '12		

SELANGOR.

HOSE, E. S.	... 19 Sept., '12	SWETTENHAM, R. F. R.	... 6 Nov., '12
MEADWAY, J. J.	... 10 Mar., '13	WATSON, R. G., C.M.G.,	14 Sept., '12
ROBINSON, H. O.	... 12 Sept., '12		

NEGRI SEMBILAN.

AMERY, G. J.		
--------------	--------	--	--

KEDAH.

FINCH, F. G.	... 23 Feb., '13	SHAW, G. E.	... 3 Jan., '13
MAXWELL, W. G.	... 8 Sept., '12		

KELANTAN.

CULLEN, G.	... 25 Apr., '13	MASON, J. S.	... 19 Oct., '12
------------	------------------	--------------	------------------

FEDERATED MALAY STATES.

BOYLE, W. D. ...	14 Oct., '12	LEE-WARNER, W. H. ...	
BLACKLAW, C. F. S. ...	5 June, '13	LAW, SIR A. F. G. ...	2 Oct., '12
BAILEY, H. J. ...	6 Sept., '12	MAGILL, G. S. ...	Steamer due
BYRNE, H. E. ...	22 Sept., '12		18 Aug., '12
Sports Club, St. James'		MILLARD, DR. A. S. ...	30 Nov., '12
Square, S.W.		MEAD, J. P. ...	Steamer due
BILES, F. C. ...	23 Dec., '12		27 Aug., '12
BANKS, H. H. ...	20 Oct., '12	MACKENZIE, H. J. ...	26 Dec., '12
COOPER, DR. T. G. D. ...	21 Mar., '13	MCCLOSKEY, DR. A. J. ...	Steamer due
COOPER, C. C. ...	31 Dec., '12		23 Aug., '12
COX, F. B. ...	21 Dec., '13	MACINTYRE, DR. E. T. ...	31 July, '13
CAMPBELL, D. G., C.M.G.	28 Apr., '13	MORRIS, R. V. ...	25 Nov., '12
DALY, M. D. ...	9 Nov., '12	NOCK, T. C. ...	28 Nov., '12
ELLIS, T. H. ...	8 Aug., '12	POUNTNEY, A. M. ...	9 Aug., '12
EDMONDS, R. C. ...	13 Nov., '12	PRATT, E. ...	21 Oct., '12
ENGLISH, F. H. ...	18 Sept., '12	PARR, C. W. C. ...	
EATON, B. J. ...	10 Nov., '12	PRATT, H. C. ...	24 June, '13
FLOOD, P. ...	3 Sept., '12	ROWLEY, T. W. ...	24 Oct., '12
FAIRBURN, H. ...	24 Aug., '12	RIDGWAY, A. E. A. ...	Steamer due
GARNIER, F. W. ...			29 Aug., '12
GOGGIN, T. ...	29 Aug., '12	SCRIVENER, J. B. ...	10 Dec., '12
GILLESPIE, Miss M. I. ...		STANTON, DR. A. T. ...	18 Dec., '12
HIGHET, D. J. ...	9 Aug., '12	TAYLOR, F. E. ...	25 Aug., '12
HEREFORD, G. A. ...	14 June, '13	VOULES, A. B. ...	13 Nov., '12
HENBREY, G. J. ...	24 Feb., '13	WILLETT, J. ...	Steamer due
HENSHAW, P. H. ...	8 Dec., '12		15 Aug., '12
JOHNSTON, MISS M. ...	7 Nov., '12	WOOD, CAPT. F. E. ...	4 Jan., '13
KLOSS, C. B. ...	21 Aug., '13	WILSON, C. ...	10 Feb., '13
KEUN, G. C. ...	7 Nov., '12	WYATT, E. W. N. ...	
LE FEVRE T. ...	1 Dec., '12	YOUNG, A. E. ...	3 Nov., '12
LEONARD, H. G. R. ...	22 Sept., '12		

CEYLON.

ANSON, A. ...	2 Nov., '12	DREW, A. R. ...	17 Oct., '12
BAKER, C. F. S. ...	2 Oct., '12	EVANS, Miss M. ...	31 Aug., '12
c/o Messrs. Grindlay &		FOREMAN, T. ...	18 Sept., '12
Co., 54, Parliament		FILDER, C. C. ...	17 Mar., '12
Street, S.W.		FELIX, J. J. P. ...	28 Jan., '13
BARNARD, H. O. ...	4 Feb., '13	FORREST, G. F. ...	9 Aug., '12
BRADLEY, G. T. ...	8 Feb., '13	FRASER, J. H. ...	26 Oct., '12
CASTELLANI, DR. A. ...	31 Mar., '13	GIBSON, Miss A. ...	30 Apr., '13
COOKSON, G. M. ...	9 Nov., '12	HARRIS, J. ...	24 Dec., '12
CONSTANTINE, B. ...	21 Dec., '12	HARVIE, A. ...	19 Sept., '12
CREASY, H. T. ...	30 Dec., '12	HILL, B. ...	25 Nov., '12
DE SILVA, DR. A. M. ...	30 Sept., '12	HALLILEY, C. F. W. ...	15 Sept., '12
DE SARAM, DR. A. ...	15 Oct., '12	Junior Conservative	
DOWNIE, J. ...	15 Nov., '12	Club, Albemarle St.,	
DAVID, I. E. ...	9 Oct., '12	Piccadilly, W.	
c/o Messrs. Grindlay &		HOWISON, J. ...	31 July, '12
Co., 54, Parliament		HARTLEY, C. ...	18 Aug., '12
Street, S.W.		HOLBROOK, G. A. ...	30 Oct., '12

CRYLON—continued.

HAMER, T. ...	5 May, '13	RICKARBY, A. G. ...	14 Nov., '12
JACKSON, W. H....	11 Oct., '12	ROBERTSON, A. N. ...	8 Apr., '13
KILMINSTER, C. H.	29 Jan., '13	RICHARDS, A. ...	18 Sept., '13
KEY, J. ...	Steamer due 5 Oct., '12	SHANKS, M. ...	30 Sept., '12
LANAWAY, P. H. ...	13 Aug., '12	SEYMOUR, A. W. ...	28 Nov., '12
LEES, H. B. ...	13 Feb., '13	STURGESS, G. W. ...	5 May, '13
LEWIS, G. ...	27 Aug., '12	TOTHILL, F. J. ...	29 Mar., '13
MAYOR, H. ...	18 Sept., '12	TOMALIN, H. F....	18 Apr., '13
MURTY, J. O'K. ...	4 Oct., '12	THYNE, W. M. ...	22 Dec., '12
McMINN, D. K....	13 Jan., '13	TURNER F. J. S. ...	27 Sept., '12
MONTAGU, D. ...	26 Nov., '12	c/o Messrs. T. Cook & Son, Ludgate Circus, E.C.	
MILLINGTON, E. T.	16 Feb., '13	TURNBULL, R. ...	7 Aug., '12
MACGREGOR, D. S.	6 Nov., '12	TAYLOR, W. A. C. ...	3 Feb., '13
MIDDLETON, J. P. ...	17 July, '12	TALBOT, E. V. ...	23 Sept., '12
MORETON, S. C. ...	3 Aug., '12	WILLETT, T. G. ...	18 Oct., '12
ORLUMS, DR. T....	24 Aug., '12	WADDELL, G. ...	13 Sept., '12
PARKINSON, J. ...	30 Oct., '12	c/o Messrs. H. S. King & Co., 65, Corn- hill, E.C.	
POWELL, R. A. ...	28 Nov., '12	YOUNG, C. M. ...	23 Oct., '12
c/o Messrs. King & Co., 65, Cornhill, E.C.			
PRICE, N. J. ...	6 Aug., '12		
PEIRIS, DR. W. C. ...	15 Sept., '12		

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND.
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

WAY & CO. LTD., have made a careful study of **WINES and
SPIRITS** most suited for the Tropics. Their Wine List will be
sent on application, and the selections mentioned have been
supplied for several years and given great satisfaction.

PROVISIONS.—From all well known Manufacturers,
Special A and B Boxes for one man one week.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				£	s
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.

BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

ELECTRICAL ENGINEERING

is the representative engineering journal of the electrical industry. It is read by the leading electrical engineers, and is regarded as the reliable authority in all matters connected with electricity.

The articles are of a practical nature, and well illustrated ; they deal with the technical and engineering aspects of electric lighting, electric power distribution, the use of electricity in mines, electric traction, telephony, and telegraphy.

Electrical Engineering is the best medium for advertisements.

SUBSCRIPTION RATES.

Post Free Per Annum.

				<i>s.</i>	<i>d.</i>
United Kingdom	-	-	-	6	6
Canada	-	-	-	8	8
Other Colonies and Abroad	-			13	0

All communications should be addressed to the publishers:

THE KILOWATT PUBLISHING CO., LTD
203-206, Temple Chambers
LONDON, E.C., ENGLAND

ADVERTISEMENTS.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT LIMITED.



BRISTOL.

AND AT NEWPORT AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,

1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Cypher: "Signalmen, London." Telephone:—2285, Victoria.
A.B.C. (5th Edition) and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. VI.

OCTOBER, 1912.

No. 2.

CONTENTS.

EDITORIAL NOTES	87
BRITISH NATIONALITY AND CITIZENSHIP	106
THE MAKING OF THE SOUTH AFRICAN UNION	113
REVIEWS	118
BUSINESS NOTES	126
RAILWAY AND HARBOUR NOTES	139
MEDICAL NOTES	145
COLONIAL STAMPS	155
RECENT APPOINTMENTS	158
COLONIAL OFFICERS ON LEAVE OF ABSENCE	160

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Forming Walls and Lining
Ceilings—Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 15½ in. x 15½ in.,
11½ in. x 11½ in.

UNIQUE SPECIALITIES :

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from $\frac{6}{8}$ in. thick.

**CORRUGATED ASBESTOS
ROMAN TILES** for **ROOFING**.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.

The High Reputation

of the Albion is the direct result of our unique experience as the largest Manufacturers of Motor Vans in the British Empire. Every Albion leaving our Works is the product of 12 years' concentrated study of Motor Vehicle construction.



16 to 32 H.P.



15 to 70 Cwt. Loads.

ALBION

UTILITY MOTORS.

OFFICIAL CARS.
LORRIES.
VANS.

MAIL WAGGONS.
TIPPING WAGGONS.
CHARS-À-BANCS.



ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

*Codes: A.B.C. 5th Edition,
and Liebers.*

*Telegrams:
"Automobile, Glasgow."*

BELL'S POILITE

Asbestos Cement Tiles and Sheets.

(Avoid all Substitutes.)

ON COLONIAL OFFICE, ADMIRALTY & WAR OFFICE LISTS.

These **TILES** constitute a Permanent, Indestructible Roofing Material.
The **SHEETS** form the Best Material for Forming Walls and Lining
Ceilings—Fire, Damp and Vermin Proof.



Stock sizes 24 in. x 24 in., 18½ in. x 18½ in.,
12½ in. x 12½ in.

UNIQUE SPECIALITIES:

ROOFING TILES $\frac{3}{16}$ in. thick, for
fixing at 13½ in. centres, for
Engineering Buildings and large
Roofs.

SHEETS in any size up to
12 ft. x 4 ft. from ½ in. thick.

**CORRUGATED ASBESTOS
ROMAN TILES** for ROOFING.

COMPRESSED SHEETS, smooth
on both sides, 4 ft. x 4 ft. up to
1 in. thick.

By Special Appointment Architects and Engineers are received every
Tuesday at the Poilite Factories.

Colonial Users are Specially Invited to send for all Particulars.

Manufactured, Supplied, Fixed and Guaranteed by

BELL'S UNITED ASBESTOS CO. Ltd.,
SOUTHWARK STREET, LONDON, S.E.

The High Reputation

of the Albion is the direct result of our unique experience as the largest Manufacturers of Motor Vans in the British Empire. Every Albion leaving our Works is the product of 12 years' concentrated study of Motor Vehicle construction.



16 to 32 H.P.



15 to 70 Cwt. Loads.

ALBION

UTILITY MOTORS.

OFFICIAL CARS.
LORRIES.
VANS.

MAIL WAGGONS.
TIPPING WAGGONS.
CHARS-À-BANCS.



ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

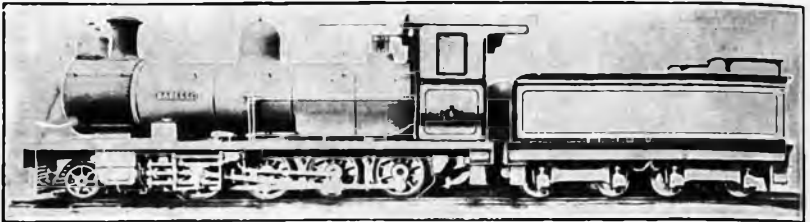
Codes: A.B.C. 5th Edition,
and Liebers.

Telegrams:
"Automobile, Glasgow."

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,
Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)

Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

**For Locomotive, Marine and Stationary
Engine Lubrication.**

For Railway Carriage and Wagon Lubrication

**For Motor Carriage and Motor Boat
Lubrication.**

**For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.**

**Special Oils and Greases for Tropical use
and onerous conditions.**

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

THORNYCROFT

OIL MOTOR VESSELS



Traders' Shallow Draught Motor Launch, for Service in China.

Are well established
in Colonial Service,
and are designed to
fulfil special require-
ments of the district.

Send for illustrated
brochure, stating your
requirements.

Quotations for Boats complete or Motors only, built
under Lloyd's and B.O.T. survey.

JOHN I. THORNYCROFT & Co., Limited,
Caxton House, — — Westminster, S.W.

Telegrams, "THORNYCROFT," London.

Codes - A B C 5th, etc.

DOULTON'S GERM-PROOF FILTERS

"THE BEST OBTAINABLE,"

Vide "BRITISH MEDICAL JOURNAL" and "JOURNAL OF HYGIENE," 1908.

The New Patent Travellers' Pump Filter

(BRITISH MADE THROUGHOUT).

LIGHT IN WEIGHT and SIMPLEST IN CONSTRUCTION.
THE MOST COMPACT (will go in Box measuring 12½ ins. by 5 ins.
by 4 ins. deep). THE JOINTS ARE UNAFFECTED BY HEAT

**CAN BE OBTAINED THROUGH ALL
STORES AND OUTFITTING HOUSES.**

ROYAL DOULTON POTTERIES, LONDON, S.E.

SOUTH AMERICA



BY

THE

R.M.S.P & P.S.N.C

Frequent Sailings from
LONDON, SOUTHAMPTON, LIVERPOOL & GLASGOW.
via FRANCE, SPAIN, PORTUGAL, MADEIRA,
CANARY IS., ST. VINCENT & FALKLAND IS.

Fortnightly from Southampton to
West Indies & New York,
Venezuela, Colombia, Colon,
Antilla (Cuba) & Pacific Ports.

"ARCADIAN" CRUISES
— to —
**Mediterranean, Holyland,
Egypt & West Indies.**
OCT./DEC. from £1 a day.

FORTNIGHTLY FROM LONDON TO
MOROCCO CANARY ISLANDS MADEIRA
23 days £22.

THE ROYAL MAIL STEAM PACKET COMPANY | London:—18 Moorgate Street.
THE PACIFIC STEAM NAVIGATION COMPANY | Liverpool:—31 James Street.

UNION-CASTLE LINE.

Royal Mail Service
TO
SOUTH AND EAST AFRICA.

WEEKLY FOR THE CAPE COLONY, NATAL, Etc.,
Calling at Madeira, Las Palmas, Teneriffe, Ascension, St. Helena,
and Lobito Bay.

**Direct Service to East Africa via Gibraltar,
Marseilles, Naples and the Suez Canal.**

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

THE HEAD OFFICE OF THE COMPANY,
At 3 & 4, FENCHURCH ST., LONDON, E.C.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4, ST. MARY AXE, LONDON, E.C.

30 MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF, &c. &c.

HYDRAULIC MACHINE TOOLS

(TWEDELL'S SYSTEM.)

For

Rivetting,
Flanging,
Forging,
Welding,

Stamping,
Pressing,
Bending,
Tube Drawing,

Wheel Bossing,
Projectiles,
Punching,
Shearing.

CATALOGUE FREE.

GAS ENGINES.

GAS PLANTS For Anthracite, Coal,
Coke, or Charcoal.

10 B.H.P. to 300 B.H.P. THOUSANDS WORKING.

OIL ENGINES.

Contractors to H.M. Government; Crown Agents for the Colonies;
Foreign Governments.

FIELDING & PLATT, Limited,
GLOUCESTER.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL.**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

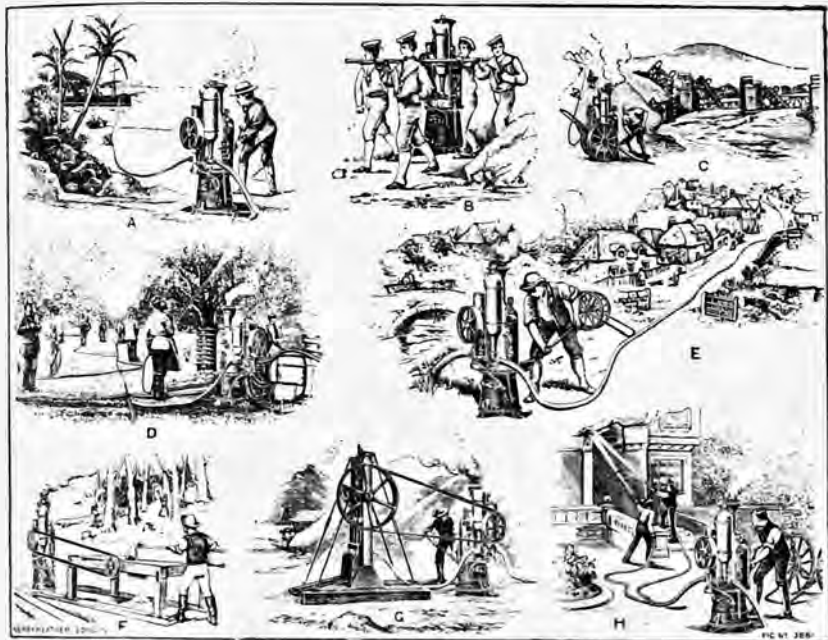
ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; Captain Scott's Expedition, 1910, and Dr. Mawson's Expedition, 1911.

MERRYWEATHERS'

"Valiant" Steam Pump and Boiler

AND ITS MANY USES.



A Watering Ships.

B—Carried by 4 men.

C—Watering Troops at Tugela River.

D—Fruit Spraying.

E—Village Fire Engine.

F—Cutting Timber.

G—Driving Stamp Battery.

H—Extinguishing Fire.

FOR "UP-COUNTRY" WHERE RAILS AND ROADS DO NOT EXIST.

Weights only 6½ cwts.

Will pump through 3 miles of piping.

Strong, Simple, Efficient.

WRITE FOR PAMPHLET 616 S.C.O.

MERRYWEATHERS' PATENT LIGHT SECTIONAL BOILERS.

Invaluable for Prospectors.

FULL PARTICULARS ON APPLICATION.

MERRYWEATHER & SONS,

63, Long Acre, W.C.

Works . . . GREENWICH, S.E., LONDON.

GOODLASS' "SWANSDOWN"



WHITE ENAMEL

*FOR THE HIGHEST
CLASS OF
DECORATIVE WORK*

is the very finest Enamel manufactured and produces a
surface like porcelain.

Sole Manufacturers :

GOODLASS, WALL & CO., L^{td}.
LIVERPOOL.

THE WORKINGTON

IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office: 14, Sherborne Lane, King William Street, E.C.

**Telegraphic Addresses: "Mosbay, Workington,"
"Mosbay, Cannon, London."**

SHEEPBRIDGE COAL & IRON CO., LTD.,

Manufacturers of

Cast-Iron Gas & Water Mains

From 2 Inches to 48 Inches Diameter.

**Also Hydraulic Pressure Pipes, Steam Pipes,
Electric Cable Pipes, &c.**

CASTINGS OF ALL KINDS FOR GAS AND WATER WORKS.

**BEST HOUSE, GAS and STEAM COAL, PIG IRON,
BAR, ANGLE, and TEE IRON, &c.**

Contractors to H.M. Post Office, the Admiralty, and War Office.

SHEEPBRIDGE IRON-WORKS, CHESTERFIELD.

Telegrams—"Sheepbridge, Chesterfield."

Telephone—356.

London Office—53, VICTORIA STREET, WESTMINSTER, S.W.

THE TINFIELDS OF NORTHERN NIGERIA

Via THE NIGERIAN RAILWAY.

AN ALL RAIL ROUTE is now open for both Goods and Passenger Traffic from the Port of Lagos, the capital of Southern Nigeria, to Rahama, the present terminus of the BAUCHI LIGHT RAILWAY, a total distance of 712 miles. A Weekly BOAT EXPRESS connects with both the Outward and Homeward MAIL STEAMERS at LAGOS, and consists of Saloon Carriages provided with modern conveniences, including a Restaurant Car, comfortable Sleeping Accommodation, Lavatories and Bathrooms, and fitted throughout with Electric Light and Fans. The train runs through to Zaria (622 miles) in 45 hours and Passengers tranship there to the Bauchi Light Railway for Rahama.

2. At Lagos, Passengers and their luggage, etc., are conveyed to and from the Ocean Liners by a Tender which lands them at Iddo Wharf, where the Boat Express is drawn up. All Meals and Refreshments can be had in the Restaurant Car throughout the journey to Minna. The saving in time by the All Rail Route is from Eight to Ten days on each journey in comparison with the old Niger River Route via Forcados.

3. The Passenger Fares from Lagos to Rahama are as under:

First Class £9 14s. 7d. Third Class (Servants only) £0 19s. 0d.

There is no restriction on the quantity of baggage which can be taken by Passengers by the Boat Express.

The rates to Rahama are as under:—

First 2 cwt. ... Free. Next 20 cwt. ... 11s. 8d. per cwt. Next 20 cwt. ... 19s. 6d. per cwt.

Any baggage in excess of 2 tons 2 cwt. will be charged at excess luggage rates.

4. All goods are carried from Iddo (Lagos) to Zaria, Rahama and Kano at the same rates as from Forcados by the river and rail route, and every facility is provided at Iddo for the handling of heavy and bulky articles of machinery, etc.

The rate per ton for machinery from Lagos to Rahama, or from Forcados to Rahama, is £18 3s. 5d., and for tin ore from Rahama to Lagos or Forcados, £13 17s. 6d.

For further particulars apply to the—

**TRAFFIC SUPERINTENDENT, NIGERIAN RAILWAY, LAGOS,
TRAFFIC SUPERINTENDENT, NIGERIAN RAILWAY, MINNA,
or to the CROWN AGENTS FOR THE COLONIES, Whitehall Gardens, London, S.W.**

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	£1,000,000.	Called-Up Capital	£240,000.
Subscribed Capital	£600,000.	Reserve	£100,000.

DIRECTORS.

Rt. Hon. The Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. Clifford B. Edgar, Esq.
D. Q. Henriques, Esq. Geo. Miller, Esq. W. P. Moore, Esq. Geo. W. Neville, Esq.
Sir Owen Philipps, K.C.M.G. Maxwell Stuart, Esq. O. Harrison Williams, Esq.

Chief Manager: Leslie Cosper.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown and Sherbro. **GOLD COAST** and **ASANTI**—Axim, Secoundee, Saltpond, Cape Coast Castle, Winnebah, Accra, Tarquah, Coomassie.

LIBERIA—Monrovia. **FRENCH IVORY COAST**—Grand Bassam, Assinie. **NIGERIA**—Lagos, Ibadan, Abeokuta, Zungeru, Zaria, Forcados, Warri, Onitsha, Lokoja, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonemma, Benin, Brass, Buguma, Blama, Bonny, Bo, Dakar, Degama, Dunkwa, Ekwanga, Fernando Po, Half Assinie, Koko, Lahou, Loanda, Madeira, Matadi, Obuassi, Opobo, Pombombu, Prestea, Sapelli, Segbwema, Tenerife.

New York Agency, 74 Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W. ;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of **OPEN HEARTH**


ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS

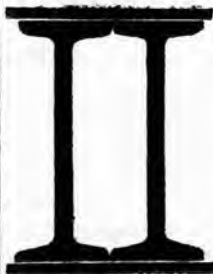
And **STRUCTURAL STEEL WORK** for all purposes.

Speciality: **STEEL FRAME BUILDINGS,**

FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.	
	BSB 30	24 X 7½	100	ASB 17½	10 X 4½	35
	.. 29	20 X 7½	89	BSB 18	9 X 7	58
	ASB 29A	20 X 6½	65	DLB 15A	9½ X 3½	23½
	BSB 28	18 X 7	75	BSB 15	9 X 4	31
	ASB 28A	18 X 6	55			
	BSB 27	18 X 6	62	.. 14	8 X 6	35
	.. 26	15 X 6	59	.. 13	8 X 5	28
				.. 12	8 X 4	18
	.. 25	15 X 5	42	.. 11	7 X 4	16
	.. 24	14 X 6	57	.. 10	6 X 5	25
	.. 23	14 X 6	46	.. 9	6 X 4½	20
	.. 39	12 X 6	54	.. 8	6 X 3	12
	.. 21	12 X 6	44	.. 7	5 X 4½	16
	DLB 20A	12 X 5	39	.. 6	5 X 3	11
	BSB 20	12 X 5	32			
	.. 19	10 X 8	70	.. 5	4½ X 1½	6½
	.. 18	10 X 6	42	.. 4	4 X 3	9½
	DLB 17A	10 X 5	35	.. 3	4 X 1½	5
	BSB 17	10 X 5	30	.. 2	3 X 3	8½
				.. 1	3 X 1½	4


--

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, ½ in. to 2½ in. ; HALF-ROUNDS, 1½ in. to 3½ in. ; SQUARES, ½ in. to 2½ in. FLATS, 1 in. to 13 in. ; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work ; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

ADVERTISEMENTS.

Telegrams: "Crown, Cardiff."

ESTABLISHED 1860.

THE
CROWN PRESERVED COAL Co.,
CARDIFF. Limited.

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL



TRADE MARK.



USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.

AWARDS.

London...1862 | Liverpool... 1886 | Royal Naval 1891 & 1905 | Bordeaux ...1895
Paris1875 | Jamaica ... 1891 | Chicago1893 | Mexican ...1908

Works: CARDIFF and PORT TALBOT.

**"HANDBOOK OF THE
BRITISH COLONIAL EMPIRE."**

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies :

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring accurate and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,
GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

THE
COLONIAL OFFICE
JOURNAL

OCTOBER, 1912.

Issued Quarterly.

London:
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.

Lacre

UTILITY MOTOR VEHICLES

10 CWT.
TO
6 TONS.



TANK WAGON,
SIAMESE WAR OFFICE.

LACRE COMMERCIAL VEHICLES.



LOOSE TOP-SHEET VAN—One of a
FLEET OF TWELVE in N.S.W.

Some recent orders, including **REPEAT ORDERS**, have been received for "LACRES"
from:—

— THE JOHANNESBURG MUNICIPALITY.
— THE GLASCOW CORPORATION.
— THE CANADIAN GOVERNMENT.
— THE AUSTRIAN ADMIRALTY.

THE N.S.W. GOVERNMENT.
THE SIAMESE GOVERNMENT.
THE CROWN AGENTS FOR THE COLONIES,
ETC.

VANS.
LORRIES.
TIP WAGONS.
TRANSPORT
WAGONS.
CHAR-A-BANCS.
MUNICIPAL
WAGONS.
TANK WAGONS.
ETC.



NOTE:—
THE
LACRE
COMPANY
ARE ON
THE
OFFICIAL
LIST
OF THE
CROWN
AGENTS
FOR THE
COLONIES.

4-TON LACRE LORRY WITH WINDING GEAR AT
WORK IN THE INTERIOR OF QUEENSLAND.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

BY ROYAL
WARRANT



TO
H.M. THE KING.



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

TORBAY PAINT.

*THE MOST RELIABLE AND
DURABLE PAINT FOR
TROPICAL CLIMATES.*

Special Paints for Coating
New and Old Galvanized Iron.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1709 AVENUE.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM:

Clayton Fire Extinguishing and Ventilating Company, Limited,

22, CRAVEN STREET, LONDON, W.C.

Tel.: Gerr. 3232.

Code:—A.B.C. 4th and 5th Editions.

Tgms.: "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

THE COLONIAL OFFICE JOURNAL.

VOL. VI.

OCTOBER, 1912.

No. 2.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

THE prosperous condition of Australia is reflected in the returns of imports during the first quarter of this year. These showed an increase of more than 21 per cent. over those of last year. The increase of imports coincided with an increase of population due to immigration, and this will be a continuing cause. Intending emigrants will be encouraged by the recent reports which show that New South Wales has perhaps the lowest death-rate in the world, though it may be remarked that the death-rate is always kept down by a tide of healthy immigrants, and that, therefore, a good deal of allowance must be made for this in drawing comparisons.

In Australia a big policy of immigration depends on "closer settlement," but when attempts are made to break up large estates for this purpose the interests threatened naturally make their objections heard. Wool is the predominant rural industry, and this means extensive runs. But agriculture is now developing more rapidly than sheep farming, and more land is wanted to meet the demand. But it has been said by a minister in New South Wales that if 1,000 settlers came there to-morrow the department could not find 50 blocks of decent land within 15 miles of a railway to offer them. This fact marks the great difference between Australia

and Canada. The purchase system which has been resorted to in Australia has apparently not made much impression. In New South Wales in six years between two and a half and three millions have been spent, and only 2,400 settlement blocks have resulted. The rise in values has in many places been very great recently and stops government buying. An extensive railway policy is in view, twelve new railway lines being contemplated, but to make any substantial impression on the adjoining land by the purchase system would cost, it has been estimated, the enormous sum of fifty millions. The Government will not consider it satisfactory to incur the heavy expenditure on these railways without providing room for the settler, and if the large holders do not themselves move in the matter it seems likely that legislation will be resorted to. The federal land tax, the first report on which has just been issued, has had a substantial effect in inducing those owners who are liable to the higher scales to sell.

The comparative advantages of Canada and Australia to the emigrant are frequently discussed, and as each Dominion has special advantages of its own it would be difficult for impartial observers to decide which offers the greatest attractions. The Canadian people have certainly an extremely strong belief in and affection for their country. There is a spirit of confidence and optimism which rises above all trials. The man in the street has no doubts and can tell you all about the phenomenal progress of his own locality. There must be something in the climate or soil of the North American continent which inspires this vivid faith in the country, the belief in the future, the devotion to work, and the love of enterprise and advertisement. The average Australian may have as deep a trust in himself and his territory, but he does not display it, any more than the ordinary Englishman, in so marked a manner. On the other hand he has in his favour a potent element of stable prosperity. He can borrow money more cheaply. In Canada the settler has to pay generally 7 to 10 per cent. for the money he wants to improve his property; in Australia the ruling rate is not more than 5 per cent. In both cases there is practically unlimited room, and while in Canada the obstacle to development is the cold winter, in Australia it is the aridity of the interior. The Canadian winter stimulates the forces of the individual; the Australian problem, which is being energetically attacked by wells and irrigation, calls for great government schemes, and this difference has a marked effect on the character of politics and, in the long run, on that of the people. In Canada the trapper and explorer have been the pioneers, and their present day successors must have something of the same qualities, for they must overcome the essential difficulties with their own hands and without state help. In Australia it is the Government which, by vast and organized methods, will lead the way westward and conquer the desert.

The life of the Australian settler will be made easy, but generally speaking a Canadian career contains the greater possibilities.

In our last number we referred to the enquiries which are being made in Canada as to the increased cost of living, and it now appears that New Zealand is also bent on tackling the problem. A Royal Commission has been appointed by the Dominion Government to see whether the cost of living has increased within the last twenty years; if, so, has the increase been greater than in other English-speaking countries; how far the increase is due to the higher standard of living, or to monopolies, trusts, tariff, price of land, or labour legislation; also what steps should be taken towards reducing the cost of the necessaries of life. New South Wales is also investigating the subject. In the United States there has been a proposal to send a Commission round the world to study the subject. There will evidently in due course be a vast accumulation of evidence, and no doubt the operation of various causes will be traced, but it will take a good deal of faith in administrative measures to believe that a world-wide movement of this character can be stopped. Broadly speaking a general change in prices is the result of a variation in the value of gold, and if everyone was a direct producer the effect of such a variation would be comparatively slight, as it would be balanced between the sales and purchases; but as a very large proportion of the world's workers are unnatural beings who receive a fixed wage, an alteration of the usual equilibrium in the direction of making goods dearer is attended with a vast amount of inconvenience. The last news from Canada is that the "index number" has gone up ten points in the year ending May last, and that this is largely on account of common necessaries is shown by the fact that the price of the potato has advanced 50 per cent. The explanation ordinarily advanced for this universal rise is that there is an over-production of gold. The production of gold has no doubt something to do with it, but the world's commercial transactions are largely conducted with paper and on a small basis of gold, and it is therefore probable that the reduced purchasing power of money is to a great extent brought about by the extension of credit and banking systems, which in effect multiply the actual quantity of gold and silver in circulation.

The Northern Territory of Australia has been reported on by the "Preliminary Scientific Expedition," and it does not appear that any attractive prospects can at present be held out so far as agriculture and ranching can be concerned. Professor Gilruth, now the Administrator, writes:—"Since my return I have been asked by several individuals what is the present outlook for the investment of capital and the establishment of their sons in the Territory, and have been compelled to reply that under existing circumstances there is

none. Until it is demonstrated what the country can do, beyond carrying a bullock to the square mile where occupied, and less than one domesticated animal (including man and poultry) to the square mile over the whole area, especially with the present insecure tenure of land provided by the 'permit' system, under which no sane man would effect any improvement, an influx of population cannot be looked for." Of the mining prospects the Commissioners speak more favourably. They think that the practice of letting mines to Chinese on tribute is to be condemned, on the ground that they deplete valuable reefs of their richer portions, leaving only the lower grade material, which by itself might not be worked profitably. They also consider that the families of the second generation of Europeans showed no signs of physical degeneration. If this were the case on a scale sufficient to justify a generalisation, the prospect of a "White Australia" in the Northern Territory would be immensely strengthened. But Dr. Ahearne, whose observations were much more extensive, in his paper on "The Effects of the Tropics upon the White Australian," came to a totally different conclusion, and the experience of other hot countries, such as India, supports him. The Australians have made up their minds to exclude coloured labour, as far as possible, from the north, but there is so far no indication that they can populate it themselves. However, the territory does not appear to be attractive enough to cause other races to cast jealous eyes on it. The "yellow peril," if there is one, will not come that way.

The libel action brought by Mr. W. F. Massey against the New Zealand Times Company, although taken to the Privy Council, turned on a small incident, but the case is no doubt edifying as helping to show how far politicians or journalists can go in the way of satirical comment on their opponents "in good faith and without malice upon a matter of public interest." The cause of offence was the publication of a picture showing a man harnessing a donkey to a waggon, the donkey being labelled "Ananias," and laden with packages labelled "private calumny," "startling revelations," etc., while under the cartoon are the words:

"Hitch your waggon to a star—Emerson."

"Hitch your waggon to a lie—Dr. Findlay's amendment."

It appears that Dr. Findlay, the Attorney-General, had accused the Opposition of having "hitched their waggon to a lie," and the cartoon is a pictorial representation of this attack. The jury in the dominion found that the figure of the man represented the plaintiff, but the Lords of the Judicial Committee somewhat plaintively remarked that it was to be regretted that they had not a report of Dr. Findlay's speech before them, "because if they had been thus favoured it might have appeared clearly and definitely what was the particular lie to which the Opposition were exhorted to hitch their

waggon, or to which they were accused of having hitched their waggon." This momentous matter must therefore be left unsolved, but as regards the picture of the plaintiff their Lordships decided that it might well have been introduced as typical of the party, and not at all for the purpose of fixing on him a charge of personal misconduct. They referred to the evidence of Mr. McBeth, himself an artist, who stated in cross-examination that if he wanted to typify the Opposition he would do so by their leader; that to typify the party generally he might use their leader; that the cart as he understood it was the party cart; the cargo, the cargo of members of the party, and represents either the stock in trade of the party, or the stock in trade of the man who drives the cart. This view was adopted by the jury and their Lordships upheld their verdict. The moral seems to be that it is not only safe to accuse a political party of mendacity or nefarious designs, but that the leader of it may for pictorial purposes be specially included in the charge, in which case, however, it should be understood by an intelligent public that the representation is only "typical." We presume that it must be quite clear on such occasions that the "type" is really the leader. Evidently complications might occur if unfortunately anyone was selected for this vicarious office who, in his own estimation, was not the leader. The decision in the present case ought to be satisfactory to all parties, as it vindicates the right of the press to indulge in political skits, while establishing that the effigy of a political leader is merely representative. The only person who, if he were alive, might still be grieved over the case would be Emerson.

We are all becoming familiar with the idea that illegal strikes, that is to say, strikes contrary to agreements or awards, or prohibited by law, should be stopped by means of penalties, but there are some misgivings as to whether such penalties would be practically enforceable. The experience of New Zealand gives a basis of fact on which this question can be considered. Here, if a strike takes place in any industry, each worker who is a party to the strike, and who is bound by an award or agreement, is liable to a penalty not exceeding £10, and in case of a lock-out each offending employer is liable to a penalty not exceeding £500. For inciting, instigating, aiding, or abetting an unlawful strike or lock-out, or its continuance, a worker is liable to a penalty of £10, and a union, association (of employers or workers), or an employer, £200. A gift of money or other valuable thing for the benefit of a party or union engaged in a strike is deemed to be aiding or abetting. There are special provisions in the case of strikes and lock-outs in industries affecting the supply of the necessities of life, such as water, milk, meat, coal, gas, or electricity, or in the working of any ferry, tramway, or railway used for the public carriage of goods or passengers. In these

industries, whether affected by an award or agreement or not, fourteen days' notice must be given within one month of an intended strike or lock-out, failing which each worker concerned is liable on summary conviction before a Magistrate to a maximum fine of £25 or an employer to a maximum fine of £500. The maximum penalty for inciting, aiding or abetting in these cases is £25 for a worker and £500 for an employer or a union or association. Strikes and lock-outs are forbidden during the hearing of a dispute by the Council or Court of Arbitration. There are also penalties for breaches of awards and industrial agreements.

In the four years 1908-11 there were 29 strikes in all, but some of these were not illegal. In only three cases was a union concerned and in these fines were imposed and recovered of £60, £75 and £100. A large number of men were fined £5 each and the money was actually recovered except a small proportion. The result shows that the law can be enforced, and though the fines are not on the whole heavy, convictions are likely to have a considerable moral effect. It may be observed that in one case the crucial question whether employers will recognise the union representative when he is not one of their employees was settled by a conference at which it was agreed that when a dispute arises the matter should first be laid before the employers by the men, and if the latter are dissatisfied with the decision they should have the right to refer the matter to the union, whose officials would then be recognised by the employers.

If the penalties in such schemes are not drastic enough they can be increased, and in the Queensland bill lately introduced, which is the result of recent industrial disorder, the fines are heavier than in the New Zealand Act. Thus anyone inciting to or assisting a lock-out will be liable to a fine of £1,000, and anyone participating in or inciting to a strike to a fine of £50.

In Canada, where there is compulsory investigation with a view to agreement but no compulsory arbitration, a very large proportion of cases have been settled satisfactorily. The general result, in Canada and in Australia, is that the great majority of disputes are arranged under the statutory machinery, but there are serious exceptions. A working class, in the last resort, will probably strike if it thinks fit in spite of penalties, but the good done by the Acts deserves recognition.

The old question of the effects of different gaol systems on crime receives some light from a return prepared by the Prisons Department of New South Wales. It appears that out of 8,242 persons who were convicted in the last ten years (excluding those who were granted the benefits of the First Offenders' Act), only 562 have been convicted a second time, or about 9 per

cent., and of these 96 have been convicted a third time, or 7 per cent. The efforts to make imprisonment reformatory and not degrading are clearly being crowned with success. The prisoners are carefully grouped into different classes and young men are shielded from contact with old offenders. Educational and moral influences are brought to bear, always with a view to lifting up the prisoner, and the results are seen in a rapid decline of the gaol population.

By a fortunate coincidence it fell to Mr. G. E. Foster to introduce to public notice in this country the terms of the agreement between Canada and certain of the West Indian colonies. Two days after the official publication came the banquet given by the West Indian Committee, and the Canadian Minister reviewed the steps which led to the agreement and outlined its terms. In this matter Mr. Foster has carried out views which he has held for many years and expounded on many occasions. At the Intercolonial Conference at Ottawa of 1894, he moved a resolution in favour of reciprocal relations between Great Britain and her colonies, and that pending such an arrangement it was desirable that the colonies should take immediate steps to place each other's products, in whole or in part, on a more favoured customs basis than is accorded to the like products of foreign countries. No one can hear Mr. Foster on the subject without realising that he is prompted by an intense desire to promote the progress and stability of the Empire. Any definite project for carrying out this object must have a material side, and on questions of trade, as such, opinions may differ amongst men who have equally at heart the welfare and unity of the mother-country and the colonies: but in the mind of Mr. Foster there has ever been present a consideration which is not material in that sense, and which arises more naturally in Canada than it does here. This is the desire to keep the British subject under the British flag instead of allowing him to drift abroad. A dominion which has seen vast numbers of emigrants from these islands pass to its neighbours and abandon their connection with the Empire may well be exercised over the problem and disposed to take a view of the matter which is not bounded by commercial considerations. Mr. Foster on this occasion expressed this feeling when he said that "underneath all was the basis of British sentiment." No one who has followed the trend of public opinion in the West Indies will think that some effort to encourage this sentiment is superfluous.

The West Indies already have a preference in Canada, but Canadian refiners are allowed to import 20 per cent. of their requirements from foreign countries at the same rate of duty, and it is very probable that this right not merely diminishes the imports from the

West Indies up to 20 per cent. of the requirements, but also operates to reduce the price obtainable by them. When sugar is procurable from all quarters on equal terms, even though the total quantity is limited, the importers naturally encourage competition, and in the result are able to secure for themselves a part of the preference. This is not a satisfactory result, and probably a smaller preference would have been more beneficial to the West Indies if this exception to it had not been introduced. The abolition of this right, therefore, will be welcomed.

The peasants of Great Britain, in addition to being keenly vied for by Canada and Australia, will now be sought for by South Africa. The Land Settlement Act passed last Session authorises the importation of men, and it is expected that many landowners would be willing to pay higher wages than they do at present in order to secure white labourers. It is proposed that the imported men should contract to work for their employers for three years, after which period of service the Government would grant them small holdings. It remains to be seen what the wages to be paid will be and what will be the value of the assistance given by the Government, but an obligation to work under an employer for three years will create a substantial difficulty at the outset. It would be a new departure in the case of European immigrants and it is difficult to see how a system of indentured labour, for that is what it comes to, could be applied to them. At any rate the condition would militate against South Africa's chances in the competition for white labourers. The immigration policy of the Government must also be limited by the amount of land which it can acquire for the holdings contemplated. In this respect South Africa is in much the same position as Australia, with the additional difficulty that expropriation has been ruled out, and there is therefore nothing for it but to buy in the open market, a course which, as usual when a government is a purchaser, tends to cause a great advance of prices. The Government will, no doubt, make the best use of its opportunities, but probably there is no intention, or desire, to force the pace. The criticism of the opposition is that the proposals for acquiring land are not sufficiently effective and that provision should have been made to enable the Government to acquire land at a fair price if it is lying idle. Thus, so much do terms vary in our Empire, we have a Unionist Party which wants a tax on unimproved land.

In another serious respect South Africa labours under a disadvantage which does not exist in Canada or Australia. It arises from the existence of the native population. There is much special legislation, or special exceptions, which discourage the employment of white men. Thus the Workmen's Compensation Act does not apply

to natives, and this is sufficient, in vast numbers of cases, to make an employer prefer a native workman. The pass laws give the employer a control over his native employes which is impossible in the case of white men, and the laws preventing natives from obtaining spirituous liquors are another inducement to prefer them.

It is noteworthy that in Australia the civil service has attained the dignity of being constituted an "industry" within the meaning of the Conciliation and Arbitration Act, 1904-11. An organization of civil servants therefore (provided it comprises three-fifths of their total number), can bring before the Court any plaint relating to their salaries or conditions of employment, and the claim will then be treated as if it were an industrial dispute within the meaning of the act. The award is not limited to the subject matter of the claim, but may include anything which the Court thinks necessary in the interests of the public. The award may even be contrary to the laws, but if so will not be operative if either House of Parliament passes a resolution disapproving it.

The abandonment of rebates by the Union-Castle line is a triumph for the South African Government, which has steadfastly fought for the principle. The effect on commerce will be watched with interest by many countries which are affected by the custom. The arrangement on the one hand renders the competition of other lines possible, but on the other it sets free the hands of the Company, which can bargain individually with merchants and vary its terms as it likes. In these negotiations the big man naturally has an advantage, and even without the assistance of rebates a powerful shipping line can do much by alliances with the leading merchants to secure the virtual control of staple exports. If one way of securing combination is given up, as in this case rebates are, it is not surprising if another is discovered, probably one which works in a more obscure manner. Public opinion, however, revolts against any system which openly brings about monopolies, and there is a wide feeling against rebates. The success of the movements against them depends on the strength of the competition for freights which can be maintained, and this, of course, differs according to place. The Union Government has had to pay a price for the abandonment of the rebates in the shape of an engagement to pay an increased rate of 10 per cent. on government freight. They have decided that it is worth while to do this in order to give the public the benefit of open competition. It has been suggested that, in order to secure uniform rates for all customers, the Union Government will take steps to discourage any outside lines from attempting to share in the trade; but this would mean discouraging competition after paying to encourage it.

A writer in a French journal has recorded the impressions resulting from a *coup d'œil* which he has thrown on the colonial organization in this country. He was evidently much surprised and even disconcerted at what he saw. He expected to find some system of administrative centralization such as he was accustomed to in France. Instead of that he found a number of offices "éparpillés à travers la ville. Chacun s'occupe de son département sans avoir à subir le contrôle incompétent des voisins." No doubt the system under which the offices of the great colonies are scattered indifferently over the city and the West-end is somewhat perplexing to the enquiring foreigner. It may be typical of our independent spirit but abroad it seems chaotic, like other features of London. Even the Colonial Office was an accident, being a sort of satellite thrown off by the War Office at a time when the European conflicts became too absorbing. He was also struck by the absence of any newspaper devoted entirely to colonial news generally. Here again the variety of the British Empire brings about a result different from that in France: our possessions have less in common with one another in either political or industrial matters than the fairly homogeneous French colonies. However, he notes that the press as a whole devotes a good deal of attention to colonial affairs, and that the public is attentive. "On ne saurait trop dire avec quelle attention jalouse l'opinion veille sur la plus grande Angleterre. Ici, l'éducation de la nation n'est plus à faire en matière d'expansion coloniale, et loin d'avoir à entraîner la masse, le gouvernement est obligé plutôt de modérer son élan."

The reputations of military positions fluctuate greatly with the changes in political and strategical considerations, but it is satisfactory to find that Gibraltar is holding its own in this respect. Not very long ago it was the fashion to decry this stronghold on the ground that it could be shelled from hills commanding it from the interior; but, while it may be conceded that this constitutes a vulnerable spot, the risk appears remote in any circumstances that need be considered, and the developments in naval design tend to increase the value of the position, this being so close to Great Britain and also at the end of the bottle in the Mediterranean. Mercantile vessels are realising the convenience of the place more and more, and the figures of entrances and bunkering are mounting upwards. The chief drawback in Gibraltar is the limited space, which has caused serious administrative and engineering difficulties. Apart from its military character, its most distinctive possession is the "unclimbable fence" which was put up to stop smuggling and is probably unique. The cheapness in such a free port of various favourite objects of customs taxation naturally led to a good deal of smuggling and to serious complaints

from Spain, and as we hold Gibraltar for a special purpose it was considered right to do everything that was possible to stop the practice.

The revenue of Ceylon exhibits a rapid growth, and there is abundant evidence of increasing general prosperity. The United Kingdom and the colonies secure a very satisfactory proportion of the import trade, the share of foreign countries being only 13½ per cent. There is no one to touch the United Kingdom in the important sphere of machinery. The most effective competition of foreign countries is in cheap articles of comparatively low quality, such as printing paper; and the explanation of this is that British manufacturers find that it pays best to devote themselves to a good article, and as they cannot do everything this leaves the field open for the cheaper goods. In the exports an increasing percentage is being taken by foreign countries, which is a natural result of a growing output and international demand for tropical prospects; the most striking feature is the increase of exports, principally green tea, to Russia in Asia, which country will, no doubt, as it develops, become a very important market for Ceylon. The alienation of land, which causes so many questions in other places, proceeds smoothly here. Where occupiers can prove prescriptive possession against the Crown, certificates of quiet possession are issued, and where the occupation has been for less than the prescriptive period, settlements are effected on special terms. Otherwise the alienation of crown land is effected by sale of the freehold at public auction. The total area settled under the Waste Lands Ordinance reaches about a million and a half acres, and the confidence of the large majority of the people in the fairness of the settlements offered has now been secured.

In Ceylon the criminal statistics show a large number of murders and "grievous hurts," and these cases are on the increase. On the other hand cases of burglary and theft are on the decrease, and it seems clear that the increase of crimes of violence is not due to poverty or adversity, but on the contrary is more or less caused by the extraordinary wave of prosperity. When trade is good there is more to quarrel about. The police can exercise little control. Stabbing is the national way of fighting, and not much improvement can be effected until this custom is changed. It is suggested in the Annual Report that in order to effect such a change it is necessary to begin with the children, and that it would be a good thing with this object to encourage boxing as a national pastime in the schools. It is remarked that this could do no harm, and in years to come might well tend to a more general use of the fists to the exclusion of the knife. We appreciate the excellent spirit of the suggestion,

but it may be doubted whether the somewhat laborious method of settling disputes which, by a polite fiction, is supposed to be still practised in English schools, would ever command itself to the quick-tempered and vendetta-loving Asiatic. Perhaps a shorter method would be to penalise the carrying of dangerous weapons.

It is good news for dwellers in Malaya that a local Simla has been discovered. It rejoices in the name of Gunong Tahan, and lies in magnificent mountain scenery on the borders of Kelantan and Pahang, over 7,000 feet high. The climate is likened to that of the Highlands of Scotland, which for the purposes of such comparisons appears to be reckoned at a plus figure. There are plateaux some five or six thousand feet high where there is ample space. The place would no doubt be a good one to recoup in after a bout of fever or other infirmities, but somehow such mountains are in practice not much used in the tropics when escape by sea is possible.

The mission of Mr. H. Conway Belfield to the Gold Coast Colony and Ashanti is an instructive example of the valuable results which may be obtained by sending an experienced and able officer to report on an administrative problem in a place with which he has not previously been associated, and to which he brings a fresh mind and unbiassed judgment. It was well worth while to have an enquiry made in this spirit into the conditions of the alienation of native lands in those possessions, for the Concessions Ordinance of 1900 was only arrived at after much trouble and doubt, and in fact after a complete change of the policy originally put forward. No doubt it bears upon its face the signs of conflict. The provision which left it to the judges to decide whether a proper price was paid by the purchaser for a "concession" without any guidance as to what a proper price should be, was something new even in colonial legislation, fertile in expedients as it has been. But it would have been equally new to vest such a power in the executive. Mr. Belfield observes that it is not clear why the unusual course was taken of placing the administration in this matter in the hands of the judicial rather than those of the executive authority. The explanation may, we suggest, be found in the fact that in this country the Government has not been in the habit of interfering with harsh and unconscionable bargains, but the court of law have. It is no part of any government department here to determine whether a contract is just or unjust, or to relieve any one from the consequences of what he has agreed to do, and the legislature has on the whole studiously avoided any measure which might seem to interfere with the sanctity of contracts. But the courts have built up a system which, however limited in its scope, is intended to afford relief in hard cases. It was

therefore in accordance with a substantial analogy that the Gold Coast courts were entrusted with the task of confirming or disapproving mining concessions. There is one great argument in favour of judicial decisions in such cases, and that is that they are given in public and after full opportunities of discussion. Mr. Belfield submits that, "while it is true that the court is the proper authority to adjudicate upon questions of contract generally, its assistance is only involved when a dispute or difference arises." This is not the case, such assistance is frequently involved for the settlement of matters about which there is no dispute. But while this may be said for the policy adopted in the Concessions Ordinance, it is another matter whether it has worked well, and in what respects it can be amended, and on these questions Mr. Belfield's examinations and suggestions are very valuable. His scheme comprises agricultural as well as mining concessions. He observes that no theory was offered to him to elucidate why the former were left out. We would suggest that the reason was simply that till 1906 there were not any. The one object of concession-hunters at the time when legislation was first contemplated was to obtain mining rights, this being a time when the knowing thought that they knew the country to be a second Rand. The innocence and ignorance of many of the native owners were undoubtedly being abused by these people, and something had to be done to put a stop to this. Whether better means can be devised for these ends will be a matter for the committee recently appointed. In the meantime it may be borne in mind that in any case the alienation of native lands has not after all gone very far, as in the Gold Coast it only amounts to one twenty-seventh of the area of the Colony. The sale of this small fraction has been accompanied by the construction of a railway and a vast improvement in the production and trade of the Colony. The natives participate in the benefits of this development, and there seem no indications that they have suffered from the process.

The only cloud on the serenity of Ashanti is, it appears, caused by Christian converts refusing personal service to their chiefs. There may be occasions on which services are required which would do violence to the convert's religious feelings, but the plea is often nothing more than an excuse to get rid of communal and personal obligations, and naturally irritates the chief, who sees his authority slipping away. It has been found necessary to draw up rules for the guidance of both parties—a task requiring considerable delicacy.

Much trouble was taken to make the census of Southern Nigeria as trustworthy as the conditions allowed, and the return is no doubt good enough for practical purposes. The population is shown at

7,858,689, and the average density works out at slightly under 100 inhabitants per square mile. Of this great number, all but 2,940 were natives. The European population then resident was 1,648. The more organized condition of the Western Province, as compared with the Central and Eastern, is shown by the size of its towns, all those of over 50,000 inhabitants being in that Province. Of the whole population of the Province 45 per cent. is collected in twenty of the towns. Here, practically only one language (Yoruba) is spoken, while in the Eastern Province there are 57. No attempt was made to schedule the religious beliefs of the natives except in the ports, but Mr. Birtwistle states that there is little doubt as to the pagan population in the whole of the Colony and Protectorate exceeding three-quarters of the total. No one can consider these figures without being struck by the difficulties of administering such a territory. The population of the Lagos Municipal area, which includes Ebute Metta, was 73,766, showing the remarkable increase of 70 per cent. in ten years. An astonishing number of these, viz., 21,293, described themselves as "traders," and, while liberal allowance should be made for the large number of women who add some kind of trading to their not very onerous domestic duties, it must be allowed that Lagos is exceedingly well supplied with this class.

The murderous attack on two white prospectors in Northern Nigeria shows how easily such outrages may arise from the superstitions of the pagan tribes. It appears that all the unfortunate men had done was to attach small pieces of cloth to the tops of bamboos set up to mark an area. Now, a rag attached to a pole or bough is a favourite form of the local ju-ju and, naturally, the pagans concluded that the ju-ju put up by the white men was hostile to them, or, at any rate, that their own spirits would be offended by its presence. This is no small matter when the spirits are believed to be capable of doing a vast amount of harm, and to be very ready to take offence. With the growth of Islamism, however, the hold of these superstitions over the natives is beginning to weaken.

The local revenue collected in Northern Nigeria is increasing in a very marked manner, and, no doubt, great credit is due to the Administration for this result. If this possession has not yet attained the present position of British East Africa by dispensing with a grant-in-aid, it is, at any rate, well on the way towards it. Northern Nigeria has, in one important matter, to bear a greater responsibility than the Eastern Protectorate; it has to carry on a railway which was built very economically as a pioneer line, and on which a further substantial expenditure was necessary at once.

The annual report of the East Africa Survey Department states that "the arrears are steadily increasing; they now stand over $1\frac{1}{2}$ million acres and will in a few weeks be over 2 million." The word "arrears" hardly does justice to this energetic department, as the gathering numbers refer to surveys which are ordered of fresh territory. Reasons are continually arising for the survey of lands which have not appeared to have any particular value, and the growing demands on the Survey Department reflect the activity of the country. In 1911-12 the cadastral survey embraced 579,679 acres. The cost of the cadastral survey works out at 6.86 pence per acre, of triangulation at 19.4 shillings per square mile, and of topography at 11 shillings per square mile.

The importance of the distinction between white and black races increases in proportion with the improvement of the latter. It does not matter much at first. The uncivilised or partly civilised tribes readily accept the lot of war and the rule of the conqueror. This is the law of life to which they are accustomed and which seems natural. The trouble begins when he has been civilised. He is then confronted, not with open force, but with a race prejudice which he does not and cannot respect. War with such races has practically disappeared; in its place there is race hatred. This is inevitable if the coloured man is kept without political power and without openings for natural aspirations. One theoretical remedy is the creation of separate states for the bulk of the native races, in short, segregation. It is said that the Emir of Kano, an educated man, advocates this in Northern Nigeria. The black, he argued, has a latent fear of the white, and this feeling is easily turned into one of hate. There can be no doubt that the plan is excellent in places where the natives are intelligent and there is only a small element of whites, as in Basutoland, but there would be great difficulties when once the white admixture became important. Segregation would then imply removal, and the fate of various projects for that purpose shows how impracticable it is to dissolve a society into its component parts. After all, the black who has become accustomed to the resources of civilisation shows no disposition to leave them, even if he chafes at the restraint put upon him. Nor can any scheme of segregation, even if adopted at a sufficiently early stage, be permanent. Trade and travel break down the barriers, and the history of native reserves of all kinds is much the same in the long run. The solution of the problem can only be found in a generous and sympathetic treatment.

An anti-slavery society may seem to be a peculiarly British institution, but there is one in France. The establishment of the

French Protectorate in Morocco and the occupation of Benghazi by the Italians has, it appears, so completely stopped the slave traffic in these parts that the society finds nothing more to do so far as this traffic is concerned. But it has been pointed out by M. le Myre de Vilers that it cannot consider its work complete until the native family is so reconstituted that the woman shall not be submitted to the servitude of the harem. It is regretted that the administration has in the Soudan favoured the development of Arabian civilisation by setting up numerous Mahommedan schools. The suggested way to organise the African family on a proper basis is quite simple, on paper, and characteristically French. It is to provide the young native woman with a *dot*. On the dark continent the men who marry have to buy their wives, and this excludes the young men who cannot find the money. The remedy is to advance the necessary sum. It is recognised that the work would be a vast one, but, at any rate, a start has been made. A sum of 22,000 francs has been obtained, mostly from a *vente de charité* held under distinguished patronage. This suffices for 110 *dots* of 200 francs. Five years are to be allowed to the bridegrooms for repayment. The Society is certainly enthusiastic in the cause of constituting the native family,—“the essential basis of all civilisation.” It remains to be seen whether it can make a substantial effort to deal with the problem. Meantime, the spread of industry and the increased cost of living are operating against polygamy, even in Africa.

The problems of India are, to a large extent, the problems of the Crown Colonies, and a policy which succeeds in India deserves watching. India is eminently an agricultural country, but the native's methods of cultivation are primitive, and both in his own and the buyer's interest it is important that they should be improved. This is the case in many places, for though in an agricultural country the agriculturalist is the mainstay of the community, he is generally its weakest member. He depends on credit, but his credit—to use a phrase attributed to Louis XVI.—“supports agriculture as the rope supports the hanged.” The most promising means of helping him, in the opinion of the “Agricultural Journal of India,” is co-operation. An astonishing change has already been brought about by this method. “Rural credit has been reorganised. The co-operative society enables the small farmer to cultivate scientifically, to get good seed and manures and agricultural machinery at cheap rates, to sell his crops to the best advantage while avoiding the profit of the middleman, to manufacture his dairy produce and sell it in the best market, to improve the breed of his live-stock and to insure his possessions against all risks. These are only a few of the directions in which the co-operative principle has been applied. The movement encourages agricultural education and reaps the benefit in improved cultivation

and a stronger and more intelligent force within itself. The societies form practically a huge unpaid agency for making known and bringing into practical use in all parts of the country the improvements of agricultural science and economy." We have referred in a previous number to the various schemes of agricultural co-operation, the essential features of which should be that the people concerned should, as far as possible, manage the undertaking themselves, receiving the help and encouragement of the Government officials, but retaining the responsibility. There can be no doubt that the movement is a sound one and is destined to spread wide. The usual method in India is for the district officers to nominate a limited number of members, say thirty, and to suggest to them certain operations, such as the introduction of new seed or better methods of cultivation, acting as agents for ploughs, or making arrangements for marketing. Each man is supplied at once with the materials he needs and is visited once a month. At the end of six months the members meet and discuss the work done and to be done. It is considered an honour to be chosen to be a member. This method is, no doubt, suitable where agriculture is backward, and it is, therefore, necessary for the Government to take a prominent part, but it may be better in other conditions to have more independent associations.

The Putumayo correspondence furnishes a lurid disclosure of the treatment which may await West Indian labourers who are tempted to South America by the promise of high wages. Some 200 Barbadians were recruited by the firm of Arana Brothers in 1904-5, and the form of contract under which they were engaged certainly left nothing to be desired. The men were engaged as general labourers for a term of two years, work to commence one day after arrival at the Putumayo, and to cease upon the completion of two years. It was stipulated that a free passage both ways should be granted, and that the wages should be at the rate of £2 1s. 8d. per month, with free food daily to consist of tea or coffee, breakfast and dinner, free doctor and medicine, also free lodgings. The working days were to be six per week, and the working hours to be from 7 a.m. till sunset, with one hour allowed for breakfast and one hour for dinner. The contractor further agreed that the labourer should not during his contract be left destitute in the place to which he was going, and that on the termination of this contract, on his giving notice of his wish to be repatriated, his employer should repatriate him by paying his passage to Barbados. By Barbados standard this pay was good, but the men who worked on the Amazon River soon discovered that it was about one-half below the local rate, and most of them left before the end of the two years. In this part no serious abuse arose. But on the Putumayo the situation was

very different. The firm of Arana Brothers and its successors, the British company, do not appear to have scrupled to lay the burden of feeding the great majority of the employes very largely upon the surrounding native population, who were compelled by illegal force to labour in a variety of forms for the maintenance and profit of the company and its employes. In the exercise of this compulsion, frequently accompanied by gross outrages upon the Indians, including murder, flogging, and torture, many of the Barbados men played a constant part. These men, instead of being used as labourers, were forced to act as armed bullies and terrorists over the surrounding native population. Whether it was food-stuffs that were required, labour for building houses or planting cassava, sugarcane, maize, or other produce for the needs of each station, or the collection of india-rubber, the Indians had to satisfy all the demands of the so-called commercial establishment which had planted itself in their midst.

These demands were not supported by the offer of barter-goods in exchange for what was required of the Indian, but were enforced upon him, his wife, and children by absolutely illegal and often terrifying methods. In this system of armed extortion, which can only rightly be termed brigandage, the Barbados men were active agents. This part, no doubt, the men themselves were sometimes willing enough to perform, but in many cases it was made clear that the men had themselves protested, and had only discharged these duties with reluctance, and often under threats which in more cases than one had been realised. In a region so remote, where no civilised jurisdiction existed or government authority was exercised, the agents of the so-called trading bodies had and have supreme control. The Putumayo River is about 1,000 miles long, and in the district affected by the operations of the Peruvian Amazon Company and its predecessors, the Arana Brothers, it was not the main stream of this little-known river, but two of its northerly affluents, which were the theatre of the scenes in which these British subjects took part.

In some instances the Barbadians were themselves subjected to severe ill-treatment. Nearly all were in debt to the company, with no prospect of ever getting straight, and they could not leave the Putumayo till their indebtedness was wiped out. No doubt, the case of Arana Brothers is exceptional, but abuses have generally arisen in places beyond the pale of administrative control, and will probably continue to do so so long as there is any profitable territory left.

In British Guiana there has been trouble in a similar industry, but of an entirely different kind. The balata season of last year was generally disastrous to the companies, and the employers attributed this to the insubordination and dishonesty of the labourers, while the latter ascribed it to false prospecting reports

and inexperienced managers. The grants are all of Crown forests and their protection is a matter of vital importance to the colony, and largely on this account there is a system of registration of labourers to secure that only experienced men are employed; but on the whole the actual industry is left very much to its own resources. The labour troubles are inseparably connected with the appalling difficulties of travel and transportation. Over the 83,000 square miles covered by the licences there are no roads or telegraphs. Success depends entirely on proper organisation and tactful handling of the uneducated African creoles. Some of the new-comers have not realised that it is necessary to win the trust of these men, who, as a class, are neither foolish nor dishonest. The practice of employers making profits from supplies has led in some cases to abuses, and, no doubt, should be discouraged.

It appears that, notwithstanding the general amelioration of customs, the venerable practice of piracy is not quite extinct. Last December, the Weihaiwei report states, an exceptionally daring piracy was committed in the waters of the harbour. A band of six pirates, armed with pistols and knives, boarded a large junk which was lying at anchor at a short distance from Port Edward Pier, overpowered the crew and sailed the junk out of British waters. One of the captive crew was sent back by the pirates to Port Edward with a message to the effect that if a ransom of \$3,000 was not brought to a certain place in Chinese territory within three days the remainder of the captive crew would be killed and the junk burned. As soon as news of this outrage was received a launch which happened to have steam up was manned with a party of armed police and sent in pursuit of the pirates, who, being overtaken, tried to effect their escape by swimming ashore. But before they jumped overboard they deliberately shot and killed one of their captives. Three of the pirates were drowned in attempting to escape, the remaining three were captured. As they had committed a murder in Chinese waters, in which their arrest was effected, they were handed over, after a full preliminary examination had been held by the magistrate at Port Edward, to the Chinese authorities at Chefoo, by whom they were condemned to death and publicly shot.

On the whole, the results were not so encouraging as to invite imitation.

BRITISH NATIONALITY AND CITIZENSHIP.

British Citizenship.—A discussion initiated by E. B. SARGANT, and reprinted by permission from the Journal of the Royal Colonial Institute "United Empire." (*Longmans, Green & Co.* 2s. 6d. net.)

The Problem of Empire Governance.—By C. E. T. STUART-LINTON. (*Longmans, Green & Co.* 3s. 6d. net.)

At the Imperial Conference of 1909 Sir Wilfrid Laurier urged that the "*civis Britannicus*" should hold that status "not only in the country of naturalization, but everywhere"; and Mr. Winston Churchill spoke of "a uniform and world-wide status of British citizenship which shall protect the holder of that certificate wherever he may be; whether he be within the British Empire or in foreign countries." These expressions, used as they were with reference to a definite political proposal, merit close consideration, and Mr. Sargent, who is admirably qualified to appreciate the ideas which they suggest, has done good work in setting out the questions which arise and in collecting the opinions of a band of distinguished contributors, including Mr. Bryce, Professor Westlake, and many colonial administrators. Mr. Sargent himself sums up the discussion in a way which shows that his object is not merely to investigate the meaning of phrases, but to find some scheme by which British citizenship should imply some responsibility for the common affairs of the Empire. But, no doubt, in the first instance it is desirable to clear our minds as to the meaning in our constitution of such a term as British citizenship, and the very considerable differences of opinion disclosed by the discussion show that there is room for an examination of the matter.

The only term known to the law of England as expressing English nationality is that of subject. The original or common law

rule was simple. Every person born on British territory was a British subject, and every person born abroad was an alien. Thus it was not a matter of the family, *jus sanguinis*, but of place, *jus soli*. As the old acts put it, the question was whether a person was born "within the ligeance of the King," or "without." The principle was a logical one, allegiance being claimed from everyone to whom protection was given at birth, and from no one else. And it suited the circumstances of this country when there was little intercourse with foreign countries. But when this intercourse sprang up the inconvenience of holding that the children born abroad of British parents were aliens became felt, and a demand arose for modifications of the rule. A statute of Edward III. provided that "children inheritors" born abroad should "enjoy the same benefits and advantages" as those born "within the ligeance," and a statute of Anne carried out the object fully by enacting that all the children born abroad of natural-born subjects should be deemed "natural-born subjects of this Kingdom." Thus the *jus sanguinis* was added to the *jus soli*. Later statutes further incorporated the *jus sanguinis* by providing that the children born abroad of those who had been made natural-born subjects by the preceding statutes should also be deemed natural-born subjects. The result is summed up by the Committee on the Naturalization Laws (1901) thus: "A person whose father or paternal grandfather was born within Her Majesty's dominions is deemed a natural-born British subject, although he himself was born abroad. . . . The effect of the statutes is that either the father or the paternal grandfather must have been actually born within Her Majesty's dominions." Thus the son of a British subject is not necessarily a British subject himself. But the old rule of *jus soli* continues in full force, and, therefore, to give an example, a man who is the son of Chinese parents and who is born in Hong-Kong is a British subject, not only in Hong-Kong, but throughout the British Empire.

An alien can acquire the status of a British subject by naturalization, and in this country the procedure is settled by the Naturalization Act of 1870. The most material conditions are that an applicant must have resided in the United Kingdom, or have been in the service of the Crown, for five years, and intends to continue so to reside or serve. As to the latter condition, apparently an intention at the time of application is considered sufficient, as there is nothing to show that the grant lapses if the intention is not carried out, and though there is a penalty for false statements there is no express power to cancel a certificate. It is further provided that the naturalized alien shall not, when in the country of which he was previously a subject, be deemed to be a British subject unless he has ceased to be a subject of that country by virtue of its laws or treaties. Thus naturalization does not make him a British subject for all

purposes, and this condition or reservation distinguishes him from natural-born British subjects. But "in the United Kingdom" he is "entitled to all political and other rights, powers and privileges, and subject to all obligations, to which a natural-born British subject is entitled or subject in the United Kingdom." On these words the question at once arises: Does the expression "in the United Kingdom" mean that the newly-acquired rights only hold good there and not in the colonies or elsewhere? If so, the recipient of the grant becomes an alien anywhere beyond the United Kingdom, though clearly he does not thereby regain his original nationality if he has lost it. The act does not seem to be concerned with this question, as nothing is said about it.

Thus complications arise when such British subjects pass from place to place. In the French Empire French subjects are for certain purposes governed everywhere by the same laws, and citizens have the same status. The difference between this and our system is due partly to the fact that our colonies have their own laws and administrative systems, and therefore for the present purpose rank as separate and independent powers, and partly to the incapacity of colonial legislators to pass any laws operating beyond their territories. The result is that colonial naturalization is necessarily, under the present powers, local, just as naturalization under the act of 1870 is; and this is recognised in the circulars which have laid down that persons naturalized in the colonies are only entitled to the good offices of His Majesty's Representatives abroad "as a matter of courtesy," when they are beyond the colony to which they belong. The transition from the status of subject to that of alien naturally leads to embarrassments and protests. But this particular anomaly is only one effect of our constitutional systems, under which, generally speaking, our fellow subjects in the colonies are for the purposes of the civil courts out of our jurisdiction, and we out of theirs.

An alien cannot vote at any parliamentary or municipal elections, or hold any parliamentary or municipal office, or fill any place of trust, civil or military. Perhaps the majority of the applications for naturalization are made in order to get rid of these disabilities, which shut residents out of the national life. A considerable number are also due to the wish to be able to travel in the country of origin under the protection given to British subjects, but this protection is only due there when the alien has "ceased to be a subject of that State in pursuance of the laws thereof, or in pursuance of a treaty to that effect." The naturalization granted in this country may therefore be either subject to the claims of the country of origin if the alien returns there, or it may be unconditional by virtue of an international agreement. In practice the conclusion of such an agreement largely depends on the period of residence which it is proposed should constitute a qualification for naturalization. Naturally a country

which on the whole exports emigrants is reluctant to release its hold over its subjects, while an importing country is anxious to absorb them as quickly as possible. The problem therefore becomes one of the number of years of residence. The Committee of 1901 recommended legislation to enable a Secretary of State, or the Governor of a British possession, to confer the status of a British subject on persons who fulfil the requisite conditions in any part of the British Dominions, and that the status so conferred should be recognised by British law everywhere, both within and without His Majesty's Dominions. They added that this provision should be "without prejudice to the power of the Legislature of any British possession to provide for the conferring upon any persons under such conditions as it might see fit the whole or any of the rights of British subjects within its own territory." These proposals point to a double system, the larger satisfying the foreign requirements and being therefore unrestricted, and the narrower being based only on local requirements and limited to the place. This appears to be the only possible solution of the difficulty.

In these questions we are only concerned with the term British subject. The rights and obligations implied by his status are clear. The term citizen does not appear in British statutes, and is in fact borrowed from foreign sources. The Encyclopædia Britannica quotes the following dictum: "The use of 'subject,' as the modern equivalent of citizen, is awkward because in a wider, earlier, and still permissible sense, 'subject' includes any person subject to the power and jurisdictions of the State, and therefore a resident alien no less than a subject in the narrower sense. A subject who is a citizen may be distinguished, when distinction is necessary, as a natural subject, one who is not a citizen may be termed an alien subject." But this is entirely contrary to the historical use of the term in our jurisprudence. "Subject" is not a modern equivalent of citizen, and it never in our laws included an alien. The term citizen originally meant a burgher of a municipal corporation possessing the rank of a city, and by an extension of the idea may describe a person who has full political rights in a State. Obviously a British subject does not necessarily possess such a franchise. In the United States under the constitution all persons subject to the jurisdiction are "citizens," and in this are included women and minors; here the term is adopted in place of subject and is more appropriate in a republic, but with us it is limited to local franchise, and there can be no "Imperial Citizen," except in a rhetorical sense, unless there is a franchise common to the whole Empire.

The proper meanings of the terms therefore appear to be clear, but there is evidently much confusion on the subject of British nationality. Thus in the contributions collected in "British

Citizenship," Professor Westlake states that "certain it is that the Foreign Office gives no restricted international effect to colonial naturalization. It grants passports to persons who have received it, and protects them everywhere except in their own country, where even those who have been naturalized in England would not be protected by reason of the practice above mentioned. Therefore, Sir Wilfrid Laurier, as quoted by Mr. Sargant, was in error in stating that the American citizens who have become British subjects in Canada are still American citizens in Great Britain." This ignores the fact that naturalization granted in a colony operates only in that colony, and it is sufficient to say that the recognition by the Foreign Office of colonial naturalization is not unrestricted but is only given as a matter of courtesy, and that Sir Wilfrid Laurier was right. Lord Brassey states that "British subject is British subject everywhere, with all rights and privileges. He bears as a shield the certificate of citizenship." The same error appears here, and as for citizenship Lord Brassey's expression must refer to an ideal rather than to a fact, as there are many millions of natives who are undoubtedly British subjects everywhere, but who have no title to citizenship in any sense, in fact such British subjects can be and are in some cases shut out and expelled from British territory, a circumstance which does not suggest the idea of imperial citizenship. The same consideration applies to Mr. Bryce's statement that "the citizenship which gives a man or woman full private rights, entitling him to be treated everywhere in the British Empire as equal in respect of all private rights to all his fellow subjects, is the basis of our whole imperial conception, and is the really great service which our law is rendering to every inhabitant of the British Empire who owes allegiance to the Crown." Unfortunately for this ideal our law does not render this service in South Africa, Canada, or Australia. In short the use of the term citizenship in such a sense sets up an idea of a status which does not exist.

It is different in France, where the citizenship of the Empire can be extended to all places and persons. Thus by a recent decree this title is conferred on all the natives of the French West African possessions on certain conditions—substantially as a reward for good behaviour and a knowledge of the French language. It appears to be anticipated that the measure will have a great effect in spreading French influence. France followed the Roman model, while England followed the feudal, and the latter is essentially local in its character. Some of the writers in "British Citizenship" evidently regret that there is no such thing as a "British Citizen" in this empire-wide sense. Professor H. E. Egerton considers that the absence of a system of common citizenship is a necessary consequence of the "formless and chaotic

character of the British Empire as a whole." This is a severe expression, and it may be submitted that the absence of a common form is due to the fact that the units differ in character and that it would be futile to think of any process for assimilating them. It may also be questioned whether uniformity in such a matter is desirable even if it were practicable, considering that climate and race and local circumstances create differences which cannot be ignored. These differences would remain even if a really Imperial Parliament were created.

The most conspicuous anomaly in the present position can be removed by legislation providing that all persons naturalized anywhere in the British Empire should be on the same footing as natural born subjects, and the Imperial Conference decided in favour of Imperial legislation for this purpose. Each Dominion would then have to decide whether it will apply the Act, and as its requirements may be different from those of this country the probable result will be that there will be two sorts of naturalization in the colonies, one being the limited or local type now in existence, and the other complying with larger requirements and effective throughout the Empire. But this alteration is one of detail, and will not affect the fact that each State in the Empire can and does settle its own conditions of citizenship.

The contributors to this discussion very properly keep clear on the whole of speculations as to political schemes for effecting a greater legislative unity in the Empire. The first object is to define things as they are. It is, however, evident that many of them are animated by a desire to find some plan for creating a body which would represent the whole Empire and decide on all matters of common concern. The idea of greater unity is undoubtedly attractive, and if all British subjects who possess the franchise in their respective territories had the right of voting and sitting in a Parliament of the Empire there would be a real Imperial citizenship. "The true ideal is, and should be," said Lord Rosebery, "a vast co-operative league of contented and emulous Anglo-Saxon States." A great advance has been made in this direction in recent years, for the co-operation now is vastly greater than it was not very long ago, but this is far from satisfying the aspirations for constitutional federation. Nor would any form of Advisory Council content the advanced advocates of Imperial unity. Such a body may be accepted as a useful stepping-stone, but a Federal Parliament is to them essential. The scheme is worked out with remarkable completeness by Mr. C. E. T. Stuart-Linton in "The Problem of Empire Governance." A federal constitution is here mapped out in detail and a full programme of work assigned to it. With much of the preliminary

argument most readers will, we think, be in agreement, but when it comes to the subjects which are to be handled by the Federal Parliament there is a difficulty which appears to us never to have been met.

This is the difficulty that there would be in getting the best and most influential politicians to sit in such a body. It may be argued with some force that distance counts for little nowadays as regards the necessities of travel, but distance does count for very much as regards the severance of a politician from his constituency and the local questions which make up much if not most of its political life. Men who represent constituencies must remain in close contact with them or they are likely to see the representation pass into other hands. They can only afford to pay a flying visit to this country on special occasions, and even then they do so at some risk. Nor are the subjects reserved for the Federal Parliament such as excite the deepest interest or determine the fate of electors. The matters enumerated by Mr. Stuart-Linton as proper for such a chamber would usually leave the colonial voter cold. What interest he has in them would be too occasional and distant to stir him greatly. This may be regrettable, but facts being what they are it is futile to expect that the most prominent men would elect to sit in the Federal Parliament. Yet it is necessary to secure the attendance of such men if the cause of co-operation is to be advanced, and this can only be done by their meeting in their country at intervals. This limitation makes an Imperial Parliament of the kind contemplated impossible, but it permits the Imperial Conference to be carried on. The Conference is a meeting of executive heads, and every British subject who has had a voice in their selection may fairly be said to have exercised a function of British citizenship.

THE MAKING OF THE SOUTH AFRICAN UNION.

The Inner History of the National Convention of South Africa.—By the HON. SIR EDGAR H. WALTON, K.C.M.G., M.L.A.
(*Longmans, Green & Co.* 10s. 6d. net.)

THE meeting of the National Union Convention in South Africa was a historic event of the highest importance, but hitherto it has been known only by its results. The proceedings were private. Usually in such a case an authorised statement is subsequently published which gives at least the substance of the discussions. When a number of men meet together for constructive work it may be impossible to allow the public to be admitted to the sittings, as this might lead to harassing demands and interference from critics who have not the same responsibility and possibly not the same objects; but this ban is generally taken off when the proceedings are at an end and the work done. But in the case of the National Union Convention this has not happened. Nothing was published but a bare minute of the conclusions. The reason is that it was resolved by the Convention that the proceedings should be absolutely secret and that no records of any speeches should be made. Only the resolutions, proposals and amendments, and divisions were to be recorded. There was, no doubt, special justification for this course. Many of the men who sat together had known of one another only by name and met then for the first time. It was obvious enough that the questions which would come up would elicit grave differences of opinion, and that the only hope of successful solution was that the members would speak with perfect freedom and listen with sympathy and confidence. Such a feeling is not to be created in a day, and for some time the members were engaged, not merely in the consideration of particular points, but in acquiring a knowledge of one another and the invaluable sense of companionship. At first there was some natural reserve, and it may easily be realised that the

thirty-three members felt the weight of their responsibilities to an extent which made them cautious and watchful; but in the result they rose to the height of the occasion and put in front of their differences the value to South Africa of union.

The absence of an official record of the proceedings is now largely supplied by Sir Edgar Walton's book. His materials have been his own notes and memory. The summary, therefore, is necessarily condensed and may not always be composed in right proportions. It does not appear that the author obtained the consent of all the delegates to the publication, and possibly some objection may be felt to the disclosure of speeches which were made under the seal of secrecy, but we gather that the publication was approved by Lord de Villiers, the President of the Convention, and it would certainly have been a grave loss if an occasion so remarkable for great issues and patriotic feeling had been allowed to pass without any memorial of the delegates' speeches. And so well are the various opinions expressed that it is scarcely conceivable that any reputation will suffer from the publication or that anyone will be aggrieved.

At the outset serious difficulties presented themselves on all sides. In the Cape Colony there was an apprehension that the occasion might be used to the advantage of the active and wealthy north. Nowhere in South Africa is local feeling so keen as here, nowhere are the historical associations so strong, and it could not be said that there was any predominant public opinion in favour of union. In Natal there was decided apprehension, largely because the colony is a small corner of South Africa and might be swamped by absorption. In the Transvaal there was a fear that their financial resources would be exploited for the assistance of the Cape, which had had a long period of depression, marked by several deficits, the suspension of the sinking fund, and increase of taxation. In the Orange River Colony alone the convention was awaited with calm approval.

The real business was introduced on the second day of the meeting by Mr. Merriman, the senior Prime Minister, in a speech which produced a great effect, and to which only slight justice can be done by a short summary. He was emphatically in favour of a strong central control, and argued that when this was secured, which is not the case in the United States, Canada, or Australia, not only is pure government possible, but larger powers of local self-government could safely be granted. He was followed by General Smuts, who appears to have become the principal authority on the questions at issue throughout the proceedings. He developed the argument for union, as distinguished from the looser tie of federation, by pointing out that federation is a contract between the states concerned, and that it is therefore necessary in such an arrangement to provide that the contract should be interpreted by the courts of law: this may

result, as was happening in Australia, in the courts giving judgments adverse to the parliaments, and eventually leads to political selections of judges. He agreed with Mr. Merriman that federation encourages corruption because power is so dispersed that it is difficult to fix responsibility and to punish offenders. Accordingly he proposed the British system, under which Parliament is supreme, and not the courts. These strong arguments for union appear to have quietly carried the day, and left open to discussion only the question, one comparatively of detail, as to the extent of the powers which should be delegated to the local parliaments. Thus Sir F. Moor, the Prime Minister of Natal, where considerable preference had been expressed for federation, did not oppose the resolution in favour of union, and directed his argument to the question of the local powers, though his colleague Mr. Morcom maintained that Natal would insist upon independent powers of legislation. The case for unification seems to have been substantially strengthened as the discussion proceeded by the references to the Australian Commonwealth, where actions at law had already taken place between the states and the central executive, and federation had increased the cost of administration by a heavy figure. General Schalk Burger and General Botha both urged that no form of government would be satisfactory except that of a supreme central parliament, and Sir George Farrar agreed. Sir Starr Jameson and Mr. Abraham Fischer, both of whom had been inclined to federation, were convinced by the arguments and the general tone of the debate that local interests had nothing to fear from union. Thus the cause of unification triumphed, and when the resolutions in its favour were put no division was called for.

There came next a question which was much more likely to divide the delegates into opposing camps. This was the question of language. To a large extent this was already settled on the basis of convenience. In the Cape both English and Dutch were spoken in Parliament, and in the country districts officers knowing both were appointed. The Transvaal had a similar practice, and in Natal there was no substantial grievance. The trouble was in the Orange River Colony, where the Dutch were in a great majority, and where before the war Dutch was almost the only language in the country districts. General Hertzog and ex-President Steyn spoke with great feeling on the subject and urged that the two languages should be treated on a footing of equality. Eventually a resolution moved by Sir George Farrar was adopted to the effect that the two languages should be treated on a footing of equality, and that both should be used in all parliamentary acts and records. By this action the question of language for the officials was to some extent side-tracked, the convention being content to lay down the general principle of "equality and no compulsion."

The third important issue was the franchise, which meant the coloured vote. Here the existing practices were widely different, and it was obviously anomalous to have three different systems in the Union. The claims of the natives were put forward by Colonel Stanford, who urged that the franchise was the best outlet for grievances, and that the natives if trusted in this way would prove themselves worthy of citizenship. Sir Percy Fitzpatrick contended in reply that the improvement shown by the native peoples did not constitute civilisation in the full sense, and that "the white man gave as security the traditions of his race of many centuries of civilisation." This opinion was strongly held by others. In South Africa there is a general belief that the natives have not shown themselves capable of European civilisation, and in addition to this there is the consideration that the white class has to keep itself supreme on the principle of self-preservation. On the other hand it is considered in the Cape Colony that the franchise granted there to natives who have attained a certain position and passed a qualification test has conduced to good order. It is a noteworthy fact that the registered voters had not joined in the rebellion. Elsewhere, however, public opinion is not ready to accept this policy, and even if it is admitted that it has been successful in the Cape Colony it is considered that the natives of that Colony stand in a class by themselves, as they have been long associated with civilisation. Thus agreement could only be secured in the Convention by leaving the Cape practice as it stood and excluding native franchise elsewhere. This was the solution proposed by General Botha and eventually accepted, with the important variation that only persons of European descent should be eligible as members of either House of Parliament of the Union. Thus the Cape gave up the right of coloured men to sit in Parliament. This decision caused much adverse comment in this country, and it will be remembered that Mr. W. P. Schreiner accompanied a native deputation to London to urge on the Imperial Government the amendment of the South African Act in this matter. Mr. Schreiner, however, had failed to obtain the support of the Cape Parliament, and it is clear from the proceedings that it was impossible to conclude any arrangement which, in addition to giving the Cape coloured voters for members of the Union Parliament, would have given them also the right of sitting in that body. It should no doubt be recognised that the essential duty of the Convention was to bring about a union of the white peoples of South Africa, and that this task presented sufficient difficulty without adding to it the problem of the native population.

Sir Edgar Walton gives a very clear account, however abridged it may be, of the discussions as to the constitution of the Union Parliament, the representation of the Provinces, and local self-government. Under the last head his pages may well be studied for

the discussion of the principle of proportional representation. The object in adopting this method was to minimise party divisions in the Provincial Councils by electing the senators and the executive committees from representatives of both parties, and, as Sir Edgar observes, it will be interesting to see how it works. The public subsequently showed itself slow to appreciate the innovation, and in the Cape especially it was viewed with much suspicion, as is naturally the case with anything not clearly intelligible. The machinery, however, does not affect the ordinary votes, as it only applies to elections made by the members of the Councils, and the provision was retained in the Imperial Act notwithstanding the objections that had been made. The subject of education appears to have been disposed of without much difficulty in view of the settlement of the language question. It was agreed to leave education to the Provincial Councils, and the Convention was content to stop at this; there is no indication that such a controversy as has since arisen in the Orange Free State was foreseen. The financial arrangements were also settled without any serious hitch, and were no doubt facilitated by the willingness of the Transvaal, though this did not appear in the official proceedings, to finance the Orange River Colony and Natal for their immediate necessities pending union. There followed the question which perhaps aroused more public interest than any other, the choice of a capital, and Sir Edgar Walton's summary will show that in the circumstances a compromise was the only possible solution. It may be remarked, as an instance of the judicious avoidance of contention-breeding words, that the word capital is not used in the Act, Pretoria being made the seat of government and Capetown the seat of the legislature.

The draft constitution arrived at by the Convention had to run the gauntlet of the Colonial Parliaments, and it emerged from this ordeal very satisfactorily. There was, however, enough criticism to show that the draft went as far as was possible without setting up serious difficulties, and that further decisions must be the work of time. The occasion, in fact, was one for setting up a machinery of union rather than for solving arguable questions of administration, and it may safely be said that this object was admirably effected.

REVIEWS AND NOTICES.

Through the Heart of Africa.—By F. H. MELLAND and E. H. CHOLMELEY. (*Constable & Co.* 12s. 6d. net.)

THE authors are officers of the British South Africa Company who came home from their posts in Northern Rhodesia, via Egypt, by a route which avoided the beaten tracks as much as possible. They made for Lake Tanganyika and the German Territory, and their observations on what they saw in that Colony are specially interesting, because it is very little known to British travellers. They were struck at Bismarckburg with the absence of any means of recreation, and the life of the occupants, whose sole form of exercise seemed to be a short stroll at sundown outside the walls of their fort, did not impress them as exhilarating. In this matter we, no doubt, do better everywhere. They found that the methods in the district were that of the old military administration, and that there was a lack of keenness amongst the officials, who are officers seconded from the German army for two years duty in Africa, counting as four in their service. Thus they are not long enough in the country to acquire a real interest in it. It is remarked that the Germans apparently make a point of placing women in power among the natives, in succession to male chiefs who die or are removed, as being less likely to cause trouble, but it does not seem that there is any particular occasion for this practice as no chafing against German rule is shown. At Tabora the buildings and roads are good, though here again there are no recreation grounds, which is the more regrettable as the ground is described as constituting perfect golf links. Here the administrator had spent over eight years in the land, and had a wide knowledge of it. To this place large quantities of goods arrive from the Uganda railway and its steamers to Mwanza, but the Germans anticipate that the arrival of the railway from Dar-es-Salam will alter this. The authors, however, think that the line will diminish rather

than increase the importance of Tabora, which will be deprived of its importance as a transport centre, while for production it is not well placed, being in a bleak and waterless region. However this may be, the German line will undoubtedly affect the Uganda railway, though to what extent the authors do not attempt to judge. No doubt, in any case, there is ample room for both systems. At present the Germans have confined their work mostly to the coast region, and with good reason, as the section of the protectorate which the authors saw struck them as poor and not likely to come to much. It is, however, well populated, and the Swahili element seemed "infinitely superior as a civilising and educating influence to the 'Kitchen Kaffir' element of South Africa that is encroaching on Northern Rhodesia." The greater part of the country is really ruled through the native chiefs, to whom is left the collection of the poll-tax (four rupees per annum), and who receive five per cent. of the amount collected. The chiefs, it is said, exacts the tax as they like, and as no census is taken and the assessment is a rough one they make up the total without being so inconsiderate as to call on their own friends. No native can appeal to the white man, except through the wali or headman, which seems an excellent plan for simplifying matters, as the German military officer in this way "only hears what the local wali chooses to tell him, and knows little or nothing of what is going on." But at Tabora, under a civil government, a different system prevails, and natives have free access to the District Commissioner. No doubt this will be the case generally as the country is brought under effective administration, and civil rather than military methods are adopted. As to the development of the territory the authors' observe as follows:—

"The most outstanding feature of the German administration is without doubt the thorough way in which they investigate and experiment on the possibilities of the territory. The way in which they have fostered and organised trade up country deserves every praise. The roads that have been made are excellent, and the manner in which they are pushing on railway construction calls for a good deal of admiration. Thoroughly and systematically conducted, it presents a rather marked contrast to the usual haphazard British methods. The somewhat rigid systems and unbreakable rules in force at their stations may strike an Englishman as a trifle pointless, but, nevertheless, in an administration of a country, discipline and system are of the greatest importance, and probably some means between the German rigidity and our own casual elasticity would produce the best results. We should study each other's methods, and choose which can be adopted with profit and which discarded. The Germans are openly and admittedly learning from us with our greater colonial experience. We, on the other hand, need not think that we have nothing to learn from them."

The journey through British territories describes scenes and incidents which have become more or less familiar, but the narrative will well bear comparison with any other. The customs of natives are explained with a clear grasp of the subject. There is a concluding chapter on "some African Problems," which contains the fruit of the authors' general experience. They urge the right of the white invaders to the land, on the grounds that the occupation is in the interests of liberty and security, and that the native is an unprofitable producer. They do not think that it is possible for a negro to attain a European standard of civilisation, but he can be taught to do useful work if his wants are gradually developed. They recommend Labour Bureaus to prevent employers from competing to such an extent for labour as to raise wages unduly. They pay high praise to the missions in Africa, which, in their opinion, have generally ceased to step beyond a purely non-political sphere. The authors' views on these matters will not command universal assent, but they are well worth attention as coming from experienced and observant administrators.

My Adventures among South Sea Cannibals. — By DOUGLAS RANNIE, sometime Government Agent for Queensland. (*Seeley, Service & Co.* 16s. net.)

This book would have been excellent evidence on an important and controversial subject some quarter of a century ago. It gives with a detail such as has never seen light before an account of the Kanaka labour traffic as it used to go on under a strange administrative system compounded of Imperial acts, deputy commissions, naval officers, and government agents, until, after much vacillating, Queensland discarded it. Mr. Rannie's purpose is to recount his personal experiences in those flourishing times, and he is not concerned to bring the history of the matter up-to-date. But this is rather misleading to the ordinary reader, who is not likely to know that the whole business has passed away. We have just read an indignant review of the book in a leading newspaper, in which it is urged that the traffic should have the prompt attention of the Colonial Office. It would be hard to say now when that prompt attention was first given, but at any rate it was severely exercised from the year 1872, when the first Pacific Islanders' Protection Act, alias the Kidnapping Act, was passed. The traffic in Kanakas from the South Sea Islands to Fiji and Queensland was then in its halcyon period, and undeniable abuses brought about two Imperial Acts, and an Order in Council which for novelty and intricacy has never been surpassed, comprising as it did principles of procedure which were declared on high authority to be repugnant to British law and which certainly led to a vast amount of confusion. Incidentally it led to the creation of

a High Commissioner for the Western Pacific and eventually to the annexation of a great number of islands, so that it may at any rate be credited with some good results. But for the original purpose of putting down kidnapping the elaborate code of law and procedure set out in the Order of Council was singularly ineffective. The reason was simple. If an outrage was committed on an island, whether by whites on natives or by natives on whites, it was generally impossible to get the necessary evidence. The naval officer who in due course arrived to sift the matter according to his lights usually found that the vessel which had caused or received the trouble was gone, and that the natives in any case took up a hostile position. Frequently the naval officer, if the natives appeared to be in fault, settled the matter by landing a party which shot at all and sundry and burnt villages, until justice seemed to be satisfied. The traders frequently evaded the acts by changing the flag. To exercise any supervision over them it was necessary for the colonies importing the labourers to appoint government agents to accompany the vessels, and no doubt this precaution had a good effect. In the days of which Mr. Rannie writes, Queensland was anxious to retain Kanaka labour and was loyally supported by the Colonial Office when the traffic was attacked in this country. The curious may find in the annals of the House of Commons an admirable speech by the representative of that department defending the system, and showing that everything was as it should be. The time came, however, when the Queensland Government changed its views and the traffic was brought to a complete end in 1904. The lawless character of some of the traders had something to do with this, but the main cause of the change was that the colony began to stir with the idea of what is now called "a White Australia." No doubt, though the most flagrant offences were put down with the help of H.M. cruisers, objection on other grounds grew stronger as the traffic went on. Labourers could not be got unless bribes were given to the chiefs, and the usual bribe was fire-arms, the trader not concerning himself overmuch with the consequences. The practice of bribery naturally led to compulsion by the chiefs, and the virtual depopulation of the islands was in sight. The wages paid to the government agents were poor and intermittent, yet to raise them meant making the cost of importation prohibitive.

However, whatever academical objections might be made to the traffic, it certainly provided an abundance of lively incidents, and Mr. Rannie's pages are full of adventures which can truly be described as sensational. The savages were fighting men, born thieves and liars; but at the same time they played the game in a fairly sporting spirit and with an eye to the picturesque. The following will serve as a specimen of a long collection of fighting cases.

"The blowing of conch shells and the music of reed instruments, in the shape of flutes and Pan's pipes, drew our attention

to a procession of canoes coming towards the ship. The leading canoe was a new one, just launched that morning. It was manned by twenty-two warriors, all bedecked in their war paint, beads, and feathers. One man stood in the bow chanting a war song and waving a tomahawk and spears; another sat on an elevated seat in the stern steering with a large paddle, while twenty sat two abreast paddling the canoe, and joining every now and then in a rousing chorus.

"The prow of the canoe was decorated with the still bleeding and ghastly head of a woman, while the sides were liberally daubed with her blood. She had been killed that morning to celebrate the occasion, and her body was being cooked ashore to serve up at the feast that was to follow. The skipper of the *Atlantic* told me it was just touch-and-go with him the day before, and I might have found his head instead of that of the native woman ornamenting the prow of the new canoe.

"On the afternoon of the previous day, he said, several natives came on board, with a few strings of copra, i.e. dried cocoa-nut kernels, to barter. And when stooping down to get some articles from his trade-box, he saw the shadow of one of the natives raising his tomahawk. Starting back he was in time to draw his revolver, and before the blow descended he shot his assailant, and then emptied his revolver into the others. His two mates hearing the firing rushed up from below, and with their assistance the decks were cleared and the dead thrown overboard. This affair, he added, made no difference in his relations or dealings with the natives ashore, as they were always on the look-out to take him unawares, loot the ship and burn her hull. They had several times made the same attempt before, but had always come to grief. As they chanced the risks, they put up with the penalties, the blame rested alone with the dead, and bygones all were bygones."

The Canadian Annual Review of Public Affairs, 1911.—By P. J. CASTELL HOPKINS, F.S.S. (*Annual Review Publishing Co., Toronto.*)

The Annual Review comprises what will probably be the best record of the stirring controversy on reciprocity with the United States which went on in Canada last year until the general election in September and which set up the dividing line between the political parties. In the past both Conservatives and Liberals had supported a policy of reciprocity. Both sides had made efforts to obtain the renewal of the arrangement of 1854, which was terminated by the United States in 1866. Various missions, or informal negotiations, went on from that date till 1898. All these attempts failed, and the result was that for several years the idea became

generally unpopular and was dropped from the political programmes. Sir Wilfred Laurier made it clear, both in Canada and in this country, that as Canada's offers had not been accepted she had put aside the project of reciprocity with the United States and was looking to British trade. The rapid growth, however, of Canada made the subject more important to the United States. Not only was their neighbour greater and richer than previously, but relations had been made closer by a considerable export of both emigrants and capital to the Dominion, and the vast resources which were being opened up had become a vital factor in the development of the continent. The proposed agreement immediately commended itself to certain great interests in Canada, but as discussion proceeded the disturbance to trade and transport and the effects on the national life and the Imperial connection came forward more prominently. The question was handled with striking skill and force on both sides, and in the end the general election seems to have turned not so much on directly economical considerations as on the desire to preserve Canada's independent character.

Provincial affairs and the commerce of the year are treated with the usual fullness of this admirable annual.

Handbook of British East Africa, 1912. BY H. F. WARD AND J. W. MILLIGAN. (*Caxton Printing Co., Nairobi.*)

To the intending settler in East Africa who asks what he can grow there, the answer is simple—"Practically everything." The larger holdings on the highlands, however, are chiefly devoted to cattle and sheep farming. The grazing land has a quality all the year through which can hardly be excelled anywhere, and a very fortunate circumstance in addition is that a half-bred beast approximates to the thoroughbred side of its derivation. Land in many parts has been eagerly taken up and has risen substantially in value. Capital is scarce and bank interest has seldom been under 8 per cent. It is of little use to commence stock farming with a smaller capital than £3,000, but agriculture can be undertaken with much less, and perhaps, on the whole, with more certainty. The next question of the settler is—"How can I obtain land?" and if, as is probable, he wishes to obtain a grant from government, he will find that a freehold can only be acquired on a homestead farm of 320 acres, and that all the other grants are leaseholds of 99 years, at rents varying according to the class of land from three to eighteen cents. He will also be made aware that a far-seeing legislation provides for a revaluation of the "prairie" value, or what the land would fetch if it were waste land without improvements, at the end of 33 years, and if 5 per cent. of this value is found to be 56 cents an acre or more, the rent will be

56 cents ; the same process is again followed after 66 years. In the first instance, possession will be given by an occupation licence. The lease will not be granted till development has taken place and may be claimed after two years. The property will be liable to confiscation if the necessary development has not been effected in two years from occupation. The conditions of development are, briefly, in the highlands white occupation for eighteen months of the two years and the expenditure of twenty times the rent.

The highland district can be considered, roughly, as that land which is over 4,000 feet high.

Every applicant before obtaining any land in the Protectorate will be required to prove to the land officer that he is possessed of means sufficient to develop the farm applied for. The possession of £400 is generally considered by the land officer as sufficient to qualify for one farm. A letter from a banker, stating that the applicant in his opinion is worth the sum required, is accepted by the land officer.

The white population is largely recruited from travellers who have explored the country for pleasure and are attracted by the opportunities which it offers for business. The mode and cost of travelling away from the railway are matters on which reliable information is important, and the authors sum up the subject as follows:—

“Probable Cost of Safari.—Naturally the first question that presents itself to the intending settler, or the big game shooter, is the general expenditure that is likely to be incurred for a given trip or on a given time of sojourn in the country. Expenses naturally vary considerably with the requirements of the individual, and it is open to the sportsman to multiply his expenses over and above the usual estimated costs. To the settler bound on a business safari it can be made at a very greatly reduced rate to that of the sportsman who requires the larger retinue and a considerable number of native carriers. Roughly speaking, a hunting safari for a single individual works out at about £100 per month, but it is to be remembered that this is exclusive of a £50 sportsman's licence, horses or mules, service of a white hunter, and, furthermore, it would not cover the expenses of trips made into certain remote districts. For a one-man hunting safari, of two or three months' duration, the usual number of porters required is about thirty. The wages given are Rs.10 (13s. 4d.) per month per porter ; in addition to this there is the food supply and equipment, the latter consisting of a blanket, water bottle, tent to accommodate six men, and a cooking pot for the use of the same number. Taking it all round, one may reckon that for the first month porters will cost Rs.15 (£1), while for subsequent months the rate will work out at about 15s. per month. Porters' rations consist of mealie meal flour costing (according to the

state of the market) approximately 4s. 8d. per sixty-pound load, and that amount is sufficient to feed one porter for one month. In addition to the porters the sportsman will require a head man to govern the caravan, also an English-speaking tent boy, a cook, two gun-bearers, and possibly two askaris (police boys). The wages given respectively to these men may average Rs.30 (£2) per month exclusive of their personal kit and daily rations."

The Handbook gives all the usual information, and, in addition, a great amount of clear and sensible advice.

BUSINESS NOTES.

THE Dock strike was much more serious from the beginning than was generally admitted and it will still take some time before the state of chaos is fully dispelled. Not only were deliveries of shipments held up, but works on and near the Thames had to suspend operations for lack of materials. Many works in the colonies will feel the effect of the delays. Imports from the colonies were not so much affected as the exports from this country, as it is comparatively easy to vary the means of distribution, but business conditions generally suffered and the time was bad for new enterprises.

Poulsen Wireless System.

Hitherto it has been generally believed that wireless telegraphy cannot enter into serious competition with submarine cables, and this is probably true of all "spark" systems. Lately, however, a remarkable development has been made of the continuous arc system, and it seems possible that this will supersede all "spark" systems. A demonstration of the Poulsen system was given in July between Cullercoats and Lyngby in Denmark, a distance of about 600 miles; the power used at the latter place was said to be under 14 kilowatts, and at the former 4. At a speed of 400 letters a minute the signals were extremely clear, but a small number of dots and dashes were missed and there were occasional signs of atmospheric disturbances causing a letter to be lost. In spite of this, plain language and "dictionary-word" code traffic could be dealt with as easily as, and faster than, by a cable of the same length. For "combination" codes it might be necessary to repeat the message, but probably the missing dots and dashes

were due to defective operation. The atmospheric conditions on the occasion were of the worst.

The power used was very low, and it is certain that a great increase of range could be obtained by using more power.

It seems highly probable therefore, that all, except a comparatively small proportion of cable traffic, will eventually be transferred to radio-telegraphy. The system is so much cheaper that it would admit of one-third, and perhaps one-quarter, of the present rates. Probably the cable companies will set themselves to acquire licenses in the countries in which they work, and in one instance at least this has already been done.

The development has a great practical interest for the West Indies.

Two stations on the Poulsen system have recently been opened at Honolulu and San Francisco: 36 kilowatts generators are provided. The masts are 438 feet high and of wooden lattice work instead of the usual square section. The distance is 2,360 miles, greater than that between Ireland and Nova Scotia (2,000).

The Poulsen system uses continuous undamped electrical oscillations produced by an arc in hydrogen and tuning can therefore be readily conducted. It is claimed that it can be adapted to communicate with any of the "spark" systems.

Rubber.

Professor Perkin's announcement before the Society of Chemical Industry of a new method of making synthetic rubber has excited great interest and some alarm. It is believed to have had the effect of keeping down prices for rubber shares, but the general depression and the dock strike are sufficient to account for the state of the market during the summer. It is, no doubt, the case that a sort of rubber can be produced, and Professor Perkin suggested 2s. 6d. per lb. as the probable selling price for some years to come. At such a price artificial rubber would oust all natural rubber, except that from well situated and well managed plantations. But it remains to be seen whether rubber can be manufactured which possesses the physical and chemical properties of the natural product.

More than two years ago the German chemists discovered that, when rubber is subjected to distillation by heat, a liquid called Isoprene is formed, and that this liquid could be converted back into a spongy substance resembling rubber. Isoprene is a combination of ten parts of carbon and sixteen of hydrogen and the

problem became one of finding cheap materials for producing these. Starch was suggested, but it was found that the cost of splitting it up was too great. Then Professor Fernbach of the Pasteur Institute discovered a cheap way of permeating starch so as to produce a substance called Butyl Alcohol, which is very nearly the same as fusel oil, from a constituent of which Isoprene is obtainable, but the difference is that Butyl Alcohol contains four atoms of carbon to five in Isoprene. It is the addition of this atom that has been the problem recently. The difference is a serious one, causing a variation in the properties of the two bodies. The product of Butyl Alcohol is called Butadiene and it resembles rubber in appearance and vulcanizes by both the hot and the dry processes. But it cannot be obtained from rubber and therefore cannot be identified with it. It is not so resilient and more breakable when stretched; in fact it has not the same structure and does not exhibit the "nerve" of the natural product. The English experimenters seem to rely on a process of obtaining Isoprene from a constituent of fusel oil, but it is admitted that further experiments are necessary and Sir William Ramsay has stated that two years will be required for this purpose. On Professor Perkin's announcement some newspapers revelled in startling descriptions of the results which it foreshadowed, but as far as science has gone the only thing established is that a substance resembling rubber, but inferior to it in its characteristic qualities, can be produced from materials which are plentiful and cheap. There might very well be a market for such a substance, as for instance for paving purposes, but it would not compete with the natural product for the uses where strength and resiliency are important. The precedent of synthetic indigo has a good deal to do with the expectations of the possibilities of synthetic rubber, but it should be borne in mind that the artificial indigo is not the same thing as natural indigo and is not so lasting in its effects. It caught on with the dyers because it was cheap, easily handled and effective for a time, but people who have lived in hot rainy countries know very well that it is not equal to the old dye. If the public insisted on a first-class material there would be a good market for real indigo. No doubt for the purposes of clothes a cheap article has a great advantage, even if inferior, but in industries a difference in quality cannot be disregarded.

The recent Brazilian law and regulations are very full and well designed to encourage planting. All materials intended to be used are admitted free of duties and bonuses are given for new plantations according to the area of cultivation. The Government will

establish experiment or demonstration gardens. Further bonuses are given for rubber coming up to a high standard. Immigrant inns and hospitals are to be provided in suitable districts and various narrow gauge railways are specified. Bonuses are also provided for refining works. All this represents a determined effort to use the natural advantages of the country to establish plantations with which it is evidently recognised the future will rest. In time, no doubt, the competition of Brazil with plantation rubber will be a serious matter. The law has been translated into English and has been distributed by the "Bureau de renseignements du Brésil à Paris."

Rubber Seeds.

Much disappointment is often caused by the failure of consignments of seeds which have been sent a long distance. Ordinarily it can only be expected that about twenty to thirty seeds out of a hundred will germinate, even when no long journey is made. From experiments made in Malaya, it appears that the best plan for increasing the percentage of germination is to coat the seeds with beeswax, by dipping them into the melted article and allowing it to solidify. By this means the germination has been raised to an average of about 55. Hard paraffin also improves germination, but not so much as beeswax.

Coconuts.

Increasing attention is being given to this product and most places which can grow it are studying the methods of cultivation. Capital will, no doubt, be attracted by encouraging prospects, though from an investor's point of view some schemes that have been put forward are sadly wanting in definiteness. It is often the case that localities which cannot be profitably used in any other way can be turned to account by planting coconut trees. The Journal of the Jamaica Agricultural Society remarks that the axiom that the nearer the sea the better the coconuts is not always absolutely correct, yet there is no question that where the trees are near the sea, the roots even running out to be lapped in the waves, and where the soil is fairly good, though containing a large percentage of sand, then there is a situation and conditions which it is hard to better for the growing of coconuts. The coast lands of Jamaica, therefore, are in nearly all cases the choice for planting the trees, always excepting any lands that are swampy and difficult of drainage. It has been

supposed that the salt causes the trees to flourish, but it is more likely that the effect is due to the ease with which the roots, traversing a very porous soil, reach water, a plentiful supply of which is essential to the trees. The mineral food which has to be taken up to the crown depends for its passage on water. On heavy clay lands, root disease is apt to occur. Also the coast is usually more open to air and sun than the interior. Cultivation should be deep to enable the roots to reach abundant moisture. In hard soil an explosive saves much work. The seed nuts should be carefully selected from well matured trees and should be planted in the nursery in rows on their sides with the eye end slightly raised and exposed. Planting out should be early and before roots are thrown out.

Marseilles is still the biggest buyer of copra and of oil generally, but rivals are springing up in this country and Germany.

Tobacco.

It is said that half a match-box full of tobacco will produce plants sufficient for an acre, and in Australia a gross return of £110 per acre has been secured. But the difficulties and expenses are great, and the British colonies, on the whole, lag behind in the industry. Tobacco requires "intensive culture." A man can only look after about three acres, and he must be an expert. The land must be carefully chosen, and is exhausted by tobacco, which is a great feeder, in three years. Much careful weeding is required, necessitating a thin and sharp hoe blade. Every plant should be examined and grubs, which are very small, removed by hand. "The Sydney Stock and Station Journal" states that it "is an extremely difficult thing to detect the existence of a grub in the stalk, and even men who have been tobacco-farming for years are baffled; but the Chinese workers can tell immediately. Sometimes the plant has to be cut down level with the ground to enable the removal of the grub, and so a fresh growth has to be awaited. Many inspections are needed to combat the parasites. The work of the grub is not noticed from the outside; and the layman would look at a damaged leaf and see no difference until he held it to the light, when he might easily see that only a film was left and that the grub had eaten the inside tissue away much as white ants turn a piece of timber into a mere shell. When the plant is fully developed it is 'topped,' leaving from eighteen to twenty leaves on the stalk. Immediately afterwards a shoot starts at the top of each leaf. Ten

days later this supplementary growth has to be rubbed off. Four times this operation is necessary.

"When the crop is ready to harvest the stalk of the plant is split right down the centre, to within about eight inches of the ground. By an expert slash with the same knife—which is provided with a blade at the end and one at the side—the plant is cut off at its base; it is then put astride of the stick, which is placed on a portable trellis that holds fifty sticks."

Ceylon finds its chief market for tobacco in Southern India, but it has lately been confronted by the fear of this market being closed or restricted, and the production of a quality suited for European taste has been under consideration. The smoking tobacco at present produced is generally too coarse in texture, contains too large a percentage of nicotine, and has a strong and rather disagreeable flavour. The cigars are frequently spoilt by tobacco borer. However, the climate and soil are favourable, and, if the methods are improved, the industry should do well. It should be recognised that tobacco production is more like an industry than ordinary agricultural work, and is highly specialised into different branches, according to the kind to be turned out. The expert is, therefore, necessary, perhaps more for this article than for any other tropical product, and careful and methodic experiments, under proper supervision, will save a colony much time and money.

It is a great advantage to a colony, in the case of such an industry as tobacco, if a substantial company undertakes to buy the produce on the spot. Thus the Rhodesian Tobacco Company receive the leaf at central warehouses, where it is graded and resold. An immediate advance will be made, when the leaf is delivered, up to 50 per cent. of its estimated value, and a further 25 when it is ready for sale. The Company gives expert advice, and also, in suitable cases, advances money for building curing barns. The output under this encouragement is making remarkable progress, and there is no doubt that planters are doing well. Good land can be got for 3s. to 4s. an acre. The grower of tobacco must specialise in the business, but he can combine it with ranching. As in most such places, he should have a capital of over £500 and must do some hard work to prepare the land; but the country is in many respects more advanced and comfortable than many others which are competing for such settlers.

Cotton.

"The South African Agricultural Journal" puts the cost of producing an acre of cotton at £2 5s., arrived at as follows:—

Preparing and breaking (old lands) ...	...	£0 10 0
Harrowing ...	...	0 2 0
Planting ...	...	0 1 0
Cultivating ...	...	0 5 0
Harrowing and hand hoeing ...	...	0 7 0
Picking 1,000 lb. ...	...	0 15 0
Cartage to gin ...	...	0 1 0
Wear and tear on implements ...	...	0 1 0
Sundries ...	...	0 3 0
		<hr/>
		£2 5 0

One acre of good cotton should produce 1,000 lb. of seed cotton giving 30 per cent. of lint, i.e.

300 lb. at 5½d. per lb. ...	...	£7 3 9
Total cost of production ...	...	2 5 0
		<hr/>
Profit per acre ...	...	£4 18 9

The last two or three crops marketed have realised on an average more than 5½d. per lb. American uplands have at times fetched on the European market about 7d. per lb. Reports on South African cotton usually place it about 1d. per pound higher than American uplands. But, placing this cotton at 7d. per lb. last year, with the above calculations, we have:—

300 lb. lint at 7d. per lb. ...	...	£8 15 0
Cost of production ...	...	2 5 0
		<hr/>
Showing a net profit per acre of ...	...	£6 10 0

The American crop last harvest has been estimated to yield 14,885,000 bales of lint of 500 lbs. each. This is the largest crop on record, and at 5½d. per lb., the average price obtained during the last five years, represents the enormous sum of over £178,000,000. It is said that the planters are taking steps to organise themselves into co-operative unions, and are considering a price of 7½d. per lb. The cost of production with them is lower than it appears to be in South Africa, being £1 17s. an acre, and, no doubt, this is largely due to better organisation.

It appears that the seed cotton in South Africa yields a much greater proportion of lint than is got in the United States.

At Rustenberg several varieties gave more than 400 lbs. of lint per acre, while in the United States the average yield in recent years has been only 174 lbs. per acre. The Rustenberg cases may be exceptional, but it seems likely that the climate and soil of the Transvaal are so favourable that this territory will before long become the greatest producer of cotton in Africa. A new "bond" of Empire will be created when these supplies reach Lancashire.

Rice.

Experiments in India, it is stated in the "Agricultural Journal of India," show that, at least under certain conditions, a larger yield of grain is obtained by ploughing the land in puddle immediately before transplanting paddy than by ploughing immediately after the previous harvest. This seems to be partly due to the breaking up of the soil by desiccation followed by rain. Early ploughing conserves the moisture and prevents this process. It may also be due to an alteration in the bacterial contents of the soil.

The Japanese salt-water method of selecting paddy seed of high specific gravity brings about a decided increase of yield. It consists in using only grains which sink in a solution of one part by weight of salt in two of water.

Canadian Coal.

We are presented at recurring periods with prophetic pictures of the approaching time when there will be no more coal, and few people can or care to question the data given on these occasions. But as regards immediate requirements the remarkable thing is the constant discovery of new fields. In almost every part of the earth fresh stores are being opened up. Thus Dr. Dowling, of the Geological Survey of Canada, has computed that in the province of Alberta alone there are some one thousand million tons, leaving out many areas not yet prospected. Between four and five millions are now being mined annually in the province, and constitute a resource which is contributing in no small measure to the development of the West. At present the coal is only worked where it is close to the surface, and the methods adopted are rather rudimentary and wasteful. The coal-bearing strata are of later epoch than those of Great Britain, and the youngest yield lignites rather than true coals. Coal deposits improve with age, largely because earth-movements compress them, so that they become harder, brighter and more solid. A large part of the Alberta coal is too young for any but domestic purposes, but there are great areas at present untouched of steam coal. There is reason to believe that these stores can be

reached without great cost, and there is every prospect that they will lead to the rise of great manufacturing cities on the prairies. It is well known that in the past these bare expanses have been covered with thick forests, the remains of which now lie at no great depth, and the time is now at hand when these treasures will be made available.

Tin.

In Malaya last year was a satisfactory one, and there was a substantial increase from 170,361 to 196,427 in the number of labourers. The Chinaman has evidently not been tempted away by rubber. Suction gas is being largely resorted to for power. Coal has been discovered at Rawang and, if it proves to be of good quality, would stimulate the use of suction gas and the adoption of up-to-date plants.

In Nigeria attempts have been begun to conduct tin-mining by mechanical means, but the size of the properties makes a difficulty, to say nothing of the transport. There has been a good deal of activity and the figures of production should show improvement.

Solid Oil.

The troubles of transport and storage of liquid oil make a solid form very desirable, and this article is now produced under the Armstrong-Mordan process by the Petroleum Solid Fuel Co., Ltd. If the invention is to be fully used, the oil must be made into solid blocks at the place of production so as to save the great expense of special tanks and steamers, and this object is in view. At present the production appears to be limited by the difficulty of getting the raw material.

Steam Pumps.

A portable steam pump is desirable in places where there are no roads or means of traction, and one called the "Valiant," made by Messrs. Merryweather, is doing good service under many awkward conditions. It can be carried by men on shoulder poles or supplied with a carriage. It has a powerful throw and can be used as a steam fire engine. It is used to supply water to troops or to vessels stationed off the coast, and to fill tanks on railways. The small size weighs $6\frac{1}{2}$ owt., and the large 11 owt., and it can be taken apart into five or six sections to facilitate transport over long distances. The price is from £160 to £340 according to size and fittings.

Reinforced Concrete.

At the International Congress of Navigation held in Philadelphia in May, some useful communications were made as to the use of reinforced concrete in hydraulic work, and the general opinion was that little if any damage is suffered by even a poor concrete structure below water, except in cases of freezing, or when sea water has been used in the mixing. But many concrete structures exposed to sea water have suffered much from disintegration of the parts not constantly immersed, and it is desirable that the cement used in making concrete to be exposed to sea water shall contain sufficient silicious materials as will satisfy whatever excess lime there may be in the hardened cement. This is accomplished in many parts of Europe through the addition of trass or puzzolana to hydraulic cement containing an excess of lime, which tends to increase its strength and render it stable in sea water. Also one of the prime essentials for a concrete structure that will be immune against sea water action is that the surface shall be dense and impervious. An attempt has been made to secure this condition by applying mortar under an air pressure of upwards of 30lb., and while this undoubtedly increases the density as compared to hand methods, nevertheless it remains to be seen whether it achieves the object desired.

Good practice demands that the concrete shall be mixed a sufficient length of time, without too much water, so that there results a mass of viscous consistency which will flow readily and yet the ingredients do not separate. If such a concrete is deposited under conditions which will prevent the sea water permeating it before it has set, such concrete affords excellent resistance to sea water. Another method proposed has been to deposit the concrete in tremie, as with this form of construction only the upper surface comes in contact with the water, and there results a concrete which is not affected by sea water action.

When reinforced concrete is used in sea water it is essential that the aggregate shall be a hard, dense material of low absorption, and that the reinforcement be protected by a coating of at least one inch of silicious mortar.

When concrete is subjected to the action of alkaline or acid waters the same precautions must be observed as in the case of exposure to sea water.

It is important for the purposes of harbour works to note that concrete for reinforcement should not be made with sea water, or have salt mixed with it. If this is done, the reinforcements corrode. The other danger is that of cracks; but there is small chance of shrinkage if the concrete is kept wet while setting.

Properly made, the material is practically immune, and as it acts by resistance and not by weight the work required is less than when material in mass is used.

Cape Town Reinforced Concrete Pier.

Fast work on this work was accomplished by the use of a travelling stage, which was erected on land and travelled on its own legs to the sea in position for driving the first pile. Thus no temporary staging was required, and the stage moved along the front of the work, driving the piles as it proceeded, in a zig-zag course, so as to bring the pile driver into the necessary position for the next pile. The movements were made with remarkable ease. This is said to be the first instance of the use of such a stage for pile-driving.

Deterioration of Coal in Storage.

Coal has commonly been regarded as liable to serious change and loss on exposure to weather. In 1870 a German gasworks engineer claimed to have found that moist fine coal sustained an average loss per week of 1·7 per cent., this loss being due to gas. The 1889 edition of "Groves and Thorp's Chemical Technology of Fuels" says: "In some places coal is known to lose 50 per cent. of its heating value in six months." Other statements like these are to be found in recent literature, but probably the great majority of chemists and engineers to-day hold no such exaggerated ideas on the subject. There is, on the other hand, a well-defined suspicion in the minds of many that sufficient loss of volatile matter and sufficient deterioration by oxidation does occur in coal to be of industrial importance. Recent experiments in America, however, showed that the loss in calorific value by weathering in the open has been very much over-estimated, as the loss was generally found to be about 1 per cent. in a year. Slacking and crumbling on the surface of a pile indicates the beginning of loss, but this process does not appear to penetrate more than about 18 inches.

Theoretically the best way to preserve coal is to store it under water. An English railway and dock superintendent reported in 1903 that he had found that coal submerged for 10 years in the salt mud of the English Channel actually improved in calorific value by 1·8 per cent. He claimed that salt will preserve the virtues of coal and that if coal was given a strong dose of coarse salt and water, 12 hours before using, its calorific value was improved.

Storage under water unquestionably preserves the heating value and the physical strength of coal. But it practically necessitates firing wet coal, and therefore means the evaporating in the furnace of an amount of moisture varying from 1 per cent. to 15 per cent., according to the kind of coal. This factor is an important drawback to under-water storage with coals which mechanically retain 5 to 15 per cent. of water after draining, but in case of high-grade coals, if firemen are permitted, as is ordinarily the case, to wet down their coal before firing, so as to make, as they say, "a hotter fire," then the addition during storage of the 2 or 3 per cent. moisture which these coals retain would be of little consequence. Submergence storage is an absolute preventive of spontaneous combustion, and on that account alone its use may be justified with some coals, but merely for the sake of the saving to be secured by avoidance of weathering there does not seem to be good ground for its use.

White Ants and Buildings.

There are numerous expedients for keeping down this nuisance, but the simplest method which we have seen suggested is to sprinkle salt freely on the ground between or under the foundations, and in each post hole if there are any, in order to give a brackish tone to the soil. It is said that this has entirely kept off white ants. It would perhaps be an improvement to soak posts intended for building in boiling brine.

White Ants and Trees.

Trees can be protected by worrying the ants with arsenical fumes, but this treatment is not as a rule absolutely successful. Immense devastation to orchards is often done, and the reason is not far to seek. It is simply that when land is carefully cleared and prepared the insects are deprived of their usual food. In such cases the agriculturalist has carefully removed all the natural food of the insects which existed in superabundance—fallen leaves, dead twigs, stumps, and the like—and left the ants nothing to feed upon. Similar cases are often to be found where land is first set out to sugar-cane, the plant cane suffering owing to the fact that the natural food, grass, and scrub, has been largely removed in ploughing the land and preparing it for planting. At the same time old sugar-cane fields are riddled by white ants without a sign of damage, because the débris of cane growth supplies a sufficiency of food which is, to them, preferable to the living cane.

Hull as a Distributory Centre.

Colonial exporters continue on the whole to favour London without considering the merits of other home ports, and many of them are not in a position to weigh such questions and simply follow established customs. There can be little doubt, however, that as time goes on the convenience of other distributing points will assert itself. Thus Hull serves a very large and growing population. It gives a fast train system to all parts of the country, and its navigable waters and canals serve one-sixth of the total area of England. All river craft use the docks free of dues and compete actively with the railways, and as a result of this the railway rates are on a lower basis than from any other port in the United Kingdom. Thus it is said that Hull can deliver meat and apples to London markets at practically the same cost as when they are delivered from the London Docks. Not only is London generally admitted to be the dearest port in the United Kingdom, but also the charges for handling and selling goods are higher in London than in Hull. It is most important for exporters to avoid unnecessary changes for transport and handling and to discard roundabout methods.

RAILWAY AND HARBOUR NOTES.

Lagos Harbour Works.

The quantity of stone deposited in the East and West Moles in June was greater than in any previous month, and it was anticipated that, when the new railway deviations had been put into proper working order, a substantial further increase would be made. At the end of June the East Mole had progressed 7,517 feet, and the West Mole 281 feet, and the expenditure was about £320,000. The iron wharf at Apapa was completed in the half year, and affords a berthage of 345 feet with depths at low water alongside varying from 10 to 16 feet.

The bar draught from January to July varied from 11 feet 6 inches to 16 feet 6 inches. During the latter part of this period the entrance channel became extremely difficult for navigation, owing to the encroachment thereon of the western spit and the resulting narrowing of the fairway between the leeward side of this spit and the "Egga" wreck. This action became so pronounced that at the beginning of June it was considered advisable to reduce the official draught to 11 feet 6 inches for vessels inward and enable navigation to take a course leeward of the "Egga" and "Kittiwake" wrecks. In view of the advance of the East Mole the use of this channel could only be a temporary measure, and subsequently matters got worse. However, it was believed that as the volume and strength of the ebb tides increase, corresponding with the augmented discharge of fresh water, the encroachment of the weather spit would be checked and the formation of a navigable channel windward of the "Egga" again result. The advance of the East Mole will contribute materially to this effect.

The making of the new wharves near Wilmot Point, which will be 2,000 feet long, necessitates a reclamation plant, which includes a dredger and a tug and towed barges. It is intended to employ the "Egerton" for the dredging, and orders have been given for the other requisites. The plant will be of great service elsewhere in turning swamps into valuable land.

The Lagos and Baro-Kano railways tariff, printed at Lagos, has been provisionally approved, but subject to notification that the Government is not prepared to guarantee freight between Burnutu and Baro by river and will only undertake to convey up to the available capacity of its own boats at the advertised rates. A schedule of rates for public goods to stations on the Baro-Kano railway has been issued separately. Copies of a pamphlet entitled "Northern Nigeria," descriptive of the journey from Lagos to Kano, have been distributed from the office of the Crown Agents for the Colonies. The post of General Manager, Southern Nigeria Railways, held by Mr. F. B. Glasier, C.M.G., has been abolished, and Mr. J. Eaglesome, C.M.G., Director of Public Works, Northern Nigeria, has been appointed "Director of Railways and Works."

The combined Nigerian Railway systems are to be called the "Nigerian State Railway."

Accra Harbour Works.

In May the sand pumping plant did exceptionally good work and soundings showed an appreciable deepening over almost all the sheltered area.

Freetown Harbour.

A proposal has been under consideration for the construction of a deep sea export wharf. As Freetown is not a terminal port, this could be done at a distance from the place where imports are landed. A possible site has been found where the sea-bed is free from mud, at Fourah Bay, the sites nearer Freetown being so occupied and the depths of water so limited that the requisite accommodation could not be provided at a reasonable cost. The distance from the business premises near Susan Bay and the Government Wharf would be from one-and-a-half to two miles, but the inconvenience would diminish as the land is taken up for trade purposes. Borings will be made to test the possibility of the scheme.

Meantime the extension of the jetties and an additional jetty have been decided on.

Barbados Harbour Works.

The question is under consideration of the improvement of coaling facilities in Carlisle Bay. One proposal is to accommodate the lighters at Needham Point, which is naturally sheltered largely during the hurricane months when the wind is from the south-east. A sheltered area would be found by a breakwater extending from the Point northerly and an arm from the shore, affording an entrance 150 feet wide. These constructions would be 750 and 450 feet long respectively. The cost may be put at £52,000. Another proposal is to provide accommodation for ocean-going vessels in Carlisle Bay by prolonging the harbour westwards providing a breakwater, which might be 1,200 feet long, a jetty and a dredged area. Such a breakwater would have to be longer to afford sufficient protection to vessels on the occasion of a hurricane, but such hurricanes occur only at long intervals, the last having been experienced in 1898. The accommodation would benefit the port by enabling vessels to load and unload, without, as at present, barging, but it remains to be considered whether the benefit would be likely to prove commensurate with the cost, which is estimated at £325,000. It does not seem possible to deepen the Carenage for the reception of ocean-going steamers.

Grenada.

A project is under consideration for improving the harbour by dredging and providing wharfage accommodation. The immediate extent of this accommodation will no doubt be largely determined by the results of an examination of the site.

Uganda.

In the year 1911-12 the receipts were £360,224, and the expenditure £228,852, giving a net profit of £131,372 against £98,519 in the previous year. The report refers to the inadequacy of the rolling stock and the necessity for more wharfage at Kilindini, and states that the investigation now being conducted in order to utilise the grant recently sanctioned to the best advantage is being followed with the keenest interest. The railway staff mourn the loss of the late General Manager, Mr. H. A. F. Currie, C.M.G., to whose indefatigable energy the progress of the railway was largely due.

Plans for the construction of the Deep Water Pier at Kilindini have been under consideration. A screw pile pier would probably be difficult, as in many places there is not enough sand to hold the piles and the rock in parts is too steep for them to enter. But a good foundation is obtainable and a solid construction is therefore possible. Further enquiries will have to be made as to the character of the rock, and Mr. J. H. Gailey has been engaged for this work. Mr. Gailey was the engineer of the barge pier.

A rocky foreshore can be cleared away by a Lobnitz rock-breaker to a depth sufficient to enable ships to lie alongside a quay, which can be faced with timber or steel, with a mass of concrete between the rock and the frame.

Malay States.

The through main line from Kuala Lumpur to Salak South was commenced at the beginning of the year and by the end of June the jungle had been cleared for the whole length and the permanent way commenced.

On the survey from Bukit Mertajam to Alor Star at the end of June plans were completed for forty-four miles of line.

The western route has been adopted for the railway from Tembeling to Kelantan.

Ceylon : Mannar.

There were very heavy rains in December, and on the 19th the "Kalaar" rose rapidly. At that date the two main girders were bolted up, but the top booms were not in position and if the trestles had been swept away the bridge would certainly have been wrecked. The water continued to rise till it was about thirty feet above the bed of the stream and the whole valley was under water; the buildings were flooded and many of the coolies narrowly escaped drowning. The bridge, however, was saved by the promptitude of Mr. Crawford. Rails and steel were piled on the bridge to steady the trestles and gangs of men stationed to prevent brushwood and floating trees becoming foul of the staging.

It is anticipated that the piers will be completed early in 1913 and through communication established between Madawachohi and Talai Mannar, but the line may not be fit for a night passenger service till a much later date. The wet season terminates approximately in March and the road may be expected to be then

in its worst condition. In July railhead was at twenty-five miles forty chains. It was expected that the north pier would be finished in October.

Fiji.

A scheme has for some time been under consideration for the construction of a railway from Suva up the valley of the Rewa to the junction of the Wainamala and Wainibuka Rivers. The means of communication in the Colony are so restricted that an improvement of this kind would be very welcome if it can be made to pay. The line would pass through a region where there is much fine land now lying idle, and if the Government acquired some of this cultivation could be stimulated and the railway receipts augmented. A preliminary survey is being made, and an engineer is going out to report on the scheme.

Non-Parallel Axle Tracks.

It has long been realised that the axles of railway rolling stock should be allowed freedom to assume positions other than parallel, the ideal being that there should be as many degrees of flexure as there are axles, subject to such control as would ensure safety when passing over crossings. When the axles are rigidly aligned, the running must be laboured and great energy is required to force such vehicles round a curve. The result is bad for tyres and rails.

The Warner system claims to overcome these difficulties by suspending the weight of a vehicle by means of hangers or other flexible connections and separate underframes or carriages from that of the main vehicle, so that the axles are not constrained to remain in parallel position, nor is the truck body compelled to align itself into one particular position relatively to the axles. It will be interesting to see how the scheme works in practice.

Oil Fuel.

The Caledonian Railway has been experimenting with oil fuel for its locomotives. In the engines so fitted, the oil is stored in a cylindrical tank placed on top of tender in part of the space ordinarily occupied by coal. The oil flows from the tank to the engine injectors, which force it into the fire-box at two separate points about eighteen inches apart, where a current of steam from the boiler causes it to assume the form of fine spray spreading itself throughout the fire-box. By means of a thin layer of wood or coal fire covering the firebars this spray is ignited, and so

generates steam for the motive power, as well as for the injecting and spraying. The extent of the flame is regulated by a controlling valve on each of the injectors, and the operation of driving is, of course, the same as with coal fired locomotives. The fire-box, in addition to the customary fire-brick arch, is equipped with a fire-brick wall to protect the copper front plate from the effects of the extraordinary heat given out by the oil fuel. It is to be noted that these special fittings are of such a kind as permit of the engine using oil fuel, or coal, as found desirable. The Company's present locomotive stud consists of 927 engines.

MEDICAL NOTES.

The Prevention of Malaria.

The most satisfactory method is mosquito destruction, for mosquitos carry several other diseases, but when the population is sparse and scattered over great spaces the quinine method is more practicable. Dr. D. Thomson, in the ("Liverpool Annals of Tropical Medicine" (Vol. VI., 2), states: that the most scientific method of taking quinine is, not the conventional daily dose of five grains, but that every adult person in the population (children in proportion according to age) should take twenty grains of quinine daily and simultaneously for a period of three weeks, quarterly, i.e., four times a year. This amounts to 1,680 grains per adult per annum, if well during the year, and probably 1,800 grains, if ill at some period in the year. This, in the aggregate, is less quinine than in the former method, which is faulty in the following respects:—

(1) Five grains of quinine daily is insufficient to prevent infection from mosquitos.

(2) Five grains of quinine daily will take a long time to eradicate malaria from the system. In many cases it will not eradicate it. The fact that a person can take an acute malarial attack during such dosage, proves that it is an insufficient amount to render the blood uninhabitable to the parasite.

(3) This amount of quinine makes the blood less suitable for the parasites, and, hence, tends to keep the disease latent in the system without properly curing it. A few parasites may be present in the blood not sufficient to cause fever, and the person may feel comparatively well and congratulate himself that he is free from the disease, yet he may be harbouring numerous crescents for long periods of time, since those latent chronic cases are often the most fertile producers of crescents.

On the other hand :—

(1) The administration of quinine in doses of twenty grains daily for three weeks is almost certain to destroy both the asexual and sexual parasites. After this period, the person will be non-infective to mosquitos, and, in the great majority of cases, will be cured of the disease. Very few patients have a tendency to relapse after this treatment. By this method, therefore, every person would be non-infective to mosquitos, and freed from a tendency to relapse, four times a year.

(2) Infective mosquitos must necessarily become much fewer in number.

(3) The amount of quinine taken is less in the end, and none is taken during nine months of the year.

(4) After the third day the majority of people feel very little inconvenience when taking 20 grains of quinine daily.

(5) It is quite as practicable a method as the five-grain daily method. It would be as easy to make a population take 20 grains daily for three weeks, quarterly, as to make it take five grains daily for a year.

Mosquitos.

In up-to-date legislation we have got to the point that the mere presence of mosquito larvæ on any property constitutes an offence. Such larvæ can only exist on water, and it is the duty of an owner to see that there is no casual water on his premises on which larvæ can collect, or to prevent any collection of water from becoming a nuisance in that way. A recent Gambia ordinance expresses it in this way : "the occupier or owner of any house or premises, or the owner or person having the charge of any ship, boat, canoe, hulk, timber, cask, or other article lying upon any street, shore, beach or open space, in or about which there is any collection of water found by the Board to contain mosquito larvæ, shall be liable in respect of each and every such collection of water to a fine not exceeding twenty shillings, or in default to be imprisoned with or without hard labour for seven days."

Sleeping Sickness.

Mr. R. Paske Smith, the Officer-in-Charge of the Sleeping Sickness Administration Measures, Uganda, writes as follows :—

"Of the measures adopted for the suppression of Sleeping Sickness the clearing of fly areas will, I consider, where the population is large or sufficient, prove the more effective and in the long run the more suitable from every point of view. The difficulties and trouble

of moving natives whose ancestors have lived for generations in these areas, and who often strongly object to moving to new districts, is avoided; trade routes can be opened and maintained without danger of spreading Sleeping Sickness; valuable land—some of the richest land in the Protectorate is situated within these areas—can be developed; the cost to government is less, there being no loss by reason of tax exemptions; and there is less hardship to the natives.”

Observations in German territory confirm this view. In places where the last clearing has taken place more than a year ago and the bush has thickly grown again, the *glossina palpalis* is not found. It seems that the slow mode of propagation of the fly does not enable it to reoccupy positions quickly once they are lost. Surgeon-General Stendel considers that usually it is enough to clear the underwood, without radical clearing and uprooting; the flies do not find their food in large trees. The Germans are evidently making a systematic attempt to eradicate the fly.

Unfortunately, while the *glossina palpalis* is generally found only in narrow limits near water, the *glossina morsitans* is spread widely over the continent. The discovery, therefore, that the latter is a carrier of the disease is alarming, but as this fly is migratory the cases are likely to be sporadic.

Tuberculosis.

South Africa has a well-deserved reputation as possessing a beneficial climate for persons afflicted with consumption, and considerable numbers have gone there to get the advantage of the warm and dry air. The country cannot, however, be expected to welcome these visitors when it is found that the disease is rapidly spreading, and steps are being taken with a view to discouraging them from coming. Other countries are adopting the same policy, but there is a practical difficulty in the fact that early or slight cases of tuberculosis are difficult to detect. In the United States, persons afflicted with tuberculosis are excluded from admission, and quite a catalogue of other diseases is added; at New York, however, the principal gateway, not more than two minutes can be given to the first inspection, at which over 70 per cent. are usually admitted, and the inference is necessary that diseases which require a long and careful examination, such as tuberculosis, largely escape detection. A recent commission in South Africa remarks upon this inherent difficulty, and adds that apart from this there are other reasons why total exclusion of tuberculous immigrants is inadvisable. Thus in very advanced cases it is often impracticable to subject them to the risks of a long voyage back to their port of embarkation. To do so would in many

instances mean hastening their death. This fact was strongly emphasised by the Chief Immigration Officer for the Cape Province in the course of his evidence. Such cases, therefore, must necessarily be landed for treatment in a suitable institution. It may be remarked that in respect of the deportation of immigrants, South Africa is less favourably situated than are America and Canada, by reason of the much greater length of the return voyage to the ports of embarkation.

Furthermore, in the case of persons suffering from phthisis in its early stages, difficulty is felt by many in justifying action excluding them from the benefit which the climate of South Africa may afford them, provided that they are able and willing and can be trusted to carry out such precautions as will reasonably insure the safety of our own inhabitants. It is a well-established fact that residence in parts of South Africa, especially the higher and dryer portions, often results in the permanent arrest of the disease in suitable cases. Most medical men practising in South Africa can recall such recoveries.

There is another and very practical objection to an attempt at rigid exclusion, and that is that whenever administrative measures of control involve excessive severity they tend to defeat their own ends by leading to evasion by the public. A tuberculous immigrant who has some hope of being admitted to the country, if he conform to the reasonable requirements of the State, is much more likely to play an open hand than the person who knows that he cannot gain admittance except by concealment or fraud. This point is of special importance, in view of the extensive land frontiers of the Union, at which it would appear from the evidence that there are and always will be exceptional difficulties in exercising effective control over immigration.

But although it may be impracticable to exclude entirely all tuberculous immigrants, the Commission was very strongly of opinion that every possible and legitimate means of discouraging such immigration should be adopted by the State. Moreover, whenever such immigrants are admitted, measures of a thorough kind should be insisted upon in each case, in order to prevent spread of infection. The Commission therefore recommend the following rules and conditions under which alone should be admitted any immigrant recognised to be suffering from tuberculous disease in an infectious stage:—

- (1) A tuberculous immigrant should be admitted only through a recognised port of entry proclaimed for that purpose.
- (2) He should be admitted only on a permit issued to him on the authority of the Minister, entitling him to remain within the Union for a definite time, to be named in the permit.

- (3) Every such permit should be issued subject to the proper observance by the immigrant of conditions to be written into his permit, having for their object (a) the keeping of the immigrant under suitable surveillance and control, and (b) the observance by him of adequate measures for preventing the spread of infection.

- (4) Such conditions should include the following:—

- (i) That the immigrant shall possess sufficient means: (a) to make a deposit of not less than [£20] with the Immigration Officer, to be applied by him in meeting the cost of deportation (if found necessary) or any other expenditure properly incurred by the Government in the immigrant's behalf. (b) To support himself during the period of the currency of the permit in conformity with its conditions.

As a guarantee that the means of support actually exist, or, that existing, they will be properly applied and not lost or dissipated, the Immigration Officer shall require the surety of an approved person resident within the Union or of the master or owner of the vessel bringing the immigrant; or otherwise a sum of money to be deposited with the Immigration Officer sufficient for the proper maintenance of the immigrant in accordance with the conditions of the permit during the period of its currency; such money to be paid out to the immigrant by the Immigration Officer in such instalments at such intervals as that officer may deem fit.

It is suggested that the sum to be deposited for this purpose should not be less than an amount equal to [£8] per month of the permit's currency.

- (ii) That the immigrant shall reside at a specified place.

Other details as to residence and examination are added.

Efforts to stamp out the disease on lines similar to those proposed in South Africa will, no doubt, be made in other quarters. It does not do to rely on the fact that the climate of a place is favourable for the treatment of consumption, or unlikely to originate it. The disease has only been known in the West Indies in comparatively recent years, and it used to be thought that the islands were fit to be sanatoria for persons affected. But the growing mortality, to which we referred in our last number, shows that when the disease has got a footing it will spread, unless effective measures are taken. In this case better housing is no doubt the first remedy.

Quarantine.

The horrors of quarantine require no description, and medical men generally are anxious to reduce this institution to the minimum degree consistent with public safety. The three great infectious diseases which have to be considered are small-pox, cholera and plague, and the first question is during what periods a "contact" is infectious. In the case of small-pox a Straits Settlement Quarantine Inquiry Commission considers it sufficient for a contact to be inspected daily for 15 days, this being the period of incubation in the disease during which the infected person is harmless and isolation is unnecessary. Plague takes three forms, but of these, two, viz., septicæmic, or general blood infection, and pneumonic, are uncommon, and at Singapore are almost unknown. In bubonic plague the victim gets the disease direct from the rat flea, and it is the locality rather than the persons in it that requires isolation. When a contact's body has been cleansed, and his clothing dealt with to ensure that no rat fleas lurk in it, he ceases to be a source of danger and may be set free.

There appears to be a certain amount of doubt whether infection can be conveyed from a septicæmic plague sufferer to a healthy person. All that can be said is that the risk of this in septicæmic cases is greater than in bubonic cases.

It is beyond doubt that in pneumonic cases the sufferer is actively infective, and as contacts may receive the germs of the disease from breath or from expectorations and may convey them to others, they require most careful disinfection, and it would be necessary to subject them to isolation as in the case of cholera contacts. In Singapore the climatic conditions are hostile to all forms of the disease, which, therefore, is not likely to reach serious epidemic proportions. The recommendations are:—

- (1) That bubonic plague contacts should be disinfected, inoculated and thereafter released, subject to the same conditions as to daily medical inspection as are proposed in the case of small-pox contacts.
- (2) That in septicæmic and pneumonic plague cases the Health Authorities should have full discretion as to whether contacts should or should not be isolated after disinfection.
- (3) That all houses in which plague cases have been found be closed until the premises have been thoroughly cleansed, all rat holes have been stopped, and, as far as possible, all rats destroyed.

Cholera is the most difficult case to deal with from this point of view. Cholera contacts ought beyond all doubt to be isolated

without delay for the full period of five to six days which elapses between infection and development of the disease. In this disease daily medical inspection would not be a sufficient safeguard: an infected person may appear to be in good health at say 10 a.m., be in an extreme stage of the disease at noon, and be dead within the next two or three hours. In the interests of the contacts themselves, and still more in the interests of the community as a whole, it is essential that they should be placed under conditions which will ensure their prompt treatment if seized with the disease. Even before any serious symptoms are felt the excreta of the sufferer may be extremely infective, and the only safeguard is its treatment by the most perfect systems of disinfection. Further, the medical evidence indicates that cholera contacts may be a danger, even though they do not themselves show active signs of the disease: they may act as "carriers" of the infection, and no system of disinfection is known which would entirely avert this danger.

However, it is an advantage that the period of incubation of cholera is short (being about five days), and the inconvenience to contacts who are isolated is not so great as in the case of other diseases.

Typhoid Epidemics.

The report of a Jamaica committee discusses the subject of waterborne endemic typhoid and allied diseases. The committee observe that Dr. Houston, of the London Metropolitan Water Board, who is an undoubted authority on water supplies, has given this question much investigation, and is not inclined to attach much weight to the belief in waterborne endemic disease from a fair, usable filtered river water.

On the other hand Professor Starkey, of McGill University, Montreal, and an influential body of American sanitarians, are strong in condemnation of river water even reaching the standard of purity that Kingston filtered water attains.

Rainfall and the water supply are intimately connected.

The evidence of the year 1911 and of the previous six years goes to suggest a certain influence on the rise of typhoid of a spell of drought followed by slight rain. A fall seems to succeed flood rains.

It is clearly recognised that the tributary streams of the water supply are certainly liable to excremental pollution of human origin; and in spite of shutting off the first flood waters the Bacterial content of the water is usually raised after rains. That content is reduced some 80 to 90 per cent. by filtration, and the chances of infection are considerably diminished. It is just the importance of those remaining chances that is debated by authorities.

In the past year the quality of the water supplying most of Kingston was inferior during the first four months to what it was later, with perhaps the exception of the month of August, when again the quality was less good. Cases of typhoid rose in April, May and June, fell to a minimum in August, and a rapid rise occurred in September.

While one may not be prepared to lay much importance on these coincidences of rainfall and drought, with water pollution and the rise of typhoid, in view of collateral evidence of the probably more important personal factor, it must be realised that there is a possible danger in the water supply in its present condition, and that all means possible should be taken to render the supply as pure as possible.

One single case attributable to water may be the source through personal means of a number of cases extending over years.

Ankylostomiasis.

Dr. R. P. Cockin, of Grenada, reports in favour of the use of Beta Naphthol, on the ground of its effectiveness as a germicide, its rapid and complete expulsion of the parasites, its cheapness (2s. per lb.), and the absence of danger. He states:—"For this kind of work the Beta Naphthol could be made up in pill form—five grains to each pill—and given in five, ten or fifteen grain doses (according to the age and condition of the patient) on alternate days for ten days or a fortnight.

"This course was, I believe, adopted by the Porto Rico Commissioners with regard to Thymol and with good results: and I consider could be undertaken with Beta Naphthol with far less risk."

It appears likely that ankylostomiasis is encouraged by the newer modes of cultivation. Dr. Lee Bennett, of Grenada, observes that in the old sugar days the soil had frequent chances of getting dried up and aerated, and so did not afford the worm a suitable nidus for its eggs and larvæ; but to-day, under the shade of cocoa and nutmeg trees, the soil is always damp and ready for the requirements of the parasite.

If the yards of the dwelling-places, in certain localities, were kept free from vegetation, allowing the sun and wind to dry them up, very few people would require to be specially treated for ankylostomiasis; this disease has a natural tendency to cure itself; and it is the reinfections that cause all the mischief. The process of cure and reinfection will go on till the soil surrounding dwellings is treated.

Use of Salvarsan for Yaws.

Dr. R. P. Cookin reports good results throughout at Grenada, but that the drug, although efficacious, may, at times, be a dangerous remedy.

The duration of patients' stay in the Hospital, after injections, averaged out at $25\frac{1}{2}$ days, as against an average of about 3 months under other modes of treatment.

With regard to "duration of stay" in Hospital it must be remembered that practically all Yaw cases are infected with Ankylostomiasis, and that removal of these parasites is necessary as a preliminary to any treatment by Salvarsan.

The Chinese Hospital in Hong-Kong.

At the Congress of the Far Eastern Association of Tropical Medicine, Sir Frederick Lugard made a reference to a very interesting, and, in fact, unique institution, the Tung Wa hospital. This, he stated, is entirely managed and controlled by an annually elected board of Chinese gentlemen, under the supervision of the registrar-general, and with a government inspecting medical officer. Primarily a hospital which admits annually over 4,000 patients, with an average in the wards of about 25, treated in equal proportion at their choice by Western or by Eastern methods, together with a clientele of 110,000 to 120,000 outpatients, it is in reality an institution with a much wider sphere of usefulness. It contains a refuge for the ailing poor and destitute, and special facilities for vaccination; it affords a temporary shelter for destitutes pending repatriation (generally at its own cost), and free burial for those unable to afford the cost, averaging some \$3,600 per annum. In addition, it is the recognised agency for collecting subscriptions for famine and destitution in China, and for other charitable purposes in or beyond the colony by Chinese in all parts of the world, who are eager to employ it as a medium to transmit their collections. It administers an income of about \$100,000 per annum, of which only \$8,000 is subscribed by government, and it is in charge of various charitable funds amounting to about \$100,000. It has just opened a branch in Kowloon, similarly managed, and capable of accommodating about 70 patients in its ward, as well as a new small-pox hospital to correspond to the one on the island.

In the Hong-Kong University, which it is hoped to open shortly, the first faculty will be that of medicine, since the University incorporates the College of Medicine, which for over twenty years has done admirable work in training students, chiefly Chinese, up to the standard of its "licenciate" certificate. In the new University they will be able to take a full medical degree, of the standard required

by the British Medical Council, without (in the case of Chinese) having to reside for a long series of years in a foreign country, away from their own people, and at a fraction of the cost. This institution will, no doubt, achieve invaluable results for China.

Rat Guards.

It is important to prevent, if possible, the passage of rats from ships coming from infected ports to the shore, and guards on the ropes are useful for this purpose, especially in ports where the rats cannot easily swim to a landing place. The Port of London Authority has adopted a guard, recently patented, which is self-adjusting so as to fit closely any rope, from $1\frac{1}{2}$ inch to 12 inches in circumference; it is strongly made of galvanized iron, can readily and without skill be fixed in position, has no loose parts and remains at right angles whatever the position of the rope, effectively preventing the passage of a rat. The device automatically closes the aperture through which the rope passes. It is flat and easily stored; price about 10s.

A "Course of Hygiene" for the use of schools has been published in Fiji. It contains the elementary information which children in the tropics ought to be taught, and being very lucid, could be adopted for this purpose where no local handbook has been prepared.

COLONIAL STAMPS.

THE past quarter has witnessed the appearance of a great number of the expected issues bearing the portrait of H.M. the King: in fact only one new issue has borne any other emblem and that has the portrait inset. It seems quite possible that in the near future, this sign of the Unity of the Empire, will be shown on all stamps issued by its component parts, and there are few more effective ways of keeping the fact before the eyes of the world.

The recent issues are given below: the character of the stamp, where it is produced from one or other of the universal keyplates, being indicated shortly as old D.L.R., Nyasaland type, or new D.L.R., with reference to the illustrations which accompanied our April issue. Where no description is given, it may be taken that a new special keyplate similar to the old one has been made to fit the existing border or overprint plates.

It may be taken that all stamps follow the Universal Colour Scheme and that all values above 2½d., or its equivalent in other currencies, are on surfaced paper unless otherwise stated.

BAHAMAS.—1d.

BARBADOS.—¼d., ½d., 1d., 2d., 2½d., 3d., 4d., 6d., 1s., 2s. and 3s.

In these stamps the Charioted Britannia appears on a smaller scale, the portrait of H.M. the King being inset at the top left hand corner in the case of all values up to 6d., inclusive. Above 6d. the stamps are of the revenue size and the portrait is centred in the upper half of the stamp.

The value is the only portion of the stamp which is applied at the second printing. This appears at the left hand bottom corner in the values below 3d., at the top right hand corner in the remaining small stamps and in both top corners in the large stamps.

CEYLON.—2, 5, 25, 30 and 50 cents; 1, 2, 5, 10, 20, 50, 100 and 500 rupees.

All the above stamps are printed from the old D.L.R. keyplate, with the exception of the three highest values, which are of the

Nyasaland type. The figures are in colour on a white background and the following are the colours :—

2 cents. Same as now but brighter.

5 cents. Same as now but brighter.

25 cents. Bright yellow, with name and value in blue
White paper.

30 cents. Green. Name and value, violet. White paper.

50 cents. Black. Name and value, violet. White paper.

R. 1. Purple, on yellow paper.

Rs. 2. Black. Name and value red, on yellow paper.

Rs. 5. Black, on green paper.

Rs. 10. Purple. Name and value black, on red paper.

Rs. 20. Black. Name and value red, on blue paper.

Rs. 50. Purple, on white paper.

Rs. 100. Black, on white paper.

Rs. 500. Green, on white paper.

In our last issue we omitted to mention that the colour of the 10 cents stamp is now all sage green.

DOMINICA.—3d. First time on ordinary paper.

EAST AFRICA AND UGANDA PROTECTORATES.—1, 10, 12, 15, 25, 50 and 75 cents; 1, 2, 3, 4, 5, 10, 20 and 50 rupees.

In adopting the Universal Colour Scheme, 10 cents has been taken to represent 1½d., 12 cents 2d., 25 cents 4d., 50 cents 8d., 75 cents 1s., R. 1 1s.

The remaining values are as follows :—

	KEY.	BORDER.	PAPER.
Rs. 2.	Red.	Black.	Blue.
Rs. 3.	Blue Purple.	Green.	White.
Rs. 4.	Red.	Green.	Yellow.
Rs. 5.	Blue.	Purple.	White.
Rs. 10.	Red.	Green.	Green.
Rs. 20.	Black.	Purple.	Red.
Rs. 50.	Red.	Green.	White.

GIBRALTAR.—2s., 4s., 8s. and £1.

GILBERT AND ELLICE ISLANDS PROTECTORATE.—1d., 2d., 2½d., 4d., 2s., 2s. 6d. and 5s. (old D.L.R.).

JAMAICA.—2d. and 1s. (Nyasaland type).

The new design for the 2s. and 5s. stamps is shown in the Judicial stamps, but has not yet been issued without the overprint.

LEEWARD ISLANDS (sent to Antigua).—2d., 3d., 6d. and 1s.

NORTHERN NIGERIA.—½d., 1d., 2d., 3d., 4d., 5d., 6d., 9d., 1s., 2s. 6d., 5s., 10s. and £1.

The 9d. and £1 stamps are new values. The former is printed in the colours allocated to 10d.

ST. HELENA.—½d., 1d., 2d., 2½d., 4d., 6d., 8d., 1s. and 2s.

The 4d. and 6d. are similar to the existing issue, but the remaining values are of the large size and limited to postal use. The 2½d. stamp is from the "Wharf" keyplate and the view in every case is printed in black and the border in the colour appropriated to each duty on the colour scheme. Only the 4d. and 6d. values are on surfaced paper.

SOMALILAND PROTECTORATE.—1, 2, 4 and 6 annas and 1 rupee.

The 2 anna stamp is still on surfaced paper.

SOUTHERN NIGERIA.—½d, 1d., 2½d., 3d., 4d., 6d., 1s., 2s. 6d., 5s., 10s. and £1.

STRAITS SETTLEMENTS.—5 and 10 cents, and \$500.

In St. Vincent it has been notified for general information that St. Vincent Postage Stamps bearing the head of His late Majesty King Edward the Seventh, together with all other stamps of the present issue, will be withdrawn from circulation on the 1st day of January, 1913. The remainders will be destroyed.

NEW HEBRIDES CONDOMINIUM.—The stamps of the French series will no longer be on sale officially in Paris, but will be obtainable in the same way as the English series, by direct application to the Postmaster at Vila, New Hebrides.

Book Received.

"ST. HELENA."—By Fred J. Melville. Published by the *Melville Stamp Books*, 47 Strand. 6d. net.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- MR. G. F. M. ENNIS (Chief Justice, Uganda), Puisne Judge, Ceylon.
- MR. R. B. RODEN (Police Magistrate, Barbados), Chief Justice, St. Vincent.
- MR. W. A. RUSSELL (Crown Advocate, Uganda), King's Advocate, Cyprus.
- MR. D. KINGDON (Legal Assistant, Gambia), Crown Advocate, Uganda.
- MR. C. P. HUGGINS (Clerk of the Courts, Jamaica), Stipendiary Magistrate, Trinidad.
- MR. H. C. MORCOM (Deputy General Manager of Railways, Gold Coast), General Manager of Railways, Sierra Leone.
- MR. P. L. H. ARCHER (Postmaster-General, Southern Nigeria), Comptroller of Customs, Gold Coast.
- MR. A. C. KNOLLYS (First Assistant Secretary, Uganda), Assistant Colonial Secretary, Gambia.
- MR. C. W. DUNCAN (District Inspector of Police, British Guiana), Deputy Inspector-General of Police, Mauritius.
- MR. F. T. G. TREMLETT (Sub-Inspector of Constabulary, Jamaica), Inspector of Police, Mauritius.
- MR. R. C. CORFIELD (Assistant Resident, Northern Nigeria), Officer Commanding, Camel Corps, Somaliland.
- MR. C. de S. DUNN (late Constable, South African Constabulary), Police Officer, Camel Corps, Somaliland.
- DR. T. A. DOWSE (District Commissioner and Medical Officer, Caicos Islands), Medical Officer, West African Medical Staff.
- MR. J. I. LAUDER (Clerk to Commissioner, Montserrat), Assistant Receiver-General, Gambia.

BENSON'S

NEW MODEL—EXTRA THIN "FIELD" WATCH.

BEST LONDON MADE HALF CHRONOMETER.

Breguet Sprung and Adjusted for all climates. The Best Watch for Travellers, with improvements only to be found in Benson's make. 18-carat Gold Cases, any style, rich monogram included,

£25; in Silver, £15.

An owner writes: "It is a watch of incomparable excellence."

For men of active life the "Field" is the Watch beyond all others.

The Economical and Equitable

"Times" Monthly Payment System

IS AVAILABLE.

Illustrated Book No. 1 of Watches from £2. Chains and Rings (with size card), &c., post free.

62 & 64, LUDGATE HILL, E.C.

AND 25, OLD BOND STREET, W.



UNWATCHED BUOY AND BEACON LIGHTS. WIGHAM'S PATENT.

IMPROVED
DUPLEX
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS LTD., STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."

A B C Code, 5th Edition.

G. GARNETT & SONS, Ld.,

WORSTED & WOOLLEN MANUFACTURERS,
APPERLEY BRIDGE, YORKSHIRE,
ENGLAND.

MANUFACTURERS OF
PURE INDIGO SERGES,
SUNPROOF SUITINGS
AND
FOREIGN SERVICE FLANNELS.

CONTRACTORS TO ALL
H.M. GOVERNMENT OFFICES.

THE HOME OF
“GARBIRNETT” AND
“GARBIRCORD” REGD.

The ideal cloth for hard wear, sports and all out-door purposes; made in white, cream, khaki, drabs, and all other up to date shades. Remarkable for strength and lightness. Rainproofed.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ANDERSON, A. ...	14 Nov., '12	HINSON, Capt. W. ...	24 Dec., '12
ALLAN, Dr. K. B. ...	6 Dec., '12	HAY, Dr. M. B. ...	16 Dec., '12
BREWER, H. W. ...	7 Jan., '13	HIGHAM, R. ...	12 Dec., '12
BRITTON, J. A. ...	2 Nov., '12	HULTON, J. ...	28 Oct., '12
BURNS, W. ...	7 Nov., '12	HOBBS, G. ...	19 Oct., '12
BERINGER, Dr. F. J. A. ...	11 Dec., '12	HENDERSON, R. H. ...	14 Oct., '12
BARTON, P. F. ...	4 Oct., '12	HARRISON, E. L. ...	12 Oct., '12
CALLAWAY, H. N. ...	12 Oct., '12	HOBBS, H. J. ...	14 Nov., '12
Craggs, G. H. ...	1 Nov., '12	HEARSON, J. G. ...	20 Oct., '12
CONCANNON, J. ...	8 Nov., '12	HAMILTON, Dr. H. F. ...	12 Oct., '12
CROFT, C. ...	24 Dec., '12	INGRAM, Dr. A. ...	1 Nov., '12
CAMPBELL, R. C. ...	24 Oct., '12	IRVINE, Major R. A. ...	7 Nov., '12
DALE-GLOSSOP, Capt. H. ...	7 Nov., '12	Junior Naval & Military Club, 96, Piccadilly, W.	
EWALD, Capt. F. C. F. ...	30 Oct., '12	JOHNSTON, J. ...	31 Dec., '12
FULLER, F. C., C.M.G., Travellers Club, Pall Mall, S.W.	24 Nov., '12	KNOWLES, Dr. B. ...	13 Dec., '12
FERGUSON, B. ...		LEES, Capt. E. F. W. ...	7 Oct., '12
FELL, T. E. ...	1 Dec., '12	LE FANU, Dr. C. V. ...	5 Nov., '12
Sports Club, St. James' Square, S.W.		Sports Club, St. James' Square, S.W.	
GALE, E. E. ...	8 Oct., '12	LORENA, Dr. A. C. ...	2 Jan., '13
GOODMAN, T. ...	14 Oct., '12	LONGHURST, F. H. ...	13 Dec., '12
GARLAND, R. V. ...	5 Nov., '12	MIGEOD, F. W. H. ...	19 Jan., '13
GRIMSHAW, H. C. W. ...	14 Oct., '12	c/o Messrs. Cox & Co., 16, Charing Cross, S.W.	
c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.		MILSON, H. H. ...	9 Dec., '12
GRAHAM, C. H. ...	9 Dec., '12	MILLER, J. R. A. ...	20 Oct., '12

GOLD COAST—continued.

McMULLIN, A. J. F. ...	3 Dec., '12	SMYLY, Sir P. C. ...	31 Dec., '12
MARSHALL, J. H. ...	3 Oct., '12	SHARMAN, J. D....	13 Jan., '13
MORCOM, H. C. ...	19 Oct., '12	SANDERS, J. D. G.	28 Nov., '12
MADDOCK, J. H. ...	24 Nov., '12	SHARP, N. H. ...	12 Oct., '12
McDONALL, Dr. J. C. S.	10 Oct., '12	THORNE, G. H. ...	14 Oct., '12
NICHOLS, J. E. ...	22 Oct., '12	TREWIN, H. L. ...	28 Oct., '12
OPIE, G. ...	1 Nov., '12	WEBB, C. E. ...	7 Oct., '12
PETTIT, C. W. ...	29 Dec., '12	WADE, Dr. W. M. ...	18 Oct., '12
QUINN, T. ...	8 Oct., '12	WELMAN, C. W. ...	8 Oct., '12
RATTRAY, R. S....	14 Nov., '12	WRIGHT, G. W. F.	8 Oct., '12
REECE, E. B. ...	14 Nov., '12	WARDEN, Capt. E. O.	14 Oct., '12
ROSS, H. ...	23 Dec., '12	WILSON, R. ...	22 Oct., '12
RAINSFORD, W. R.	27 Dec., '12	WILLIAMS, P. ...	27 Dec., '12
RUSSELL, J. E. ...	31 Dec., '12	WYPER, J. ...	27 Dec., '12
REEVES, J. ...	31 Dec., '12	WHITAKER, J. R. ...	31 Dec., '12
RICE, Dr. T. E. ...	19 Dec., '12		
Sports Club, St. James'			
Square, S.W.			

SIERRA LEONE.

AYLMER, G. ...	Due back	KNIGHT, W. R. ...	5 Nov., '12
	16 Nov., '12	LEES, A. G. ...	21 Nov., '12
BERRY, W. ...	3 Dec., '12	Le MESURIER, Capt. F. N.	31 Dec., '12
BEATTY, K. J. ...	14 Oct., '12	LEAN, R. ...	10 Oct., '12
c/o Standard Bank of		McALLISTER, Miss M. M.	Due Back
South Africa, Ltd., 10,			25 Oct., '12
Clement's Lane, E.C.		MEGGETT, A. ...	21 Oct., '12
BRADSHAW, A. S. ...	14 Oct., '12	MANGER, E. V. ...	24 Oct., '12
CLEMENS, P. W....	5 Nov., '12	c/o Messrs Holt & Co.,	
CULLEN, A. J. ...	7 Jan., '13	3, Whitehall Place,	
FINCH, H. S. ...	14 Oct., '12	S.W.	
FORREST, Miss M. ...	22 Oct., '12	PRICE, G. W. ...	14 Nov., '12
HODGKINSON, J....	21 Nov., '12	STANLEY, G. ...	11 Oct., '12
HUNT, R. L. ...	23 Oct., '12	STEVENS, J. ...	28 Nov., '12
HAMILTON, F. H. ...	7 Nov., '12	TODD, J. E. ...	7 Jan., '13
c/o National Bank of		TINLING, J. A. ...	9 Dec., '12
South Africa, Ltd.,		WOOD, Dr. J. G. ...	11 Nov., '12
Circus Place, London		WARREN, Lt.-Col. H. G.	24 Nov., '12
Wall, E.C.		WILKINSON, R. W. H....	7 Nov., '12
JENKINS, E. D. ...	23 Nov., '12	WHITE, R. ...	11 Oct., '12
KEILLER, E. W. ...	5 Nov., '12	WILLOUGHBY, E. D. ...	11 Oct., '12

GAMBIA.

GALWAY, Sir H. L.,	19 Nov., '12	INGLIS, Capt. A. M. ...	22 Nov., '12
K.C.M.G.		KENNEDY, Dr. A. F. ...	24 Nov., '12
HARLEY, Dr. J. A. ...	18 Nov., '12	KINGDON, D. ...	Due back
HUME, E. A. ...	Due back		1 Nov., '12
Union Club, Trafalgar		McCALLUM, J. K.	Steamer leaving
Square, S.W.			12 Oct., '12
HOPKINSON, Dr. E., D.S.O.	29 Oct., '12	PRYCE, H. L., C.M.G.	Steamer leaving
			12 Oct., '12

GAMBIA—continued.

SPICER-SIMSON, Lt. G. B., R.N.	11 Oct., '12	THURSTON, Capt. V. B.	9 Oct., '12
SPROSTON, Capt. H. F. <i>Steamer leaving</i>		WOODS, T.	8 Nov., '12
Junior Naval and Military Club, 96, Piccadilly, W.	12 Oct., '12		

SOUTHERN NIGERIA.

ALEXANDER, C. M. ...	15 Nov., '12	DANIEL, W.	19 Oct., '12
AMBROSE, CAPT. W. G. ...	5 Nov., '12	DELIVERA, C.	14 Nov., '12
ALEXANDER, J.	27 Nov., '12	DUNN, S. W.	8 Oct., '12
ANGUS, F. L.	20 Dec., '12	DALE, C. E.	17 Oct., '12
ANDERSON, J.	5 Nov., '12	ELGEE, Capt. C. H. ...	12 Oct., '12
BURNETT, A.	1 Nov., '12	ECHLIN, R. F. W. ...	7 Nov., '12
BARHAM, C. H.	17 Nov., '12	FOSTER, E. W.	11 Nov., '12
BOURNE, V. C.	7 Jan., '13	FAIRHURST, W. C. ...	23 Oct., '12
BAILEY, Dr. J. C. M. ...	4 Oct., '12	FIRTH, O. W.	7 Jan., '13
BLAKELY, J. F.	9 Dec., '12	FREELAND, H.	20 Dec., '12
Royal Colonial Insti- tute, Northumberland Avenue, W.C.		FISHER, W.	22 Oct., '12
BALNAVE, W. F.	4 Dec., '12	FAIRCLOUGH, W. K. ...	28 Oct., '12
BARKER, E.	31 Dec., '12	FLEMING, A.	14 Oct., '12
BLACKSHAW, W.	20 Dec., '12	GRAY, Maj., W. B. ...	26 Dec., '12
BURROWES, T. F.	26 Nov., '12	GILMAN, E. C. V. ...	26 Nov., '12
BARLOW, R. J.	5 Nov., '12	GAUNT, R. F.	7 Jan., '13
BURKE, A. A.	14 Oct., '12	GILL, J. O.	14 Oct., '12
BEAR, W. A. S.	22 Oct., '12	GUGGISBERG, Maj. F. G.	<i>Due back</i>
BUCHANAN, R. A.	14 Nov., '12		24 Nov., '12
BROWNING, F. S.	6 Nov., '12	GREEN, J. E.	3 Dec., '12
BEDWELL, H.	14 Nov., '12	GRAHAM, Dr. W. M. ...	28 Oct., '12
c/o Sir C. R. McGregor, Bart., & Co., 25, Charles Street, S.W.		GLEDALL, E. D.	3 Oct., '12
BIDEN, C. E.	14 Nov., '12	GRAY, Dr. G. M.	31 Dec., '12
BEATTY, G.	20 Dec., '12	HARRIS, H.	23 Dec., '12
c/o Belfast Bank, Donegal Square.		HOWARD, F. C.	16 Oct., '12
BALDWIN, W. F.	7 Jan., '13	HIVES, F.	24 Oct., '12
COTTON, J. C.	14 Oct., '12	HERON, R. M.	8 Oct., '12
CHEETHAM, Lieut. H. C. V. B., R.N.R.	22 Oct., '12	Junior United Service Club, Charles Street, S.W.	
CROOKENDEN, J.	3 Dec., '12	HALL, W.	26 Dec., '12
CORDON, C. G. W.	14 Oct., '12	HUMFREY, Capt. L.E.H.	29 Dec., '12
CROSS, R. G.	11 Dec., '12	HAWES, A. B.	
COOPER, J.	7 Jan., '13	HOMAN, A. R.	
CHILD, Capt. H. A., R.A., C.M.G.	31 Dec., '12	HEWSON, C. L.	7 Jan., '12
COWAN, A.	31 Dec., '12	HARRIS, H. G. E. ...	31 Dec., '12
DARE, J.	29 Dec., '12	HEWITT, W. S.	2 Oct., '12
DAVIES, D. E.	7 Jan., '13	HOOD, Dr. T.	29 Oct., '12
DITTON, W. B.	26 Nov., '12	HUTTON, Dr. A.	8 Oct., '12
DREWE, Miss A. E. ...	6 Dec., '12	HILSDON, J. E.	14 Oct., '12
		HODGSON, G. F.	14 Oct., '12
		INSLEY, T. B.	14 Nov., '12
		JACKSON, E.	21 Nov., '12
		JONES, J. C.	9 Dec., '12
		JUDGE, W.	1 Dec., '12

SOUTHERN NIGERIA—continued.

JONES, A. ...	7 Jan., '13	STEEL, G. E. ...	4 Oct., '12
JONES, T. C. ...	14 Nov., '12	SELANDER, J. E. ...	24 Nov., '12
KENTISH, H. E. ...	<i>Due back</i>	SINGLE, Miss L. ...	27 Oct., '12
	10 Nov., '12	SANDERSON, H. ...	31 Dec., '12
KINGHORN, J. M. B. ...	19 Dec., '12	SARSON, R. T. ...	<i>Due back</i>
KNIGHTS, E. J. ...	7 Jan., '13		3 Nov., '12
LUBBOCK, E. N. ...	20 Dec., '12	SPROSTON, S. W. ...	30 Dec., '12
LAMBERT, J. A. P. ...	29 Dec., '12	THOMAS, M. L. ...	25 Nov., '12
LUMLEY, G. ...	24 Oct., '12	THOMPSON, H. N. ...	26 Nov., '12
McKAY, Dr. G. H. ...	21 Nov., '12	c/o Messrs. H. S. King	
MASSY, H. P. ...	20 Dec., '12	& Co., 9, Pall Mall, S.W.	
MILLS, H. M. ...	17 Nov., '12	TABOR, F. L. ...	17 Oct., '12
MULLIN, A. ...	<i>Due back</i>	TAW, M. L. ...	17 Jan., '13
	3 Nov., '12	TALFOURD-JONES, F. ...	7 Jan., '13
McKENZIE, W. ...	3 Dec., '12	THOMPSON, E. J. ...	26 Nov., '12
NORTON-HARPER, Capt.	22 Oct., '12	THOMPSON, P. G. ...	26 Oct., '12
A. J. M.		THEXTON, A. ...	31 Dec., '12
OWEN, O. G. ...	21 Nov., '12	TYNDALL, W. H. ...	7 Nov., '12
PINNUCK, A. ...	8 Oct., '12	THOMPSON, Dr. F. B. ...	11 Nov., '12
PEGDEN, J. W. ...	1 Nov., '12	TAYLOR, Capt. B. H. W.	12 Oct., '12
PHILLIPS, L. H. ...	20 Dec., '12	Junior Naval and Military Club, 96, Piccadilly, W.	
PARTRIDGE, C. ...	5 Nov., '12	TAYLOR, V. B. ...	26 Nov., '12
PHILLIPS, J. ...	31 Oct., '12	THOMAS, E. N. ...	3 Nov., '12
PARE, A. E. ...		VAUGHAN, E. G. S. ...	21 Nov., '12
PICKELS, Dr. J. A. ...	10 Jan., '13	VETCH, C. F. ...	14 Oct., '12
PRYCE, H. F. F. ...	14 Jan., '13	WILSON, Lt. J. D., R.N.R.	3 Dec., '12
PAYNE, R. L. ...	5 Nov., '12	WILSON, D. E. ...	22 Oct., '12
PECK, R. W. ...	5 Dec., '12	c/o Messrs. Way & Co.,	
PALMER, E. C. ...	14 Oct., '12	11, Haymarket, S.W.	
c/o Sir C. R. McGregor,		WILLIAMS-THOMAS, F. S.	7 Jan., '13
Bart., & Co., 25, Charles		WADE, F. W. ...	4 Oct., '12
Street, S.W.		WATSON, W. R. ...	20 Oct., '12
PENNINGTON, A. R. ...	11 Dec., '12	WILLIAMS, J. ...	1 Dec., '12
RAIKES, R. D. N. ...	24 Oct., '12	WHEATLEY, R. S. ...	
Royal Societies' Club,		WHITING, W. A. ...	22 Oct., '12
St. James' Street, S.W.		WOLFF, Capt. C. H. ...	26 Nov., '12
ROBERTS, R. A. ...	4 Oct., '12	Sports Club, St. James' Square, S.W.	
ROBERTS, J. ...	20 Dec., '12	WILSON, H. ...	5 Nov., '12
ROSS, W. J. ...	14 Oct., '12	WATKINS, E. C. ...	5 Nov., '12
ROBERTS, D. ...	22 Oct., '12	YOUNG, T. A. ...	26 Nov., '12
STEWART-BROWN, J. P.	8 Oct., '12		
SELF, J. ...	16 Oct., '12		
SANDERS, E. ...	26 Oct., '12		

NORTHERN NIGERIA.

ANDERSON, P. A., ...	14 Oct., '12	BICKERS, A. A. ...	18 Nov., '12
ANDERSON, C. L. ...	10 Jan., '13	BLACKETT, E. J. ...	3 Dec., '12
BRICE-SMITH, H. M. ...	6 Oct., '12	BAILEY, J. E. ...	12 Oct., '12
BOOTH, Major C. A. ...	23 Nov., '12	BRIDGER, H. C. G. ...	18 Oct., '12
Junior United Service		CUMMINS, A. A. ...	22 Oct., '12
Club, Charles St., S.W.		CRANK, J. ...	28 Oct., '12

NORTHERN NIGERIA—continued.

CLARKE, J. C. O. ...	3 Dec., '12	ORMEROD, R. G. ...	1 Nov., '12
CHAPMAN, R. S. ...	9 Nov., '12	OLIVER, T. E. ...	18 Jan., '13
CHARTRES, J. ...	21 Nov., '12	PAUL, A. H. D....	11 Nov., '12
COCKBURN, Major J. B.	13 Nov., '12	PUTLAND, G. B. ...	14 Oct., '12
DUNNE, Miss S. ...	31 Oct., '12	PHILLIPS, T. B. ...	20 Dec., '12
DAVIES, W. ...	26 Nov., '12	Primrose Club, Park	
ELLIS, Major O. H. ...	9 Oct., '12	Place, St. James', S.W.	
ELLIS, Dr. M. F. ...	16 Mar., '13	PYKE, R. N. ...	4 Oct., '12
Royal Societies Club,		PARKER, Capt. J. C. ...	11 Oct., '12
St. James' St., S.W.		PRATT, J. W. ...	12 Oct., '12
FAGAN, Dr. J. P. ...	17 Oct., '12	PIRIE, Dr. G. J....	20 Oct., '12
FOWLE, C. H. ...	26 Nov., '12	POLLOCK, F. R. ...	9 Dec., '12
FRASER, W. K. ...	14 Oct., '12	Guards' Club, 70, Pall	
GASKIN, D. ...	22 Oct., '12	Mall, S.W.	
GORDON, Capt., C. F. ...	24 Nov., '12	PILLOW, C. N. ...	31 Dec., '12
Junior Naval and		RUXTON, Capt. U. F. ...	15 Oct., '12
Military Club, 96,		RYAN, H. B. ...	31 Oct., '12
Piccadilly, W.		SPOONER, G. H....	8 Oct., '12
GRAHAM, Dr. E. W. ...	29 Oct., '12	SIMPSON, Capt., J. M. ...	11 Oct., '12
GREENWOOD, J. O. ...	17 Oct., '12	SMITH, F. M. U. ...	17 Dec., '12
GEOGHEGAN, J. R. ...	3 Dec., '12	SMITH, R. S., R.N.,	2 Feb., '13
GUSH, H. ...	20 Dec., '12	SECCOMBE, Capt. G. ...	17 Nov., '12
GALLOWAY, J. ...	22 Nov., '12	Junior Naval and	
HOLLIS, D. ...	30 Nov., '12	Military Club, 96,	
HARE, C. E. ...	14 Nov., '12	Piccadilly, W.	
HAMILTON-BROWNE,		SCIORTINO, J. C. P. ...	18 Oct., '12
Major, W., D.S.O. ...	22 Oct., '12	SPEAR, H. B. ...	3 Oct., '12
HASTINGS, A. C. G. ...	31 Oct., '12	STEED, R. ...	6 Oct., '12
JONES, W. A. ...	14 Nov., '12	TRUMPER, Dr. W. A. ...	11 Nov., '12
JOHNSON, W. ...	7 Oct., '12	THORPE, J. W. ...	14 Oct., '12
JONES, A. W. ...	31 Oct., '12	VINCENT, J. W. ...	21 Nov., '12
JERVELAND, C. N. ...	3 Dec., '12	VICARS, W. G. ...	28 Oct., '12
JEFFREY, R. C. ...	31 Oct., '12	VAUGHAN, F. J. ...	12 Oct., '12
KERRISON, W. G. ...	29 Dec., '12	WIGHTURCK, C. ...	4 Oct., '12
KEENE, P. F. ...	28 Oct., '12	WALTON, Capt., W. J....	14 Oct., '12
LAWRANCE, Capt. A. S.	15 Dec., '12	WILEMAN, G. A. ...	9 Dec., '12
Bachelors' Club, Picca-		c/o Messrs. Way & Co.,	
dilly, W.		11, Haymarket, S.W.	
LANGWORTHY, H. W. ...	17 Feb., '13	WILLIAMS, R. G. ...	11 Oct., '12
LLOYD, R. A. ...	8 Oct., '12	WHINERAY, S. B. ...	10 Jan., '13
LYON, P....	28 Oct., '12	WILEMAN, J. L. ...	9 Oct., '12
MAULE, Capt., W. J. ...	29 Dec., '12	WILLIAMS, J. F. ...	12 Oct., '12
MCALLISTER, R. ...	23 Nov., '12	WESTALL, R. C. ...	3 Dec., '12
MATTHEWS, G. R. ...	14 Dec., '12	WINGATE, G. R. ...	31 Dec., '12
MAY, R. ...	24 Dec., '12	WOODHOUSE, C. A. ...	14 Nov., '12
MILLIGAN, J. ...	22 Oct., '12	WILL, J. P. ...	11 Oct., '12
MOLYNEUX, J. H. M. ...	4 Oct., '12	WILLIAMS, Dr., R. F. ...	12 Feb., '13
MANNING, Dr. F. ...	9 Oct., '12	New Club, Grafton	
O'BRIEN, P. ...	8 Oct., '12	Street, W.	
Bank of Nigeria, Ltd.,		WRIGHTSON, C. ...	8 Jun., '13
Norfolk St., Strand,			
W.C.			

EAST AFRICA.

AKERS, W. S. ...	9 Nov., '12	LOWSLEY, Dr. L. D. ...	18 Nov., '12
ACTON, W. B. ...	21 Nov., '12	MARSTON, Miss A. M. ...	9 Oct., '12
ALEXANDER, G. B. W. ...	31 Jan., '13	McDOUGALL, K. ...	8 Nov., '12
BOILEAU, E. K. ...	9 Feb., '13	MILTON, J. H. ...	26 Oct., '12
BRUCE, Lt. G. W., R.N.R.	5 Dec., '12	MURRAY, P. J. A. ...	18 Feb., '13
BRAMWELL, W. J. ...	25 Oct., '12	McINTYRE, D. J. ...	<i>Due back</i>
BARLOW, W. ...	1 Nov., '12		19 Jan., '13
BROWN, L. ...	9 Oct., '12	MORTON, E. ...	28 Nov., '12
CUMBERBATCH, H. C. ...	12 Nov., '12	NOON, J. H. ...	15 Nov., '12
CHALK, C. H. ...	<i>Steamer due</i>	OWEN-PRICHARD, Dr. W.	4 Dec., '12
	4 Nov., '12	PUGH, J. ...	28 Feb., '13
CAMPBELL, C. H. ...	13 Nov., '12	PANTING, C. J. B. ...	<i>Due back</i>
CHEVALLIER, Dr. C. L. ...	3 Feb., '13		30 Dec., '12
DICKINSON, W. ...		PICKERING, G. J. ...	7 Dec., '12
DOBBS, C. M. ...	20 Oct., '12	PATTERSON, J. ...	21 Dec., '12
EDMONDSON, R. ...	14 Oct., '12	Scottish Conservative	
EWART, R. M. ...	20 Oct., '12	Club, Edinburgh	
EASTWOOD, B. ...	29 Mar., '13	PHILLIPS, Capt. G. F. ...	21 Oct., '12
ESPIE, H. P. ...	6 Dec., '12	PLATTS, W. A. F. ...	7 Oct., '12
GREGORY, C. W. ...	8 Nov., '12	ROBERTSON, J. S. ...	27 Oct., '12
GILES, Dr. J. L. ...	8 Nov., '12	RADFORD, Dr. W. J. ...	25 Nov., '12
GOSLING, J. T. ...	23 Nov., '12	c/o Messrs. Cox & Co.,	
HEALY, J. ...	23 Dec., '12	16 Charing Cross, S.W.	
HERNE, D. E. ...	<i>Due back</i>	SUTCLIFFE, V. ...	28 Dec., '12
	21 Oct., '12	SPENCER, C. E. ...	21 Feb., '13
HOPTON, H. C. ...	<i>Steamer due</i>	STEVENS, D. H. ...	<i>Due back</i>
Sports' Club, St.	11 Oct., '12		14 Nov., '12
James' Square, S.W.		SAUNDERS, H. C. R. ...	19 Dec., '12
HAMILTON, R. W. ...	13 Oct., '12	SAUNDERS, Capt. A. C. ...	23 Dec., '12
HUMPHRY, R. W. ...	7 Oct., '12	c/o Messrs. Cox & Co.,	
Higgins, E. SCOTT ...	22 Oct., '12	16 Charing Cross, S.W.	
c/o Messrs. H. S. King		SOTHAM, E. G. ...	20 Nov., '12
and Co., 9 Pall Mall,		TANNER, W. H. ...	14 Oct., '12
S.W.		TAYLOR, C. E. ...	14 Oct., '12
ISAAC, F. W. ...	31 Oct., '12	TANNAHILL, A. C. ...	6 Dec., '12
JOHNSON, Dr. J. T. C. ...	11 Dec., '12	WOLFFE, P. E. ...	9 Oct., '12
JEBB, R. R. H. ...	1 Dec., '12	WILLIAMS, J. H. ...	9 Oct., '12
KNAPMAN, G. W. ...	12 Oct., '12	WYE, A. ...	14 Jan., '13
KENYON-SLANEY, N. A.	7 Jan., '13	WILSON, E. G. ...	24 Jan., '13
LYNDE, W. M. ...	31 Jan., '13	WHISH, Lt. C. B., R.N.R.	2 Mar., '13
LOW, W. N. ...	31 Jan., '13	YOUNG, H. A. ...	7 Oct., '12

UGANDA.

ALLEN, R. C. ...	6 Nov., '12	CLIFFORD, S. ...	5 Dec., '12
APTHORP, Capt. S. E.	<i>Steamer leaving</i>	c/o Messrs. Cook & Son,	
	11 Oct., '12	Ludgate Circus, E.C.	
BROWNING, S. ...	8 Nov., '12	DUGDALE, Capt. G. F. ...	16 Feb., '13
BALDOCK, W. P. ...	22 Nov., '12	DAIN, C. K. ...	17 Dec., '12
BAINES, D. L. ...	21 Dec., '12	EDEN, C. W. Guy ...	4 Mar., '13
COLLYNS, Dr. J. M. ...	24 Feb., '13	ELLIS, G. P. ...	5 Nov., '12
CARR, S. H. ...	10 Jan., '13	FLINT, Capt. F. A. ...	6 Nov., '12
CHAPMAN, G. ...	13 Dec., '12	c/o Messrs. Cox & Co.,	
COOPER, P. W. ...	8 Nov., '12	16 Charing Cross, S.W.	

UGANDA—continued.

FRASER, Capt. J. ...	23 Jan., '13	NICOLL, F. B. ...	22 Dec., '12
GLEDHILL, B. S. ...	22 Jan., '13	PEARCE, C. F. ...	6 Nov., '12
HUTCHINS, E. ...	6 Nov., '12	PEARSON, R. J. ³ ...	26 Mar., '13
HAWLEY, B. W....	4 Jan., '13	REYNOLDS, F. ...	6 Nov., '12
JACKSON, F. J., C.B.,	25 Nov., '12	RUSSELL, J. P. ...	8 Nov., '12
C.M.G.		SCOTT, E. L. ...	6 Nov., '12
KNOLLYS, A. C....	17 Dec., '12	STRATHAIRN, Dr. G. C....	8 Oct., '12
KNIGHT, H. G. ...	9 Feb., '13	SMITH, G. D., C.M.G. ...	19 Oct., '12
JANE, Dr. G. ...	17 Oct., '12	SKINNER, J. ...	13 Dec., '12
Sports' Club, St.		SILVER, Capt. W. H. ...	Due back
James' Square, S.W.		Junior Naval and	8 Dec., '12
LYLE, G. ...	20 Nov., '12	Military Club, 96,	
LEEKE, R. H. ...	17 Feb., '13	Piccadilly, W.	
LAWRANCE, Capt. E. H. T.	16 Nov., '12	SINGLEHURST, S. G. ...	11 Dec., '12
Junior Naval and		SULLIVAN, C. E. E. ...	4 Jan., '13
Military Club, 96,		THORNYCROFT, Capt. E.	17 Jan., '13
Piccadilly, W.		G. M.	
MAULKINSON, R. J. ...	8 Dec., '12	TOLLAND, J. P. ...	6 Nov., '12
MOORE, H. L. ...	3 Feb., '13	VAN DER VELDE, M. A. M.	16 Nov., '12
McMAHON, N. C. M. ...	11 Dec., '12	WESTRAY, F. E....	6 Nov., '12
McCLURE, A. ...	6 Nov., '12	WOMBWELL, W. H. ...	14 Nov., '12
NEWMAN, F. H. C. ...	7 Dec., '12		

NYASALAND.

ANDERSON, G. B. ...	17 Nov., '12	MURRAY, R. H. ...	22 Nov., '12
BEVES-NORTHERN, A. W.	8 Jan., '13	MACDONALD, R....	1 Mar., '13
BALLARD, E. ...	6 Nov., '12	Royal Societies' Club,	
BAINBRIDGE-RITCHIE, G.	29 Oct., '12	St. James, St., S.W.	
le H. K., Thatched		MANNING, G. F. ...	12 Feb., '13
House Club, St. James'		RHOADES, E. L. ...	30 Jan., '13
St., S.W.		STEVENS, Lt.-Col. H. W.	9 Jan., '13
FYSON, P. W. ...	18 Oct., '12	SANDERSON, Dr. G. M. ...	25 Oct., '12
HEWITT-FLETCHER, S. ...	9 Dec., '12	TUCKETT, G. H....	4 Feb., '13
JEPSON, A. H. ...	15 Dec., '12	VERRY, C. T. ...	4 Nov., '12
KENNEDY, C. G. ...	11 Jan., '13	WEBB, F. ...	13 Oct., '12
KEYTE, V. J. ...	23 Dec., '12		

SOMALILAND.

BYATT, H. A., C.M.G. Steamer leaving		SANDERSON, L. ...	Due back
11 Oct., '12		c/o Messrs. Holt & Co.,	21 Nov., '12
MILLARD, T. ...	Due back	3, Whitehall Place,	
10 Oct., '12		S.W.	

BECHUANALAND.

SURMON, Capt. W. B. ...	31 Dec., '12	c/o Standard Bank of South Africa.	
Ltd., 10 Clement's Lane, E.C.			

BASUTOLAND.

TOMBLESON, Miss E. J....	31 Oct., '13
--------------------------	-----	-----	--------------

SWAZILAND.

MARWICK, A. J. ...	31 Oct., '12	SMYTH, J. J. ...	25 Jan., '13
--------------------	--------------	------------------	--------------

BRITISH HONDURAS.

COLLET, W. ...	15 Dec., '12	STRANGE, H. P. C. ...	14 Nov., '12
HOAR, W. H. ...	4 Jan., '13	WINTER, Dr. W. C. P. ...	4 Jan., '13

FIJI.

ANDERSON, Miss M. C....	22 May '13	MONTAGUE, A. ...	19 Feb., '13
MARSDEN, A. ...	14 Feb., '13	MCCAW, G. T. ...	7 Dec., '12

FALKLAND ISLANDS.

KIRWAN, A. C. ...	11 Dec., '12	TOWNSON, H. W. ...	16 Nov., '12
-------------------	--------------	--------------------	--------------

CYPRUS.

BAYLEY, Maj. G. C. ...	29 Jan., '13	HARVEY, G. J. ...	3 Oct., '12
CLEVELAND, Dr. R. A....	10 Oct., '12	ORR, Capt. C. W. J. ...	23 Oct., '12
Royal Colonial Institute, Northumberland Avenue, W.C.		Army and Navy Club, Pall Mall, S.W.	
CADE, C. S. ...	4 Dec., '12	WOODHOUSE, C. B. ...	2 Nov., '12
DAY, G. A. ...	31 Oct., '12	c/o Messrs.Glyn, Mills,	
FENN, J. C. D. ...	29 Nov., '12	Currie & Co., 67, Lombard Street, E.C.	

BARBADOS.

ALLDER, W. H....	1 Dec., '12	HARRISSON, S. T., C.M.G.	17 Nov., '12
BRIGGS, Rev. F. J.	18 Nov., '12		

LEEWARD ISLANDS.

JONES, G. A. ...	21 Nov., '12	WEIL, V. M. ...	26 Oct., '12
------------------	--------------	-----------------	--------------

GRENADA.

COMMISSIONG, T. M.	28 Oct., '12	O'NEALE, Dr. R. O.	Steamer leaving
HATTON, Dr. E. F.	Steamer leaving 9 Oct., '12		6 Nov., '12

DOMINICA.

O'FARRELL, P. ...	31 Oct., '12	RUGGLES, N. C. ...	19 Oct., '12
-------------------	--------------	--------------------	--------------

ST. VINCENT.

MASON, Dr. G. B. ...	26 Nov., '12	MONPLAISIR, V. J. ...	9 Dec., '12
West India Club, Howard Hotel, Norfolk Street, W.C.		West India Club, Howard Hotel, Norfolk Street, W.C.	

ST. LUCIA.

MURPHY, M. A.Steamer leaving	23 Oct., '12
-------------------	--------	--------------------	--------------

S. KITT'S NEVIS.

FRETZ, Dr. W. H.	24 Nov., '12
----------------------	--------	--------	--------------

ST. HELENA.

ARNOLD, W. J. J. ...	17 Jan., '13	British Empire Club, 12, St. James' Square, S.W.	
----------------------	--------------	--	--

BRITISH SOLOMON ISLANDS PROTECTORATE.

EDGE-PARTINGTON, T. W. 22 Nov., '12

JAMAICA.

BRADBURY, P. J. O'Leary	1 Nov., '12	KER, Dr. J. E. ...	26 Oct., '12
BROWNE, P. J. ...	14 Nov., '12	MARSDEN, A. ...	14 Feb., '13
BURKE, J. M. ...	2 Nov., '12	MEIKLE, Dr. M. M. ...	2 Nov., '12
COX, E. F. H. ...	6 Feb., '13	MOSELEY, Dr. C. A. ...	29 Nov., '12
CORK, P. C., C.M.G. ...	28 Dec., '12	ORPEN, R. T. ...	10 Nov., '12
GORDON, R. A. M. ...	3 Dec., '12	SOLOMON, M. C....	22 Nov., '12
West India Club, Howard Hotel, Nor- folk Street, W.C.		West India Club, Howard Hotel, Nor- folk Street, W.C.	
JUDAH, B. T. ...	17 Oct., '12	WHITTINGHAM, Miss ...	10 Nov., '12
KERSHAW, Lt.-Col. A. E., Junior United Service Club, Charles St., S.W.	2 Nov., '12		

TRINIDAD.

ACTON, E. V. ...	2 Dec., '12	KEATING, W. ...	22 Oct., '12
ACHAM, A. ...	22 Oct., '12	LE HUNTE, Sir G. R., <i>Steamer leaving</i> G.C.M.G.	20 Nov., '12
BELL, A. G. ...		LORD, R. C. ...	23 Oct., '12
BOUCAUD, Dr. A. A. ...	17 Dec., '12	LUCIE-SMITH, Sir A. <i>Steamer leaving</i>	9 Oct., '12
BURROWS, A. ...	19 Nov., '12	MARSDEN, A. ...	14 Feb., '13
BROWN, J. ...	18 Nov., '12	MCINROY, J. ...	19 Nov., '12
COOMBS, W. H. ...	8 Nov., '12	SCHULT, Dr. R. ...	5 Nov., '12
c/o The Manager, London & South Wes- tern Bank, Ltd., South Kensington		SAUNDERS, Capt. J. B....	10 Nov., '12
CASSIDY, M. P. ...	18 Dec., '12	c/o Messrs. H. S. King & Co., 65, Cornhill, E.C.	
DE VERTEUIL, A. ...	18 Dec., '12	SLYNE, D. ...	5 Nov., '12
HANCOCK, H. H. ...	14 Jan., '13	SMITH, W. B. ...	21 Oct., '12

BRITISH GUIANA.

BOWHILL, J. A. P. ...	6 Feb., '13	MAY, F. H. P. ...	3 Feb., '13
BOOTH, J. R. ...	6 Nov., '12	MOULDER, E. R. D. ...	15 Jan., '13
COX, C. T. ...	20 Dec., '12	OZZARD, Dr. A. T. ...	25 Nov., '12
Royal Colonial Insti- tute, Northumberland Avenue, W.C.		POOK, R. C. ...	20 Feb., '13
CRAVEN, Dr. A. J. ...	30 Dec., '12	PARKER, W. A. ...	15 Dec., '12
De FREITAS, Dr. G. B.	31 Mar., '13	ROBSON, W. J. ...	17 Dec., '12
De RINZY, Col. G. C. <i>Steamer leaving</i>	23 Oct., '12	RIDLEY, A. A. ...	23 Oct., '12
FRASER, N. L. ...	8 Feb., '13	VON WINCKLER, Dr. W. J.	27 Nov., '12
GAINFORT, B. ...	3 Feb., '13	West India Club, Howard Hotel, Nor- folk Street, W.C.	
HILL, J. K. D. ...	22 Dec., '12	WILSON, R. W. & H. ...	9 Apr., '13
HODGE, L. P. ...	29 Oct., '12	WALLBRIDGE, H. A. ...	14 July, '13

MAURITIUS.

BONCHERAT, J. ...	23 Mar., '13	FOSTER, C. ...	14 Feb., '13
BEAUGEARD, H. M. A.	21 Oct., '12	ROCHERY, L. G. ...	29 Mar., '13
DAWSON, J. W. ...	14 Nov., '12	YARDIN, M. ...	29 Jan., '13
EDWARDS, C. H. ...	13 May, '13		

SEYCHELLES.

BRADLEY, Dr. J. T. ...	12 Nov., '12	SMITH, W. H. ...	8 Nov., '12
POUGNET, G. ...	10 Jan., '13		

STRAITS SETTLEMENTS.

BUCKELL, C. P. ...		McGUINNESS, P. ...	14 Mar., '13
BISHOP, D. A. ...	25 July, '13	MOODY, J. A. ...	8 Apr., '13
BOURNE, F. G. ...	20 Mar., '13	NIALL, M. J. M. ...	23 Jan., '13
BADDELEY, F. M. ...	21 Jan., '13	NICOL, C. H. ...	18 Feb., '13
BAILEY, A. W. ...	11 Dec., '12	O'NEILL, M. ...	28 Dec., '12
COWAN, J. C. ...	10 Nov., '12	PERRETT, H. F. ...	28 Mar., '13
CRAIG, W. ...	19 Feb., '13	PHILLIPS, C. M. ...	
CODRINGTON, S. ...	2 May, '13	ROBERTS, E. ...	24 Nov., '12
CONNOR, T. ...	28 Feb., '13	SAUNDERS, C. J. ...	29 Apr., '13
DYSON, C. V. ...	25 May, '13	SMITH, Miss S. B. ...	12 Dec., '12
EVANS, W. ...	31 Jan., '13	SMALLWOOD, H. A. ...	13 Apr., '13
FFORDE, F. C. ...		SMITH, A. G. ...	16 Mar., '13
FRY, R. S. ...	25 Nov., '12	SAVI, V. G. ...	9 Dec., '12
GREEN, P. R. J. ...	4 Feb., '13	THRELFALL, W. H. ...	Steamer due, 11 Nov., '12
HASKINS, W. J. ...			
HOWARD, T. ...		THORNTON, S. L. ...	28 Oct., '12
HOLDEN, G. ...	21 Jan., '13	WILKINSON, R. J., C.M.G. c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.	24 Jan., '13
HICKEY, L. ...	16 Mar., '13		
JOYCE, J. ...	17 May, '13	WEBSTER, J. K. ...	22 Nov., '12
KING, N. T. ...	8 Apr., '13		
LEWIS, O. E. ...	16 May, '13		

TANJONG PAGAR DOCK.

BARRETT, W. S. ...	7 Nov., '12	PAXTON, H. ...	28 Feb., '13
McLACHLAN, C. D. ...	5 Apr., '13	RAISON, H. ...	21 Feb., '13
NICHOLSON, J. R. ...		WRIGHT, W. ...	
PLUMB, A. J. ...	10 June, '13		

WEI HAI WEI.

WALTER, R. ...			16 Feb., '13
----------------	--	--	--------------

HONG KONG.

BLACKMAN, W. F. ...	5 Dec., '12	JACKS, P. ...	26 Nov., '12
BREWIN, A. W., C.M.G. c/o Bank of Liverpool, Ltd., Settle, Yorkshire	28 Nov., '12	KYNOCH, G. W. ...	31 Jan., '13
BOND, E. L. ...	15 Dec., '12	KEYT, Dr. F. T. ...	13 Feb., '13
BRETT, L. E. ...	30 Dec., '12	MOODY, J. ...	15 Dec., '12
BARRINGTON, J. H. ...	28 Feb., '13	NOLAN, N. G. ...	2 Apr., '13
COLEMAN, F. A. ...	31 Jan., '13	O'SULLIVAN, E. ...	2 Jan., '13
CLARKE, S. J. ...	16 Jan., '13	O'REGAN, J. ...	16 Jan., '13
CLARKE, H. G. ...	16 Jan., '13	PIERPOINT, E. J. ...	7 Mar., '13
COYSE, G. W. ...	2 Jan., '13	PATERSON, H. J. ...	24 Feb., '13
CRAIG, R. H. A. ...	24 Jan., '13	PEPPERELL, W. A. ...	16 May, '13
ELDRIDGE, J. E. ...	25 Mar., '13	RALPHS, E. ...	12 Mar., '13
FARRELL, U. A. ...	6 May, '13	SLOAN, Miss M. ...	15 Dec., '12
GARRETT, H. L. ...	23 Dec., '12	TUTCHER, W. J. ...	5 Apr., '13
GIPSON, G. ...	16 Jan., '13	TUTCHER, Mrs. E. ...	8 Apr., '13
GIBSON, A. ...	26 Mar., '13	UNWIN, W. J. ...	16 Jan., '13
HAZELAND, F. A. ...	Steamer due 15 Nov., '12	WATT, R. C. ...	24 Feb., '13

PERAK.

BOWEN, L. ...	12 Mar., '13	LAIDLAW, D. H. ...	29 May, '13
CANDLE, P. W. ...	15 Nov., '12	MOIR, W. H. ...	10 Dec., '12
HUNTER, P. N. ...	18 Dec., '12		

PAHANG.

BREWSTER, E. J. ...	24 Mar., '13	de Vos, A. E. E. ...	31 Jan., '13
BENNETT, H. L....	28 Jan., '13	DREW, J. S. ...	12 Jan., '13

SELANGOR.

GROVES, T. ...	3 June, '13	MCGREGOR, T. J. ...	12 May, '13
Royal Colonial Institute, Northumberland Avenue, W.C.		MEADWAY, J. J. ...	10 Mar., '13
KEIR, A....	3 July, '13	ROBINSON, H. O. ...	12 Nov., '12
MYNOTT, A. R. ...	27 May, '13	SWETTENHAM, R. F. R....	6 Mar., '13
		WILLIAMS, G. ...	5 Feb., '13
		WATSON, R. G., C.M.G...	14 Nov., '12

NEGRI SEMBILAN.

HUGHES, G. E. E. ...	23 Dec., '12	MORGAN, W. H. ...	Steamer due 29 Jan., '13
----------------------	--------------	-------------------	-----------------------------

KEDAH.

FINCH, F. G. ...	23 Feb., '13	SHAW, G. E. ...	3 Jan., '13
------------------	--------------	-----------------	-------------

FEDERATED MALAY STATES.

BURTON, H. ...	17 July, '13	GREEN, W. H. ...	30 Jan., '13
BARR, A....	7 Feb., '13	GRAYSHAW, J. ...	28 Feb., '13
BURR, T....	5 Jan., '13	GRIFFITHS, J. ...	Steamer due 10 Jan., '13
BROWN, G. M. ...	9 Dec., '12	HOLLYWOOD, J. H. ...	2 Mar., '13
BROUARD, G. W. ...	31 Dec., '12	HUXLEY, W. S. ...	2 Mar., '13
BILES, F. C. ...	23 Dec., '12	HENDERSON, H. A. ...	27 Jan., '13
BANKS, H. H. ...	27 Jan., '13	HENSHAW, P. H. ...	8 Dec., '12
BROWN, D. ...	22 Mar., '13	HEREFORD, G. A. ...	14 June, '13
BLACKLAW, C. F. S. ...	5 June, '13	HENBREY, G. J....	24 Feb., '13
CAMPBELL, D. G., C.M.G.	28 Apr., '13	KLOSS, C. B. ...	21 Aug., '13
COOPER, Dr. T. G. D. ...	21 Mar., '13	LEE-WARNER, W. H. ...	
COOPER, C. C. ...	31 Dec., '12	LE FEVRE, T. ...	1 Feb., '13
COX, F. B. ...	21 Dec., '12	LEONARD, H. G. R. ...	22 Feb., '13
CRICHTON, R. ...	18 Apr., '13	LAMONBY, W. F. ...	24 Feb., '13
CALDECOTT, A. ...	28 Feb., '13	LEWIS, A. E. ...	28 Feb., '13
COWAN, W. ...	31 July, '13	LYTH, N. R. ...	30 Nov., '12
CLAYTON, R. J. B. ...	17 Mar., '13	MAREK, O. ...	8 Apr., '13
DURIE, W. ...	30 Apr., '13	c/o Messrs. H. S. King & Co., 9, Pall Mall, S.W.	
DALY, M. D. ...	9 Mar., '13	MCCALLUM, E. ...	31 Dec., '12
EDMONDS, R. C....	13 Nov., '12	MCLEAN, L. ...	14 Apr., '13
EATON, B. J. ...	10 Mar., '13	MOSS, P. ...	3 Nov., '12
FLOOD, P. ...	3 Dec., '12	MACINTYRE, Dr. E. T. ...	31 July, '13
GILLESPIE, Miss M. I. ...	20 Jan., '13	MORRIS, R. V. ...	25 Nov., '12
Chartered Bank of India, Australis and China, Ltd., Bishops- gate Street, E.C.		MILLARD, Dr. A. S. ...	30 Nov., '12
		MACKENZIE, H. J. ...	26 Dec., '12

FEDERATED MALAY STATES—*continued.*

NOCK, T. C. ...	... Steamer due	SHAW, Miss H. M. ...	7 Jan., '13
	5 Dec., '12	SHEFFIELD, J. N. ...	17 Mar., '13
PRATT, H. C. ...	9 Apr., '13	SCHREINER, A. P. ...	28 Jan., '13
PARR, C. W. C. ...	24 Dec., '12	SPINKS, E. ...	16 Jan., '13
POTTIE, J. ...	9 Mar., '13	VOULES, A. B. ...	12 Dec., '12
ROBINSON, A. ...	28 Feb., '13	WOOD, Capt. F. E. ...	4 Jan., '13
RHODES, H. ...	19 May, '13	WILSON, C. ...	10 Feb., '13
ROWLEY, T. W. ...	24 Nov., '12	WOOD, C. S. ...	Steamer due
SCRIVENER, J. B. ...	18 Feb., '13		14 Nov., '12
STANTON, Dr. A. T. ...	18 Dec., '12	WOODS, Dr. A. A. ...	4 June, '13
Sports Club, St. James'		YOUNG, A. E. ...	3 Nov., '12
Square, S.W.			

CEYLON.

ASERAPPA, Dr. E. P. ...	24 Dec., '12	MCGREGOR, D. S. ...	6 Nov., '12
ABSON, A. ...	2 Nov., '12	McMINN, D. K. ...	13 Jan., '13
BARNARD, H. O. ...	4 Feb., '13	MONTAGU, D. ...	26 Nov., '12
BRADLEY, G. T. ...	8 Feb., '13	POWELL, R. A. ...	28 Nov., '12
BROWN, W. ...	13 July, '13	c/o Messrs. H. S. King	
BARTLETT, F. ...	28 Feb., '13	& Co., 65, Cornhill,	
CHRISTOFFELSZ, Dr. H. S.	1 Aug., '13	E.C.	
CASTELLANI, Dr. A. ...	31 Mar., '13	PRICE, N. J. ...	6 Nov., '12
CONSTANTINE, B. ...	21 Dec., '12	PROUSE, A. D. ...	20 Feb., '13
CREAST, H. T. ...	30 Dec., '12	ROBINSON, Dr. M. de L.	30 Jan., '13
COOKSON, G. M. ...	9 Nov., '12	RIDING, J. ...	26 Dec., '12
DREW, A. R. ...	17 Oct., '12	ROSEWAY, D. ...	8 Dec., '12
DOWNIE, J. ...	15 Nov., '12	REID, T. ...	21 May, '13
DE KRETZER, H. E. ...	27 June, '13	Royal Colonial Insti-	
DAVIES, S. ...	1 Dec., '12	tute, Northumberland	
FELIX, J. J. P. ...	Steamer due	Avenue, W.C.	
	3 Feb., '13	RICKARBY, A. G. ...	14 Nov., '12
FRASER, J. H. ...	26 Oct., '12	ROBERTSON, A. N. ...	8 Apr., '13
GIBBON, Miss A. ...	30 Apr., '13	SEYMOUR, A. W. ...	Steamer due
GREGSON, W. B. ...	18 Apr., '13		30 Nov., '12
c/o Messrs. T. Cook &		STURGESS, G. W. ...	5 May, '13
Son, Ludgate Circus,		SKELTON, R. ...	14 Feb., '13
E.C.		SIZER, P. W. ...	7 Dec., '12
HILL, B. ...	25 Nov., '12	TURNER, L. J. B. ...	19 Feb., '13
HARRIS, J. ...	24 Dec., '12	TOMALIN, H. F. ...	18 Apr., '13
HAYER, T. ...	5 May, '13	THYNE, W. M. ...	22 Dec., '12
HOLBROOK, G. A. ...	2 Nov., '12	TOTHILL, F. J. ...	29 Mar., '13
HILLIER, H. K. ...	31 Oct., '12	TAYLOR, W. A. C. ...	3 Feb., '13
HUNTER, T. G. ...	29 Nov., '12	WADDELL, G. ...	31 Oct., '12
JENSEN, O. ...	2 Nov., '12	c/o Messrs. H. S.	
JAHAN, Sister A. M. ...	6 Nov., '12	King & Co, 65, Corn-	
KILMISTER, C. H. ...	29 Jan., '13	hill, E.C.	
LEES, H. B. ...	13 Feb., '13	WILLETT, T. G. ...	18 Jan., '13
MIDDLETON, J. C. C. ...	13 May., '13	WARMAN, S. E. ...	26 Mar., '13
MURRAY, W. A. ...	18 Feb., '13	WYLIE, T. A. ...	31 Mar., '13
MOLES, J. A. ...	31 Oct., '12	Golfers' Club, White-	
MACMILLAN, H. F. ...	16 Apr., '13	hall Court, S.W.	
MACLEOD, K. W. B. ...	22 Nov., '12	WICKS, C. A. ...	31 Jan., '13
MILLINGTON, E. T. ...	16 Feb., '13	YOUNG, C. M. ...	23 Oct., '12

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND,
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,
ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

WAY & CO. LTD., have made a careful study of **WINES and
SPIRITS** most suited for the Tropics. Their Wine List will be
sent on application, and the selections mentioned have been
supplied for several years and given great satisfaction.

PROVISIONS.—From all well known Manufacturers.
Special A and B Boxes for one man one week.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand" **THE POST OFFICE MAGAZINE.**

22nd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand" THE POST OFFICE MAGAZINE.

22nd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

JOHN LYSAGHT, LIMITED,

ST. VINCENT'S IRON WORKS,

BRISTOL,

AND AT NEWPORT AND LONDON (ENG.),

With Branches or Agencies at all the chief places in

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, CANADA
AND SOUTH AMERICA.

MANUFACTURERS OF

Black and Galvanized Sheet Iron and Steel
(Corrugated and Flat).

Tanks, Cisterns, Hollow-ware, Agricultural
Feeding Requisites, etc., etc.

Galvanized Wire Netting.

Iron and Steel Roofs, Buildings, Bridges, and
Constructional Ironwork generally.

CONTRACTORS TO HOME AND COLONIAL GOVERNMENTS.

Shipments direct by Steamers

From BRISTOL (Avonmouth Dock) to

AUSTRALIA, NEW ZEALAND, SOUTH AFRICA, SOUTH AMERICA, CANADA,
WEST INDIES, ETC.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

*SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.*

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879.

1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJINI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Address: "Signalmen, London." Telephone:—2285, Victoria.
Bentley's A.B.C. (5th Edition) A.B.C. and A1 Codes.

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. VI.

APRIL, 1913.

No. 4.

CONTENTS.

EDITORIAL NOTES	253
NOVA SCOTIA IN 1813	271
THE POLICY OF EMIGRATION	278
REVIEWS & NOTICES	284
BUSINESS NOTES	303
ENGINEERING NOTES	308
MEDICAL NOTES	327
RECENT APPOINTMENTS	335
COLONIAL OFFICERS ON LEAVE OF ABSENCE	337

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of OPEN HEARTH

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS
And STRUCTURAL STEEL WORK for all purposes.

Speciality: STEEL FRAME BUILDINGS,
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
B8B 30	24 X 7½	100	ASB 17½	10 X 4½	25
" 29	20 X 7½	89	B8B 18	9 X 7	58
ASB 29½	20 X 6½	65	DLB 15½	9½ X 3½	32½
B8B 28	18 X 7	75	B8B 16	9 X 4	21
ASB 28½	18 X 6	53			
B8B 27	16 X 6	62	" 14	8 X 6	35
" 26	15 X 6	56	" 18	8 X 5	28
			" 12	8 X 4	18
" 25	15 X 5	42	" 11	7 X 4	16
" 24	14 X 6	57	" 10	6 X 5	25
" 33	14 X 6	46	" 9	6 X 4½	30
" 22	12 X 6	54	" 8	6 X 3	12
" 21	12 X 6	44	" 7	5 X 4½	18
DLB 20½	12 X 5	39	" 6	5 X 3	11
B8B 20	12 X 6	32			
			" 5	4½ X 1½	6½
" 19	10 X 8	70	" 4	4 X 8	9½
" 18	10 X 6	42	" 3	4 X 1½	5
DLB 17½	10 X 5	35	" 2	3 X 3	8½
B8B 17	10 X 5	30	" 1	3 X 1½	4

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; SQUARES, 1/2 in. to 2 1/2 in.; FLATS, 1 in. to 16 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

BY ROYAL
WARRANT



TO
H.M. THE KING



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of OPEN HEARTH

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS
And STRUCTURAL STEEL WORK for all purposes.

Speciality: STEEL FRAME BUILDINGS,
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
BSB 20	24 X 7 1/2	100	ASB 17 1/2	10 X 4 1/2	25
BSB 20	20 X 7 1/2	89	BSB 18	8 X 7	35
BSB 20 1/2	20 X 8 1/2	95	DLB 15 1/2	9 1/2 X 3 1/2	22 1/2
BSB 22	18 X 7 1/2	75	BSB 19	9 X 4	21
BSB 22 1/2	18 X 8 1/2	85			
BSB 27	16 X 8 1/2	62			
" 29	15 X 8 1/2	59	" 14	8 X 6	38
			" 15	8 X 6 1/2	38
" 35	15 X 9	48	" 16	8 X 4	18
" 36	14 X 8 1/2	57	" 17	7 X 4 1/2	16
" 38	14 X 8	45	" 18	6 X 5	20
" 39	13 X 8 1/2	54	" 19	6 X 4 1/2	20
" 41	13 X 8	44	" 20	6 X 3	13
" 42	13 X 8 1/2	44	" 21	5 X 6 1/2	14
DLB 20 1/2	12 X 8 1/2	39	" 22	5 X 8	11
BSB 30	12 X 9	52			
			" 23	4 1/2 X 11	8 1/2
" 36	10 X 8 1/2	70	" 24	4 X 8	9 1/2
" 38	10 X 6	42	" 25	4 X 11	8
DLB 17 1/2	10 X 6	35	" 26	3 X 8	8 1/2
BSB 17	10 X 5	30	" 27	3 X 11	5

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; SQUARES, 1/2 in. to 2 1/2 in.; FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails
Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

BY ROYAL
WARRANT



TO
H.M. THE KING



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,

**29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.**

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { "COOMASSIE," LIVERPOOL.
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; Captain Scott's Expedition, 1910, and Dr. Mawson's Expedition, 1911.

HYDRAULIC MACHINE TOOLS (TWEDDELL'S SYSTEM.)

For

Rivetting,
Flanging,
Forging,
Welding,

Stamping,
Pressing,
Bending,
Tube Drawing,

Wheel Bossing,
Projectiles,
Punching,
Shearing.

CATALOGUE FREE.

GAS ENGINES.

GAS PLANTS

For Anthracite Coal,
Coke, or Charcoal.

10 B.H.P. to 300 B.H.P. THOUSANDS WORKING.

OIL ENGINES.

Contractors to H.M. Government; Crown Agents for the Colonies;
Foreign Governments.

**FIELDING & PLATT, Limited,
GLOUCESTER.**

ALBION

UTILITY MOTORS.



In every corner of the British Empire, Albions are running every day. They are running over rough and undeveloped roads; they are working regularly miles and miles away from the nearest repair shops—and so satisfied are the owners that orders for more Albions are coming in day after day.



The Albion Company have over twelve years' experience in the construction of Motor Vehicles and they are the largest manufacturers of Motor Vans in the British Empire.



OFFICIAL CARS,
MAIL WAGGONS,
TIPPING WAGGONS,
CHARS-À-BANCS,
LORRIES,
VANS.

10 cwt. to 4 ton loads.

ALBION MOTOR CAR Co., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

Codes: A.B.C. 5th Edition,
and Liebers.

Telegrams:
"Automobile, Glasgow."

VACUUM OILS.

Telephone No. 6840 Gerrard.
(Four Lines.)
Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

For Locomotive, Marine and Stationary Engine Lubrication.

For Railway Carriage and Wagon Lubrication.

For Motor Carriage and Motor Boat Lubrication.

For Gas and Oil Engine, Dynamo, Turbine, Refrigerator and General Lubrication.

Special Oils and Greases for Tropical use and onerous conditions.

These Lubricants are used and approved in all parts of the world.

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

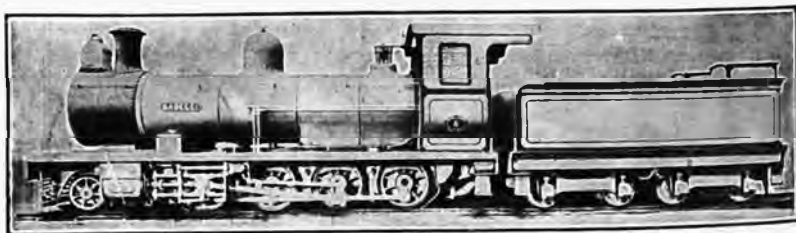
VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,

**Marine Engineers and Shipbuilders,
NEWCASTLE-ON-TYNE.**

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

SHEEPBRIDGE COAL & IRON CO., LTD.,

Manufacturers of

Cast-Iron Gas & Water Mains

From 2 inches to 48 inches Diameter.

**Also Hydraulic Pressure Pipes, Steam Pipes,
Electric Cable Pipes, &c.**

CASTINGS OF ALL KINDS FOR GAS AND WATER WORKS.

**BEST HOUSE, GAS and STEAM COAL, PIG IRON,
BAR, ANGLE, and TEE IRON, &c.**

Contractors to H.M. Post Office, the Admiralty, and War Office.

SHEEPBRIDGE IRON-WORKS, CHESTERFIELD.

Telegrams—"Sheepbridge, Chesterfield."

Telephone—356.

London Office—1 53, VICTORIA STREET, WESTMINSTER, S.W.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel.: GERF. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

CONTRACTORS TO
INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

TORBAY PAINT.

One Quality Only.

*THE MOST RELIABLE PAINT
FOR TROPICAL CLIMATES.*

Special Paint for Coating
New and Old Galvanized Iron.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

THORNYCROFT

**PETROL COMMERCIAL VEHICLES
FOR
ALL TRADES IN EVERY COUNTRY.**

We have a Large Range
of Vehicles for all Loads
from 8 cwt. to 4 tons.

The Repeat Orders we
are continually receiving
are proof of the
Sterling Quality of our
Productions.



Write stating fully your
requirements.

Repeat Order for four additional vehicles in hand for the above.

WE WILL QUOTE YOU SPECIALLY TO ENSURE SUCCESS.

JOHN I. THORNYCROFT & Co., Limited,
Caxton House, ——— Westminster, S.W.
Telegrams, "THORNYCROFT," London. Codes: A B C 5th, etc.

THE WORKINGTON

IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE.**

**Pure Cumberland Hematite Pig-iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office: 14, Sherborne Lane, King William Street, E.C.

Telegraphic Addresses: "Mosbay, Workington,"
"Mosbay, Cannon, London."

SOUTH AMERICA



R.M.S.P. & P.S.N.C.

Frequent Sailings to South America from

Southampton, Liverpool & Glasgow, via
France, Spain, Portugal, Madeira,
Canary Is., St. Vincent & Falkland Is.

Fortnightly from Southampton & Cherbourg to

West Indies & New York,

British Guiana, Venezuela,
Colombia, Panama (for Pacific
Ports), Cuba & Bermuda.

CRUISES TO NORWAY,

Mediterranean, Holy Land, Egypt, &c., by ocean
yaching steamer "Arcadian." June to December.

From £1 a day.

Fortnightly Cruises from London to

MOROCCO CANARY ISLANDS MADEIRA

23 days £18.

THE ROYAL MAIL STEAM PACKET COMPANY
THE PACIFIC STEAM NAVIGATION COMPANY

London:—18 Moorgate St
Liverpool:—31 James St.

UNION-CASTLE LINE.

Royal Mail and Intermediate Services to
SOUTH AND EAST AFRICA.

WEEKLY FOR SOUTH AFRICA

via Madeira and the Canaries.

MONTHLY FOR EAST AFRICA

via Gibraltar, Marseilles, Naples and the Suez Canal.

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

THE HEAD OFFICE OF THE COMPANY,

At 3 & 4, FENCHURCH ST., LONDON, E.C.

Branch Offices at Southampton Birmingham, Leeds, Liverpool, Manchester
and Glasgow.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c. all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4, ST. MARY AXE, LONDON, E.C.

30 MOSLEY STREET, MANCHESTER.

BIRMINGHAM, CARDIFF &c. &c.

GOODLASS' "SWANSDOWN"



WHITE ENAMEL

**FOR THE HIGHEST
CLASS OF
DECORATIVE WORK**

**is the very finest Enamel manufactured and produces a
surface like porcelain.**

Sole Manufacturers :

**GOODLASS, WALL & CO., L^{td}.
LIVERPOOL.**

Telegrams : "Crown, Cardiff."

ESTABLISHED 1880.

**THE
CROWN PRESERVED COAL CO.,
CARDIFF. Limited.**

**MANUFACTURERS
AND SHIPPERS OF**

CROWN PATENT FUEL



TRADE MARK.



USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS

AWARDS.

London...1882 | Liverpool... 1886 | Royal Naval 1891 & 1905 | Bordeaux ...1896
Paris1875 | Jamaica ... 1891 | Chicago1893 | Mexican ...1906

Works : CARDIFF and PORT TALBOT.

CROSSLEY & CO. LTD. (Established 1845.)

ADVERTISING CONTRACTORS.

**Schemes prepared, without charge, for making known the advantages of
any Colony inviting Emigration. Lectures arranged.**

**Advice given gratis on all forms of advertising in Great Britain, the
Colonies or Foreign Countries.**

**Advertisements received for and inserted in all classes of Newspapers,
Periodicals and Magazines at minimum rates.**

Correspondence invited on all questions relating to newspaper publicity.

Offices : 57, COLEMAN STREET, LONDON, E.C.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Nigeria, and to the Imperial Government in Sierra Leone.

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorized Capital	- £1,000,000.	Called-Up Capital	- £292,000.
Subscribed Capital	- £730,000.	Reserve	- £111,000.

DIRECTORS.

The Rt. Hon. Viscount Milner, G.C.B., G.C.M.G. Henry Coke, Esq. Clifford B. Edgar, Esq.
D. O. Henriques, Esq. Geo. Miller, Esq. W. F. Moore, Esq. Geo. W. Neville, Esq.
Sir Owen Philipps, K.C.M.G. Mazzini Stuart, Esq. O. Harrison Williams, Esq.
Chief Manager: Leslie Couper. Secretary: J. R. Bingham.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). GAMBIA—Bathurst. SIERRA LEONE—Freetown and Sherbro. GOLD COAST and ASHANTI—Axim, Seccondoo, Saltpond, Cape Coast Castle, Winneba, Accra, Tarquah, Comassie.

LIBERIA—Monrovia. FRENCH IVORY COAST—Grand Bassam, Assinie. NIGERIA—Lagos, Ibadan, Abeokuta, Zungeru, Zaria, Forcados, Warri, Onitsha, Lokoja, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonema, Benin, Bragg, Buguma, Blama, Bonny, Bo, Dakar, Degama, Dodowah, Dunkwa, Egwanga, Fernando Po, Half Assinie, Koko, Labou, Loanda, Madaira, Matadi, Obuassi, Opobo, Pendembu, Prestea, Sapelli, Segbwema, Teneriffe.
New York Agency, 74, Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

THE

TINFIELDS OF NORTHERN NIGERIA

Via THE NIGERIAN RAILWAY.

AN ALL RAIL ROUTE is now open for both Goods and Passenger Traffic from the Port of Lagos, the capital of Southern Nigeria, to Rahama, the present terminus of the BAUCHI BRANCH, a total distance of 712 miles. A Weekly BOAT EXPRESS connects with both the Outward and Homeward MAIL STEAMERS at LAGOS, and consists of Saloon Carriages provided with modern conveniences, including a Restaurant Car, comfortable Sleeping Accommodation, Lavatories and Bathrooms, and fitted throughout with Electric Light and Fans. The Train runs through to Zaria (622 miles) in 45 hours and Passengers tranship there to the Bauchi Branch for Rahama.

2. At Lagos, Passengers and their luggage, etc., are conveyed to and from the Ocean Liner by a Tender which lands them at Iddo Wharf, where the Boat Express is drawn up. All Meals and Refreshments can be had in the Restaurant Car throughout the journey to Zaria.

3. The Passenger Fares from Lagos to Rahama are as under:

First Class £9 14s. 7d. Third Class (Servants only) £0 19s. 0d

There is no restriction on the quantity of baggage which can be taken by Passengers by the Boat Express.

The rates to Rahama are as under:—

First 2 cwt. ... Free. Next 20 cwt. ... 11s. 8d. per cwt. Next 20 cwt. ... 19s. 6d. per cwt.

Any baggage in excess of 2 tons 2 cwt. will be charged at excess luggage rates.

4. All goods are carried from Iddo (Lagos) to Zaria, Rahama and Kano at the same rates by the all rail route as by the river and rail route, and every facility is provided at Iddo for the handling of heavy and bulky articles of machinery, etc.

The rate per ton for machinery from Lagos to Rahama, or from Forcados to Rahama, is £18 3s. 3d., and for ton ore from Rahama to Lagos or Forcados, £13 17s. 6d.

For further particulars apply to the—

GENERAL MANAGER, NIGERIAN RAILWAY, LAGOS;
TRAFFIC SUPERINTENDENT, NIGERIAN RAILWAY, LAGOS;
or to the CROWN AGENTS FOR THE COLONIES, Whitehall Gardens, London, S.W.,
from whom a descriptive pamphlet may be obtained.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

" Whilst the ' Colonial Office List ' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED,

GREAT WINCHESTER STREET, LONDON, E.C.

Price 2/6 net.

Post free to any place 3/-

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1913.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

"HANDBOOK OF THE BRITISH COLONIAL EMPIRE."

BY

W. H. MERCER, C.M.G.,

One of the Crown Agents for the Colonies ;

AND

A. J. HARDING,

Of the Colonial Office.

"Whilst the 'Colonial Office List' is issued mainly for the use of the official world, the present volume is intended primarily for educational purposes and for the use of those desiring succinct and reliable information regarding the history, trade, government, and commercial development of the various outlying portions of the Empire. A large amount of useful information upon those subjects has been gathered together by the Authors, who, owing to their official positions in the Colonial Civil Service, have had exceptional opportunities for obtaining the latest and most authentic details regarding the present administrative and commercial state of all parts of the Empire. The book is well suited for educational purposes, and might with advantage be introduced not only into the schools of the United Kingdom, but adopted by Colonial educational institutions in order that students in any single portion of the Empire may know something of the history, character, and condition of all its widely scattered parts."

Journal of the Royal Colonial Institute.

* * * * *

"The book is intended for educational purposes and is so attractively written, and contains such a fund of information, that it cannot fail to become popular."

Education.

WATERLOW AND SONS LIMITED.

GREAT WINCHESTER STREET, LONDON, E.C.

Price **2/6** net.

Post free to any place **3/-**

THE
COLONIAL OFFICE
JOURNAL

JANUARY, 1913.

Issued Quarterly.

LONDON :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.

Lacre

UTILITY MOTOR VEHICLES

10 CWT.
TO
6 TONS.

NOTE.

THE LACRE COMPANY ARE ON THE OFFICIAL LIST OF THE CROWN AGENTS FOR THE COLONIES.



NOTE.

THE BEST MEANS OF TRANSPORTATION UNDER THE MOST TRYING AND ADVERSE CLIMATIC CONDITIONS.

JUST SHIPPED—THE LATEST LACRE VEHICLE FOR THE CROWN AGENTS FOR THE COLONIES.

. IMPORTANT. .

SOME SPECIAL COLONIAL FEATURES.

EXTRA LARGE
GROUND
CLEARANCE
15 INCHES.

STEERING ARM
OVER AXLE.

SPECIALLY
LARGE CAST
ALUMINIUM
RADIATOR.



LARGE
DIAMETER
STEEL WHEELS
IF REQUIRED.

POWERFUL
BRAKES.

EXTRA LARGE
TURNING LOCK

2-TON SPECIAL COLONIAL TYPE "LACRE" SHEET VAN WITH 15 INCHES GROUND CLEARANCE. IF SPECIALLY ORDERED 18 INCHES GROUND CLEARANCE CAN BE GIVEN.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

107, PALMERSTON STREET, ANCOATS, MANCHESTER, ENGLAND.

CODES: WESTERN UNION, LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

THE COLONIAL OFFICE JOURNAL.

VOL. VI.

JANUARY, 1913.

No. 3.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

MR. BORDEN'S speech on the part to be taken by Canada in the naval policy of the Empire was the culmination of a long and earnest discussion in the Dominion. The subject was a very prominent one at the last elections and the whole country rang with the arguments. After the elections the question became less of a party matter. Few can doubt that Canada's interests in the high seas are identical with those of the United Kingdom. The continual growth of her maritime trade makes the maintenance of the Imperial Navy more and more important to her. The decision of the Canadian Government to recognise this position by the gift of three battleships marks a great advance in the solidarity of the Empire. Not long ago Dominion statesmen justified the naval abstention on the ground that Canada had provided means of transport of troops from east to west by the Canadian Pacific Railway. The present danger, however, is very different from what was contemplated then. It is put, with a directness which indicates the master hand, in the Admiralty memorandum (Cd. 6513). It is with no little gratification that the country has almost simultaneously received the offer of the Malay States, at the gate of the seas on the other side, not merely for the value of the gift, great as that is, but for the devotion shown by the native rulers to the cause of the Crown.

In this country colonies are mostly judged from their exports, and the brimming figures of wool and wine and the products of field and dairy from Australia convey the impression of a country which is pre-eminently agricultural. But the statistics tell a rather different story. The actual occupations of a people are best shown by the amount paid in wages, and in Australia the largest sum is that expended in metal works and machinery, and the second largest goes to clothing and textile fabrics. These facts help to explain the enormous preponderance of the population in the principal towns as against that in the country. They are largely due to the economic policy under which manufacturers are strongly protected, subject to their paying their employes rates of wages in which the profits made are in effect taken into account. The modern developments of agriculture also contribute to the process. An enormous amount of food is sent in to the towns to be prepared in factories for export, and the improvement of agricultural machinery is stimulating an engineering industry of which Australia has good reason to be proud. No doubt at the back of all this the strength of the country lies in its agricultural and pastoral resources, and the governments recognise the importance of opening up new districts and bringing in labour for them.

In the report to the Board of Trade on the trade of Australia for 1911 the British manufacturer comes in for the usual punishment for neglecting his opportunities and allowing foreign competitors to oust him. A percentage of over 61 per cent. of the imports, however, does not seem a bad performance, and a good show is made in the lines which Great Britain specially cultivates, and of which machinery and textiles are conspicuously the most important. It is observed that the position of the British manufacturer as a supplier of agricultural implements is unsatisfactory. His United States rival sells more than twice as much. But it may be remarked that an export trade is, as a rule, only a development of a domestic trade, and that a country cannot be expected to make for export, on any great scale, articles which are not in demand locally. The agricultural conditions of the United States are much more like those of Australia than ours are, and it is not surprising if that country turns out articles such as Australia wants more successfully than Great Britain. The general opinion in Australia is that the British manufacturer does not supply according to the requirements of the market. That this is not due to want of skill is shown by the fact that in machinery, a much bigger matter, Great Britain turns the table entirely. But no doubt better business could be done if the practice of the United States and

Germany were followed in appointing skilled and energetic agents. Our manufacturers are certainly behind the times in this matter, and the fact is sometimes attributed to their conservative character. A more concrete reason is the practice of relying on the London export houses, who, it is believed, would resent attempts to set up separate agencies in the colonies. The Board of Trade, however, is doing good work in facilitating the appointment of agents in Australia.

The Federal Capital City, to give it its full title, of Australia offers a large scope to the designers. It is not a case of providing merely for the public buildings but of planning the whole of a city, with provision for railways, tramways, parks, ornamental waters, places of amusement, and "sports areas," and with due regard to hygiene, prospect, and future expansion. One hundred and thirty seven designs were sent in in the competition, and it is hardly necessary to say that the judges did not agree as to which was the best. The site is flat and very well watered.

Eventually the Northern territories of Australia will see the introduction of the camel as a means of transport, and it is likely that this well-tried animal will be found eminently useful. Already there are over a thousand in Queensland and the number is rapidly increasing. The territories will certainly require many novel propositions for their development and at present Australia is too busily engaged on lucrative business which it understands to go so far afield. Nevertheless, in the future, the possession of this tropical district will be an enormous boon.

In Queensland the production of sugar appears to have settled down to a steady figure. There are 4,238 proprietors engaged in it, and the whole Australian production amounts roughly to six-sevenths of the quantity required for local consumption. White labour in 1911 produced 94·42 per cent. of the cane, so that the policy of granting a bonus where such labour is employed is successful at any rate in the immediate object. The bonus paid was £498,868, representing 1,448,778 tons of cane. Each acre crushed yielded 16·02 tons of cane, and 1·81 tons of sugar.

A noteworthy fact in the Australian "universal training" scheme is the extremely low percentage of "junior cadets" who are found on medical examination to be unfit, temporarily or otherwise. Up to the end of June 1912, it was 2·3. It was higher but still very low for senior cadets, viz., 7·6. These figures, which may well provoke envy in older countries, are the more significant as the obligatory clauses have been, owing to the

expenses attached to the initiation of the scheme, at first confined to the large cities and the more populous of the country towns. Four hundred and forty six training localities, however, had been established by that date, and the total number actually in training was 89,074. This is a good start, and it would have been a little better but for the fact that many magistrates dismissed cases in which prosecutions were instituted for neglect to attend parades. This was on the ground that the year was not then completed and that offenders would have plenty of opportunities to comply with the act before it was. The authorities complained that these decisions were unsound, as absence from any one statutory parade is an offence and the magistrates had no right to assume that there would be "plenty of opportunities" afterwards.

One of the economical lessons which all the world is learning, is that agricultural welfare rests with the small holding. The United States have been a country of large holdings, but the opinion is growing that they are a mistake. The best results are got from a man who owns no more than he can properly manage, and with the advance of scientific farming this quantity is continually growing less. There is no country in the world where the lesson is so much wanted as South Africa. In the Transvaal the average farm is 5,000 acres, against 143 in the United States, 63 in Great Britain, and $14\frac{1}{2}$ in Belgium. The vast stretches of veld have been in this sense a mischief. Often all that the 5,000 acre farm shows is a poor cottage, a few starved cattle, a mealie patch, and some five acres of pasture. There are companies with vast territories which hardly show a trace of intelligent cultivation. There has been a sort of land hunger which has drawn all classes into great schemes which have gone far beyond the possibilities of the population. "The South African Agricultural Journal" gives evidence of what the result is. "It stands for poor farming, persistent crop failure, poverty, and national stagnation." One of the best object lessons is given by Belgium. There is a common opinion in this country that the sub-division of land in France and Belgium has been carried too far. There may have been some grounds for this view when agriculture was less scientific, but there are none now. Belgium contains the poorest land in Europe, but, with the single exception of wheat, it produces the best yields per acre in Europe. The best conditions of success are (1) small holdings, (2) freehold or at least long leasehold tenure, (3) co-operation. It is not easy in South Africa to secure these conditions within reasonable distance from a railway, but the necessity for small allotments is obvious and the Government has appointed a commission to consider the whole question. Apparently no great expansion of the mining industry

is in prospect, and the best hope for the employment of a white population lies in small farms. For this task two operations will be essential—the deep bore and dry farming. The average depth of bore in South Africa is 140 feet, and the cost about £55. The example of Australia is extremely encouraging in this matter. There the cost of sinking an artesian well is higher, about 20s. per foot, and the depth greater, extending to almost a mile, but the good done is incalculable.

Mr. Sothern Holland's report on the trade of South Africa contains some suggestive observations as to the value of the native as a purchaser of imported articles. There is no precise way of ascertaining what proportion of these goods is bought by the native and coloured population, but at an estimated figure of 3s. 6d. a head in the Cape Province and 2s. elsewhere, the value comes to £6,351,580. This basis of calculation is conservative, and, in any case, the amount is sure to increase rapidly. Whenever it is open to him to do so, the native is now beginning to do skilled work and shows himself a competent workman. Every year education and increasing contact with civilization add strength to this movement, and an enormous new field is opening out for imported articles. Thus the vast numbers of South African natives are acquiring a new economical value. It is true that everything that is possible is done to reserve skilled work for white labour, and the steady advance of the native artisan will be watched with much suspicion and apprehension. But it will be largely realized as the country progresses that the black man's gain is not the white man's loss, and that all work enriches the whole country. The natives in any country cannot be expected to acquire new tastes and wants while he retains primitive habits of life, and the best way of inculcating a proper appreciation of the white man's wares is to make a good workman of him. In no long time at the present rate of progress the buying power of the South African native will become so great as to constitute a new force in both commerce and politics.

Up to the present the natives in our possessions have worked on their holdings individually, and when any scheme requiring capital and combination has been introduced it has been European. It may be expected that as the natives assimilate advanced ideas they will begin to form companies and embark on large undertakings themselves. It is perhaps surprising that so little has so far been done in this direction, but a noteworthy start has been made in South Africa by the formation of a Native Farmers' Association, which has purchased and stocked some 13,000 acres. There are twelve directors, and the memorandum of association

sets out that the objects of the Company include teaching natives the advantages of farm life, as contrasted with the evil influences of the towns, and gradually introducing improved methods of farming and stock-raising. The enterprise emanates from the Transvaal, and if it is successful it is likely to be followed by many others. Ideas run fast through the native races, as is shown by the rise of the Ethiopian Church, provided they are clear and definitely indicate an attainable advantage. The opportunities in South Africa are of course enormous. In most places agriculture where practised at all, is of recent origin, and as the virgin soil has easily produced mealies or Indian corn little else has been thought of. Later on it will be found necessary to study a rotation of crops, and with the increase of stock suitable food products will be required. All this means a great amount of work, and there will be openings for combination, both in the Union and Rhodesia, such as the coloured races have never had elsewhere. Development on these lines will have a profound effect on the racial character.

The South African Defence Act, the provisions of which were summed up in a previous number, will have an important influence on the country apart from its military value. It will do much to consolidate the two white races. Companionship in arms does more than anything else to create the feeling of brotherhood. The differences between Dutch and British, as individuals, were never deep, and now that the political conditions which kept them apart are removed the process of coalescence will go on fast. Self-government enables the population to deal as a whole with matters which inevitably created racial parties so long as influences from outside were at work. The party divisions of the future will probably represent generally the agrarian and the mining interests, and, though these at present largely follow racial lines, in course of time there will be a strong element of each race in both camps. A great evolution is now in the making which will make South Africa a vastly different country from what it has been in recent years.

The anti-trust legislation in the self-governing dominions has been collected and given to Parliament (Cd. 6439). In Canada the remedy against a combine which causes detriment to consumers or producers is to admit the articles affected duty free or at reduced rates of duty so as to give the public the benefit of reasonable competition. The measure is based on the belief that protection encourages the limitation of competition and the formation of trusts, and this was put in unstinted terms by the Minister

of Labour when he said: "The Government in a protectionist country by its fiscal policy makes the whole country a huge trust, that is to say, puts blue-coated, brass-buttoned gentlemen on the shore to shut out foreign competition. To that extent the country becomes a huge trust, and it resembles a trust in this, that it takes from its consumers very much more money than what it gives in return is worth." In Australia the act is directed in effect against combines which resort to "unfair competition." Here, as is natural in a protectionist country, the evil is considered to be, not that there is too little competition, but that what there is may be unfair. Various instances are given of unfair dealing, but as the Act is a criminal one exact evidence would be necessary and there would be much practical difficulty in working the measure. A long government enquiry has been going on which illustrates this. The object is to ascertain whether there is a meat trust in Australia, a matter over which public opinion is greatly stirred. There is abundant evidence that the Americans are endeavouring to establish a market there, but the existence of a combine for this purpose is stoutly denied, and clearly for criminal purposes stronger proofs would be necessary than that which satisfy a commission. The New Brunswick Act is limited to telephone, water, heat, light and other public services, and constitutes a board to regulate charges in such cases; it was quickly followed by a charge of excessive rates against a telephone company. The New Zealand Act prohibits the sale by a trust of certain articles at a price which gives more than a fair and reasonable rate of commercial profit. Thus in Canada the apprehension is that the trusts may raise prices too high, while in Australasia it is rather that they may make them too low. The movement against trusts is however, common to both, and is likely to be maintained till experience shows what is the most effective policy.

The collection also includes the Post Office Administration Act, 1911, of South Africa, which prohibits a mail contract with any person who is connected with any combination deemed detrimental to South African trade or industries, or who offers a rebate in consideration of getting the customer's entire shipments. These provisions were aimed at a single case, and now that the mail contract has been settled and the Union Castle Company has abandoned rebates they have for the time being no further application. But there is a strong sting in the further provision under which dock, and other dues and railway rates, may be differentiated against any such person as above described. This extends the war against rebates from the company which gets the mail contract to all others which trade with South Africa. There

are five other shipping companies, and a form of agreement has now been settled on the basis of definite rates and without rebates.

In an article in the "National Review," Mrs. Conyers Alston, in the course of an interesting description of South Africa, remarks that: "South Africa, paradoxical in this as in so many other directions, remains a protest against Buckle's theory of climatic and geographical influences, for the Dutch children of South Africa are an extremely sober, not to say heavy, little people. No fairies lurk in the South African bluebell, no pixies haunt the caverns and the rocks, and birds and beasts do not talk." But South Africa is not really peculiar in this matter. The fairy tales have not come from the sunshine of the South but from the gloomy woods of the North. They represent the spirit of romance and sentiment which has sprung up in an atmosphere of vague outlines and changing colours. They are not at home on the hard clear veld, and whatever literature for children or adults South Africa may produce it will certainly not be such as grew up on the Rhine or on the Thames. There will be no Spencer, Shakespeare, or Goethe in it. The myths or folk-lore of such a country are the summary of its worldly wisdom rather than the creation of imagination and sentiment, and its future literature will inevitably be shaped in the same way.

Rhodesia is benefiting considerably from the growing prosperity of South Africa. Prosperity, unfortunately for new-comers, sends up the price of land, and this process is going on all over the South, but Rhodesia can still offer the attraction of cheap land and easy terms, and settlers are coming in fast—many of them having sold holdings down South to take advantage of the lower prices. The result is that an agricultural development is taking place which is not equalled anywhere else in South Africa. Unimproved land can be obtained from about 4s. per acre, and though the price goes up with irrigation or proximity to railways and settlements it remains very reasonable. There are also arrangements under which occupation is permitted with an option for purchase which is open for 10 years or more. The British South Africa Company itself sets an example to the settlers by its own farms, which are conducted as commercial undertakings and constitute a good model; thus the agriculturist in Rhodesia has not only the help of the Agricultural Department as a scientific mentor, but also that of the Company in the capacity of a fellow worker. A very good class of settler is being obtained, and the standard of social life is remarkably high.

In Nyasaland satisfactory progress was recorded in 1911-1912. The weather was bad for cotton, but it is fortunate that when this is the case tobacco flourishes. The annual report observes that the two crops are admirably calculated to balance each other, the one being as much benefited by excessive rain as the other is injured by it, while a normal year should produce good crops from both. Tobacco needs less labour than cotton, and is of the two perhaps the crop less liable to complete failure, and it is possible that it will ultimately take first place as the Europeans' standard crop in this country. Among natives, on the other hand, the cotton industry is every year obtaining a firmer hold and nothing but a very heavy fall in the price of cotton is now likely seriously to check it. The product is suited as few others could be to the native's present stage of development, and though he has yet much to learn as to its cultivation and grading, he can produce an excellent quality of cotton in quantities which pay him well. The system of cotton markets now being instituted by the Government in the principal native cotton districts will promote competition and secure for the native the best prices for his produce.

The decay of the power of native chiefs and the tendency all over the Protectorate to the splitting up of villages into small family groups continues: this tendency is to some extent gratifying in that it originates in the native's sense of the complete security under the existing Government and goes far to guarantee a peaceful and contented future for the native population of the Protectorate. It becomes increasingly clear, however, that some paid native local authorities are required who shall be responsible to the District Residents for the good order and administration of their villages or areas.

The financial burden thrown on the Protectorate by the guarantee of interest on the capital needed for the Zambesi—Port Herald section, and by the redemption of the subsidy lands pledged to the constructors of the Shire Highlands Railway, is a heavy one; moreover, the actual process of construction may have the effect of raising the price of labour and thus adversely affect local industries; but the community realises that the solution of the commercial difficulty is justified.

The report of the Nyasaland Native Civil Service Committee deals with a question of interest to many crown colonies, viz. the conditions on which natives can be employed as civil servants. At present the native staff in Nyasaland, numbering 152, serves under temporary agreements, and has no regular scale of pay or pension rights. They have, it is stated, acquired their education and training in a rather haphazard fashion either by means of a Mission school or during the course of their employment in

Government service. Nevertheless, they are, generally speaking, a useful body of men capable of improvement; they take a cheerful interest in, and are quick to learn their work but their usefulness is impaired owing to a limited knowledge of English and lack of opportunity for suitable training prior to entering the service. Except in a few instances, native employees know very little English and are not the best type obtainable, which is explained by the fact that so many natives holding high school certificates go to South Africa in search of better pay so soon as they leave school or after a few years in local employment.

The Committee were of the opinion that the institution of an organised Civil Service, the entrance to which would be by competitive examination after a few years' training in a Government school and improved conditions of service in the way of a regular scale of pay and provision for old age, would not only improve the standard of usefulness of the native staff, but also secure and retain the services of the best educated men who at present leave the country.

The proposed terms are:—

(a) on entering the training school, 5/- per month food allowance.

(b) as 4th grade clerks ...	... £12 to £15.
as 3rd " " ...	... £17 to £21.
as 2nd " " ...	... £24 to £36.
as 1st " " ...	... £40 to £60.

Ultimately this scheme would prove economical, as it would cover duties which would otherwise have to be performed by Europeans or Indians. An important feature of it is that, before entering the proposed Government training school, candidates would be required to sign agreements to serve for five years, including two to be spent at school.

It appears from the Colonial Survey Report, 1911-12, that in that year 30,000 square miles were topographically surveyed in British Africa. Eight sheets of Uganda, covering an area of 30,000 square miles, were published, representing the largest block of topographical mapping in tropical Africa which has yet been issued, and indicating very clearly the great advance made in recent years in the extent and accuracy of the surveys of the continent. The delimitation was completed of the frontier between Uganda and the Congo, in the 'Mfumbiro district, and also the Uganda-German East African boundary to the east of Mount Sabinio.

A meeting took place in June, 1911, between representatives of the Belgian and British Governments to discuss the procedure and methods of work to be employed on the Rhodesia-Congo boundary commission. The commissioners left Europe in July,

1911, and met at Sakania on the 1st September, 1911. This frontier is over 1,100 miles in length and it is estimated that the work will extend into 1914, and the result of their labours should add largely to the geographical knowledge of this portion of the Empire.

Preliminary arrangements have been made to appoint commissioners to delimit the boundary between Rhodesia and the Portuguese colony of Angola. It is hoped that the Commissioners will rendezvous at the junction of the Congo-Zambesi watershed with the 24th meridian east of Greenwich on or about the 21st March, 1913.

The boundary between Southern Nigeria and the German Kameruns, lying between Yola and the Cross River, has been ratified since the close of the year under review, and it is hoped to send out a commission, under one of the officers employed on the original boundary commission, to mark out the new boundary on the spot.

A commission left Sierra Leone in 1911, to delimit the new boundary between that colony and Liberia. Owing to unexpected difficulties, the commission made practically no progress and returned to Freetown.

In many parts of West Africa it might easily be inferred from appearances that land should be plentiful and cheap, but it will be found that the native will tell you that there is little to spare. There is some truth in this, as a population which would be scanty in a civilised country may be dense when methods of cultivation are wasteful and require a great amount of room. In addition there is often great unwillingness to sell. In an interesting report, which has appeared in the "Southern Nigeria Gazette," Mr. A. J. Findlay remarks of the district of Aba, that the landowner evidently clings tenaciously to his land even although he derives no benefit from it and never will so long as it is under bush. Thus the impression that there is abundance of land is a false one, as it is for the purposes of a buyer scarce and high-priced. The result is that it is difficult to effect improvements. The natives of the oil-palm districts rely on palm oil for what money they require, and for food he is content to grow yams and such produce for a few years and then to allow the land to revert to the bush. A permanent crop, such as cocoa or rubber, does not appeal to him. It is not likely that there will be much change in this respect till the oil-palms are fully tapped.

The French territory in Central Africa, in the region known as "Ouhangui-Chari-Tohad," is interesting to us because its history is closely linked with that of Nigeria and because difficulties similar to ours have been encountered. The French have every reason to be

proud of the heroism which has been shown in the struggle with Rabah and the Senussites. The territory stretches from the German Cameroons and Lake Tchad to the Egyptian Sudan, and only a conventional line separates it from the desert on the north. The work of pacification in this vast region is still far from complete, but it has gone far enough to produce great changes in the population, which has been recently estimated at 2,545,000. This population is roughly divided into two groups, the fetish-worshipping races of the south and the Mohammedan races of the north. Before the arrival of the French the one class were the continual prey of the other, and to escape slavery or massacre were constantly flying to the mountains or forests for shelter. This process has gone on for centuries, and probably to this cause are largely due the smallness of the population and the arid and sterile condition of the country. The slave hunters are still represented by nomad Berbers, who preserve their hold of Borhou and Tibesti and who, being well armed with modern weapons, are no mean antagonists. The colonial authorities are anxious to crush these bandits, while in France objections are urged to further operations in a country which does not seem economically promising. Probably, as in similar situations of our own, the problem will be solved by a gradual process. For the present the difficulties of the French come from the Mohammedan races, and the result is that Islamism is not regarded by them with tolerance and even appreciation common in our colonies, but is looked upon as mischievous and dangerous.

Reports on all sides testify to the spread of Mohammedanism in our possessions, and the usual explanation is that this religion allows polygamy. But this consideration cannot appeal to the majority of men and does not explain the enthusiastic devotion of great numbers. There are other causes at work, and one which makes the propagation of the faith easy is that the religion is not represented by any church in our sense. There are no priests or officials. Births, deaths and marriages call for no intermediary between Allah and the faithful. There being no ecclesiastics there are no rites or ceremonies or sacraments. There are various religious orders and persons who exercise a great influence by virtue of mystical exaltation or severe asceticism, but they are not a necessary machinery though they readily rise up when the conditions call for them. An impressive feature of the religion is the open-air celebrations, in which people of all ages join, giving full rein to their ecstasies and often torturing themselves before the public gaze as they move on; these spectacles, while leaving a profound impression of horror on the ordinary European, have an enormous influence on less civilised nations. With them the religion, unaccompanied as it is in these

forms by any machinery for the teaching of dogma, blends easily with the superstitions from which they start. Education is generally strictly limited to reading the Koran; it borrows nothing from modern knowledge and leaves the population deplorably ignorant. The French authorities are supplying the deficiencies by building on the existing foundation. The Franco-Arabian schools provide for the teaching of the Koran by natives all the morning, while the afternoon is devoted to the usual primary education in French. But nomad marabouts are severely warned off French territory.

From time to time there have been visions (in the French press) of a great native West African army, and some disquietude has been caused by the possibility of such a force and the uncertainty as to how it might be used. The large populations that could be drawn on and their reputed warlike qualities made the task seem easy. But after some fifteen years' experience it appears that there are serious difficulties. The natives discover that trade or agricultural work is more profitable and less painful than regimental life. In the heroic period, when the French conquests were in progress, it was fairly easy to get recruits, especially as in such times it was reasonable for the warriors to expect a certain amount of loot; but now that this advantage has been lost and columns are seldom on the march the monotony of garrison life becomes an affliction and the recruits drift away. The training of reserves is also peculiarly difficult, because it takes the native a long time, as he does it, to get to the appointed place. It is considered that mobilisation for the defence of Dakar would take three months. Colonel Mangin, in the estimate which originated the idea of a great French West African army, considered that 40,000 voluntary recruits could be obtained each year, but the Governor-General, M. Ponty, has stated that it would not be possible to exceed a levy of 8,000 to 10,000 men without risking a check to the development of French West Africa, and without using compulsion. Complaints have been made, and to some extent recognised by the Administrations, that the recruits have been obtained by objectionable methods. In short the native who was accustomed to serve his chief readily in times of trouble will not serve the French Government when nothing which he has is threatened. "*C'est purement et simplement le rêve des troupes noires dissipé.*"

In Ceylon the census of 1911 has disclosed a growth of the capital which has outstripped all expectations. The population of "Old Colombo" is now 201,380. The growth is, however, in a sense artificial, and the Superintendent remarks that "the permanent population of Colombo may be said to be the stranger within her gates." The natural increase only accounts

it is reckoned, for about 8 per cent. of the total increase, leaving 92 per cent. to be accounted for by immigration. The population is increasing by a third, at least, in each decade, to say nothing of a daily passenger population. This means an extension of the suburbs, especially as a large part of the new population will not be satisfied to live in overcrowded quarters. The consequence is that public works schemes, such as that now in hand for the drainage of the town, will have to be considered with a view to a considerable enlargement of the area.

The trade of Fiji in 1911 exceeded the largest previous value by more than a quarter of a million. A survey is to be made of native lands, and this will, no doubt, be useful and beneficial in the administration of the lands which will be leased by the Government on behalf of the native owners. In past years a great amount of somewhat academical literature was written about the alienation of native lands in Fiji, and a policy of restriction was followed; but it is now realised there, as elsewhere, that if the country is to be developed there must be practicable means of obtaining land, and the system has been altered to enable the Government to make grants. The construction of a railway from Suva through the Rewa Valley has been under consideration. An important change in the constitution has been made, two elected members of the Legislative Council having been appointed members of the Executive Council. There will certainly be no lack of work for this body, a very extensive programme having been set out in the Governor's address to the Legislative Council.

The meeting of the Central Quarantine Authority in Barbados in August was disturbed by the fact that British Guiana thought it sufficient to agree to the suggested alterations to the Quarantine Convention and Regulations and did not send a delegate. It was considered at the meeting that in consequence of this the Authority was not properly constituted. In the scheme laid down by the Secretary of State, it was provided that the Authority should include one delegate from each of the Governments adhering to the West Indian Inter-Colonial Sanitary Convention. It was argued at Barbados from this that the attendance of a delegate from each of those Governments was essential to the proper constitution of the Authority, and the members decided that they could sit only as individuals and send in their opinions merely for what they were worth. No doubt the absence of an important member of a body may have the effect of restricting discussion or decisions, but it seems to be a new doctrine that such absence invalidates the proceedings of the others. This would be the case when the express consent of

each member is necessary, as in the case of a trust, but in deliberative assemblies of every kind the majority decides, subject to the constitution of a quorum or to any specific provisions applicable, and it is immaterial if any members are absent. It was apparently thought that the absence of any provision for a quorum made it necessary for each colony to be represented, but it may be submitted that a quorum represents only a minimum number and that the only effect of not providing for a quorum is that the body can act on the powers however small the attendance. However, a very useful discussion took place, the most important new proposition being that suspected cases of infectious or contagious disease should be notified by the colonies. This is the usual practice now, but it would be a step further to make it obligatory. It was also proposed to make it compulsory, where there are plague-infected rats, to prevent access of rats to ships or to secure their destruction on board. The inter-colonial schooner traffic is very big, and distances between the islands are quickly covered when the wind is fair, so that unless some such provision is made it is only a question of time when the colonies will be infected with plague through the importation of rats from Trinidad.

In Jamaica the year 1911-12 recorded a high water mark in the values of the imports and exports, and the impression is that the general revival of trade has elements of comparative permanence in it. The November storm unfortunately did very serious damage, but such misfortunes, regrettable as they are, do not affect the essential elements of the island's prosperity. They have to be looked upon as occasional risks such as most undertakings are exposed to, and should be provided for, as has been done in Jamaica, by some form of insurance. Appeals to philanthropy in such cases do not fail, but they tend to set up impressions which exaggerate the damage and the risks, and thus do harm to the colony. Some instructive figures are given in the annual report as to the effect which the tariff reductions had on consumption, and it is clear that the increase of consumption was very considerable. This is not solely a question of price, for an article's cost may go up in the country of origin, but this is a gradual process; a reduction of duty produces an immediate effect, as the merchant is encouraged to import more and aim at a wider distribution, which may remain established when the price advances.

The Government railway shared in the general prosperity, yielding a net earning equivalent to a dividend of £3 9s. 9d., and certainly shewing very efficient management.

The legislation passed in Jamaica to deal with persons who steal growing crops from the field has received a good deal of

attention, as it is an attempt to check by special methods an abuse which may become very serious but which easily escapes detection and punishment. The Journal of the Jamaica Agricultural Society gives an interesting account of the "Authorized Persons" who are specially empowered to arrest offenders who are caught in the act or reasonably suspected. It states that "prædial larceny, or the stealing of growing crops from the field is a form of theft very common there; in other countries where there are more towns other kinds of stealing, such as breaking into houses or burglary, are most common, but there crops are often grown far back from houses, without any protection; no hedge, no wall, often no wire fence even, and so products are very easily stolen without much chance of the culprit being caught in the field; crops too are such as can be easily sold in small quantities, and are often such as can be used for food right away without other preparation than cleaning or peeling and boiling. The plan of having authorized persons is an attempt to check prædial larceny by appointing representatives of Agricultural organizations such as Branch Societies, authorized to stop any persons found carrying produce under suspicious circumstances and ask an explanation of how the article or articles were come by. This is an addition to the law which permitted previously only authorized constables to arrest people for prædial larceny if they were actually found in the field in the act of stealing. Here we have now a set of private persons authorized to stop persons suspected of stealing crops; and if the circumstances are sufficiently suspicious to arrest the person. Any person who is in honest possession of anything can and should readily explain. Some mistakes will be made sometimes, in a perfectly honest person being so stopped, but these will be exceptions and uncommon. The authorized persons are usually men of discretion and judgment, are expected to be so, and would not stop anyone, or make an arrest without being very sure of the circumstances being very suspicious. Usually prædial thieves are habitual; only in times of severe stress as during a long drought does the stealing of food crops become rampant. Now these authorized persons under the law appointing them, are not policemen in any way; they are not under the control of the Inspector-General of Police, or under the authority of the local Inspector, Sergeant, or Corporal of Police as Authorized Persons. If an authorized person breaks the law himself, of course he can be dealt with like an ordinary individual. If, however, he misbehaves in connection with his duty as an authorized person, he cannot be dealt with like a district constable or one of the police, by the Inspector-General fining him or dismissing him. Authorized persons are not policemen. They are nominated by Agricultural Societies for appointment,

and these Societies are expected to understand the importance of this matter and only nominate such persons as are of good character, well-behaved men interested in their appointment and likely to be vigilant. It is advisable, too, that these men should in all cases be members of an Agricultural Society: it would be wise if those proprietors who have nominated men and sent the names to the Agricultural Society for recommendation, would also consider the advisability of getting the men they propose for appointment to become members of the nearest local Agricultural Society, where there is such a Society at hand. And it would in all cases be wise for any Branch nominating men in future, to have their nominees attend a meeting and have their proper duties explained, what they are expected to do, and may do under the law. Some branches ask their authorized persons to attend a Branch meeting once every quarter, and report on what they have done in the way of their duties. This is a very commendable practice."

The annual report remarks that: "The employment of "authorized persons" appears to be acting as a check on prædial larceny, less on account of the amount of arrests effected than on account of the greater apprehension diffused in the minds of the prædatory class by their knowledge of the vigilance of persons habitually living among them other than the ordinary police.

The speculations as to the effect of the Panama canal on trade routes are usually based entirely on calculations of the distance which can be saved, and no doubt this is the principal consideration. But it is not by any means the only one, and even it will be discounted to a substantial extent by the canal tolls. After the distance, the most important point to a ship is the traffic which it can pick up en route. The Suez canal not only shortened distances for many important lines but gave a more busy and remunerative route. But this will hardly be the case with the Panama canal. Thus the vessels which ply between Great Britain and Australasia via the Cape get the substantial advantage of the South African traffic, and it is significant that in recent years this route has gained at the expense of the Suez canal. Next comes the matter of coal and water, and for these purposes the South African ports will have a great advantage. It seems probable that with the progress of South Africa this Imperial route between Great Britain and Australasia will hold its own. Probably some concessions will be made at the South African ports to encourage shipping.

The key to the character of a colonial administration is contained in the annual estimates of expenditure, and these display

a great variety of objects. We have never, however, except in the case of Malta, which supports an opera house, but which is hardly representative of British customs in such matters, come across an instance of a financial provision such as appears in the budget of the government of Madagascar. This is for a *corps de ballet*. Our treasurers seem to overlook entirely this and the like requirements of civilisation. It is not so in France. It is true that "*la cour des comptes*," which no doubt displays the same pettifogging instincts that characterise similar bodies in our own system, has commented severely on the sums spent in Indo-China on subventions to theatrical companies, but this outburst is apparently provoked by the excessively large amounts. The drama follows the French flag, and no colony is complete without it.

The Secretary of State has decided that on the next revision of the Colonial Regulations the term "Crown Colony" is to be eliminated. The editors of the Colonial Office List have from time to time received complaints, the informality of which did not interfere with the vigour of their expression, of the application of this term to certain of the West Indian colonies: but, as their functions in such matters are of course limited to recording the decisions of the powers that be, they could only return the uninspiring reply that the category was official. The inclusion under one head of the colonies which have independent legislatures and of those which have not has become more inappropriate in recent times in consequence of the addition to the empire of great territories which are still in an early period of development so far as constitutions are concerned. In these cases the policy must be largely directed from home, but it is certainly desirable to distinguish such places clearly from those which have long enjoyed representative institutions.

THE MANOR OF MARYLAND.

"A Colonial Governor in Maryland; Horatio Sharpe and his Times." By LADY EDGAR. (*Longmans Green & Co.* 10s. 6d. net).

THE Colony of Maryland was constituted by a charter as a property to be held from Windsor Castle in free and common soccage, "by fealty only for all services, and not in capita, nor in knight's service, yielding therefore unto us, our heirs and successors, two Indian arrows of these parts, to be delivered at the said castle every year." The people were granted participation in making the laws and exemption from taxation by the Crown. The province in fact was a palatinate, an institution created by the Merovingian Kings of France, under which in course of time exclusive powers, almost kingly in character, were bestowed upon great vassals. It is easy to see at this date that the great measure of independence given to the American proprietary colonies from the start launched them well on the way to full self-government. This, of course, was far from being the intention at the time. The idea was simply feudal. The charter was of a type familiar in England. The Lord proprietor could coin money, create courts, appoint judges, pardon criminals, and exercise all the royal rights enjoyed by the Bishop of Durham within his county palatine. While such a charter created a sort of hereditary monarch, it conferred great rights on the people under his jurisdiction. Thus the Maryland charter declared that no tax or custom should be imposed on the settlers by any British authority, and laws were to be made by the proprietor with the advice and assent of the freemen or their deputies. It was followed by the "Conditions of Plantation," laid down by the first proprietor, Lord Baltimore, under which lands in fee were conveyed to "adventurers." Thus the constitution was largely democratic, the lord having in effect a power of vetoing legislation. The feudal system in fact, though its remains at this day are popularly associated with aristocratic privileges, in its day lent itself readily on British soil to liberal institutions, as it fully recognised the value and rights

of the vassals. The charter gave to the place in question what Great Britain as a whole had not got, viz., a written constitution. The model, under which the lord proprietor or the governor representing him and the officers of state appointed by him stood apart from the popular assemblies, is preserved in some of the West Indian constitutions and in that of the United States.

The proprietary rights inevitably dwindled with the growth of population. An absentee proprietor was in no position to contend with a spirited body of colonials who stood constantly on their rights, and the tendency was for him to leave matters alone so long as his pecuniary rights were respected. The proprietary idea was, however, in due course attacked from another quarter. When the British Parliament began to attempt control over the American colonies, the charters stood in the way. They were then "subjected to inquisitorial torture"; on one excuse or another the policy was to revoke them and to turn the proprietary colony into a "royal province." The real question became one between Imperial control and independence. The early conflict with the Colonies was caused largely by this revocation of charters. This step opened the door to the imposition of taxes and eventually brought about the revolt. The petty tax on tea which figured as the cause of war might have been endured but for the substantial fact that the right of self-taxation had been given and then taken away.

The case of Maryland was somewhat peculiar in that the charter, though at one time revoked, was at any rate to some extent restored. This exceptional result was due to the astuteness of the proprietary family with the authorities at home. In other respects the settlement shared the story and characteristics of its neighbours, and, though Lady Edgar does not attempt to give a complete narrative, her account of one of the most interesting governors, compiled as it is largely from private sources, gives a remarkably vivid picture of the contentions of the times and of the views held at home and in the colony. Colonel Horatio Sharpe reigned for sixteen years, from 1753, and, as Lady Edgar remarks, this period covered some of the most eventful days in colonial history. From the very commencement of the settlement a struggle had gone on between the proprietor and the settlers. For one thing the Baltimores were then Roman Catholics, and most of the members of the upper house were of the same religion, relatives and trusty friends of the proprietor. But the Protestants were in a majority of more than ten to one, and these were not days of toleration. The flight of King James II to France was the signal for an anti-papist agitation in most of the American colonies, and in this Maryland was conspicuous. It was in fact a revolution, bloodless and successful. King William supported the colonists and Lord Baltimore's political control was

cancelled. About a quarter of a century afterwards, however, the province was in a sense restored to the grandson of the deposed proprietor, but the lost ground was never wholly recovered. It cannot be said that the Council and Assembly under the new style established a creditable record. They passed several intolerant Acts which were disallowed by the Crown. It is true that they established the Anglican Church and levied an annual poll-tax of forty pounds of tobacco for the support of the clergy; but it is recorded that as the quality of the tobacco was not specified the few clergymen in the province came near starving. However, they did establish schools, of which there were none under the old regime.

Colonel Sharpe arrived as the representative of the proprietor at a time when the Colony was hard pressed by both the French and the Indians. As in England, it was the wars that developed the powers of the people. The Governor of Maryland had to go to the popular assembly for supplies, and it was the same in the other colonies. Co-operation was clearly necessary, and so early as 1754 a congress of the colonies adopted a form of union, drawn up by Benjamin Franklin, which provided for a council representing all the colonies and a president. Nothing came of this proposal as it was considered too democratic by the home government, but it contained the germ of the American constitution. Meanwhile, the home government decided to send out two regiments of foot to oppose the French. An order, which had a serious consequence, was given that officers of the provincial troops should have no rank when serving with officers commissioned by the Crown. A young provincial colonel of promise, named George Washington, would not accept this regulation and retired into private life with a grievance. There was no difficulty in getting volunteers for service, but the assemblies, particularly in Maryland, Pennsylvania and Virginia, persistently refused to grant supplies for the maintenance of the troops, and it fell to Governor Sharpe to propose that the British Parliament should pass a Bill making it obligatory on the colonies to contribute to the defence of His Majesty's dominions. He suggested a stamp duty on deeds, and this was the origin of the Stamp Act which ten years later convulsed the country. He received, however, at the time no help in this quarter, and had a vast amount of trouble with the Assembly, which would only vote money in a way to which the Upper House would not agree. The taxes which the Lower House proposed touched the proprietary estates, and while on the one hand it was contended that these should bear a fair proportion of the cost of defence, on the other it was claimed that they should be exempt. The Assembly took a view of the matter which would nowadays be generally considered reasonable, but in those days privilege was strong and it seemed to the Governors odious that taxation should cover all persons alike, that the collection should be in the hands of

the people, and that the troops should be virtually under their command. This was quite contrary to the proprietary idea and to the mental habits of the gallant soldiers who were sent out to administer the government. Eloquent appeals were made to the patriotism of the Maryland Assembly, but the supply bills remained saddled with conditions that the Governor could not accept, and eventually the companies were without pay and were granted furlough for an indefinite period. Certainly the Governors were in a very unenviable position between the home government and the proprietor on the one side and the sturdy colonists on the other. The struggle between the proprietary interests and the local opinion was similar in character to that which in our own time has occurred in Rhodesia, but its importance was enormously heightened by the severity of the long-drawn contest with the French. At that time, some hundred and fifty years ago, France claimed the whole of the vast area lying between the Gulf of Mexico and Hudson Bay, and England held only a narrow strip along the Atlantic coast. The English, it is true, were enormously superior in numbers, for they were about eleven hundred thousand, while the French were about sixty-six thousand, but the latter were soldiers to a man, under one leadership, and with the Indians for allies. Eventually in Pennsylvania the Governor submitted to the Assembly's conditions, and assented to a supply bill which taxed the proprietary estate. This resulted at once in a large increase of the troops provided by that province, but Governor Sharpe in Maryland resented the concession as an act of weakness. The situation there, however, was saved by the tide of war rolling to another scene. The great struggle was fought out by the St. Lawrence and was practically settled by the fall of Quebec in 1759.

In 1764 the home parliament passed the Stamp Act, a measure by which it was intended to raise money towards the cost of defending and securing the colonies in America. It was, however, received with so much indignation in Maryland that it was never possible to give effect to it. Soon it was repealed, and a great wave of enthusiastic loyalty marked the gratitude of the American people. It stands out clearly from the correspondence, which valuably supplements the meagre records of the parliamentary speeches, that it was fully realised in this country that the Americans claimed what they looked upon as their birthright, namely, that the people had always kept the purse, that the Commons in the language of every bill of supply gave and granted, and that the King returned thanks. As colonists by settlement they claimed the benefit of the common law and established rights. From a technical point of view it could be and was argued that the House of Commons could pass bills of supply for all the dominions and that it was not essential that the colonies affected should be

directly represented in the House. But the instances of taxes levied without representation were few and exceptional, and the American colonies make a totally different class. The repeal of the Stamp Act, however, was soon followed by a revenue act imposing duties on glass, paper, tea and other articles. This act went through parliament without eliciting the vigorous debates which had marked the passage of the Stamp Act. It was soon afterwards decided to take off the duties, except that on tea, "to mark a principle." To this one case the home government stubbornly adhered in spite of the protests and opposition in the colonies, and the result was the war.

Thus Maryland, like Virginia, began its career as a manor, and based its claims on the rights granted to it as such. But on American soil a rapid change of spirit manifested itself. It was not in human nature for settlers to be attached to an absentee landlord, who not only drew a revenue from the place but endeavoured to shape its policy and control its acts in order to secure his pecuniary interests. Almost from the first the settlers stood out for the right to direct taxation as their forefathers had done at home. The trifling duty on tea was an incident which only became important because a great principle was at stake. To this question of principle the proprietor and his representatives were singularly blind. The only definite plan which they produced for resisting the assembly was one propounded by Cacilius Calvert for distributing so many places as sheriffs, rent farmers, etc., among the members of that body that it would be rendered "not only silent but tame enough to bear stroking, and tractable enough to follow any directions that may be thought fit to be given them." It is true that Governor Sharpe did not consider this egregious scheme practicable, but he did not object on any moral ground. He pointed out "that a great influence hath at times been gained by the British House of Commons by such means is certain, but it cannot be thence inferred that the same might easily be done here." The misfortune was in fact that there were not the same opportunities for bribery in Maryland as there were at home.

Probably the revolt would have come sooner but for the French war. While the contest against France for the possessions of the country was being waged the constitutional question could not come to the front. It is one of the ironies of history that twenty years after the French had been driven out as enemies, they returned as allies of the colonies and with them drove out the British. It was with some reason that Cornwallis' army marched out of York to the tune "The world turned upside down."

The impress of the past is still strong on Maryland. As an example of the original English town Annapolis is unique in the United States. The very furniture of the Government House

remains. In the hall is the table at which the Governor dined ; in the corner stands the harpsichord ; the punch bowl is in its place. Whatever the political feelings, Annapolis was always a gay place, and the Abbé Robin has left it on record that there was more wealth and luxury there than in any other American town. The settlers had no yearnings for the idyllic life ; their habits and amusements vied with those of London. The town, little touched as it has been by time or circumstances, is still redolent of these memories and of the manners of a society ruled by British Governors.

REVIEWS AND NOTICES.

A Colony in the Making, or Sport and Profit in British East Africa. By LORD CRANWORTH (*Macmillan & Co., Ltd.* 12s. net).

UP to the present British East Africa is associated in the popular mind mostly with big game. It is true that in the most available districts the game is gradually disappearing. Considering the amount of sport which has been enjoyed this is not surprising. But after all the country is naturally very well adapted for game, and the herds have, after severe trials, a great power of recuperation. If ever any animal has been made the subject of special attention, it is the lion in East Africa. But his numbers keep up, if they do not actually increase. In two large reserves a great quantity of game is sheltered from the attacks of the sportsman. It seems probable, therefore, that animal life will remain a permanent attraction of the Protectorate. But in the meantime an industrial community is growing up, slowly but with every element of permanence, and between this class, which on a whole aims at making the country habitable and productive, and the class which regards it as a field for sport, there is conflict.

Lord Cranworth represents both parties and holds the balance impartially. His book will be read with interest by those who want a description of sport. It is distinguished from the many volumes which have been devoted to this engaging subject by the amount of specific information which is given, and which is as encyclopædic as is possible in the space. On the other side he shows a keen appreciation of the agricultural life, and enters fully and sympathetically into the question of local politics. There are strong feelings in the Protectorate on certain matters, and it cannot but be useful to have these explained by a writer who, while perfectly frank at all points, desires to be fair to all parties. No doubt there was a sort of

opposition between officials and colonists from the start, and there may be some grounds for the statement that the officials as a class "resented" the coming of the first pioneers. It was long before the days of the Colonial Office, but it can easily be surmised that the officials were not ready for the incursion. The Uganda Railway was built to carry out British obligations under the Brussels Act. It was in effect due to missionary influences, and its primary object was to put down slavery. The case was unique. In every other instance the railway has followed settlement. Here it went first. The result was that the country was opened up before the administration could make preparations. In particular, time was required for a survey. Then the land differs greatly in quality and value, and much experience was necessary before anything like a fair arrangement could be made. Let it be remembered that, on the other side in Northern Nigeria, it is now recognised that prospecting and licence-granting have gone on too fast. No doubt there have been many hard cases in East Africa, but the matter is now well in hand and in 1911 great progress was made. Lord Cranworth recognises the difficulties though he makes us realise the troubles of the settlers. In the matter of the rents charged by the Government he takes a strong line in which he is undoubtedly supported by the public opinion of the Protectorate. It is generally good for a department to see itself criticised and Lord Cranworth's criticisms of the Foreign Office and Colonial Office in this matter are given with a force of style which commands attention. It is not for us to attempt to say whether he is right or wrong, and we will only suggest that there were some reasons for the policy decided on. The subject on which local opinion has expressed itself most strongly against the home authorities is that of the land laws, the particular case being the revision of the Crown rent after certain periods, to wit, thirty-three and sixty years. This provision Lord Cranworth emphatically condemns. He states that "In their antagonism to this point the farmers and townsmen are for once unanimous; and it must be confessed that it is almost incomprehensible that the opinion of those who have special knowledge, and who alone are affected, should be held absolutely valueless. The argument of the farmer is this: I take up 5,000 acres of land, the possibilities of which are unknown and which is accordingly valueless. My neighbours and I spend time and money in experiment and find out that it will grow coffee, wattle, or sisal. By our efforts the unimproved value of this land becomes £2 an acre. As a reward for my efforts I am to be fined £500 per annum! It is pointed out that when unearned increment was introduced into England, on not one but on a thousand Radical platforms it was argued that the duty was only

fair where it arose from extraneous circumstances, and that to penalise a man for the improvements his own industry had effected would be grossly unjust. What was grossly unfair to the voting community in England is good enough for the voteless people of British East Africa." As to this it may be remarked that, while undoubtedly the farmers in the Protectorate deserve the fullest possible encouragement and protection, the Government has also to consider the future interests of the possession. The land may be for the present "unknown and accordingly valueless," and even a rent of halfpenny an acre may be sufficient to pay. But things do not remain like this very long. As the settlement of the country proceeds—which settlement was only possible in consequence of a state work, the Uganda Railway, to say nothing of other government assistance—the value of land inevitably rises. Is it contended that the first occupant should take the whole of this added value? Is the Government, which after all for this purpose is only the community at large, to get nothing out of it? Opinions may differ about the details, but the principle of charging a very low rent for Crown Land at first, and of increasing that rent if the increase of population and market makes the land more valuable, can hardly be so radically unsound and unjust as Lord Cranworth represents. The farmer's own improvements to the land are fully provided for. They are to be taken out of the case in the re-assessments. What is left is the difference between the "prairie" value and the value as increased, after a term of years, of the land by itself. Some of this increase will certainly be due to the work of the farmers themselves in making experiments and observations, but it is equally certain that, if East Africa progresses as we all believe it will, a large part of it will be owing to causes which are beyond such work and which represent the advance of the whole community. This was the reason for the legislation, and we do not recognise the grounds mentioned by Lord Cranworth, and very properly dismissed by him as inadequate, as having played any part in the discussion of the matter. The object lesson which was in view was that provided by Australasia, which is now repurchasing or retaxing great areas of land which were disposed of on improvident terms. Lord Cranworth quotes, as the first argument in favour of the revision, that long before the end of the thirty-three years the Protectorate will be in a position to make or repeal any land laws it may choose. Possibly when that happy time comes—and if it implies the establishment of a strong white community in East Africa we hope it will come soon—the future Government will not be particularly anxious to renounce its rights. It is even conceivable that it may find room for some gratitude to the department which reserved them.

Guiana: British, French and Dutch. By JAMES RODWAY, F.L.S.
(*T. Fisher Unwin*, 10s. 6d. net.)

In the early days of American settlements Guiana appeared very attractive. Tobacco was the valuable product, and British, Dutch and French fought for the hot and well-watered territory between the Orinoco and the Amazon. The Pilgrim Fathers thought of going there, and if they had carried out this idea history would have been written very differently. Eventually the Dutch accepted Surinam in exchange for New York, and at the time it was thought no bad bargain. Fortunately, the English, as compared with their colonising rivals, the Dutch, generally hit upon territories where the white race can increase and multiply. As it proved, the difficulties of planters in Guiana were always very great. To this day cultivation only covers a few strips about three miles deep along the coast and river banks; the interior is in much the same condition as in the case of Raleigh. The country is magnificent and full of possibilities; the difficulty is the want of labour. Here, as is now largely the case in West Africa itself, the negro does not increase, and the only hope of development rests with the coolie. But, at any rate, British Guiana pays its way, while Surinam makes a heavy drain yearly on Holland. Profits are hard to make, but the exports of sugar keep up. The planters are the backbone of the country, and, considering their numbers, keep up a remarkably high standard of civilization. The time cannot be far off when the abundant resources of the possession will be more fully exploited. Within the last four years or so the collection of balata has risen so fast that it is now the third most important export industry in the colony, and this industry should be permanent. It is recorded in Mr. C. W. Anderson's excellent report on the forests of British Guiana that tracts of Crown Lands on which the balata trees were first tapped a quarter of a century ago are still being worked and continue to yield supplies of balata. The timber trade should be extended, for there is hardly any industry in which profits are so certain if reasonable foresight is used. The increased price of tropical products generally should stimulate enterprise, and at this time the case of rice, which has gone up abnormally, may be mentioned. The cultivation of the oil palm should, as the Governor has pointed out, be successful. There is no lack of suggestions for improvements: some advisers rely on canals, others on roads, others on railways. There is a case for all, and it is to be hoped that full public discussion will soon enable the colony to decide how to begin and how far to go. Some of the schemes which have been started in this country with reference to British Guiana have not been felicitously planned, but there can be no occasion for slipshod methods when so much is done to supply information. In this colony, as in many other places, the cry is "back to the land." There are thousands of square miles of

Government land available, though in districts which are at present out of the way, and there is plenty of land in private hands which can be bought cheap. But the rising generation shows the usual tendency to dislike field work, and Georgetown is overcrowded with the mercantile class. The climate operates against work. Where there is no winter, and fruits and vegetables ripen twice a year, there is no incentive to thrift. This is true more or less of all West Africa, but in Guiana the negro seems to be less capable of continuous work than even in West Africa. Future agricultural development depends on the East Indians, of whom there are now over 100,000 in the colony. This race comes from the tropics, but from a country where, on the whole, the land is poor; thus they had through centuries acquired the habit of patient work. When such development is in prospect, it may be justifiable to incur the heavy cost of improving the bar at Georgetown, but such schemes are so difficult and uncertain in their results that it is impossible to consider the problem too carefully.

Mr. Rodway's work, which forms one of the "South American Series," is very well planned. It gives a description and history of all three Guianas, and, as may be expected from the writer, the account of industries and ways of living is given with full command of the subjects and in very readable style. We are glad to see his statement that the selection of East Indians is now well done, and that it is quite a pleasure to see the arrivals from a coolie ship. This emigration is carefully watched in India and is from time to time the subject of criticism; we trust, therefore, that Mr. Rodway's account of the treatment and status of the immigrants will receive notice there. The following passage may be quoted as an example:—

"Coolie riots are now largely a story of the past, but they must not be forgotten. The causes were almost entirely disputes about wages; they may be compared to the strikes so common now in Europe and the United States. Some have been serious, but hitherto have always been confined to a particular estate. Combination was conspicuous within that area, but never became universal in British Guiana. Armed police and even soldiers have been necessary at times, but the row was soon over. In no case was there any renewal of the disturbance; arbitration by the immigration officials always settled the matter. 'Sammy' is open to reason, and has great respect for the 'coolie papa,' as they call the chief of the department. The danger always lies in a misunderstanding; the planter has therefore learnt to be very cautious in his dealings, and to see that there must be no mistake in the pay-sheet. Nothing serious has occurred for nearly forty years, but now and again an overseer is assaulted, or a gang may be seen marching off to the immigration agent to make a complaint that wages are too little. The matter is at

once taken in hand, and the agent's decision is considered final by both planter and coolie. These decisions may appear at times somewhat arbitrary, but the authorities are prepared to enforce them, even going so far as to demand the discharge of an overseer, and in one case, at least, of a manager. The proprietor is bound to submit, otherwise the coolies might be removed; this would, in many cases, mean utter ruin."

The East Indian in fact dominates the situation. The special attentions of the Government are for him, and it is a notable fact that the death-rate on the plantations is now less than that of the general population.

Trails, Trappers, and Tender-feet in the New Empire of Western Canada. By STANLEY WASHBURN (*Andrew Melrose*, 10s. 6d. net).

The deerslayers and pathfinders whose exploits entranced our boyhood have been steadily moved further and further west, and now their last foothold is at the edge of the Rockies. Even these resorts are now threatened by the advance of the railways, or, as it is locally expressed, "steel." The endless miles of trail, the strange wildernesses, the foaming rivers and distant peaks, which have been sacred to the Indian, the trapper and the explorer, will soon be made familiar in many places from the observation cars. The C.P.R. led the way, and now the Grand Trunk will break in on a vast expanse of new ground. A few years ago this latter Company was in a dismal condition. The patriarch of Canadian railways was sinking into a condition of something like decay, and the result appeared in suspended dividends. The story of the rise of the Grand Trunk from this position is one of the most striking in railway history. It has been mostly due to the invigorating influence of American methods. Mr. Hays, of the Wabash Railroad, came across to apply the plan which has been found successful in the United States, and which consists simply in making a good road and providing an attractive service. That the policy paid was soon seen in the announcement of a dividend. But this was merely a prelude. The road was one on which three-quarters of the freight of Canada originated, but much of this slipped over to other and competing lines. It did not carry to destination. The logical remedy was to build from coast to coast, and after much opposition Mr. Hays carried this scheme through. There is now under construction a line extending from Monoton, in New Brunswick, to Prince Rupert, in British Columbia, a distance of 3,545 miles. The work is to be first-class from the start, on the principle that it costs about three times as much to rebuild an operating line as it does to make a good one from the beginning. Thus on the mountains

there is no ascent exceeding more than 26 feet to the mile. Compare this with the C.P.R., built at a time when it was considered good enough to get over at any grade. There the grade at the Kicking Horse Pass was 116 feet to the mile, and three enormous locomotives were required to push half-a-dozen freight cars over. The result was a dream of delight to the tourist but it was bad business with the engine and coal bill, and in recent years the grade has been reduced by gigantic loops, but even now the gradient is three times as stiff as that of the Yellowhead Pass taken by the Grand Trunk. The agent by which a moderate grade has been secured is dynamite. On the last stretch into Rupert a shelf sixty miles long has been blasted out of the solid rock, and on this piece alone 2,000,000 shots of dynamite were exploded.

This line when finished will be the principal road to the east from England. Prince Rupert is 500 miles north of Vancouver and the journey to Japan and China will be appreciably quicker than by the Vancouver route. The work is advancing rapidly, and presently vast areas, hitherto useless, will be brought into the zone of international commerce.

The advent of this undertaking gives an unusual interest to such a book as Mr. Washburn's. The part of the wilderness of which he writes is already melting away before the explosive and the sledge-hammer. Nothing can affect the grandeur of the scenery but the simple life and primitive traffic are going. Mr. Washburn's record will be the last one of the handful of men who roam within these mountain fastnesses "with hearts of Vikings and the simple faith of the child." To anyone who can appreciate the gladness and serenity of such a life his pages will strongly appeal. They do not profess to relate existing adventures or great achievements, but they are full of interesting incidents and of the spirit of romantic exploration. We may quote one description as an example of mountain territory: "If there is any country in the world to-day that stands as a sample of the primeval, it is this same valley of the Fraser. Giant cedars that measure six and eight feet across at the butt and soar 80 feet clear to the first branch on the largest trees. . . . The whole floor is sown with rotting trunks that must have been moulding for centuries. I don't know how long it takes a tree to rot, but it must require some time for a tree four or five feet through to mould to such an extent that you can dig through the brown decay with a shovel. In these spots one can walk for half a mile on tree trunks and never touch the earth by ten feet. Ten good men with sharp axes could not cut a mile of trail a day where horses might travel." It may be observed that these great forest deposits are only possible in temperate climates. In tropical countries they are seldom allowed to remain. The ants see to that.

The Virgin Islands. By W. C. FISHLOCH (*Waterlow and Sons Ltd.*).

This unpretentious but well written handbook will, it may be hoped, prove serviceable in drawing attention to these attractive islands. They have had palmy days, but suffered as much as any place from the abolition of slavery. Before that event the yearly exports alone amounted to £164,128; in 1900 the whole export and import trade was valued at only £6,199. With these figures before him, it must have cost the author something to admit, as he does, that slavery cannot be defended even on economic grounds. No doubt adhesion to this principle is *de rigueur*, but economic truths often take a very long period to work out, and in the meantime exact much patience from the believers. The implied condition in the case of the abolition of slavery was that time should be allowed for a race which had been accustomed to work under masters to be educated to work for itself. More than a hundred years passed before much was achieved in this direction. The policy of education was not taken actively in hand till the Agricultural Department was established in 1900. Now the Islands are doing well, and with the development of the cotton, limes and coco-nut industries, they are likely to enter on a new era of prosperity. They will in time, no doubt, get more benefit from one invariable asset, the climate, which, from a medical point of view, is claimed to be equal to any in the West Indies. When the centre of gravity of the British Empire has shifted to Canada, which, we are told is now a matter of easy calculation, the Virgin Islands will be a popular resort. We trust that they will even then retain that simplicity of life which now enables the whole Presidency to be controlled by one policeman.

West Indian Tales of Old. By ALGERNON ASPINALL (*Duckworth & Co.*).

Mr. Aspinall looks forward to the approaching time when the Caribbean Sea, instead of being a sort of cul-de-sac, will become one of the world's principal highways, and bring in a great influx of visitors to the West Indies. The new order of things should greatly enlarge the number of persons who take an interest in the history of the islands, and it was a good idea of Mr. Aspinall's to minister to such demands by collecting a number of romantic incidents, which, it need hardly be said, he sets out in eminently readable style. First comes the story of Benbow the Brave, and then one of the most remarkable episodes in colonial history, the fate of Governor Parke. Parke was Governor of the Leeward Islands and behaved in an outrageous manner: he was recalled by the King but did not obey, and a mob broke into the house and killed him. Rodney's great victory over de Grasse, by which Jamaica and other islands were

secured to Great Britain, is duly told; also the affair with the Spaniards at Chaquaramas Bay, Trinidad, and other incidents of the numerous international struggles which the islands have seen. Places which have seen so much wild work must, of course, crown these experiences with a few tales of mystery and the supernatural, and these are represented by the Legend of Rose Hall, at Montego Bay, which is distinguished by the occasional visits of the ghostly form of a former mistress who was (apparently very properly) killed by her own slaves.

Federated Malay States Railways.

An attractive pamphlet has been issued at Kuala Lumpur for the information of travellers. There are now many inducements to make a tour of the Peninsula, for in addition to business matters there is big game shooting, the best snipe shooting in the world, and over 2,000 miles of fine roads for motoring. In fact the pamphlet concludes with the cry "Malaya for Motorists." The descriptions of places of interest, by Mr. C. W. Harrison, supply exactly what is required for a first impression.

Bulletin of the Imperial Institute (VOL. X, No. 3). (*John Murray, by post 2s. 9d.*).

The leading article in this, the third quarterly issue, is on the improvement of cotton in India and sets out the steps taken to remedy the defect of short staple cotton. Teas from Southern Nigeria are pronounced to be of very promising character, but the proportion of tannin is high. The Falklands furnished a satisfactory sample of copper ore, and if such ore can be found in large quantities a new era would be open to the islands. Recent agricultural developments in Uganda are explained in detail: of all planters' crops the most desirable is judged to be coffee, the export of which will grow greatly. A review of the coal resources of the Crown colonies embraces an account of recent discoveries in Southern Nigeria; the lignite of this country is of good quality and will be very serviceable made up into briquettes.

Reports of the Wellcome Tropical Research Laboratories

(*Baillière, Tindall & Cox*). Fourth Report, Vol. A. Medical, 21s. net.

Vol. B, General Science, 18s. Supplement "Review of some of the more recent advances in Tropical Medicine, 15s.

The fourth report carries on the record of the research work conducted in the Sudan into many varied and deeply interesting problems. The supplement contains a very full and clear summary of recent investigations in all parts. In addition to the purely medical matter there is much information of general interest about the natives and their customs.

BUSINESS NOTES.

Oil.

THERE have been sharp fluctuations in the price, and this is inevitable with this article as the production is uncertain owing to the occurrence of gushers. The demand is affected by this uncertainty, as manufacturers dread unexpected changes of price more than anything else; but on the whole the price continues to rise, and probably the large speculative element in the business contributes to this result. The Standard Oil Company endeavoured to conquer the world's markets by selling kerosene for export at low prices, but it failed to stop enterprise in Europe and a group of interests was formed to operate in competition. Their principal producer is Russia, where there are more than a hundred English petroleum companies. At the beginning of 1912 the Standard Oil Company was formally dissolved, and the various concerns which then became independent raised the price, being encouraged to do this by the prospect of the great navies being fed with oil instead of coal. This rise was followed by activity all over the world in boring for new supplies and developing the old.

Unfortunately much money has already been lost on these enterprises, the usual error being to trust to surface indications of petroleum without regard to the general geological character of the region.

In formulating an administrative policy with regard to oil it is necessary to consider this peculiar character of the principal undertakings. It is desirable to prevent, if possible, the supplies of a colony falling into the hands of a monopolist undertaking; on the other hand it is unsatisfactory to allow them to be acquired by small concerns which cannot properly exploit them. The negotiations with regard to Trinidad concessions and agreements are governed by these considerations.

Rubber.

The Director of Agriculture in the F.M.S. expresses the opinion that one hundred trees to the acre should be the maximum number, and that eighty are ample. He states that the cultivation usually given to rubber trees is hardly worth the name, consisting usually of a scraping of the soil to remove the weeds, and that once a year at least the soil should receive a thorough cultivation to a depth of at least four inches. Then during dry weather the trees would not suffer as they do now, as the soil water would not evaporate so quickly. Such a system, combined with a good leguminous cover crop, would improve the growth immensely. The Department is experimenting with a large number of cover crops, the ideal being a rapidly growing plant which quickly shades the soil sufficiently to keep down the weeds, with a short life so that within the year it can be cut down, dug in and re-sown. Experiments are also being made with manuring and tapping, and valuable results will no doubt be obtained from these systematic observations, but unfortunately they require several years.

There was recently every prospect that the total production in Malaya would exceed the estimate prepared in 1911.

The latex tubes of a rubber tree are a path by which food material is conveyed to the plant, and this conveyance is interfered with when the tree is tapped. It is therefore advisable, the curator of the Seychelles Botanic Station points out, to tap the tree moderately and to adopt a system which would give the highest yield with the minimum of injury within a certain period of time. Professor Fitting, in Java, has proved that the reserve food of *Hevea* becomes poorer after a certain period of tapping and he advocates the system of resting the trees to allow the tree to store food in the wood behind the strip last tapped. If there is no period of rest the tapping in the second period is started at a disadvantage as compared with the previous period. It is useless going on tapping all the year round. In another way the importance of resting is well illustrated in the experiments at Heneratgoda. The first ten tappings for example gave 197 grammes in a period of 140 days and the last ten tappings 70 grammes only. On the same tree where the other side of the tree was tapped without a resting period, the first ten tappings of the second period of 180 tappings gave 118 grammes (instead of 197) and the last ten tappings 26 grammes (instead of 70). In a full herring-bone tapping at Heneratgoda in 1905-06 it was shown that 840 tappings (if that were possible) would have been required to produce the same yield as the first 57. In presence of these figures it is easy to decide on the best method of tapping. The way of incising or excising (pricking or paring), the system planned must vary according to the age and resistance of the

trees and to the yield obtained in the minimum time. In Seychelles where the trees are young and the soil comparatively poor, except in drained marshes and alluvial flats, it seems advisable to tap the trees as soon as they measure 17 inches at three feet from the ground and tap them only during a short time after the rainy season. Owing to the conditions of the market the highest yield should, however, be contemplated and the system suggested would be: three cuts half spiral are made one foot apart on one side of the tree and tapping by excising made every day or on alternate days for two months, then tapping should be shifted to the other side of the tree and continued for two months. These two sides of the tree at three feet from the ground should be tapped in such a way as to remove the whole bark in two years with the necessary periods of rest. Then the upper three feet of the tree should be tapped in the same way. After four years the renewed bark should be tapped and the same course followed. The idea of shifting the tapping from one side of the tree to the other is based on experiments carried out in Ceylon which tend to show that the composition of the latex obtained is of more uniform composition than when the same side of the tree is tapped over a long period, the composition of the latex being in that case considerably poorer in caoutchouc at the end of the period. Further, it should not be forgotten that the tapping over a long period on the same side cuts off the roots from the crown on that side for the whole of that time. The circumference of the tree can without inconvenience be divided into four parts or three parts and tapping done on the one-third or quarter in one year system, but where there are long periods of drought tapping has to be done within a short period and a system adopted which would appear too drastic in places where tapping goes on all the year round. The same remark applies to every day tapping instead of every alternate day and as all systems have advantages and disadvantages, the system adopted should combine the maximum yield and the least injury to the tree as far as food reserve is concerned, provided no renewed bark is tapped when less than four years old. The whole question is dependent on the age and resistance of the trees. With those of a certain age, forty inches circumference, the bark area on every day tapping by *V*'s which extend half round the circumference, six feet above ground, is removed only after 610 successive parings. The problem is to combine the tapping system in such a way as to remove the same area in a number of days which is large enough to avoid interference with the health of the tree. In experiments made by Dr. Lock the yield from the renewed bark after two years seems to compare favourably with that from any of the preceding areas of old bark. The percentage of

rubber in latex is found to be higher when a change is made to a fresh tapping area, there is a constant yield after six months tapping in all rows, the yield being of course smaller in the case of those more frequently tapped.

Banana Cultivation.

Mr. H. Q. Levy, in the "Journal of the Jamaica Agricultural Society," gives the following calculation of cost and returns per acre of a field of plant bananas cultivated a few years ago, on a "red dirt" soil of fair fertility, without manuring, and planted 14×14 , two separate seed suckers to each hole.

440 stems giving 70 per cent. payables, equal 308, average £9 per 100	...	...	£27	8	0
Forking common pasture, per square, 4s.	2	0	0		
If guinea grass pasture add 2s. 3d. per square for hoeing up the grass.					
Lining, per acre, 2s.	...	...	0	2	0
Digging holes 2 feet 6 inches \times 18 inches \times 18 inches, 222 per 100, 3s. 6d.	0	7	9		
Suckers delivered, 400 average at 5s. per 100	...	...	1	0	0
Dropping suckers for	...	...	0	6	0
Planting	...	...	0	5	0
Supplying	...	...	0	1	6
Mulching with guinea grass, cutting, carrying and spreading. If bush mulch be used, the cost will be about £1 10s. more	...	...	3	0	0
Weeding twice, 20 squares, per square at 9d.	...	...	0	15	0
Pruning	...	...	0	4	0
Cutting and heading	...	...	1	0	0
Carting 8 miles to wharf, 440 stems at 1½d.	...	...	2	15	0
Profit per acre	...	...	£15	11	9

These figures help to explain the value of the banana to Jamaica. Some alarm has been caused by the discovery of disease in the island, but it does not seem to have extended much.

Coco-Nut Trees.

Probably the finest specimens are those grown by the Germans in Samoa—a ten years' work. Here no one is allowed to make copra without a special permit, and the holder of this must follow published regulations. One object is to prevent the use of nuts insufficiently ripe, and in effect only those are allowed that

fall naturally from the trees. But it is more profitable to extract the oil on the spot, rather than make copra, in order to feed stock when circumstances allow, for this is one of the best foods and is growing in favour; it is also more and more in demand for vegetable butter, confectionery, and the best kinds of soap.

There is a rivalry in the market between this oil and the palm-oil of West Africa. But the former is the best, as it is free from certain objectionable acids and other substances found in the latter. Another rival has, however, made its appearance in an unexpected quarter. This is the homely tomato, the seeds of which, it appears, yield an oil resembling cotton-seed oil. It is being produced in Italy and other countries will follow suit.

It used to be a familiar belief that coco-nuts after falling from trees travelled from shore to shore on the currents to flourish again in distant lands. Recent investigations, however, seem to make it necessary to discard this amiable theory. The envelope is provided by nature to break the shock when the fruit falls, but it is not adapted for floating and there are no known cases of its distribution by the marine method.

Mr. Dupont speaks well of the Ceylon native system of manuring, which gives more rapid results than ploughing within the manuring area. A radius of two feet is left untouched round the stem, then four or five feet wide of a shallow trench is dug, the bottom sloping away from the tree and as deep as the root system will permit. In seedy soils the trench can be dug six inches, but in laterite or rocky soils where the roots congregate near the surface it is better not to dig so deep. The trench is forked and the manure mixed with the soil thoroughly. This manuring area is thus carefully treated every two years and maintained in a fine state of tilth. It is considered that by lacerating with a plough the roots die and thus ploughing is avoided within this manuring area. However, ploughing is done outside the six feet radius where no manure is applied.

Coffee.

The "Journal of the Jamaica Agricultural Society" states that coffee can be grown on almost any soil, but to make the cultivation pay it should be confined to such soils and situations which are naturally adapted to its growth, viz., those of white limestone formation, i.e. the so-called "red dirt" lands, those of yellow limestone formation, viz. a top layer of black, and a subsoil of yellow clay, so long as they are not so heavy as to border on what is called the "soapy" condition, and clays of sandstone formation. Marly, gravelly, light sandy or badly "washed" hillsides are not suitable for coffee cultivation, and therefore should be rejected.

The "red dirt" soils require practically no drainage, except in the form of "blind" trenches, on steep hillsides, to prevent excessive washing, and the carrying away of valuable plant food. On the other hand, to obtain good and lasting results from all clay lands, especially those of yellow limestone formation, the fields *must* be systematically and deeply drained. Most excellent coffee can be grown between rocks, where the pockets of soil are deep, for the coffee plant, having a long tap root, requires a good depth of soil for its full development.

Never burn the dry leaves, bush, logs, or in fact any decaying vegetable matter off the land on which you are about to plant coffee, this specially applies to "red dirt" soils. The catch crops may benefit from such treatment of your land, but the coffee will feel the bad effects for years afterwards, and it will cost you much money and extra labour to renew the humus thus destroyed.

If the soil be poor, fly penning, bushing, and the use of stable litter, or some other form of manuring must be resorted to before you start planting operations. It is also desirable, no matter of what class your land be, to give it a thorough forking at least a foot in depth.

The coffee plant thrives best, and a better grade is produced, at high elevations, ranging from 2,000 to 4,000 feet above sea level, but it may be grown with great success at even 1,000 feet, so long as the trees are not exposed to high winds, and are partially shaded. Below that elevation, although the tree thrives in protected valleys, there is considerable risk in its successful cultivation, and the quality of the bean is always inferior.

Inspection of Export Fruit.

There can be no doubt that compulsory inspection of fruit for export proves beneficial to the grower. The "Cape Agricultural Journal" sums up the advantages to him as follows:—

- (1) If he sends for shipment 1,000 boxes of over-ripe fruit, these may be detained by the inspector and sold locally at a profit (such a case actually occurred at Capetown last season) whereas had such fruit gone forward he would have been subject to considerable loss.
- (2) An inspector sees the various styles of packing, is conversant with the best and able to advise growers how to pack their fruit properly.
- (3) An inspector knows and can instruct the growers exactly at what stage of ripeness the different kinds of fruit must be packed.
- (4) An inspector should have the right to confiscate any boxes of fruit which are fraudulently marked.

- (5) An inspector is able, during that portion of the year in which no fruit export is going on, to visit the fruit exporting districts and give instruction in correct methods of fruit growing, packing house arrangement, pruning, and one-hundred-and-one other things which he is in a better position and should be better able to understand than anyone else.

The shipping companies benefit from inspection in that they know that the goods consigned in their ships are in good order, that there is no possibility, or at any rate only the remotest contingency, of the fruit being rejected on arrival at its port of destination. In the earlier days of the development of the banana trade from the West Indies to Bristol and Liverpool on more than one occasion whole ship-loads of bananas were condemned as unfit for human food and landing denied them. No other course was open than to put back to sea and jettison the entire cargo. To-day, when there is inspection, no such danger exists. Inspectors do not pass fruit for export in an unfit condition, consequently shipping companies must of necessity be in favour of inspection and some of them are willing to institute preferential rates on fruit which has passed the inspector.

Further, under the usual fruit trade regulations in existence in all the principal exporting countries in the world, standard size fruits are exported in standard size boxes. This is a benefit to shipping companies, in that they are able to stow their cargoes in the cool or other chambers of the ship to far greater advantage than would be possible if an indiscriminate assortment of packages of all sizes were offered for shipment. It should be part of the inspector's duties to see that these standard sizes are observed.

The dealer "at the other end" is happy when he gets regular consignments of correctly graded, well packed fruit, in good condition, free from waste. It means that his work is lessened, his sales more readily made, and that his customers are satisfied.

The soundest guarantee which can exist that fruit shall arrive under such conditions is a satisfactory inspection by a duly qualified officer. It means money in the dealer's pocket.

Angora Goats.

It is incomprehensible, if the habits of this species of goat are considered, that it is not made more use of by settlers in clearing the ground of undergrowth, as at the same time it provides a valuable marketable commodity in mohair, and the flesh is a very fair substitute for mutton. The prices for these animals vary considerably, showing that care given to them will be well repaid.

Coal in Southern Nigeria.

The Imperial Institute report on the mineral survey of Southern Nigeria states that the results obtained during 1910 largely extended our knowledge of the economic mineral resources of Southern Nigeria. The important lignite (brown coal) and sub-bituminous coal deposits occurring in the country have been referred to in previous reports, and further valuable contributions are now made to our knowledge of the extent and quality of these fuel resources, which are likely to be of great importance in the future industrial development, not only of Southern Nigeria but also of the whole of West Africa. In the Udi district extensions of the seams occurring in the Ofarn river were met with, but they were not so thick as in the Ofarn sections. Workable seams of good coal were found in other districts, and west of Nike the coal seams are continuous over a considerable strip of country. The coal in the Udi district is black and fairly compact and of a type intermediate between lignite and ordinary bituminous coal.

It is certainly much to be hoped that a satisfactory supply of coal will be worked in Nigeria, for while supplies from this country cost something like 45s. a ton, railway enterprise is heavily handicapped and with it the development of the country. So long as the bar at Lagos remains difficult the price of coal will be high, and it is probably the fact that even at the present figure there is not much profit in the business.

It is intended to make further search for coal in the Udi district nearer the Niger, and the direction of the proposed railway will depend on the results of this investigation.

Electric Light.

Messrs. Preece, Cardew & Snell have advised that the "Lister-Bruston" automatic electric light plant is a simple and efficient system, and quite suitable for lighting a Government House and the surrounding buildings, providing petrol can be obtained.

The "Lister-Bruston" system was put on the market about two years ago, and a considerable number have been installed in England for country house lighting and for export abroad.

The essential portions of the plant consist of a slow-speed petrol-driven engine, belt connected to a direct current dynamo, a small storage battery, and various relays and other gear which form the automatic features of the plant.

The plant is so arranged that after a certain number of lights are turned on, or after the battery voltage has fallen to a definite amount, the battery starts the engine by means of the dynamo working as a motor. When the engine is up to speed, the engine

starts to work and charges up the battery, and supplies current to the lamps. After the lights are turned off, the engine automatically stops.

The set size "D" is big enough to supply 125 lights of an average capacity of 25 watts, provided *that not more than one-half the lights are in use at one time.*

The plant should be installed in a room about 12 ft. by 18 ft.

The above plant will use about 35-50 gallons of petrol per month, according to the hours of lighting required.

While the "Lister-Bruston" system is entirely automatic, it of course needs a certain amount of attention for cleaning, filling up with oil and petrol. A man with a fair amount of electrical knowledge would have to be engaged to instal the set, lay the cables between the buildings, and wire the lighting points in the buildings.

The dynamos supplied with the "Lister" sets are usually wound for 50 volts; if, however, the buildings are scattered over say a quarter of a mile, the dynamo will have to be wound for 120 volts, so as to avoid considerable drop in pressure. The sizes of the cables supplying the various buildings will have to be carefully calculated, to ensure that the voltage drop from the dynamo to the lamps in each building does not exceed 15 volts.

So that these calculations can be made, a map should be supplied giving the following information:—

- (a) The position of the dynamo room.
- (b) The position of each building and the number and candle power of the lights required in each building.
- (c) The roads under which cables can be laid from the dynamo room to the various buildings.

For the lighting of such a building as a new Government House the plant and materials will cost about £180.

If there is any difficulty in procuring a sufficient quantity of petrol for the "Lister-Bruston" sets, a paraffin engine can be supplied instead; this, however, while not affecting the cost of the scheme will do away with the advantages and automatic features of the "Lister-Bruston" system, and the whole of the time of the electrician would be required in order to charge the battery and keep the plant in a satisfactory condition. The battery would have to be considerably larger and the cost of its upkeep and renewal would be considerably greater.

Stamping Presses.

Automatic recording stamping presses are constructed to be worked by hand, by stampers responsible for their use, and so worked they are excellently suited for stamping, economically

and safely, deeds, instruments and forms in comparatively small quantities. But they are not suitable for stamping forms, such as those for cheques, receipts and policies, which it is necessary to stamp in large quantities. In the United Kingdom stamping of this kind is carried out by fast running power-driven machinery to which recording mechanism is not affixed, and to which it has not been found practicable to apply it successfully without much more trouble and cost than the use of the mechanism could, even if successful, obviate. Control upon stamping of this class is secured by a system under which the stamps are issued by one staff and stamped by another, and other checks are used.

A self-inking machine without recording mechanism suitable for hand stamping, under proper supervision, of forms for cheques, receipts, bills of lading, etc., can be supplied for about £58. Automatic recording mechanism can be affixed and affords a valuable auxiliary check upon the stamper, but responsible supervision while stamping would still be necessary.

The Cement Gun.

This is an apparatus which has been used on the Panama Canal for applying concrete to any surface. As soon as water touches cement combination begins, and in the "gun" the combination of cement, sand and water begins at the nozzle and is completed during the discharge, which is effected by compressed air through a hose. All superfluous air and water are expelled by the discharge on the surface to be coated. The results appear to be good and the method will no doubt be widely adopted. The New York firm of Westinghouse, Church, Kerr & Co. report the following conclusions from a series of tests:—

"In all of the tests made the product of the Cement Gun showed superior to good hand-made products of the same kind. The degree of superiority varied between wide limits.

"In tensile strength the gun-work excelled hand-work in every case by amounts ranging from 20 per cent. to 260 per cent.

"In compressive strength the excellence of the gun-work was even more marked, ranging from 20 per cent. to 720 per cent. better than hand-work.

"In the matter of surface permeability the gun-work absorbed from $\frac{7}{16}$ down to $\frac{1}{32}$ as much water per hour per unit of area as the similar hand-made surfaces.

"As regards absorption of water the hand-made mortars took up from 1.4 to 5.3 times as much as the gun-made mortars.

"The percentage of voids of the gun-made products range from 22 per cent. to 87 per cent. of that of the hand-made product.

"The adhesion of the gun-applied mortars was on an average 11 per cent. better than that of hand-work."

How to make Concrete Waterproof.

This is an important matter for public works where there is exposure to water, and much depends on the character of the concrete. It should contain a large proportion of fine materials, which make it less permeable than large substances do. There are many waterproofing materials on the market, but they do not make up for unsuitable materials.

Bricks,

The Ceylon Railway construction engineers have made bricks from cement and sand. They cost Rs. 28 per thousand. No special plant is required. The mixture is five of sand and one of cement. As little water as possible is added and the mixture is put into wooden moulds. The mixture is well rammed into the mould and the top scraped off on a level with the top of the mould. It is then turned over on a small piece of flat wood, the thumb screws of the mould loosened and the side and bottom of the mould removed. The brick is then exposed a fortnight to air. A coolie with a boy can turn out 25 to 30 bricks per hour if the sufficient amount of sand and cement mixture is available beside him. The process would be useful in other places where these are the most available materials.

Paper from Sugar-cane Megasse.

Plants are in the market for obtaining a pulp, which is said to be like those made from esparto, from megasse. It is claimed that the material is suitable for grease-proof wrapping papers, and for papers for illustrated magazines, as a large quantity of china clay can be carried in a megasse sheet and the paper can be highly finished.

Esparto grass is at present about £5 per ton, and esparto pulp about £15. The substitution of megasse might open up a great field to sugar-producing countries.

Compressed Paper Grain-holders.

An invention which seems to contain great possibilities for farmers and planters was described to the Victorian commission of enquiry on the marketing and storage of wheat. It consists of a cylinder of compressed paper, big enough to hold as much grain as 15 or 20 bags, and it is claimed to be almost twice as strong as steel. These cylinders would be filled on the farm, and loaded

on to ordinary waggons, and thence into specially made or even ordinary trucks. Storage sheds would be no longer necessary, and the only elevators needed would be the Government ones at the sea-ports where the grading might be done. The cylinders are damp and vermin-proof, and grain stored in them would not deteriorate. They are easily handled, and uniform in size and weight under all conditions. Their life is estimated at ten years; they are cheaper than bags, and might be sold to farmers on the instalment plan. A wheat container to hold a ton would cost £1 5s.

Fire Float.

In harbours this machine may be very valuable for the protection of shipping and docks' warehouses. At Cardiff the Watch Committee decided some months ago, on the recommendation of the head-constable, to add a fire float to the equipment of the fire brigade. Messrs. Merryweather & Sons were entrusted with the order and the vessel has been delivered at Cardiff. The float has a pumping capacity of 1,500 gallons per minute, and her dimensions are such as to enable her to go through all the canal locks and tunnels, so that in case of an outbreak the steam-engines could be supplemented by the new apparatus. The boiler, which is fired with oil fuel, drives both the propelling and pumping engines. A speed of six to eight miles an hour can be attained.

Alcohol for Fuel.

The increasing price of petrol is standing in the way of the use of motor tractors for agricultural purposes in the colonies. The best hope is industrial alcohol. The materials for this product are those which are rich in carbohydrates, and of these one of the best is maize, which contains 70 per cent. of soluble carbohydrate. In Demerara alcohol has been produced from the refuse of the sugar factories at 4d. per gallon. Engines constructed for kerosene can usually work with alcohol without any adaptation, and the storage of alcohol is much less dangerous than that of petrol. Alcohol has not the same value per horse power that petrol has, 1·8 times as much being required, but in places where maize or sugar are plentiful it could be produced at a much lower cost, and no doubt means will be found to permit of its employment.

Third International Road Congress.

This will be held in London, opening on June 23rd and lasting six days. It includes two sections, each divided into two sub-sections:—

FIRST SECTION.

Sub-section A.—Construction and maintenance of roads outside large towns.

Sub-section B.—Construction and maintenance in large towns.

SECOND SECTION.

Sub-section A.—Traffic and vehicles.

Sub-section B.—Administration, finance and statistics.

One object is to collect the results obtained in every country from the tests of materials used for road making, and colonial officials who are interested in such works would no doubt benefit by attending the congress. A full programme has been arranged, and, as usual with scientific societies, the social and recreative arrangements have not been overlooked.

The Nyasaland Public Works Department report mentions the excellent work done by a light, 6-ton roller manufactured by Messrs. Aveling & Porter, and imported early in 1909. This has been working almost continuously since, and has not been one day out of action through need of repair or accident, and only now does it require to have some of the boiler tubes expanded. It has still the original treads on the wheels although it has travelled between 1,500 and 2,000 miles rolling in new metal. It is fired with wood and so long as this is comparatively dry there is no difficulty in keeping up a 150-lb. pressure per square inch of steam. The consumption of firewood is just over two cubic yards for a 10-hours' day.

White Ants and Buildings.

Observations collected by the "South African Agricultural Journal" show that in order to circumvent white ants there are only a few rational points to be observed in designing buildings.

In the first place the foundations should be constructed and carried up sufficiently to give a clearance of two to three feet between the ground and the floor-joists, and there should be a sufficiency of large ventilators so as to admit the free entrance of light to all parts. Where it is desired to have tiled or flagged floors as in kitchens, pantries, bathrooms, and for verandas, these should not be built upon soil filled in between the supporting brick or stone piers, but should rest upon concrete beds supported by ironwork. Similarly, the piers erected to support fireplaces

should not be in the form of hollow brick boxes filled with earth and the debris of building operations. They should be empty and with openings to allow the light penetrating beneath the house to filter in, or the fireplace can be supported upon an arch of brickwork. In short, it should not be a difficult matter for the merest tyro at architecture to design a house to meet these simple requirements without adding materially to the cost of house building, more especially when so many elaborate, expensive, and futile precautions are evolved.

In the building of wood and iron houses the illustration given is almost sufficient of itself. That is to say, raise the building well off the ground upon piles of wood—such as jarrah, which is not attacked—or on pillars of brick or stone. In the setting of such stone or bricks, sand and cement mortar should of course be used, not dargai, which even when “pointed” with cement is a way in for white ants. Where bricks or stone or termite-proof woods are unobtainable then the wood that is selected should be thoroughly treated by soaking some days in arsenic solution, and then when dry well tarred or creosoted before implanting in the ground. As a further protection they may be set in cement, the cement being sufficient to remove the wood several inches from the soil all around and below. In such houses of course similar precautions have to be taken to insulate the bases of any steps leading to either veranda or doors.

That constant interference with them does drive ants away must be admitted. Amongst their other peculiarities they seem to like quietness, and much occupied houses are often deserted by them for quieter pastures. This is illustrated by a number of cases where families have gone away for a month or so and left the house closed up and on returning find the termites have been at work. A more striking example of this is not to be found perhaps than the immunity of kaffir huts, every particle of which is attractive food and whose grass walls touch the ground, and yet deserted huts are eaten. This is also the case with the wattle and daub and grass habitations of the Indian coolie. These are put down in the midst of termite fields and are scarcely touched, but when left uninhabited are quickly swallowed up.

ENGINEERING NOTES.

Ceylon.

It is hoped that the protection works between Galle Face Curve and Wellawatte will be finished by March, 1913, and thus enable the double line throughout between Slave Island and Mount Lavinia to be opened for traffic.

The choice of a route for the projected extension of the 5 ft. 6 in. gauge railway from Bandarawela to Badulla demands careful consideration. One route recently surveyed is $20\frac{1}{2}$ miles long, and the estimated cost of the line £402,000, or nearly £20,000 a mile. These figures suffice to show the difficult nature of the country traversed. Certain alterations in the alignment have been suggested however which, it is hoped, will affect an appreciable reduction in the cost.

The assistant engineers engaged on the construction of the Chilaw Extension are being provided with motor bicycles to enable them properly to supervise their sections.

In November, 1911, a Railway Traffic Commission concluded that the lines were inadequately equipped for the work they had to do, this being due partly to the unprecedented rapidity with which large areas of land had been opened up by cultivation and partly to the enhanced wealth of the population as a whole. The Commission put forward a programme which was considered sufficient to meet all requirements during the next five years. For this and other purposes a loan of Rs. 15,000,000 has been sanctioned. Eighteen locomotives were ordered last October, the work being distributed among four firms.

Lagos.

In 1911 the revenue was £307,092 and the expenditure £176,961. There was a substantial increase in the earnings, which were, as in the case of previous years, mainly due to the increased traffic over the so-called Commercial section, which comprises the first 200 miles of the Railway. Trade on the length of 107 miles beyond had not

yet sufficiently developed to contribute in any adequate measure to the gross earnings. The reduction of the proportion of expenditure on gross revenue to 57·62 per cent., and a return of 4·38 per cent. from the net revenue on capital applied on Open Lines may be regarded with considerable satisfaction. At the beginning of the year, however, the trans-Niger Section, Jebba to Minna, was officially opened, and as it must take some years for the traffic on this length of 160 miles to develop, both the proportion of expenditure to earnings and the return of net revenue on capital applied will be correspondingly affected. But at Minna the junction with the Baro-Kano Railway is made, and hence the earnings derived from through traffic will undoubtedly considerably benefit the whole undertaking. The cost of the trans-Niger Section, including the North Channel Niger Bridge and the train ferry and slipways at Jebba which, from the 1st January, 1912, must be added to the capital applied on the Open Lines, amounts to £899,491, and for the re-alignment between Iddo and Ibadan which at date (April) is approaching completion to £199,072 or a total additional capital of £1,098,563, should the whole of the cost of the deviations be charged to Capital Account.

Such returns, Mr. Glasier observes, are a guarantee to Government that, when the first few lean years after construction have passed, railway undertakings in Nigeria, built with due regard to commercial as well as political considerations, will pay the full interest on the money borrowed to construct and equip them, in addition to the enormous advantages which are indirectly conferred on the country. Whilst it is true that the Commercial Section—the first 200 miles of the Lagos Railway—is the main source of revenue and pays largely for the remainder, yet it is able to do so and to prosper at the same time, owing to the steady and satisfactory increase of its earning power. Before many more years the Northern Lines will themselves become self-supporting, and hence there is every reason to believe that the vigorous policy pursued during the past few years of exploiting Nigeria by railways can be continued without imposing an undue burden on the general revenue of the country. The construction of the Niger Bridge is proceeding steadily.

Sierra Leone.

The revenue in 1911 was £107,621 and the working expenditure £69,818, giving a profit of £37,803. The capital (loan) account was a little over a million, and the total capital expenditure has been

£1,114,481. The result, therefore, was not so good as on the Secondee railway, but it is very satisfactory, and it is probable that a much larger revenue will be shown for 1912.

The railway department now possesses three concrete block machines, and in the year 18,462 blocks were made and used. Buildings of concrete blocks are cheaper and more quickly built than in laterite rubble.

An extension of the railway from Rowalla to Makene has been decided upon. As in the case of the existing lines, 30 lb. B.S. rails and steel sleepers will be used. It is hoped that the line will be open for traffic by July, 1914, and that the cost will not exceed £61,400, exclusive of rolling stock. Construction will be in the hands of Mr. F. A. Target, who had charge of the line to Rowalla.

Accra Harbour.

The breakwater at Accra has been completed for the sanctioned length of 1,050 feet. It is proposed to add another 250 feet and to construct a wharf and other works for the improvement of the harbour. The estimated cost is £72,000, which covers the provision of additional pumping plant as it has been found that the existing plant is hardly able to cope with the quantity deposited annually by the sea, viz., 165,000 tons.

Accra Water Works.

Owing to the great depth at which the rock lies it has been decided to abandon the proposed dam across the Densu Valley in connection with the Accra Waterworks. Instead, a low level reservoir of 45,000,000 gallons capacity will be made in the valley.

Secondee Water Works.

Good progress has been made and operations on several cuttings had been started by October, and rail-laying was started. It was expected that if the rails were ready the work would be finished by the end of the year.

Bathurst Water Supply.

The report of the engineer despatched to Bathurst to report on the improvement of the water supply has been received and gives interesting matter. The town of Bathurst lies on St. Mary Island at the end of a long, low, sandy promontory, the highest level on the island being only ten feet. Part of the present

supply of the town is drawn from public and private wells and the balance from private tanks into which water from the roofs is drained. Neither of these systems can be recommended for an extension of the supply. The shallow wells form admirable breeding places for mosquitoes, while, owing to the absence of a sewerage system, the water in the wells is badly contaminated by soakage from the surrounding soil. The system of conserving rain-water is impracticable on a large scale on the score of cost.

In view of these difficulties it has been necessary to seek a river in the vicinity with the necessary yield for a pipe-borne supply. Such a river is the Lammin, which it is proposed to tap at a point distant from Bathurst some eight miles in a direct line. This short route, however, crosses extensive mangrove swamps over which the pipe line could not be carried except at a prohibitive cost. It is proposed to overcome the difficulty by pumping the water to a reservoir of three days' capacity to be constructed on high ground near Cape St. Mary whence the pipe line can be carried over a good road into Bathurst. £22,500 is the approximate cost of this scheme which would solve the problem of the water supply for both Bathurst and Cape St. Mary. These proposals have been approved, and it is hoped to commence operations at an early date.

Freetown.

Several inconvenient shortages during the "dries" have proved that the water supply of Freetown needs attention. The reason for such shortage is easily expressed. The present reservoir holds two full days' supply, whereas during the "dries" the daily supply is only two-thirds of the consumption. An adequate supply would be assured if it were possible to dam the Congo Valley. This, however, is not feasible. The cutting of trial trenches at the only possible site for a reservoir has revealed a general fissuring of the syenite bed. Unfortunately, this general shattering of the rocky bed is common to all the rivers around Freetown.

It is therefore necessary to find other means of supplementing the present supply. This can be done by tapping the three branches of the Babadori river which, it is thought, will yield a minimum of 288,000 gallons a day. This augmented supply will be gravitated to the existing reservoir at Tower Hill, the capacity of which is to be increased to 1,000,000 gallons. Such a scheme, estimated to cost £15,000, would seem to ensure an adequate supply for Freetown, and also enable ships to obtain cheap water, an important means of expanding trade. Various suggestions have also been made for improving the supply of the Hill Station, outside Freetown.

The proposals outlined above have been approved by the Secretary of State, subject to possible modification of details.

Bahamas.

The question of improving the harbour at Nassau has been again revived. It is proposed to cut a sleeve-like channel about 2,000 feet long and 30 feet deep through the coralline bar. In addition it may be necessary to dredge a channel in the sand of the harbour to an equal depth unless the strong tides flowing through the proposed cutting render the dredging unnecessary. The cost of such a scheme must of necessity be heavy, although the estimates framed at present are very conflicting. The best plan would be to send an expert to the spot to examine and report fully. It could then be judged whether the expenditure is warranted by the advantages to be derived.

Uganda.

A short line on the metre gauge is about to be constructed from Kampala to Port Bell on the Victoria Nyanza, a distance of $7\frac{1}{2}$ miles. Produce is at present carried by a monorail. This, however, is costly and inefficient, and the aid of the Government motor service has to be called in to supplement its efforts. The line will be laid with the standard Uganda Railway 50lb. F.F. rail but steel sleepers will be used, experience on the Jinja Kakindu (now Busoga) Railway having proved that local timber is useless for the purpose. It is proposed to employ eventually internal combustion engines on this short line, but probably a start must be made with the steam locomotive, as present experience hardly warrants the adoption of the petrol engine. The work will be carried out by the Public Works Department.

It may not be generally known that the European system of railway timing is in force on the Uganda Railway. This progressive line has just issued a very handy time and fare table. The booklet gives particulars of steamship connections and a great deal of information valuable to the prospective visitor to East Africa.

Ten Mallet locomotives have been ordered for the Uganda Railway from the North British Locomotive Company at the price of £49,320.

Kilindini Harbour.

Mr. Wilson (of Messrs. Coode, Matthews, Fitzmaurice & Wilson) is leaving in January for East Africa to study the conditions obtaining at Kilindini in order to devise a broad scheme for the

improvement of the port. The £100,000 provided for the deep water pier is not a great amount for such a purpose, and a careful enquiry is necessary to decide what can and should be done.

German East Africa.

About the middle of July Dr. Solf, the minister of colonies, arrived to inaugurate the opening of the line from Dar-es-salaam to Tabora. 655 kilometres have been constructed in four years—a very good performance. The cost per kilometre is said to have been about 100,000 marks, that of Uganda having been 126,000. The trains now penetrate for 850 kilometres into the interior, and before the end of 1913 will reach Lake Tanganyika. Dr. Solf also went up the Uganda Railway from Mombasa, visiting Nairobi, Port Florence and Entebbe, and has no doubt stored up many materials in his mind.

Trinidad.

Work on the Caparo Valley extension to Rio Claro is progressing steadily. The railway runs almost its entire length through forest and cocoa plantations, so that every yard of it has to be felled and cleared, the felling over a great deal of the length being of the heaviest description. The dry season of 1912 was an abnormal one, and while it was excellent for the earthworks the scarcity of water for the labourers necessitated carrying water from Port-of-Spain (about 50 miles) daily by rail, and thence distributing it by motor trolley to the gangs. Bush fires in consequence of the drought also caused some trouble.

The construction of the 16-mile extension from San Fernando to Siparia has been much impeded by legal difficulties in connection with the Cipero tramway. After protracted negotiations the tramway passed into the hands of the Government on the 1st of July last. As labour is more plentiful in this part of Trinidad it is hoped that good progress will soon be made. In November the sea wall was being constructed at a good rate. The steel-work of the bridges was in course of erection by the East End Foundry.

On the Tabaquite Rio Claro line the earthwork was almost complete in November.

Port of Spain Harbour.

Various reasons have led to a reconsideration of the schemes suggested in 1902 for improving the harbour at Port of Spain. Chief among these are the approaching completion of the Panama

Canal, the development of the oil industry, and an increase of trade resulting from the railway extensions under construction. Without this assistance the port has made steady progress, the total volume of trade for 1910 showing an increase of forty per cent. over the figures for 1902.

The chief features of the 1902 scheme now under consideration are a quay wall 2,500 feet long with the usual accommodation, a 27-foot basin having an area of 70 acres, and an approach channel two miles long. The cost will probably be in the neighbourhood of £600,000. As the trade of the port is at present carried on by lighters some opposition to the new scheme is to be expected from these interests. Moreover, the proposal to defray the annual charges on the requisite loan from general revenue does not find much favour in the Colony.

Grenada.

An engineer is proceeding to Grenada to study the present condition of St. George's harbour with a view to its improvement. Having regard to the unsatisfactory condition of the existing frontage and the necessity for an improved depth in the harbour, it seems indisputable that improvement works should be undertaken as early as possible, and the first step is the preparation of a suitable plan capable of future extension.

Tanjong Pagar Dock Board.

The various half-yearly reports of this board are usually received in advance of those from any of the Colonies. The report for the six months ending 30th June, 1912, has come to hand recently. Although the net revenue for this period shows a slight falling off from the previous half-year it represents, nevertheless, an increase of £13,800 over the average for the preceding thirteen half-years. After paying interest on loan funds and providing for renewals and reserve the Board are enabled to carry forward a balance of over £9,000. The report states that the progress of the Wet and Dry Docks and other extensions on hand has been eminently satisfactory during the period under review, the contractors having pushed on the works with vigour.

Fiji—Suva Drainage.

No time is being lost in carrying out the scheme for the drainage of Suva. The resident engineer, Mr. M. A. Ravenor, and his assistants have arrived in Fiji where they are now engaged on the preliminary details. Owing to the congested state of the manufacturing markets, care was taken to order at an early

stage the special machinery required with the result that it should reach the Colony in ample time. The estimate for the total scheme amounts to £28,370.

Suva Harbour Improvements.

The original scheme for the improvement of Suva Harbour contemplated reclamation work by means of a sand pump dredger. It is now found that most of the necessary material can be obtained from Crown and other land in the vicinity. As a result of reclaiming from the land the wharf front will be extended 66 feet further seaward and thus provide a greater depth of water. It is hoped that a great part of the reclamation and the erection of a new wharf thereon will be completed during 1913 or, at the latest, early in 1914.

Railway for Fiji.

Mr. R. S. Routh, late chief engineer of the Assam Bengal Railway will arrive shortly in Fiji for the purpose of examining and reporting on the proposed Suva-Rewa railway scheme. The line will run, as its title implies, from Suva northwards up the Rewa valley. A survey for the line has been made and the surveyor's report with the necessary plans will be ready for Mr. Routh on his arrival in the colony.

A trial is being made on the Nigerian state railway of the "Galloway Hill" patent furnace, by which it is claimed that considerable economy of fuel is effected. It has recently been tried on English railways.

Telephones.

The telephone industry is extending very satisfactorily in Great Britain. The absorption of all the telephone systems by the Post Office has had a considerable effect in this direction, as this department invariably gives a large preference to British manufacturers for all apparatus and plant required.

The direct encouragement of the Post Office has enabled British firms to take up the manufacture of telephone plant and apparatus on a larger scale, and the competition in the home market forces them at the same time to improve their workmanship.

The result is that at the present time it is possible to obtain from four or five independent British factories apparatus of purely British manufacture equal in every respect with the best Continental or American work. The large orders placed within the

last year or so with the Peel-Conner works, Siemens Bros., Western Electric Co., British Insulated and Helsby Co. (now known as the Automatic Telephone Co.) and British L. M. Ericsson Co. shew that in the opinion of the Post Office, each of these companies is capable of supplying equally good plant at practically identical prices.

A parcel was recently sent from Singapore to London which was the object of extraordinary care. Special arrangements were made to ensure that the seals on it should not be broken by the customs authorities, and an official certificate of the contents was given for this purpose. This was not on account of its intrinsic value: the contents were nothing but ordinary mud. They were, however, material as evidence in the action of John Aird & Co. v. the Tanjong Pagar Dock Board, the stupendous case which no doubt when decided will be instructive as to the responsibility of governments for any particulars which they give for the guidance of tenderers.

MEDICAL NOTES.

Native Medical Theories.

In many respects there is a general uniformity of character among uncivilized races, though in details, extraordinary divergencies arise. The savage does not concern himself with matters which do not affect him personally. He has no particular desire to understand the mechanical productions of civilization, and such things as gramophones and cameras are lightly dismissed as natural phenomena which neither require nor admit of explanation. But he is extremely curious and suspicious where his own person is concerned. Thus in medical treatment, beyond the usual native "dopeing," it is observed in the *Welcome Tropical Research* reports, he always suspects an ulterior motive, and drugs, pills and tabloids in particular, are to him minutely mysterious applications suggestive of magic. The stethoscope conveys the conversations of conflicting demons within his interior. The hypodermic syringe, with its potent dose, must needs transmit a spirit (probably evil) to his body. A surgical operation with its lethal sleep and cruel instruments means death, mutilation, and resurrection in one. On recovering consciousness he strongly suspects not only a damnable inquisitiveness on the surgeon's part, but probably the removal of some vital organ, the loss of which he will detect and regret anon.

Disease to the savage mind is due to supernatural influences—to evil spirits, usually the ghosts of dead ancestors, who still lurk in an after-life, animating animals, hiding as snakes in the long grass, or writhing in storms and ever seeking to trouble those still in existence. The natural result of this theory of the origin of disease is to prevent any attempt at diagnosis or treatment. One consequence is that the death rate is very high, especially among males, so that eventually the surplus of females over males becomes very large, and this in primitive communities makes polygamy inevitable.

The supernatural view of disease lends itself to numerous "cures," by methods in which deception is obvious, and it is not necessary to conclude that the native doctor is a wilful humbug on these occasions; and certainly there are diviners and devil-dancers who go through an amazing amount of physical exertion, which seems to show that they are in earnest. The native believes with a whole-hearted faith in the doctrine that "prevention is better than cure," and his way of acting on it is to use charms, generally on some fanciful analogy between the substance chosen and the power to ward off some disease; but many also are chosen because of their attractive appearance, like the mascots of modern society. Such mysterious articles as a sardine tin-opener and a sparklet bulb have been known to figure in this medico-magical category. On this basis one cannot expect much from the drugs which are used for medical purposes, though some of the vegetable preparations relieve pain. There is no real surgery, but splints for fractures are common to most primeval peoples and are an obvious resource.

Most such peoples are voracious for meat, and indulge in orgies when they get it. Frequently, it happens that game can only be caught during part of the year, in the dry season, and if there are no domesticated herds—and where there is tsetse there cannot be—cannibalism easily arises, and is encouraged by the belief that to eat the flesh of enemies makes the consumer war-like and wise.

Death is looked upon with great awe, as there is no understanding of the natural causes. It is considered a visitation of the evil powers, and on some occasions the whole village may migrate to get out of the way of further mischief.

Climate and Clothing.

The authorities collected in the "Wellcome Tropical Research Laboratories Review," incline to the view that the ills of tropical life are not due to the sun's actinic rays, and that therefore it is useless to devise clothing suitable for excluding these. Body temperature is intimately connected with the amount of water in the body and its excretion from it, and a hot moist temperature increases the amount of water and therefore heat production. Excess of water causes (1) intermittent pyrexia, (2) increased blood destruction, (3) abnormal forms of corpuscles, (4) increased pigment, (5) enlargement of the spleen. Acclimatisation in this respect is not possible. One result of these findings is that a "bracing" climate, so much desired by men from the tropics, "may result in their finding themselves braced into their coffins," they should avoid cold and damp, and if they are in a cold

temperature it is essential that they should have plenty of sunshine. For the dysenteric, extreme cold is almost as harmful as extreme heat. Recently, red or black undergarments were being boomed for tropical wear, as a means of protection from actinic rays, but there is now a reaction against this theory. Tests in the Philippines indicate that the climatic effects are produced entirely by moist heat without the aid of the sun's actinic rays. The general conclusion is that for thick clothing white stuffs are always the best, and also for thin clothing if it fits tightly to the body, but that if loose a dark colour is best because the heat absorbed by the stuff does not warm the body by contact. The best clothing is one of loose stuff, with large sleeves and easy at the neck. When the sun is very strong it should be of light exterior and dark inside. It is a mistake to aim at light weight in clothes; thick reps and drills are superior to thin materials.

Sleeping Sickness, Bulletin No. 39, Vol. 4.

It is observed that owing to the difference in width of their respective belts the carrying area of *morsitans* is much more extensive than that of *palpalis*, so that depopulation is a serious matter. The depopulation of the fly-belts alone means the removal from the water-side in the case of *palpalis*, the removal to it in that of *morsitans*. While the prophylaxis of trypanosomiasis in *palpalis* areas must be one of two extremes—local clearing or total depopulation—a middle course seems to be best when dealing with the disease carried by *morsitans*. As also the extent of the carrying area depends on the amount of traffic through the belt, prophylaxis in Nyasaland means, in addition to the removal of all villages from within the fly-belt, the closing of all roads that pass through it.

The first requirement is the delimitation of the belts proper. This can only be done by entering them from various points and noting where flies are first found in any numbers; it should be done fairly early in the day before much traffic has passed. The next proceeding is to remove all villages isolated in the bush and to concentrate them on the rivers or Lake-shore. This, as a rule, does not present any difficulty. In any case many of the new settlements will be just outside the fly-belt; steps must therefore be taken to drive the fly from the neighbourhood of such villages. It is essential that the land be not only cleared but put under cultivation by cotton, ground nuts, maize, etc. These plantations should be contiguous and should surround the village. It would seem, writes Dr. Sanderson, that *morsitans* does

not return to country lying fallow; in course of time, therefore, the extent of a belt might be gradually diminished and wide swathes, more or less following the course of the river, be driven through it. It is his experience that the carrying area of *morsitans* can be strikingly decreased by the closing of roads through the belt. Owing to the difficulty of diagnosis it will not be easy to frame efficient rules for the safeguarding of the southern fly areas. The gland palpation method does not seem applicable. No labour recruited in Rhodesia or Nyasaland should be permitted to travel by any road which passes through *morsitans* areas. During the clearing and planting of the fly-belt some natives will undoubtedly be infected; these will be discovered by the patrols instituted by the author. He considers that prophylactic measures should be carried out in all *morsitans* areas, even though no cases have been found.

The Bulletin, No. 40, corrects an impression which has gained ground that the disease is transmitted from man to man by *G. morsitans*. It states that the human trypanosomiasis of Rhodesia and Nyasaland is transmitted by *G. morsitans* but this disease is considered by the Royal Society's Commission in Nyasaland to differ from *T. gambiense* infection, to which alone the term Sleeping Sickness is applicable. There is no evidence that *G. morsitans* transmits Sleeping Sickness in nature. Taute transmitted it thus in a laboratory experiment, but it does not necessarily follow that this is a natural method or one occurring outside the laboratory. *G. morsitans* naturally infected with *T. gambiense* have yet to be found. There is at present no reason to think that administrators, when they devise measures against Sleeping Sickness, need concern themselves about any other species of tsetse, if they have *G. palpalis*.

Segregation.

In the same report attention is called to the imperative necessity for the segregation of Europeans, the ideal being that there should be a clear space of at least a quarter of a mile round any area where Europeans reside. Offices and factories must of course be built within the business areas, but it is strongly recommended that no Europeans should be allowed to reside in native towns if they are not already established there. On this point Dr Rice observes:—

“My experience in West Africa has taught me that, apart from a certain type of Government official, more happily becoming extinct, the bitterest opponent of sanitation is the local mercantile agent. He may live in a native town, but his quarters are usually palatial, whilst those occupied by his assistants are often such as, could the

shareholders at home realise their condition, they would blush to pocket their dividends.

"It is possible that this reluctance on the part of the local agent to advise his firm to build suitable residential quarters outside the native towns may, in some part, be due to financial consideration. I presume the interest on the capital sum so expended would be an annual charge to expenses, which would diminish the sum of the profits, to a percentage of which the local agent looks to augment his income.

"Then, again, the trader's great argument against living outside the town is that it is necessary for the safety of his store that Europeans should live on the premises. No doubt the merchants of the City of London advanced the same arguments long ago, but I scarcely think that in the principal towns of the Gold Coast such a reflection upon efficiency of the police force is justifiable, and the argument is stultified by the fact that in the more primitive out-stations, where police supervision is naturally less efficient, the factories are often in charge of a native agent.

"I am inclined to think, in the absence of legislation, we shall not make any great progress in this matter until the Directors at home have been brought to realise the conditions under which their employees live, and that, in the long run, capital expended in providing them with healthy quarters outside the native towns would be found to be well invested."

Shareholders' blushes will probably be spared from the fact that they are not likely to know anything about the matter. The subject is one for local investigation and treatment, and till the natives recognise that a sanitary inspector is something better than a "malignant type of police officer" the policy of segregation is sound. The old and honoured practice on the Gold Coast has been to build houses as densely congested as possible. Wherever there is room a house is built, and it is immaterial that it touches another or fills up a passage or yard. The natives are used to this mode of living and like it, and it will take many years of work to introduce a better system.

Yellow Fever in West Africa.

A few years ago it was commonly denied that yellow fever existed at all in our West African territories, and now it is sometimes enquired why, if yellow fever does take place there, are the outbreaks so limited. In the Medical Report of the Gold Coast Dr. Rice deals with the question as follows:—

"One would like to reply, that the cases are diagnosed promptly. Preventive measures, such as evacuation of the infected area and

isolation of contacts, are at once put into force, and the campaign against the stegomyia mosquito has done much to reduce the number of the definitive host. All these things are true, and there can be no doubt that the promptitude with which the various outbreaks of 1911 were suppressed was, in a large measure, due to them; but that is not all.

"We cannot pretend that prior to 1910 any of the above conditions obtained; the notification fear was universal; infected areas were not evacuated, nor were contacts isolated, and the stegomyia campaign had not begun, yet outbreaks occurred from time to time, but in no instance did one approach in character the historical epidemics of the West Indies and South America.

"The explanation I submit is:—

"(1) The comparatively small non-immune population.

"(2) The fact that the non-immunes live in houses or bungalows often widely separated from one another, and hence in West Africa the disease is apt to attack the occupants of certain houses or bungalows and is a house or bungalow disease, as contrasted with the West Indies and South America, where, in times of epidemics, it affects whole streets or districts.

"All the cases amongst the non-immune, six in number, diagnosed during the year ended fatally—a mortality rate of 100 per cent.

"Such a death rate, compared with that obtaining in other parts of the world, forces one to the logical deduction that, as far as the non-immunes are concerned, only the fatal cases are diagnosed, possibly many mild cases go untreated."

East Africa.

There has been a considerable increase in the number of cases of malaria, and it is not clear what the cause is. It has been suggested that Government Officials brought from malarial districts have had malarial relapse in the colder climate, but this would not account for the whole of the increase.

The first case of plague seen in Nairobi since 1906 occurred in May. Many infected rats were found and several more cases occurred. Buildings in the bazaar containing foodstuffs contained, as was to be expected, nearly all the rats and a large proportion of the cases. Mombasa preserves its immunity, probably owing to its higher temperature, as in India plague is a cold weather disease and is checked when the mean daily temperature passes above 80° F.

Northern Nigeria.

The sanitary condition of Northern Nigeria, an area considerably greater than twice that of the British Isles, raises a great number of questions which can only be dealt with very gradually, but many of the native customs have the rare quality of being of great assistance to sanitary activity. Thus the natives, it is observed in the medical report for 1911, prefer to have their markets out of the towns; they are fond of open spaces and wide thoroughfares, and they generally dig their wells—many of them very deep—at a considerable distance from human habitations. It may be added that the useful office of scavenger is performed by the vulture, which is accordingly protected. There is very little refuse, for the natives use up practically everything. They have lost the art of making burnt bricks, and most people live in ramshackle grass hovels which require continual renewal. Probably before long they will learn to burn lime and make burnt bricks, and a great improvement will then set in, but at present much skill is bestowed on mud working, the building is quickly made, and the results on the whole better than might be expected. The questions of water supply and sewage disposal arise everywhere, but no general plan could be settled until it is decided whether Zungeru is to remain the headquarters station, which now appears likely to be the case.

Mauritius.

The death rate in 1911 was 33 per cent. Out of 12,204 deaths 4,313 were due to malaria, or at any rate to the weakening of the resisting power caused by repeated attacks of malaria. The next highest diseases are pneumonia, tuberculosis and debility (? ankylostomiasis), and the Director of the Medical Department considers that 58.5 per cent. of the people who die in Mauritius die from preventable diseases. Evidently with proper sanitary reform the present high death-rate could be considerably reduced. There is a good deal of lunacy among the non-white population, attributable to poverty, drink, ganjah smoking and heredity.

Ankylostomiasis.

It is stated in the Jamaica medical report that since Dr. Turton reported three years ago on the prevalence of ankylostomiasis in his district it has become increasingly evident to him that this disease is responsible for a far greater amount of disability—of chronic ill-health—among the labouring population of his side of the parish than any other single cause that he can name. It is the mild infection that seems to be so insidious in its effects before the grave and unmistakable symptoms show themselves. Over and over again

within the last few years he has seen cases of chronic "debility" without any marked symptoms clear up and recover rapidly on the discovery of a very mild infection followed by specific treatment. One occasionally sees a whole family affected in greater or less degree. He writes thus of the district as only being within his own knowledge.

But he has examined every child admitted to the Industrial school during the past year: these came from every parish in the Island, and it is a rare thing to find a child from any one of the country districts that is quite free from this infection. This is of course the result of the absence of any proper system of dealing with the excreta, the earth becoming foul, re-infection occurring, and the disease spreading. Then comes physical disability, and so poverty; from this to prædial larceny is but a step and the children left to find for themselves become a curse to their neighbours by reason of the depredations—for they must steal or starve. So the vicious circle of poverty and disease becomes established, with crime as an incidental. His strong conviction is that this disease is responsible for much of the petty crime of the country districts of the Island.

It seems highly probable that hookworm infection acting continuously and unchecked through long periods is the chief factor in the production of infantilism so often met with in this population and a frequent cause of difficulty in childbirth. Observations in the southern States of America, India and other places where the disease is endemic have shown that it is producing definite physical and mental deterioration such as skeleton dwarfing and intellectual dulness, and there is reason to believe that these changes are inheritable.

The infected prisoners practically all came from moist agricultural districts; some had worked in cane or banana fields.

This disease is also dealt with in a Nyasaland report, which states that:—

"Hookworm disease (Ankylostomiasis) and other helminthic infections have been known to exist in various parts of the Protectorate; and at the Transvaal mines it was found that about 50 per cent. of Nyasa natives, both British and Portuguese, were subjects of this complaint.

"Ankylostomiasis is a complaint which is prevalent in various parts of the world, and the disease has been recognised as one of the main factors in bringing about a condition of lassitude, which in many cases amounts to a positive disinclination or unfitness for work.

"It is therefore evident that all who are interested in the native directly, or in his labour, should take such steps as are

practicable for the prevention of spread of the disease and of its obtaining a footing where large numbers of natives are employed by the various planting communities and transport companies.

"First in order is the question of prophylaxis. Natives should be provided with deep trench latrines, and all excreta voided on the surface should be collected and buried in pits. The serious nature of the disease, the facility with which it spreads, and its prejudicial effects on the physique of the workers being recognised, it is clear that it will repay planters and others to devote particular attention to this necessary measure of prophylaxis, and to expressly set aside one or more of their labourers for scavenging work. Residents of districts are in a position to point out to chiefs and headmen of villages the danger of hookworm disease, how it is caused, and the manner of its spread, and to endeavour to instil into the native mind the necessity for having proper latrines attached to every village, so as to obviate the danger arising from surface soil pollution. Town Councils should provide an adequate number of sanitarily-constructed latrines for the use of natives, on the pail system; and all nightsoil should be daily removed and buried in deep pits or, preferably, destroyed in an incinerator. It is only by the adoption of concerted measures such as are here outlined that further spread of the disease can be checked."

A technical report on the disease is added by Dr. H. S. Stannus.

Nastin Treatment for Leprosy.

A report by Dr. Hood, of Southern Nigeria, states that this treatment has been carried out with fair regularity but that the results have not been very encouraging. The Deycke system was tried at Yaba Leper Hospital, and although improvement—perhaps due to cleanliness and good feeding in the hospital—appears to have taken place in some of the patients, only one case was discharged as cured. The details are given in a Colonial Office paper.

Carbolic Acid as a Larvicide.

Paraffin is generally useless on ponds as it will be quickly blown to one side by a strong wind and evaporated before it can asphyxiate. Crude carbolic acid, it is stated in the "Annals of Tropical Medicine" (Liverpool), has been used with complete success in British Guiana.

In most of the small pits, when treated with carbolic acid, the larvæ were seen to die in about an hour, but in the case of pupæ the time was much longer (frequently as much as twenty-four hours), but usually when examined carefully the following day

after treatment no larvæ or pupæ were seen alive. The observers were inclined to the belief that, in the case of a temporary small collection of water, if crude carbolic acid is applied it does not evaporate to any large extent but concentrates as the puddle dries up, and further, that, having dried up, the ground is sufficiently impregnated with the carbolic acid to render water deposited later by a shower of rain fatal to larvæ. Sufficient data have, however, not yet been collected to make an authoritative statement on this point. A dilution of 1 in 20,000 is efficient as regards all larvæ inside two hours, but in the case of pupæ a much longer time is required—probably owing to the fact that pupæ possesses a thick chitinous shell and have no alimentary canal into which to take the poison.

For use one teaspoonful was allowed to every two cubic feet of water or one ounce to 16 cubic feet; this gives a dilution of about 1 in 16,000, and allows a fair margin of safety to cover errors in calculation.

The crude carbolic acid containing all its impurities, such as cresol, rosolic acid, oily and tarry substances, is much more efficient than the purified, more highly soluble product, possibly owing to its sticky nature making it more adherent to the larvæ and pupæ, also no doubt in a few cases blocking up the syphon tubes.

Izal.

The consumption of Izal in the colonies is very great, and has no doubt contributed greatly to improved sanitary conditions. The manufacturers, Messrs. Newton Chambers & Co., Ltd., of Thorncliffe, near Sheffield, have been honoured by a royal warrant appointing them manufacturers of disinfectants to His Majesty the King. The business was founded in the days of George III. by ancestors of the present principal proprietors. For nearly 120 years it has progressed from strength to strength until to-day it employs upwards of 6,000 workers in its coal mines, in its iron foundries, and in the manufacture of Izal.

Newton Chambers & Co. first turned their attention to the making of disinfectants in the days when carbolic acid was still regarded as satisfying the utmost requirements of sanitarians. It is constantly said of British manufacturers that, unlike their German competitors, they have been slow to adopt scientific methods. That reproach certainly does not apply to the makers of Izal, who for many years past have conducted patient research work, chemical, physical and biological, in their laboratories at Thorncliffe. In addition to their permanent staff they have also sought the advice of the ablest consulting chemists and

bacteriologists in perfecting their products. It is worthy of note that the Company were the first manufacturers of disinfectants to insist that the testing of germicides must be by bacteriological as well as chemical methods. On the occasion of a recent visit to Thorncliffe, Sir James Crichton-Browne, F.R.S., said that the country owed a debt of gratitude to Messrs. Newton Chambers and Co. for converting what had once been regarded as a waste product into Izal, "that worthy and formidable weapon for battling against the bacillus."

Mosquitoes and Trees.

Mr. Rodway in his book on Guiana mentions the effect of trees on mosquitoes. "Mosquitoes seem to be less troublesome of late years in Georgetown since the sanitary arrangements have been improved, and especially since street avenues have been planted. Some have gone so far as to say that trees harbour mosquitoes. Possibly they do afford cover for them and thus in a way prevent their taking refuge in the houses. Our experience of over forty years is that these pests take refuge in bushy places to leeward of a swamp when there is a breeze, but otherwise they prefer open places. In a low country like Demerara trees are important agents in preventing pools of stagnant water from remaining long within reach of their roots. They not only drain the land but also raise it a foot or more for as large an area as the branches extend. When Georgetown was almost wanting in trees yellow fever was rampant, but it has not appeared since systematic street planting was properly carried out. There is a great difference in the condition of the street parapets of late years, partly on account of the planting and partly from better draining. Formerly they were oozy in wet weather and the feet would sink in water, now we can tread firmly without wetting our boots. Such ooze was no doubt congenial to mosquito larvæ. This matter may seem trivial, and yet it is so important that it has received the attention of the Government and the municipality as well as the medical profession everywhere throughout the Colony."

Entomological Research Committee.

Correspondence has been published (Cd. 6,429) on the work of this Committee. The president, the Earl of Cromer, explained what has been done in the collection of specimens and study of insect fauna. An idea of the magnitude of the task is given by the fact that the collection comprises about 190,000 insects, of which 56,000 are disease carriers.

COLONIAL STAMPS.

Owing to the closing down of the mill at which all the water-marked paper has hitherto been made for the Crown Colonies, the necessary paper will, for the present, be supplied by the mill which is manufacturing that used for the Indian Stamps, and will be of the same character as that in every respect except the watermark which will remain as hitherto. Copper-plate printed stamps will continue to be printed on heavier paper, and no change will be made in the coloured papers of all of which a sufficient supply exists to last for some time to come.

The following changes have occurred since our last issue :—

THE BRITISH SOLOMON ISLANDS PROTECTORATE has adopted the new D.L.R. Postage Key-plate for its $\frac{1}{2}$ d. and 1d. stamps and has been supplied with two new values from the same key-plate, i.e. : 3d. and 11d., both printed on unsurfaced paper.

CAYMAN ISLANDS.—Farthing stamps have been supplied printed from the old D.L.R. type of postage and revenue key-plate instead of the copper-plate design, and 1d., 4d. and 6d. stamps with the new portrait have been despatched.

CYPRUS.—10 paras and 2 and 12 piastres stamps have been supplied with the new portrait. The overprints and colours are the same as before.

EAST AFRICA AND UGANDA PROTECTORATES.—The following new high value stamps have been supplied, i.e. :—

100 rupees with red centre and black border on red paper.
500 rupees with green centre and red border on green paper.
Both values are printed on surfaced paper.

GRENADA has been supplied with a complete set of stamps printed from the new D.L.R. Postage and Revenue keyplate. The values and colours are the same as the issue with the ship design, but the colours are reversed in the case of the 2s. value so that the major part of the stamp may be in doubly fugitive ink, and no £1 stamp has been printed.

HONGKONG.—1, 2, 4, 6, 8, 10, 12, 20, 30 and 50 cents and 1, 2, 3, 5 and 10 dollars stamps with the new portrait have been supplied. The colours are as before, except in the case of the 6, 8 and 12 cents values which are in the colours allocated to 1½d., 2d. and 3d. respectively, and the 1, 3, 5 and 10 dollars values which are in the colours of 2s. 6d., 8s., 10s. and £1 respectively.

New border plates have been used for the 1, 2, 4, 8 and 10 cents and the 1 dollar values, showing the values in Arabic numerals in the two lower corners, in accordance with the rules laid down by the Postal Union Convention, as well as in words as before.

JAMAICA.—Four more values have now been supplied, printed from the Nyasaland type of keyplate, i.e. 1d., 2½., 4d. and 6d., all in accordance with the Universal Colour Scheme.

The only values which do not now show the King's portrait are the ½d. and 5s. values (Arms) and the 2s. value (Queen's Head).

ST. VINCENT has been supplied with ½d., 1d., 2d., 2½d., 3d., 4d., 6d. and 1s. stamps with the King's Portrait and printed by the copper-plate process and also with 2s., 5s. and £1 stamps of the existing Arms design but printed in two colours on white paper as follows:—

2s. Centre blue. Border purple.

5s. Centre red. Border green.

£1. Centre purple. Border black.

SEYCHELLES.—12, 18, 30, 45 and 75 cents and 1 rupee 50 cents and 2 rupees 25 cents stamps with the new portrait, but otherwise exactly similar to the existing series have been supplied.

SIERRA LEONE.—½d., 1½d., 2d., 2½d., 4d., 5d., 6d., 7d., 9d. and 10d. stamps of the old type but with the new portrait have been supplied, the last three being new values. The 4d. and 5d. values are now printed on unsurfaced paper.

3d., 1s., 2s., 5s., 10s., £1, £2 and £5 stamps (also postage and revenue) have also been printed. They are of a large size and show the King's Head in an oval surmounted by a crown in the upper half and the badge of the Colony in a circle below, the portrait and badge forming the keyplate. The 10s., £2 and £5 are new values, and the colours throughout the series follow the Universal Colour Scheme with the exception of the £2 value to which no colour is allocated on that Scheme. The colours of the £10 stamp have, accordingly, been used, but the colours of the centre and border have been reversed, as indeed they have throughout the large series in order that the major part of the stamps might be printed in doubly fugitive ink.

STRAITS SETTLEMENTS.—1, 3, 4 and 8 cents stamps have been supplied with the new portrait.

TRINIDAD.— $\frac{1}{2}$ d., 1d., $2\frac{1}{2}$ d., 4d., 6d. and 1s. stamps have been supplied, printed from a new keyplate and a new set of overprint plates. The overprint plates now bear the name of the Colony, with the addition of Tobago, as well as the values. The central figure remains the same. The values are, in all cases, printed in Arabic figures, in order to comply with the rule laid down by the Postal Union Convention. Hitherto the value was only thus expressed in the case of the $2\frac{1}{2}$ d. stamp.

TURKS ISLAND.—Stamps of all the existing values have been supplied with the new portrait. They are in other respects the same, although they have been printed from entirely fresh plates, but the 1s. stamp is in yellow on white paper.

The "Stamp Collectors' Annual" is as usual a very useful and interesting volume. Georgian stamps, of course, bulk largely and for those who did not see our April number there will be found an illustrated reprint of it.

"Cayman Islands" is the latest "Melville" Stamp Book and it in no way falls behind its predecessors in attractiveness. The history of these stamps would have been somewhat meagre and uninteresting had it not been for the overprinting around which so hot a controversy raged a few years ago—a controversy which is again revived in a special chapter in this book.

"THE STAMP COLLECTORS' ANNUAL," edited by D. B. Armstrong, published by H. F. Johnson, 44, Fleet street. 1s. nett.

CAYMAN ISLANDS by Fred Melville, published by Melville Stamp Books, 47, Strand. 6d. nett.

Notice.

FALKLAND ISLANDS.—The Victorian stamps, of which only the 1s. and 9d. values remain on hand, will be withdrawn from sale on the 31st January.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. T. de M. L. BRADDELL (Attorney-General, Straits), Chief Judicial Commissioner, Malay States.
- Sir T. CROSSLEY RAYNER (Attorney-General, British Guiana), Chief Justice, British Guiana.
- Mr. J. J. NUNAN (Solicitor-General, British Guiana), Attorney-General, British Guiana.
- Mr. W. R. TOWNSEND (Circuit Judge, Sierra Leone), Attorney-General, Gold Coast.
- Mr. R. E. STUBBS (First-Class Clerk, Colonial Office), Colonial Secretary, Ceylon.
- Mr. A. C. HOLLIS, C.M.G. (Secretary for Native Affairs, East Africa Protectorate), Colonial Secretary, Sierra Leone.
- Mr. W. TELFER CAMPBELL (British Agent and Consul, Tonga), Colonial Secretary, Gambia.
- Mr. H. E. W. GRANT, C.M.G. (Colonial Secretary, Leeward Islands), British Agent, Tonga.
- Dr. J. T. C. JOHNSON (Senior Medical Officer, East Africa Protectorate), Principal Civil Medical Officer, Hong Kong.
- Mr. S. B. GOSLING (Assistant Postmaster-General, Gold Coast), Postmaster-General, Southern Nigeria.
- Mr. F. A. STOCKDALE (Assistant Director, Department of Science and Agriculture, and Government Botanist, British Guiana), Director of Agriculture, Mauritius.
- Mr. R. J. CHURCH, A.M.I.C.E. (late District Engineer, Railways Open Lines (Capital Works), Southern Nigeria), Deputy General Manager, Gold Coast Railways.

- Captain J. L. BERNE (late of the Sierra Leone Battalion West African Frontier Force), Assistant District Commissioner Somaliland.
- Captain G. P. OMMANNEY (Company Commander, Southern Nigeria Regiment, West African Frontier Force), Assistant Commissioner of Police, Gold Coast.
- Dr. A. H. B. PEARCE (Medical Superintendent of Holberton Hospital, Lunatic and Leper Asylums, Antigua), Colonial Surgeon, Falklands.
- Dr. J. T. SMALLEY (Government Medical Officer, Fiji), Medical Officer, Hong Kong.
- Mr. G. C. DU BOULAY (Chief Clerk, Post Office, St. Lucia), Clerk to Governor, Seychelles.
- Mr. W. F. O'TOOLE (Second Class Supervisor of Customs, Gold Coast), Supervisor of Customs, Second Grade, Southern Nigeria.
- Mr. A. C. BURNS (Clerk to District Magistrate, St. Kitts), Supervisor of Customs, Second Grade, Southern Nigeria.
- Mr. H. BLACKMORE (late Normal and Agricultural Master, British Guiana), Headmaster, Primary School, Gold Coast.

UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
DUPLEX
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

EDMUNDSONS **L**^{TD.}, **STAFFORD WORKS,**
DUBLIN.

Cables, "EDMUNDSONS DUBLIN."

A B C Code, 5th Edition.

BENSON'S

NEW MODEL—EXTRA THIN "FIELD" WATCH.

BEST LONDON MADE HALF CHRONOMETER.

Bréguet Sprung and Adjusted for all climates. The Best Watch for Travellers, with improvements only to be found in Benson's make. 18-carat Gold Cases, any style, rich monogram included,

£25; in Silver, £15.

An owner writes: "It is a watch of incomparable excellence."

For men of active life the "Field" is the Watch beyond all others.

The Economical and Equitable

"Times" Monthly Payment System

IS AVAILABLE.

Illustrated Book No. 1 of Watches from £2. Chains and Rings (with size card), &c., post free.

62 & 64, LUDGATE HILL, E.C.
AND 25, OLD BOND STREET, W.

G. GARNETT & SONS, Ld.,
WORSTED & WOOLLEN MANUFACTURERS,
APPERLEY BRIDGE, YORKSHIRE,
ENGLAND.

MANUFACTURERS OF
PURE INDIGO SERGES,
SUNPROOF SUITINGS
AND
FOREIGN SERVICE FLANNELS.

CONTRACTORS TO ALL
H.M. GOVERNMENT OFFICES.

SOLE MAKERS OF
“GARBIRNETT” AND
“GARBIRCORD” REGD.

The ideal cloth for hard wear, sports and all out-door purposes; made in white, cream, khaki, drabs, and all other up to date shades. Remarkable for strength and lightness. Rainproofed.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

Note for West Africa.—For the present Officers returning from leave to Freetown, Accra, Sekondi and Lagos may ordinarily be permitted to travel by the Woermann Cameroons Main Line, if they apply three weeks before sailing to the Crown Agents for passages.

—

GOLD COAST.

ALEXANDER, Dr. J. B.	11 Feb., '13	GIBSON, R.	... 13 Jan., '13
ADAMS, J. C. ...	8 Mar., '13	GRANT, W. A. ...	8 Jan., '13
ADAMS, C. H. C. ...	2 Apl., '13	GRIMSDITCH, W. H.	28 Jan., '13
BEARD, S. R. H. ...	14 Apl., '13	GOODY, C. E. ...	18 Feb., '13
BRADSHAW, J. A. J. ...	10 Feb., '13	GIBBONS, R. K. ...	12 Mar., '13
BURNS, T. B. ...	25 Feb., '13	GRANDY, F. H. ...	12 Jan., '13
BUTT, G. K. ...	25 Jan., '13	HUNTER, Dr. C. B.	21 Feb., '13
BROOK, J. S. ...	17 Jan., '13	HAMILTON, C. S.	18 Feb., '13
BREWEN, H. W. ...	7 Jan., '13	HAWTAYNE, L. E.	13 Jan., '13
CLANCEY, C. ...	11 Feb., '13	HALL, R. E. ...	18 Feb., '13
COOKSON, Capt. C. E.	27 Feb., '13	HALL, R. A. B. ...	12 Mar., '13
CLOUGH, Dr. J. A. ...	25 Feb., '13	HALLAHAN, P. ...	12 Mar., '13
CHIPP, T. F. ...	2 Mar., '13	JOHNSTON, J. ...	31 Jan., '13
CHARLTON, Capt. F. H.	2 Mar., '13	JACKSON, F. W. F.	7 Jan., '13
CROWTHER, F. G. ...	12 Mar., '13	JAMES, E. A. ...	10 Feb., '13
CORNER, R. N. M. ...	12 Jan., '13	JAMES, J. A. B.	14 Mar., '13
DOWDALL, Dr. A. M. ...	25 Feb., '13	KORTRIGHT, Capt. H. A.	15 Mar., '13
DOBSON, W. ...	31 Jan., '13	KEIGWIN, Dr. G. J. W.	13 Jan., '13
DOCKRELL, E. ...	25 Feb., '13	LORENA, Dr. A. C.	2 Jan., '13
DUFF, Dr. D. ...	11 Feb., '13	LEWIS, W. E. ...	13 Jan., '13
FURLEY, J. T. ...	23 Mar., '13	LANE, E. C. ...	16 Jan., '13
FRASER, Dr. M. W.	25 Mar., '13	LYLE, J. N. ...	11 Feb., '13
FERGUSON, B. ...	...	LEWIS, H. M. ...	22 Mar., '13

GOLD COAST—continued.

LUNDIE, Dr. A. ...	12 Mar., '13	ROSE, Maj., R. A. de B. ...	2 Mar., '13
LETT, R. E. ...	21 Feb., '13	SKELTON, Capt. E. G. ...	25 Feb., '13
MCDERMID, J. S. ...	23 Feb., '13	STANLEY, H. E. T. ...	25 Feb., '13
MACCONACHIE, J. H. ...	8 Mar., '13	SHERRIFF, M. G. S. ...	15 Feb., '13
MORRIS, A. F. R. ...	12 Mar., '13	SWIRE, Capt. W. ...	30 Mar., '13
McKELLAR, F. L. ...	2 Feb., '13	SMITH, A. ...	15 Feb., '13
MUNRO, P. G. M. ...	18 Feb., '13	SMEED, C. W. ...	13 Jan., '13
McEWAN, J. ...	11 Feb., '13	SHARMAN, J. D. ...	13 Jan., '13
MANSFIELD, E. T. ...	5 Feb., '13	TIGHE, Dr. A. B. ...	3 Feb., '13
MIGEOD, F. W. H. ...	19 Jan., '13	TUDHOPE, W. S. D. ...	13 Jan., '13
NASH, S. D. ...	23 Feb., '13	TOFT, C. F. ...	15 Mar., '13
O'BRIEN, Dr. A. J. R. ...	8 Feb., '13	UNWIN, H. B. ...	28 Feb., '13
PACKWOOD, G. H. ...	23 Jan., '13	WHITFIELD, A. G. ...	2 Mar., '13
PAGE, Miss A. M. ...	28 Jan., '13	WRIGHT, T. ...	18 Feb., '13
PEARSON, E. A. ...	23 Feb., '13	WATSON, C. E. S. ...	20 Jan., '13
RICE, Dr. T. E. ...	19 Feb., '13	WRIGHT, H. S. ...	20 Jan., '13
RATTON, J. H. ...	5 Feb., '13		

SIERRA LEONE.

APPLETON, Miss K. G. ...	15 Mar., '13	HOPKINS, W. ...	4 Apr., '13
BRACKLEY, G. ...	15 Mar., '13	KENNAN, Dr. R. H. ...	5 Feb., '13
BILL, J. F. ...	1 Apr., '13	LANE-POOL, C. E. ...	9 Feb., '13
BREMNER, Dr. A. ...	31 Jan., '13	McCONAGHY, Dr. J. ...	5 Feb., '13
BENNETT, N. C. ...	2 Mar., '13	MARCH, H. T. ...	28 Feb., '13
BLABY, G. ...	28 Jan., '13	MOORE, G. R. ...	18 Mar., '13
BROOKS, G. L. ...	28 Jan., '13	MUNN, A. E. ...	15 Mar., '13
CULLEN, A. J. ...	7 Jan., '13	PICKIN, J. J. ...	23 Mar., '13
COPLAND, C. A. ...	11 Feb., '13	PRESCOTT, H. ...	5 Mar., '13
COLLETT, Dr. J. W. ...	18 Feb., '13	PEARSON, W. ...	11 Feb., '13
CRAVEN, J. ...	17 Mar., '13	SIMPSON, J. ...	5 Mar., '13
COMBER, J. R. W. ...	21 Feb., '13	SMITH, T. ...	Due Back
FAIRTLOUGH, Maj. E. D.,	28 Jan., '13		26 Mar., '13
C.M.G., D.S.O.		TODD, J. E. ...	7 Jan., '13
GILBERT, D. P. ...	27 Jan., '13	WILSON, C. F. ...	5 Feb., '13
HORN, L. F. P. ...	28 Jan., '13		

GAMBIA.

FREEMAN, H. G. V. M. ...	19 Feb., '13	MACAFFER, M. ...	17 Feb., '13
KENNEDY, Dr. A. F. ...	12 Jan., '13	MOREY, G. B. ...	9 Mar., '13

SOUTHERN NIGERIA.

AUSTIN, E. P. ...	25 Mar., '13	BRAITHWAITE, Dr. E. C. ...	18 Mar., '13
ASTON, J. ...	2 Mar., '13	BENHAM, F. B. ...	18 Feb., '13
BRANDON, T. ...	23 Mar., '13	BRIERLEY, Dr. R. H. ...	28 Jan., '13
BERNARD, L. A. ...	23 Mar., '13	BRAY, H. W. ...	13 Jan., '13
BRIDGEMAN, F. J. ...	15 Mar., '13	BATE, Dr. J. B. ...	23 Mar., '13
BOURNE, V. C. ...	7 Jan., '13	BODDY, C. ...	25 Feb., '13
BAIN, A.	8 Mar., '13	BOLTON, H. ...	21 Jan., '13
BROADHURST, T. ...	5 Feb., '13	COWPER, J. ...	7 Jan., '13
BLAIR, Capt. A. H. ...	7 Feb., '13	CUTHBERTSON, W. R. D. Steamer leaving	8 Jan., '13
BAKER, T. W. ...	15 Mar., '13		

SOUTHERN NIGERIA—continued.

CURRIE, Dr. J.	8 Mar., '13	JENKINS, E. T. ...	21 Jan., '13
COOK, J.	11 Feb., '13	KENT, J....	18 Mar., '13
CLAYDON, B.	11 Feb., '13	KNIGHTS, E. G....	7 Jan., '13
CLINTON, G.	8 Mar., '13	LYDIARD, B.	15 Mar., '13
COLLIER, L. A. P. ...	13 Jan., '13	LANGLEY, F. J. ...	8 Mar., '13
COGHILL, H. S. ...	2 Apr., '13	LAWSON, P. W....	11 Feb., '13
CLINCH, F. A. ...	8 Mar., '13	LAYTON, E. V. ...	25 Feb., '13
CUMMINS, C. A. ...	14 Mar., '13	LESLIE, K. M. ...	25 Feb., '13
CAMERON, D. C. ...	25 Jan., '13	LEONARD, T. M. R. ...	20 Jan., '13
DOUGLAS, H. M. ...	23 Mar., '13	LYNCH, F. P. ...	7 Jan., '13
DE GAYE, J. A....	11 Feb., '13	LEESE, C. W.	21 Feb., '13
DAVIES, E.	26 Jan., '13	LAYBOURN, J. ...	11 Jan., '13
DAVIES, T. J.	5 Feb., '13	LEIGH-LYE, Capt. F. M.	23 Mar., '13
DRITON, W. B. ...	17 Jan., '13	MESSER, J. E. ...	31 Jan., '13
DRURY, G. F. ...	13 Feb., '13	MORRIS, H. J. ...	11 Feb., '13
DAVIES, D. E. ...	7 Jan., '13	MORLEY, H. J. ...	13 Mar., '13
DE ROSARIO, O. ...	12 Mar., '13	MAITLAND, D. T. ...	20 Jan., '13
ELSTOB, R. G. ...	11 Feb., '13	MARTIN, Lt. A. R. P.,	23 Mar., '13
ELLIOT, Miss E. E. ...	16 Jan., '13	R.N.R.	
ESCOTT, J.	2 Feb., '13	MILLIKEN, A. R. ...	1 Mar., '13
EVANS, A.	8 Mar., '13	MOFFETT, W. ...	9 Jan., '13
EDMONDSON, B. ...	18 Mar., '13	McKAY, T. J. ...	25 Feb., '13
FERGUSON, Dr. H. R. M.	23 Mar., '13	MARSHALL, J. F. ...	28 Feb., '13
FRASER, F. W. J. V. ...	11 Feb., '13	MORRIS, P. M. ...	13 Jan., '13
FINDLAY, G. H....	13 Jan., '13	MOULE, I. H. D'O ...	13 Jan., '13
FLACK, W. A. ...	8 Feb., '13	McFADYEN, T. J. ...	7 Jan., '13
FALK, E. M. ...	4 Mar., '13	MERCER, E. G. ...	11 Feb., '13
FIRTH, O. W. ...	7 Jan., '13	MACPHERSON, Dr. R. C.	25 Feb., '13
FARQUHAR, J. H. J. ...	8 Mar., '13	McCORKINDALE, O. ...	28 Jan., '13
GIBBONS, A. ...	20 Jan., '13	NOBLE, Rev. L. S. ...	
GAUNT, R. F. ...	7 Jan., '13	NEWPORT, Dr. H. McG.	11 Feb., '13
GRIFFITHS, C. J. ...	25 Feb., '13	OWENS, J. ...	15 Mar., '13
GORDON, Miss K. M. ...	12 Jan., '13	PERCIVAL-JONES, Lt. J.,	25 Mar., '13
HEAPS, R. ...	2 Mar., '13	R.N.R.	
HARRIGAN, C. A. ...	20 Jan., '13	PRYCE, H. F. F. ...	14 Jan., '13
HAMMETT, F. T. ...	23 Mar., '13	PEACOCK, Dr. W. H. ...	19 Feb., '13
HARDING, C. E. H. ...	11 Feb., '13	PHILIPS, J. D. ...	11 Feb., '13
HOUSTON, W. H. W. ...	21 Jan., '13	PARRY, Maj. J. L. R. ...	25 Feb., '13
HARWOOD, T. ...	11 Feb., '13	PEDDIE, J. L. ...	25 Feb., '13
HAND, J. St. V. ...	25 Mar., '13	PETERS, A. ...	26 Jan., '13
HUGHES, F. J. ...	8 Mar., '13	PATRICK, D. W....	8 Mar., '13
HOLME, H. J. F. ...	15 Mar., '13	PORTER, G. F. ...	15 Mar., '13
HINTON, W. B. ...	19 Jan., '13	PUNCH, C. ...	15 Feb., '13
HOLT, J....	8 Mar., '13	PHILLIPS, H. ...	8 Feb., '13
HORNBY-PORTER, C. ...	28 Feb., '13	PHILBY, H. P. ...	8 Mar., '13
HEAD, F. J. ...	18 Feb., '13	PEACOCK, A. V....	8 Mar., '13
HICKS, W. T. ...	25 Mar., '13	PICKELS, Dr. J. A. ...	10 Jan., '13
HEWSON, C. L. ...	21 Jan., '13	ROBINSON, H. W. ...	28 Feb., '13
HODGSON, H. ...	15 Mar., '13	ROUSSEAU, G. D. ...	3 Jan., '13
INGRAM, B. S. A. ...	15 Mar., '13	RUE, J. H. ...	13 Feb., '13
ISITT, L. ...	20 Jan., '13	RAYER, A. E. ...	3 Mar., '13
JONES, A. ...	7 Jan., '13	RICHARDSON, Capt. T. C.	15 Mar., '13
JOHNS, F. ...	20 Jan., '13	ROJAS, Lt. R. H., R.N.R.	13 Jan., '13

SOUTHERN NIGERIA—*continued.*

ROBERTSON, W. ...	...	TURNER-SMITH, E. ...	15 Mar., '13
STAMFORD, H. J. ...	15 Mar., '13	TALFOURD-JONES, F. ...	7 Jan., '13
SASSE, R. H. J. ...	11 Feb., '13	TAW, M. L. ...	17 Jan., '13
SMYTH, Dr. A. W. S. ...	18 Feb., '13	TENGEY, G. A. ...	8 Mar., '13
SYER, W. C. ...	23 Mar., '13	UNWIN, Dr. A. H. ...	18 Feb., '13
STRETCH, C. K. ...	11 Feb., '13	WILKIE, D. ...	...
STEELE, W. M. ...	15 Mar., '13	WHEATLEY, R. S. ...	13 Jan., '13
SPEAK, G. T. ...	8 Mar., '13	WOODBURN, A. ...	8 Mar., '13
STUART, C. E. ...	13 Jan., '13	WHEELER, O. ...	15 Mar., '13
SIEGER, Dr. W. H. ...	15 Feb., '13	WEBB, R. A. ...	25 Feb., '13
SAMUEL, J. A. ...	25 Feb., '13	WILSON, Dr. A. H. ...	20 Feb., '13
SEWELL, Capt. J. G. ...	18 Feb., '13	WILLIAMS-THOMAS, F. S. ...	7 Jan., '13
SEWARD, R. R. ...	13 Jan., '13	WILSON, W. ...	20 Jan., '13
SALTER, J. ...	25 Feb., '13	WILLIS, A. ...	18 Feb., '13
SULLIVAN, J. ...	10 Feb., '13	WAYLING, Maj. J. ...	11 Feb., '13
SINGLE, Miss L. ...	28 Feb., '13	WHITEHEAD, Capt. J. ...	...
SAPARA, Dr. O. ...	Due Back	H. M. ...	21 Feb., '13
	1 Feb., '13	WRIGHT, A. J. ...	1 Feb., '13

NORTHERN NIGERIA.

ASH, B. C. ...	17 Jan., '13	GRAVES, F. G. H. H. ...	11 Feb., '13
ANGUS, G. ...	2 Mar., '13	GLOOG, H. ...	20 Feb., '13
AUCHINLECK, A. L. ...	21 Feb., '13	GOLDSMITH, H. S., C. M. G. ...	9 May, '13
ARNETT, E. J. ...	8 Feb., '13	GEFFERT, J. J. ...	8 Jan., '13
ANDERSON, C. L. ...	10 Jan., '13	GIBB, J. ...	15 Mar., '13
BUDGEN, T. A. G. ...	12 Apr., '13	GREENE, Capt. J. ...	1 Feb., '13
BREMNER, J. ...	15 Mar., '13	GILL, J. W. ...	2 Mar., '13
BUTLER, W. ...	8 Mar., '13	GOODWIN, A. E. ...	20 Jan., '13
BURNS, W. ...	25 Feb., '13	HOPKINSON, Capt. J. C. ...	18 Feb., '13
BISCOE, V. F. ...	20 Jan., '13	HAMILTON, H. H. L. ...	11 Feb., '13
BROWN, R. ...	18 Feb., '13	HOPKINSON, Capt. J. ff. ...	12 Mar., '13
BURTON, Capt. E. F. N. ...	13 Jan., '13	HIGGINS, Capt. T. C. R. ...	11 Feb., '13
CHANDLER, C. L. ...	13 Jan., '13	HUNSWORTH, W. ...	13 Jan., '13
CAMPBELL-IRONS, A. ...	4 Mar., '13	HILL, R. ...	7 Jan., '13
CLIFTON, R. B. ...	7 Jan., '13	HAWKINS, Lt. E. M.,	...
CHAMPION, M. ...	8 Mar., '13	R. N. R. ...	14 Mar., '13
COLE, A. ...	11 Feb., '13	HODGES, B. ...	8 Feb., '13
COLLARD, A. S. ...	31 Mar., '13	INGHAM, B. N. ...	7 Mar., '13
COLES, Capt. R. G. ...	22 Apr., '13	KELLY, G. C. ...	15 Mar., '13
DENTON, Miss M. G. ...	18 Feb., '13	LOUGHRAN, J. P. ...	11 Feb., '13
DUNLOP, W. C. C. ...	28 Feb., '13	LONSDALE, Capt. P. ...	7 Mar., '13
DAWSON, A. E. ...	13 Jan., '13	LANGWORTHY, H. W. ...	17 Feb., '13
DANIEL, W. E. ...	23 Jan., '13	LITTLEWOOD, J. O. ...	12 Feb., '13
ELLIS, Dr. M. F. ...	16 Mar., '13	LEY-GREAVES, J. A. ...	20 Jan., '13
EYERS, W. ...	8 Mar., '13	LAWSON, H. W. ...	23 Mar., '13
FLINT, F. S. ...	8 Mar., '13	LAING, E. H. B. ...	8 Mar., '13
FARNELL, H. ...	11 Feb., '13	MAXWELL, A. W. ...	25 Feb., '13
FENNAH, C. F. ...	31 Jan., '13	MASON, G. F. ...	25 Feb., '13
FOX, L. D'A. ...	11 Feb., '13	MACFIE, Dr. J. W. SCOTT ...	8 Mar., '13
FAIRLIE, Capt. F. ...	8 Mar., '13	MANNING, Dr. F. ...	9 Jan., '13
FERGUSON, D. S. ...	23 Mar., '13	MOISER, Dr. B. ...	7 Jan., '13
GORDON-GRAHAME, A. ...	2 Jan., '13	MCBRYER, G. ...	11 Feb., '13

NORTHERN NIGERIA—continued.

MORAN, J. ...	2 Mar., '13	SMITH, R. S., R.N. ...	2 Feb., '13
MONKHOUSE, E....	20 Jan., '13	SWANN, Dr. A. J. T. ...	4 Mar., '13
MACKAY, G. ...	8 Mar., '13	SLINGSBY, W. E. ...	3 Feb., '13
McKINNEY, Dr. H. G....	13 Feb., '13	TWEEDIE, T. ...	8 Mar., '13
NICHOLLS, G. W. ...	2 Mar., '13	TOWNSEND, C. ...	28 Feb., '13
NEWPORT, A. ...	26 Jan., '13	THOMSON, Miss M. E. ...	1 Jan., '13
O'LEARY, F. D. ...	18 Feb., '13	THOMSON, Dr. J. W. ...	13 Feb., '13
OLIVER, T. E. ...	18 Jan., '13	VERTUE, G. N. ...	21 Feb., '13
MONRO, Dr. D. H. C. ...	2 Apr., '13	VISE, T. A. ...	13 Jan., '13
PURDON, A. P. ...	2 Apr., '13	WATERSON, J. ...	11 Feb., '13
PORTEOUS, Dr. E. J. ...	18 Feb., '13	WARD, Miss M. A. ...	20 Jan., '13
PARODI, E. V. ...	3 Apr., '13	WYLLIE, W. T. ...	13 Jan., '13
PRICE, Capt. J. F. N. ...	27 Mar., '13	WATSON, Dr. C. F. ...	28 Jan., '13
POSTANCE, M. A. ...	7 Jan., '13	WESTON, F. ...	11 Feb., '13
PILLOW, C. N. ...	31 Dec., '13	WALLBACH, Capt. D. A. ...	24 Mar., '13
RITCHIE, N. E. ...	4 Apr., '13	WHINERAY, S. B. ...	10 Jan., '13
ROSE, Lt.-Col. T. A., D.S.O. ...	15 Jan., '13	WATTS, H. C. ...	8 Mar., '13
ROBBINS, J. F. ...	7 Jan., '13	WESCHE, E. B. ...	15 Mar., '13
RAE, R. T. ...	15 Mar., '13	WILLIAMS, Dr. R. F. ...	12 Feb., '13
STEPHENS, F. R. ...	22 Jan., '13	WRIGHTSON, C. ...	8 Jan., '13
SMITH, F. ...	2 Apr., '13	WILLIAMS, W. E. ...	23 Mar., '13
SUTHERLAND, J. ...	2 Mar., '13	YATES, C. C. ...	28 Jan., '13

EAST AFRICA.

ALEXANDER, G. B. W....	31 Jan., '13	HILL, S. R. ...	...
BOILEAU, E. K....	9 Feb., '13	KENTON-SLANEY, N. A. ...	29 Jan., '13
BRASSEY-EDWARDS, H. ...	16 Mar., '13	LOW, W. N. ...	31 Jan., '13
BESSLER, A. ...	4 Apr., '13	LYNDE, W. M. ...	31 Jan., '13
BREADING, Lt.-Col. G. R., D.S.O. ...	Due Back 3 Apr., '13	LAMB, F. M. ...	5 June, '13
BLACK, M. A. ...	23 May, '13	MONTGOMERY, R. E. ...	...
CONDON, J. W. ...	5 Apl., '13	MONCKTON, Capt. N. ...	22 Mar., '13
CHERRETT, Dr. B. W. ...	8 May, '13	MURRAY, P. J. A. ...	18 Feb., '13
CHYNOWETH, J. C. ...	4 Mar., '13	PHILLIPS, Capt. G. F. ...	8 Jan., '13
CHAMIER, A. E. ...	3 Apl., '13	PATTERSON, J. ...	1 Jan., '13
CHEVALLIER, Dr. C. L. ...	3 Feb., '13	PUGH, J....	28 Feb., '13
DICKINSON, W....	12 Jan., '13	RAINSFORD, R. F. ...	...
EASTWOOD, B. ...	29 Mar., '13	RADFORD, Dr. W. J. ...	1 Jan., '13
HUMPHREY, R. W. ...	29 Jan., '13	SPENCER, C. E. ...	26 Feb., '13
HAYWOOD, C. W. ...	9 Apr., '13	TURNER, A. J. ...	20 June, '13
HOLLIS, A. C., C.M.G....	26 Jan., '13	WHISH, Lt. C. B., R.N.R. ...	2 Mar., '13
HUNTER, C. S. ...	22 Apl., '13	WYE, R....	4 Jan., '13
		WILSON, E. J. ...	24 Jan., '13

UGANDA.

CAREW, P. F. ...	Due Back 8 Mar., '13	FRASER, Capt. J. ...	15 Jan., '13
COLLYNS, Dr. J. M. ...	24 Feb., '13	GLEDHILL, B. S. ...	22 Jan., '13
CARR, S. H. ...	10 Jan., '13	GARRETT, Lt. C. C., R.N.R. ...	2 Mar., '13
DUGDALE, Capt. G. F. ...	16 Feb., '13	GATTRELL, E. M. ...	9 May '13
EDEN, C. W. G. ...	12 Mar., '13	HAWLEY, B. W. ...	4 Jan., '13

UGANDA—continued.

KNIGHT, H. G. ...	9 Feb., '13	SULLIVAN, C. E. E. ...	4 Jan., '13
LEEKE, R. H. ...	<i>Due Back</i>	THORNYCROFT, Capt.	
	17 Feb., '13	E. G. M. ...	<i>Steamer leaving Marseilles</i>
McMAHON, N. C. M. ...	29 Jan., '13		3 Jan., '13
MARSHALL, Dr. C. H. ...		WEBB-BOWEN, Maj.	
PACKER, S. ...	4 Mar., '13	W. J. ...	21 Mar., '13
PEARSON, R. J. ...	26 Mar., '13		

NYASALAND.

GRIFFIN, C. J. ...	20 Feb., '13	KENNEDY, C. G. ...	17 Jan., '13
INGRAM, H. I. ...	14 Jan., '13	TUCKETT, G. H. ...	4 Feb., '13

Note for Nyasaland Officers.

With special reference to the new East African leave regulations, the question of passages for Nyasaland Officers has been considered and the following decisions arrived at:—

1. Nyasaland Officers will be allowed to choose either the Suez Canal route or the Cape route when travelling between the Protectorate and this country.

2. If they select the former, they will be treated in exactly the same way as Officers of the East Africa Protectorate and Uganda, i.e. they will be allowed for the voyage the time actually taken from the date of embarkation until the date of disembarkation.

3. If they select the Cape route, they will ordinarily travel by a mail steamer between Southampton and Durban, using the Intermediate steamers only for the journey between Durban and Chinde. They will, however, only be allowed to travel by a mail steamer which is scheduled to connect with another steamer at Durban, e.g. the mail steamers leaving Southampton on the 23rd of November or 21st December.

4. If they prefer to travel by an Intermediate steamer all the way, they will be allowed to do so, on the understanding that the Government only provides them with a ticket for the Intermediate steamer, i.e. they cannot be granted the difference in cost between the Mail steamer passage and an Intermediate steamer passage, and that any time spent on the voyage between Chinde and Southampton in excess of 29 days will be reckoned as "leave in England."

SOMALILAND.

ARCHER, G. F.

SWAZILAND.

CLARK-PERKINS, Capt. R., D.S.O. 30 Apr., '13

BRITISH HONDURAS.

REES-DAVIES, C. ...	13 Feb., '13	WINTER, Dr. W. C. P.	4 May '13
STRANGE, H. P. C. ...	14 Mar., '13		

FIJI.

ANDERSON, Miss M. C.	21 May '13	|	MONTAGUE, A. ...	...	19 Feb., '13
MARSDEN, A. ...	...	14 Feb., '13	|		

CYPRUS.

BATLY, Maj. G. C. ...	29 Jan., '13	|	JARDINE, D. J.	31 Jan., '13
-----------------------	--------------	--	--------------------	-----	--------------

MALTA.

ROUFELL Lt.-Col. E. P. S., D.S.O.	6 May '13
---------------------------------------	-----	-----	-----	-----	-----------

LEEWARD ISLANDS.

GRANT, H. E. W., C.M.G.	27 Mar., '13	|	JONES, G. A.	22 Jan., '13
-------------------------	--------------	--	------------------	-----	--------------

GRENADA.

COCKIN, DR. R. P.	28 Jan., '13
-----------------------	-----	-----	-----	-----	--------------

DOMINICA.

O'FARRELL, P.	31 Jan., '13
-------------------	-----	-----	-----	-----	--------------

ANTIGUA.

THOMPSON, H. B.	31 Mar., '13
---------------------	-----	-----	-----	-----	--------------

ST. VINCENT.

MURRAY, Hon. C. G.	28 Jan., '13
------------------------	-----	-----	-----	-----	--------------

ST. LUCIA.

NICHOLLS, L.	9 Feb., '13
------------------	-----	-----	-----	-----	-------------

S. KITT'S NEVIS.

MALONE, C.	31 Mar., '13
----------------	-----	-----	-----	-----	--------------

ST. HELENA.

ARNOLD, DR. W. J. J.	30 Apr. '13
--------------------------	-----	-----	-----	-----	-------------

BRITISH SOLOMON ISLANDS PROTECTORATE.

EDGE-PARTINGTON, T. W.	22 Mar., '13
----------------------------	-----	-----	-----	-----	--------------

JAMAICA.

COX, E. F. H. ...	...	6 Feb., '13	|	WILLOUGHBY, P.R.A. ...	30 Jan., '13
MARSDEN, A. ...	...	17 Feb., '13	|		

TRINIDAD.

CASSIDY, M.P. ...	...	15 Jan., '13	|	MARSDEN, A. ...	14 Feb., '13
DEANE, G. C. ...	...	28 Jan., '13	|	MARSHALL, COL. R. S. ...	31 Mar., '13
HANCOCK, H. H. ...	...	14 Jan., '13	|	STEVENS, J. J. ...	26 Feb., '13

BRITISH GUIANA.

BOWHILL, J. A. P. ...	6 Feb., '13	HILL, J. K. D. ...	27 Feb., '13
COX, C. T., C.M.G. ...	27 Mar., '13	MACGUAIDE, Dr. T. B.W.	6 Feb., '13
de FREITAS, Dr. G. B. ...	31 Mar., '13	MAY, F. H. P. ...	3 Feb., '13
FRASER, N. L. ...	8 Feb., '13	MOULDER, E. R. D. ...	15 Jan., '13
GILCHRIST, W. J. ...	23 Jan., '13	POOK, R. C. ...	20 Feb., '13
GAINFORT, B. ...	Steamer due about 22 May, '13	WILSON, R. W. O'H. ...	9 Apr., '13
		WALLBRIDGE, H. A. ...	14 July, '13

MAURITIUS.

BOUCHERAT, J. ...	23 Mar., '13	FOSTER, C. ...	14 Feb., '13
EDWARDS, C. H. ...	13 May, '13	HANNING, T. W. ...	22 June, '13

STRAITS SETTLEMENTS.

BISHOP, D. A. ...	25 July, '13	JOYCE, J. ...	17 May, '13
BOURNE, F. G. ...	Steamer leaving 7 Mar., '13	LAWRENCE, J. W. ...	13 July, '13
BAILEY, A. W. ...	30 Apr., '13	LEWIS, O. E. ...	16 May, '13
BADDELEY, F. M. ...	Steamer leaving 7 Feb., '13	MOODY, J. A. ...	8 Apr., '13
CRAIG, W. ...	19 Feb., '13	MCGUINNESS, P. ...	14 Mar., '13
CODRINGTON, S. ...	2 May, '13	MELVILLE, T. A. ...	13 Oct., '13
CONNOR, T. ...	28 Feb., '13	NICOL, C. H. ...	18 Feb., '13
DYSON, C. V. ...	25 May, '13	O'NEILL, M. ...	15 Feb., '13
FFORDE, F. C. ...		PERRETT, H. F. ...	26 Mar., '13
GIBSON, W. S. ...	24 July, '13	SCRIVENOR, J. B. ...	18 Feb., '13
GREEN, P. R. J. ...	4 Feb., '13	SAUNDERS, C. J. ...	29 Apr., '13
HICKEY, L. ...	16 Mar., '13	STALLWOOD, H. A. ...	Steamer due 14 May, '13
HARMER, F. E. ...	4 Feb., '13	SMITH, A. G. ...	16 Mar., '13
		STEINMETZ, G. A. J. S. ...	15 Aug., '13

TANJONG PAGAR DOCK.

KING, F. W. ...	11 Sept., '13	PLUMB, A. J. ...	10 June, '13
McLACHLAN, C. D. ...	5 Apr., '13	PAXTON, W. ...	6 Mar., '13
NICHOLSON, J. R. ...		RAISON, C. ...	28 Feb., '13

WEI HAI WEI.

MUAT, Dr. W. M. ...	...	...	...	...	...	13 June, '13
WALTER, R. ...	...	...	...	...	...	16 May, '13

HONG KONG.

BARRINGTON, J. H. ...	28 Feb., '13	PATERSON, H. J. ...	24 Feb., '13
CHAPMAN, A. ...	9 July, '13	PEPPERELL, W. A. ...	16 May, '13
ELDRIDGE, J. E. ...	25 Mar., '13	RALPHS, E. ...	12 Mar., '13
FARRELL, M. A. ...	6 May, '13	TUTCHER, W. J. ...	8 Apr., '13
GOURLAY, Miss H. M. ...	15 Aug., '13	TUTCHER, Mrs. E. ...	8 Apr., '13
GIBSON, A. ...	26 Mar., '13	TOMALIN, H. F. ...	18 Apr., '13
KNIGHT, H. J. ...	15 July, '13	WATT, R. C. ...	24 Feb., '13
KEYT, Dr. F. T. ...	13 Feb., '13	WOOD, J. R. ...	17 Sept., '13
NOLAN, N. G. ...	2 Apr., '13	WOLFE, E. D. C. ...	27 July, '13
PIERPOINT, E. J. ...	7 Mar., '13		

PERAK.

BOWERS, A. F. ...	... 31 July, '13	MORDEY, W. H. G. ...	15 July, '13
BOWEN, L. ...	... 12 Mar., '13	SYMES, W. L. B. ...	20 Feb., '13
LAIDLAW, D. H. ...	... 29 May, '13	YOUNG, C. ...	8 May, '13

PAHANG.

BREWSTER, E. J....	24 Mar., '13
--------------------	--------	--------	--------------

SELANGOR.

CALDECOTT, A. ...	... 28 Feb., '13	MCGREGOR, T. J. ...	12 May, '13
GROVES, T. ...	... 3 June, '13	MEADWAY, J. J. ...	10 Mar., '13
KEIR, A....	... 3 July, '13	SWETTENHAM, R. F. R....	6 Mar., '13
MYNOTT, A. R. ...	... 27 May, '13	WILLIAMS, G. ...	5 Apl., '13

NEGRI SEMBILAN.

HUGHES, G. E. E.	23 Feb., '13
------------------	--------	--------	--------------

KEDAH.

GILROY, P. 4 June, '13	FINCH, F. G. ...	Steamer due 5 Mar., '13
----------------	-----------------	------------------	----------------------------

FEDERATED MALAY STATES.

ALEXANDER, C. S. ...	17 June, '13	LEONARD, H. G. R. ...	22 Feb., '13
BURTON, H. ...	17 July, '13	LAMONBY, W. F. ...	24 Feb., '13
BARR, T....	5 Mar., '13	LEWIS, A. E. ...	28 Feb., '13
BARR, A. ...	7 Feb., '13	LUCY, Dr. S. H. R. ...	23 Aug., '13
BROWN, D. ...	22 Mar., '13	MALLEY, T. ...	17 May, '13
BLACKLAW, C. F. S. ...	5 June, '13	MILLINGTON, W. M. ...	25 July, '13
CAMPBELL, D. G., C.M.G.	28 Apr., '13	MOIR, G. ...	...
COOPER, Dr. T. G. D. ...	21 Mar., '13	MARKS, O. ...	8 Apr., '13
COWAN, W. ...	31 July, '13	MCLEAN, L. ...	14 Apr., '13
CLAYTON, R. J. B. ...	17 July, '13	MACINTYRE, Dr. E. T....	31 July, '13
CULLEN, J. ...	20 Apr., '13	POTTIE, J. ...	1 Mar., '13
CARGILL, Capt. R. J. ...	6 Mar., '13	PRATT, H. C. ...	9 Apr., '13
DURIE, W. ...	30 Apr., '13	ROBINSON, A. ...	28 Feb., '13
DALY, M. D. ...	30 Apr., '13	RHODES, H. ...	19 May, '13
EATON, B. J. ...	10 Mar., '13	STANTON, Dr. A. T. ...	Steamer due 20 Feb., '13
FONSECA, A. H. D. R. ...	31 Aug., '13	SHEFFIELD, J. N. ...	17 Mar., '13
FRANKLIN, A. E. C. ...	30 June, '13	SANSOM, C. H. ...	3 Sept., '13
GILLESPIE, Miss M. ...	3 Feb., '13	SUTTON, Miss F. E. ...	30 Mar., '13
GREEN, W. H. ...	9 May, '13	SIRCOM, H. S. ...	17 Sept., '13
GRAYSHAW, J. ...	28 Feb., '13	TOMS, J. ...	19 Feb., '13
HOWARD, T. ...	16 Mar., '13	TALBOT, F. W. ...	30 Oct., '13
HOLLYWOOD, J. H. ...	2 Mar., '13	WHITLEY, M. H. ...	27 Apr., '13
HUXLEY, W. S....	2 Apr., '13	WELLINGTON, Dr. A. R.	23 May, '13
HENBRY, G. J. ...	24 Feb., '13	WOODS, Dr. A. A. ...	Steamer due 11 June, '13
HEREFORD, G. A. ...	14 June, '13		
KLOSS, C. B. ...	21 Aug., '13		
LE FEVRE, T. ...	Steamer leaving 20 Feb., '13		

CEYLON.

ASERAPPA, Dr. E. P. ...	24 Dec., '13	MURRAY, W. A. ...	18 Feb., '13
BRYDE, R. L. W. ...	21 Oct., '13	MULLINGTON, E. T. ...	16 Feb., '13
BERTRAM, A. ...	10 Mar., '13	NELL, Dr. A. ...	Steamer due 13 Mar., '13
BARTLETT, F. ...	23 Feb., '13	ONION, T. ...	18 Mar., '13
BROWN, W. ...	13 July, '13	PAUL, Maj., J. R., A. H.	2 Feb., '13
BRADLEY, G. T. ...	8 Feb., '13	PROUSSE, A. D....	20 Feb., '13
BARNARD, H. O. ...	4 Feb., '13	ROBERTSON, A. N. ...	8 Apr., '13
CASTELLANI, Dr. A. ...	31 Mar., '13	REID, T. ...	21 May, '13
CHRISTOFFELSZ, Dr. H. S.	1 Aug., '13	ROBINSON, Dr. M. LE L.	30 Jan., '13
CARBERY, W. H. B. ...	5 Sept., '13	ROBKE, O.	30 Mar., '13
CAMPBELL, T. J. St. A.	7 Apr., '13	SHELLEY, W. J....	28 Feb., '13
DE SILVA, Dr. C. L. A.	14 Sept., '13	SHIPTON, L.	9 Feb., '13
DE SARAM, W. B. ...	24 Mar., '13	STEVENSON, M. ...	11 Sept., '13
DENHAM, E. B. ...	26 Sept., '13	STAPLIS, H. C. ...	7 Feb., '13
DE VOS, Dr. C. ...	14 Sept., '13	SKELTON, R. ...	14 Feb., '13
DE KRETZER, H. E. ...	27 June, '13	STURGESS, G. W.	5 May, '13
FIELDER, C. C. ...	17 Mar., '13	TAYLOR, W. A. C.	3 Feb., '13
FELIX, J. J. P. ...	Steamer due 3 Feb., '13	TOTHILL, F. J. ...	29 Mar., '13
GIBBON, Miss A. ...	30 Apr., '13	TURNER, L. J. B.	19 Feb., '13
HANER, T. ...	5 May, '13	THORNHILL, G. K.	17 Sept., '13
KILMISTER, C. H. ...	29 Jan., '13	VAREY, J. A. ...	7 Oct., '13
LEES, H. B. ...	Steamer due 17 Feb., '13	VAUGHAN, C. S.	3 May, '13
MACMILLAN, H. F. ...	16 Apr., '13	WARMAN, S. E....	26 May, '13
MCLEOD, Miss E. St. C.	23 Mar., '13	WYLIE, T. A. ...	31 Mar., '13
MIDDLETON, J. C. C. ...	18 May, '13	WICKS, C. A. ...	31 Jan. '13

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND,
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,

**DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.**

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

**Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.**

BAGGAGE, &c., STORED.

NEWSPAPERS AND PERIODICALS DESPATCHED.

**Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.**

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,

ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

WAY & CO. LTD., have made a careful study of **WINES and
SPIRITS** most suited for the Tropics. Their Wine List will be
sent on application, and the selections mentioned have been
supplied for several years and given great satisfaction.

PROVISIONS.—From all well known Manufacturers.

Special A and B Boxes for one man one week.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand" **THE POST OFFICE MAGAZINE.**

22nd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

ADVERTISEMENTS.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT, LIMITED.



BRISTOL.

AND AT NEWPORT, MON., SCUNTHORPE, LINGS.,
AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand"

THE POST OFFICE MAGAZINE.

22nd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

GALVANIZED SHEETS,
BLACK SHEETS,
WIRE NETTING,
CONSTRUCTIONAL STEELWORK.

JOHN LYSAGHT, LIMITED.



BRISTOL.

AND AT NEWPORT, MON., SCUNTHORPE, LINGS.,
AND LONDON.
BRANCHES AND AGENCIES IN CHIEF COLONIAL CENTRES.

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.

VIENNA, 1873.

BRUSSELS, 1876 and 1888.

PHILADELPHIA, 1876.

MELBOURNE, 1880.

LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.

BARCELONA, 1888.

EDINBURGH, 1890.

NIJNI NOVGOROD, 1896.

SOUTH AFRICA, 1899.

BUENOS AIRES, 1910.

ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Address: "Signalmen, Vic., London." Telephone:—2285, Victoria.
Bentley's A.B.C. (5th Edition) A.B.C. and A1 Codes.

Brawford 1984

THE COLONIAL OFFICE JOURNAL.

Edited by

W. H. MERCER, C.M.G., one of the Crown Agents for the Colonies.

VOL. VI.

JANUARY, 1913.

No. 3.

CONTENTS.

EDITORIAL NOTES	171
THE MANOR OF MARYLAND	189
REVIEWS & NOTICES	195
BUSINESS NOTES	204
ENGINEERING NOTES	218
MEDICAL NOTES	227
COLONIAL STAMPS	238
RECENT APPOINTMENTS	241
COLONIAL OFFICERS ON LEAVE OF ABSENCE	243

DORMAN, LONG & CO., LTD.



MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of OPEN HEARTH

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS
And STRUCTURAL STEEL WORK for all purposes.

Speciality: STEEL FRAME BUILDINGS,
FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.					
Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.
	BSB 30	24 X 7 1/2	100	ASB 17 1/2	10 X 4 1/8
	BSB 29	20 X 7 1/2	89	BSB 16	9 X 7
	ASB 28 1/2	20 X 6 1/2	85	DLB 15 1/2	9 1/2 X 8 1/2
	BSB 28	18 X 7	75	BSB 15	9 X 4
	ASB 28 1/4	18 X 6	55		
	BSB 27	16 X 6	83	" 14	8 X 6
	" 26	15 X 6	59	" 13	8 X 5
				" 12	8 X 4
	" 25	15 X 5	42	" 11	7 X 4 1/2
	" 24	14 X 6	57	" 10	6 X 5
	" 23	14 X 6	46	" 9	6 X 4 1/2
	" 22	13 X 6	54	" 8	6 X 3
	" 21	12 X 6	44	" 7	5 X 4 1/2
	DLB 20 1/2	12 X 5	39	" 6	5 X 3
	BSB 20	12 X 5	33		
	" 19	10 X 8	70	" 5	4 1/2 X 1 1/2
	" 18	10 X 6	42	" 4	4 X 3
	DLB 17 1/2	10 X 5	85	" 3	4 X 1 1/2
	BSB 17	10 X 5	30	" 2	3 X 3
				" 1	3 X 1 1/2

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; HALF-ROUNDS, 1 1/2 in. to 3 1/2 in.; SQUARES, 1/2 in. to 2 1/2 in. FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

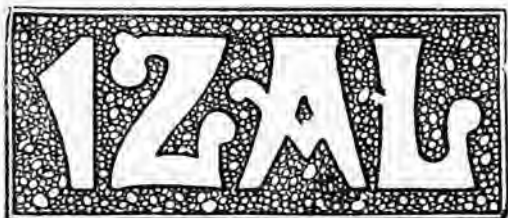
In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

BY ROYAL
WARRANT



TO
H.M. THE KING



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.

A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.

For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.

The "Izal" Rules of Health

Sent free by post, on application to

NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.

DORMAN, LONG & CO., LTD.

MIDDLESBROUGH.

19, VICTORIA STREET, WESTMINSTER, S.W.;
AND
GRANT STREET, SOUTH MELBOURNE, AUSTRALIA

Manufacturers of OPEN HEARTH

ENGLISH STEEL JOISTS, COMPOUND & PLATE GIRDERS
And STRUCTURAL STEEL WORK for all purposes.

Speciality

STEEL FRAME BUILDINGS.

FOR BOTH HOME AND ABROAD.

SECTIONS OF JOISTS.

Reference Mark	Size Inches	Weight per ft. lbs.	Reference Mark	Size Inches	Weight per ft. lbs.	
	SBS 30	34 X 7 1/2	100	ASB 17 1/2	19 X 4 1/2	85
	" 30	30 X 7 1/2	89	SBS 16	9 X 7	55
	ASB 30A	30 X 8	55	DLB 16A	31 X 10 1/2	20 1/2
	SBS 28	18 X 7	73	SBS 15	9 X 4	51
	ASB 30A	18 X 8	55			
	SBS 27	18 X 6	53	" 14	8 X 4	45
	" 24	18 X 5	50	" 12	8 X 3 1/2	43
				" 12	8 X 3 1/2	43
	" 23	18 X 5	48	" 11	7 X 3 1/2	40
	" 24	18 X 5	57	" 10	6 X 3 1/2	37
	" 23	18 X 5	46	" 8	6 X 2 1/2	33
	" 22	18 X 5	54	" 8	6 X 2 1/2	33
	" 21	18 X 5	44	" 7	6 X 2	31
	DLB 16A	18 X 5	39	" 6	6 X 2	31
	SBS 20	18 X 5	33			
	" 19	18 X 5	30	" 5	4 1/2 X 1 1/2	25
	" 18	18 X 4	28	" 4	4 X 1 1/2	23
	DLB 17A	18 X 5	35	" 3	4 X 1	21
	SBS 12	18 X 3	26	" 1	3 X 1 1/2	18

20,000 Tons of JOISTS, CHANNELS, and other Sections kept in stock at the Works, Middlesbrough; Nine Elms Lane, London; and Melbourne, Australia.

ILLUSTRATED SECTION BOOKS ON APPLICATION.

ROUNDS, 1/2 in. to 2 1/2 in.; HALF-ROUNDS, 1 1/2 in. to 3 1/2 in.; SQUARES, 1/2 in. to 3 1/2 in. FLATS, 1 in. to 18 in.; and all sizes of Angles, Channels, Tees, &c., for Engineering, Shipbuilding and Wagon Work; also Billets, Blooms and Slabs.

Highest Quality OPEN HEARTH Steel Rails

Up to 100 lbs. per yard.

GALVANISED CORRUGATED SHEETS AND ALL DESCRIPTIONS OF WIRE.

OPEN HEARTH STEEL BARS

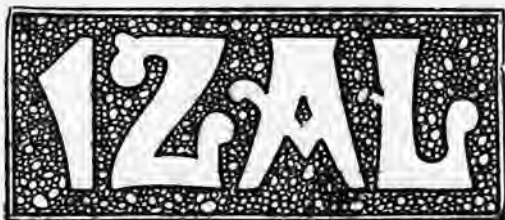
In LONG LENGTHS suitable for

FERRO-CONCRETE WORK.

BY ROYAL
WARRANT



TO
H.M. THE KING



The Ideal Disinfectant

NON-POISONOUS. NON-CORROSIVE.

OFFICIALLY ADOPTED BY H.M. GOVERNMENT.

MIXES EQUALLY WELL in SALT, BRACKISH or FRESH WATER.

THE PRODUCT OF SYSTEMATIC SCIENTIFIC RESEARCH.

**THE STANDARD DISINFECTANT for
all Public Health Work. Retains its
germicidal power in the presence of organic
matter.**

**A MORE EFFICIENT AND ECONOMICAL GERMICIDE
THAN CORROSIVE SUBLIMATE.**

**For Personal Health and Comfort those
who use "Izal" enjoy a happy freedom from
many ills, especially in the tropics.**

The "Izal" Rules of Health

Sent free by post, on application to

**NEWTON, CHAMBERS & Co., Limited,
Thorncliffe,
Near Sheffield.**

TORBAY PAINT.

One Quality Only.

*THE MOST RELIABLE PAINT
FOR TROPICAL CLIMATES.*

Special Paint for Coating
New and Old Galvanized Iron.

PARTICULARS FROM—

THE TORBAY PAINT CO.,
26, 27 & 28, BILLITER STREET,
LONDON, E.C.

Telegraphic Address: "TORBAY, LONDON."

Telephone No.: 1703 AVENUE.

CLAYTON MACHINES

— FOR —

FUMIGATION AND DISINFECTION

(SULPHUR-DIOXIDE GAS).

IN USE ALL OVER THE WORLD.

PARTICULARS FROM :

Clayton Fire Extinguishing and Ventilating Company, Limited,
22, CRAVEN STREET, LONDON, W.C.

Tel. : Gerr. 3232.

Code :—A.B.C. 4th and 5th Editions.

Tgms. : "Unconsumed, London."

CONTRACTORS TO

INDIA OFFICE, CROWN AGENTS FOR COLONIES, &c., &c.

ALBION

COMMERCIAL MOTORS For the Colonies.



**Vans, Lorries, Tipping
Waggons, Tower Waggons,
Government Waggons,
Ambulances, 'Buses,
Charabancs.**

Where roads are rough and the nearest repair shop is many miles distant—when soundness of material and quality of workmanship are liable to be put to the test at any moment—there and then the Albion with its studied simplicity and superb construction proves the wisdom of choosing a car built by the leading makers of Motor Waggons in the British Empire.

Many Governments, Contractors, Private Owners and Trading Firms at Home and in the Colonies, have proved to their own complete satisfaction that under the severest conditions the Albion is the ideal car for absolute reliability, and low running and maintenance cost. Every week orders and repeat orders from all parts of the globe bear testimony to this indisputable fact.



**MOTOR VEHICLES
FOR ALL PURPOSES.**

Load Capacity, 10 cwt. to 4 tons.

**NO HITCH OR BREAKDOWN
WHATEVER.**

Copy of letter received from Messrs. J. S. Fry & Sons, Ltd., the well-known Cocoa and Chocolate Manufacturers, of Bristol and London.

"We have much pleasure in stating that the 16 H.P. 2-ton Motor Van purchased from you in September, 1911, has given us every satisfaction. It ran 10,000 miles during the year and we have had no hitch or breakdown whatever. It answers our purposes extremely well."

ALBION MOTOR CAR CO., Ltd., Scotstoun, GLASGOW.

London Depot: 21 & 22, Upper Rathbone Place, W.

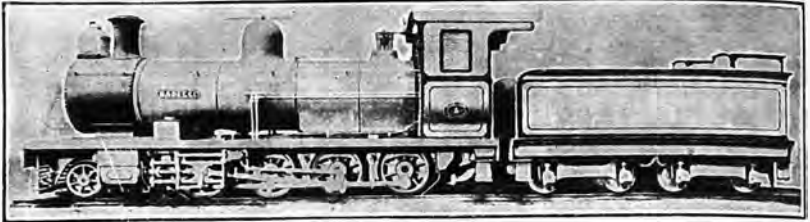
Codes: A.B.C. 5th Edition,
and Liebers.

Telegrams:
"Automobile, Glasgow."

LOCOMOTIVES

OF EVERY DESCRIPTION

FOR HOME AND FOREIGN RAILWAYS.



Tank Engines and Combined Cranes and Locomotives

ALWAYS IN STOCK AND IN PROGRESS.

COLLIERIES, IRONWORKS, RAILWAY DEPOTS, BRANCH LINES, CONTRACTORS, &c.

R. & W. HAWTHORN, LESLIE & Co., Ltd.,

Marine Engineers and Shipbuilders,

NEWCASTLE-ON-TYNE.

ESTABLISHED 1817.

Telegraphic Address:—"Locomotive, Newcastle-on-Tyne."

VACUUM OILS.

Telephone No. 6840 Gerrard.

(Four Lines.)

Telegrams: "Vacuum, London."



For Valve and Cylinder Lubrication.

**For Locomotive, Marine and Stationary
Engine Lubrication.**

For Railway Carriage and Wagon Lubrication.

**For Motor Carriage and Motor Boat
Lubrication.**

**For Gas and Oil Engine, Dynamo, Turbine,
Refrigerator and General Lubrication.**

**Special Oils and Greases for Tropical use
and onerous conditions.**

*These Lubricants are used and approved in all parts of
the world.*

SIGHT FEED LUBRICATORS.

With Unbreakable Glasses, absolute control and regularity of feed.

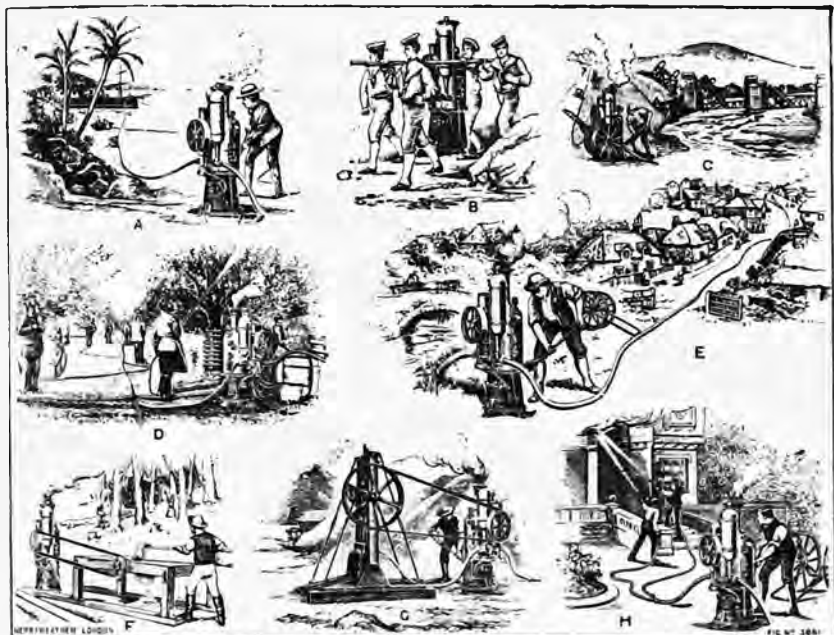
VACUUM OIL CO., LTD.,

Caxton House, WESTMINSTER, S.W.

MERRYWEATHERS'

"Valiant" Steam Pump and Boiler

AND ITS MANY USES.



A—Watering Ships.
B—Carried by 4 men.
C—Watering Troops at Tugela River.

D—Fruit Spraying.
E—Village Fire Engine.
F—Cutting Timber.

G—Driving Stamp Battery.
H—Extinguishing Fire.

FOR "UP-COUNTRY" WHERE RAILS AND ROADS DO NOT EXIST.
CAN BE ARRANGED FOR BURNING WOOD FUEL.

Weights only 6½ cwt.
Will pump through 3 miles of piping.
Strong, Simple, Efficient.

WRITE FOR PAMPHLET 616 S.C.O.

MERRYWEATHERS' PATENT LIGHT SECTIONAL BOILERS.

Invaluable for Prospectors.

FULL PARTICULARS ON APPLICATION.

MERRYWEATHER & SONS,

63, Long Acre, W.C.

Works . . . GREENWICH, S.E., LONDON.

THE WORKINGTON

IRON AND STEEL COMPANY, LIMITED,

Head Office & Works:—WORKINGTON, ENGLAND.

Manufacturers of

**ACID BESSEMER STEEL Rails,
Fishplates, Sleepers, Billets, &c.**

**ACID SIEMENS STEEL LOCOMOTIVE CARRIAGE and
WAGON TYRES and AXLES of HIGHEST GRADE,**

**Pure Cumberland Hematite Pig-iron,
Ferro-Manganese, Spiegeleisen, &c.**

London Office: 14, Sherborne Lane, King William Street, E.C.

Telegraphic Addresses: "Mosbay, Workington,"

"Mosbay, Cannon, London."

"TRIUMPH" Brand WASHABLE WATER PAINT.



**THE LAST WORD IN
WATER PAINT, AND
SUPERIOR TO ALL.**

Durability and

Permanency .

Unsurpassed .

**OVER 80 STANDARD TINTS.
ANY SHADE SUPPLIED TO ORDER.**

Sole Manufacturers:

**GOODLASS, WALL & CO. L^{td}.
LIVERPOOL.**

SHEEPBRIDGE COAL & IRON CO., LTD.,

Manufacturers of

Cast-Iron Gas & Water Mains

From 2 inches to 48 inches Diameter.

**Also Hydraulic Pressure Pipes, Steam Pipes,
Electric Cable Pipes, &c.**

CASTINGS OF ALL KINDS FOR GAS AND WATER WORKS.

**BEST HOUSE, GAS and STEAM COAL, PIG IRON,
BAR, ANGLE, and TEE IRON, &c.**

Contractors to H.M. Post Office, the Admiralty, and War Office.

SHEEPBRIDGE IRON-WORKS, CHESTERFIELD.

Telegrams—"Sheepbridge, Chesterfield."

Telephone—356.

London Office:— 53, VICTORIA STREET, WESTMINSTER, S.W.

PROVISIONS & OUTFIT.

GRIFFITHS, McALISTER & CO.,

Export Provision Merchants, &c.,
29-31, Manesty's Lane, LIVERPOOL.
14, Billiter Street, LONDON, E.C.

Suppliers of all kinds of Provisions, Camp Equipment, Medical Stores, Wines, Spirits, and Mineral Waters, &c., for Exploring and Mining Expeditions; also for private use abroad.

All Goods suitably packed for Hot Climates and made up in loads suitable for all modes of Transport.

CONTRACTORS TO THE CROWN AGENTS FOR THE COLONIES.

Telegraphic Addresses { **"COOMASSIE," LIVERPOOL**
"APPEASABLE," LONDON.

Codes used—A B C, 4th and 5th Editions, and Lieber's.

ESTABLISHED 1880.

Suppliers to Sir Ernest Shackleton's Antarctic Expedition, 1907-1909; Captain Scott's Expedition, 1910, and Dr. Mawson's Expedition, 1911.

In 2 vols., Demy 8vo. Each 12s. 6d. net (postage 4d. each).

THE LANGUAGES OF WEST AFRICA.

By F. W. H. MASON, Transport Officer, Gold Coast Colony.

The work may be treated as a linguistic survey of West Africa. It partakes of the nature of a comparative grammar. Some reference has been made in it to nearly two hundred languages or dialects, and as far as the materials admit an attempt has been made to classify them and to trace their origin, confirming or rejecting previous theories that have been advanced.

THE MENDE LANGUAGE, including Grammar, Vocabularies and Useful Phrases.
 By the same. Cr. 8vo. 7s. 6d. net.

A MENDE NATURAL HISTORY VOCABULARY. A description of the Fauna and Flora of the District, with Notes. By the same. Crown 8vo. 4s. 6d. net (postage 3d).

KEGAN PAUL, TRENCH, TRÜBNER & CO., LIMITED,

Broadway House, 68-74, Carter Lane, London, E.C.

Telegrams: "Crown, Cardiff."

THE

ESTABLISHED 1880.

CROWN PRESERVED COAL CO.,

CARDIFF. Limited.

MANUFACTURERS
AND SHIPPERS OF

CROWN PATENT FUEL



USED BY

BRITISH & FOREIGN ADMIRALTIES, STATE & COLONIAL RAILWAYS.

*Specially adapted for tropical climates and stores
for any length of time without deterioration.*

SUPPLIED THE ARCTIC AND ANTARCTIC EXPEDITIONS.

AWARDS.

London...1862	Liverpool... 1886	Royal Naval 1891 & 1905	Bordeaux ...1895
Paris .....1876	Jamaica ... 1891	Chicago .....1893	Mexican ...1908

Works: CARDIFF and PORT TALBOT.



HYDRAULIC MACHINE TOOLS

(TWEDDELL'S SYSTEM.)

For

Rivetting,
Flanging,
Forging,
Welding,

Stamping,
Pressing,
Bending,
Tube Drawing,

Wheel Bossing,
Projectiles,
Punching,
Shearing.

CATALOGUE FREE.

GAS ENGINES.

GAS PLANTS

For Anthracite Coal,
Coke, or Charcoal.

10 B.H.P. to 300 B.H.P. THOUSANDS WORKING.

OIL ENGINES.

Contractors to H.M. Government; Crown Agents for the Colonies;
Foreign Governments.

FIELDING & PLATT, Limited,

GLOUCESTER.

THORNYCROFT

PETROL COMMERCIAL VEHICLES

FOR

ALL TRADES IN EVERY COUNTRY.

We have a Large Range
of Vehicles for all Loads
from 8 cwt. to 4 tons.

The Repeat Orders we
are continually receiving
are proof of the
Sterling Quality of our
Productions.



Write stating fully your
requirements.

Repeat Order for four additional vehicles in hand for the above.

WE WILL QUOTE YOU SPECIALLY TO ENSURE SUCCESS.

JOHN I. THORNYCROFT & Co., Limited,

Caxton House,

Westminster, S.W.

Telegrams, "THORNYCROFT," London.

Codes: A B C 5th, etc.

SOUTH AMERICA



BY

THE

R.M.S.P. & P.S.N.C.

Frequent Sailings to South America from

Southampton, Liverpool & Glasgow, via
France, Spain, Portugal, Madeira,
Canary Is., St. Vincent & Falkland Is.

Fortnightly from Southampton & Cherbourg to

West Indies & New York,

British Guiana, Venezuela,
Colombia, Panama (for Pacific
Ports), Cuba & Bermuda.

CRUISES TO NORWAY,

Mediterranean, Holy Land, Egypt, &c., by ocean
yaching steamer "Arcadian." June to December.

From £1 a day.

Fortnightly Cruises from London to

MOROCCO CANARY ISLANDS MADEIRA

23 days £18.

THE ROYAL MAIL STEAM PACKET COMPANY
THE PACIFIC STEAM NAVIGATION COMPANY

London:—18 Moorgate St.
Liverpool:—31 James St.

UNION-CASTLE LINE.

**Royal Mail and Intermediate Services to
SOUTH AND EAST AFRICA.**

WEEKLY FOR SOUTH AFRICA

via Madeira and the Canaries.

MONTHLY FOR EAST AFRICA

via Gibraltar, Marseilles, Naples and the Suez Canal.

TOURS ROUND AFRICA BY UNION-CASTLE STEAMERS.

REDUCED FARES TO CIVIL SERVANTS.

EASTER, WHITSUNTIDE, AND SUMMER HOLIDAY TRIPS TO THE CONTINENT.

Reduced fares for Tourists during Spring and Summer to
MADEIRA, LAS PALMAS, and TENERIFFE.

Apply to—

THE HEAD OFFICE OF THE COMPANY,

At 3 & 4, FENCHURCH ST., LONDON, E.C.

Branch Offices at Southampton Birmingham, Leeds, Liverpool, Manchester
and Glasgow.

BRITISH STEAMERS TO AND FROM BRITISH COLONIES.

THE GAMBIA, SIERRA LEONE, GOLD COAST
AND
SOUTHERN AND NORTHERN NIGERIA (INCLUDING LAGOS).

REGULAR WEEKLY EXPRESS SERVICES

(CARRYING HIS MAJESTY'S MAILS)

are maintained out and home between Liverpool and Sierra Leone, Gold Coast (Seccondee, Accra), Lagos, Bonny and Calabar (fortnightly to the Gambia, Monrovia and Axim), and all the principal West African ports by the—

British and African Steam Navigation Co., Ltd., and African Steam Ship Co.

EXCELLENT ACCOMMODATION

with all Modern Conveniences, Hot and Cold Baths, Electric Light and Bells, is provided for passengers. The express service Steamers are also fitted with refrigerating chambers, ensuring a constant supply of fresh meat, vegetables, &c., all through the voyage.

All particulars from—

**ELDER DEMPSTER AND CO.,
LIMITED,**

COLONIAL HOUSE, WATER STREET, LIVERPOOL.

4, ST. MARY AXE, LONDON, E.C.

30, MOSLEY STREET, MANCHESTER,

BIRMINGHAM, CARDIFF, &c., &c.

THE TINFIELDS OF NORTHERN NIGERIA

Via THE NIGERIAN RAILWAY.

AN ALL RAIL ROUTE is now open for both Goods and Passenger Traffic from the Port of Lagos, the capital of Southern Nigeria, to Rahama, the present terminus of the BAUCHI BRANCH, a total distance of 712 miles. A Weekly BOAT EXPRESS connects with both the Outward and Homeward MAIL STEAMERS at LAGOS, and consists of Saloon Carriages provided with modern conveniences, including a Restaurant Car, comfortable Sleeping Accommodation, Lavatories and Bathrooms, and fitted throughout with Electric Light and Fans. The Train runs through to Zaria (622 miles) in 37 hours and Passengers tranship there to the BAUCHI Branch for Rahama.

2. At Lagos, Passengers and their luggage, etc., are conveyed to and from the Ocean Liner by a Tender which lands them at Iddo Wharf, where the Boat Express is drawn up. All Meals and Refreshments can be had in the Restaurant Car throughout the journey to Zaria.

3. The Passenger Fares from Lagos to Rahama are as under:

First Class £9 14s. 7d.	Third Class (Servants only) £0 19s. 0d.
-------------	--------------------	-----------------------------	--------------------

There is no restriction on the quantity of baggage which can be taken by Passengers by the Boat Express. The rates to Rahama are as under:—

First 2 cwt.	... Free.	Next 20 cwt.	... 11s. 8d. per cwt.	Next 20 cwt.	... 19s. 6d. per cwt.
--------------	-----------	--------------	-----------------------	--------------	-----------------------

Any baggage in excess of 2 tons 2 cwt. will be charged at excess luggage rates.

4. All goods are carried from Iddo (Lagos) to Zaria, Rahama and Kano at the same rates by the all rail route as by the river and rail route, and every facility is provided at Iddo for the handling of heavy and bulky articles of machinery, etc.

The rate per ton for machinery from Lagos to Rahama, or from Forcados to Rahama, is £18 3s. 5d., and for tin ore from Rahama to Lagos or Forcados, £13 17s. 6d.

For further particulars apply to the—

GENERAL MANAGER, NIGERIAN RAILWAY, LAGOS;
TRAFFIC SUPERINTENDENT, NIGERIAN RAILWAY, LAGOS;
 or to the CROWN AGENTS FOR THE COLONIES, Whitehall Gardens, London, S.W.,
 from whom a descriptive pamphlet may be obtained.

BANK OF BRITISH WEST AFRICA, LIMITED. (Established 1894.)

Bankers to the Governments of the Colonies of the Gambia, Sierra Leone, the Gold Coast and Nigeria, the Imperial Government in Sierra Leone, and to the Republic of Liberia

HEAD OFFICE: 17 & 18, LEADENHALL STREET, LONDON, E.C.

Telegraphic and Cable Address:—"ARREGLO, LONDON."

Liverpool Office: 14, CASTLE STREET.

Telegraphic and Cable Address:—"BULLION, LIVERPOOL."

Hamburg Office: GLOBUSHOF, TROSTBRÜCKE.

Telegraphic and Cable Address:—"BULLION, HAMBURG."

Authorised Capital	- £1,000,000.	Called-Up Capital	- £292,000.
Subscribed Capital	- £730,000.	Reserve	- £111,000.

DIRECTORS.

The Rt. Hon. Viscount Milner, G.C.B., G.C.M.G.	Henry Coke, Esq.	Clifford B. Edgar, Esq.
D. Q. Henriques, Esq.	Geo. Miller, Esq.	W. F. Moore, Esq.
Sir Owen Phillips, K.C.M.G.	Mazzini Stuart, Esq.	Geo. W. Neville, Esq.
Chief Manager: Leslie Couper.		Secretary: J. R. Bingham.

BRANCHES.

CANARY ISLANDS—Las Palmas (Grand Canary). **GAMBIA**—Bathurst. **SIERRA LEONE**—Freetown and Sherbro. **GOLD COAST** and **ASHANTI**—Axim, Secondee, Saltpond, Cape Coast Castle, Winnebah, Accra, Takorah, Comassie.

LIBERIA—Monrovia. **FRENCH IVORY COAST**—Grand Bassam, Assinie. **NIGERIA**—Lagos, Ibadan, Abeokuta, Zungeru, Zaria, Forcados, Warri, Onitsha, Lokoja, Calabar.

Telegraphic and Cable Address at all Branches:—"BANKING."

AGENCIES.

Abidjean, Abonnema, Benin, Brass, Buguma, Blama, Bonny, Bo, Dakar, Degama, Dodowah, Dunkwa, Ekwanga, Fernando Po, Half Assinie, Koko, Lahou, Loanda, Madelra, Matadi, Obuassi, Opobo, Pendembu, Prestea, Sapelli, Segbwema, Tenerife.
 New York Agency, 74, Wall Street.

BANKERS.

Bank of England. London Joint Stock Bank, Limited. Parr's Bank, Limited.

Current and Deposit Accounts accepted in London, Liverpool, Hamburg and Branches. Salaries and Dividends collected, Securities accepted for safe custody, Stocks and Shares bought and sold, Payments effected in any part of the world, and every facility afforded to Customers resident in West Africa and elsewhere.

THE
COLONIAL OFFICE
JOURNAL

APRIL, 1913.

Issued Quarterly.

London :
WATERLOW AND SONS LIMITED, GREAT WINCHESTER STREET, E.C.

Price 1s. 6d. Net.

Forwarded by the Publishers post paid to any part of the world for 1s. 9d.

Yearly Subscriptions post free 7s.

NO SKILL REQUIRED TO DRIVE A "LACRE."

18
DISTINCT
MODELS.



10 CWT.
TO
6 TONS.

IMPORTANT.

Some Special Features of the Ceylon Type "Lacre" Chassis
specially designed to comply with the

Ceylon Government Regulations.

OVERALL LENGTH - - 16 ft. 3 ins.
OVERALL WIDTH - - 5 ft. 6 ins.
TURNING CIRCLE - - 38 feet.
GROUND CLEARANCE - 13 inches.

STEERING ARM OVER AXLE.

SPECIALLY LARGE CAST ALUMINIUM RADIATOR.

SPECIALLY LARGE DIAMETER WHEELS.



NOTE.

THE LACRE
COMPANY ARE
ON THE
OFFICIAL LIST
OF THE
CROWN
AGENTS FOR
THE
COLONIES.



NOTE.

THE BEST
MEANS OF
TRANSPORTA-
TION UNDER
THE MOST
TRYING AND
ADVERSE
CLIMATIC
CONDITIONS.

2-TON CEYLON TYPE LACRE LOOSE TOP SHEET VAN, SHEWING LARGE
STEERING LOCK, GROUND CLEARANCE, AND LARGE COOLING SURFACE
SUPPLIED TO THE

CROWN AGENTS FOR THE COLONIES.

THE LACRE MOTOR CAR CO. LD.,

Principal Sales Office and Maintenance Depot:

78, YORK ROAD, KING'S CROSS, LONDON, Eng.

Registered Offices and Works: LETCHWORTH, HERTS, ENGLAND.

Cablegrams: "UNBAFFLED," LONDON and LETCHWORTH, ENGLAND.

Manchester Sales Office and Maintenance Depot:

MAYFIELD STATION BUILDINGS, LONDON ROAD, MANCHESTER, ENGLAND.

CODES: WESTERN UNION. LIEBERS, A.B.C. 5th EDITION, AND PRIVATE.

THE COLONIAL OFFICE JOURNAL.

VOL. VI.

APRIL, 1913.

No. 4.

[This Journal, though published with the approval of the Secretary of State for the Colonies, is not official, and the Secretary of State is in no way responsible for the opinions expressed in it.]

EDITORIAL NOTES.

A GREAT number of suggestions have been put before the Dominions Royal Commission, and there is no lack of variety in the subjects submitted by the witnesses for its consideration. To a great extent the evidence is directed to the question of securing greater uniformity in the commercial laws and practices of the Empire, and there can be no doubt that this object is generally desirable. On most, if not all, the matters referred to in this connection there is already in existence a large amount of official literature, but it remains true that in many cases progress is slow or non-existent. Mr. Geoffrey Drage, who has taken a wide view of the field, ascribes this to an imperfection in the administrative machinery. The Colonial Office, he states, has not had the driving power to force these subjects through, either with the Parliament at home or the Parliament of the great sister States. He suggests that there is a huge "no-man's land" of Imperial work of special importance from the point of view of trade, which no one is employed in thinking out, and upon which one department will not enter because it might encroach on another. This view leads up to the suggestion that there should be a new department, on which the Dominions will be

represented, and which would "co-ordinate" the departments concerned. The suggestion is interesting, but the ground should be made sure before a new machinery is introduced. We venture to doubt the existence of the "no-man's land," which is made the basis of the reasoning. As a matter of fact, all the specific matters referred to by Mr. Drage have been abundantly canvassed. The difficulty is not so much that there is no department to deal with a particular question as that there are several; the offices not only cover the ground, but in a sense overlap. No doubt mistakes have been made at times, but no instances are given which suggest to our minds ignorance or oversight. Mr. Drage cites two cases: Delagoa Bay, the importance of which, he says, "escaped our statesmen," and the British Guiana-Venezuela boundary case, where "there was a no-man's land between the Foreign Office and the Colonial Office, and a question as to where the documents were relating to the boundaries. That was found to be a no-man's land between the two departments, and I believe the documents were mislaid." The theory that documents were in "no-man's land" is rather suggestive of "Through the Looking Glass"; as Sir Rider Haggard remarked, "they cannot have been in the street." Probably the foundation for the story is that a valuable document was in the course of the enquiry discovered at the Record Office, where it had been since 1820, and where it had been indexed in a way which was calculated to conceal it. But no documents were "mislaid," and the document in question was in fact found as a result of a search of possible materials. It is difficult to see what Mr. Drage's new department could have done more than was done. It might possibly have done less. Mr. Drage's two cases are in fact thin material to support his great proposition. In each of them we went to arbitration, and it is not seriously argued that our cases were badly presented.

The plain reason why it is difficult to secure uniformity in trade matters in the different parts of the Empire is that there are everywhere different views and interests. The present system secures full opportunity for discussion, as may be seen from the published accounts of the steps taken by the Imperial Secretariat since the last Conference. The suggestion that the "driving-power" of the Colonial Office should be increased in some way obviously invites criticism. These matters must be dealt with by the Colonial Governments, and no Colonial representation on any body here will ever induce them to waive their rights or delegate their functions. This is abundantly seen from the position which the Dominion representatives in this country habitually take, and from the proceedings of the last Conference.

The subject of a State trans-Atlantic cable comes a good deal to the front in the evidence taken by the Dominion Royal Commission, but we do not find that any definite estimates were offered of the financial results. We have pointed out before that the business of the Pacific cable is not enough to support a trans-Atlantic line. At present all the Atlantic companies are interested in getting business for the Pacific line, and all their numerous offices, as well as the Post Offices, act as collecting stations for it. Mr. C. Bright gave evidence that if there were an Imperial Atlantic cable it would be a great advantage to the Pacific Cable Board, as at present they have not and cannot have a collecting office anywhere in the United Kingdom. He understood that the Board's agreements with the Atlantic companies prevent such an office. This is a misunderstanding; there are no agreements to such an effect, and the Board is perfectly at liberty to set up a collecting office anywhere. Nor is there any reason to suppose that the Atlantic companies would resent such a course. The Board has been so far satisfied to rely on the machinery supplied by the Atlantic companies and the Government. This may be right or wrong, but certainly the Board is free in the matter, and we do not follow the argument that the absence of a collecting office of its own is "one of the great defects" requiring a State Atlantic cable. If such a cable is established, the Board would certainly have to provide its own collecting stations, as it would enter the field as a rival to the companies and would lose all the help which it now gets from them. Whether there is a case for an Imperial Atlantic cable is for the "high contracting parties" to decide, but it should be recognised that under the present system the Atlantic companies are interested in supporting the Pacific cable, and have made valuable concessions to it.

Many doubts have been expressed with regard to the Australian defence scheme, but it is clear from the figures that the youths are coming forward with remarkable willingness. In Queensland all the youths who are liable have joined, to the number of 2,124. In New South Wales the number of 6,361 was only 96 short of the highest possible, and similar results have been obtained in South Australia and Tasmania. In Western Australia there was only one defaulter. The poorest result was in Victoria where the senior cadets, numbering 5,186, were 209 short. The material is often rough and unappreciative of discipline, but this was to be expected, and the course of training will make a vast difference as the lads realise the meaning and importance of what they are taught. There is unquestionably a growing feeling in Australia that, as the country grows in prosperity

and wealth, it becomes more and more necessary to provide for its defence. In New Zealand the policy of the Defence Amendment Act, 1912, seems to have commanded general approval. It is necessary, if the obligation to undergo training is set up, to provide penalties for disobedience, but politicians do not like to provide for imprisonment of the ordinary kind in such a case, and the original act did not prescribe imprisonment in so many words although the procedure laid down would lead up to it. The amending act invents the penalty of military custody, which allows the defaulter to carry on his occupation but puts him through his training.

The Australian Royal Commission on food supplies is to have its proceedings cut short. The Minister of Justice had remarked that at the present rate of progress the Commission would finish in five or six years. The cabinet therefore issued an instruction to the chairman to conclude the enquiries by May 31st. It is no doubt exceedingly difficult to get at the facts in such matters, as industrial combinations do not by any means proclaim their arrangements from the housetops, especially in places where attempts to establish monopolies are indictable offences. The phenomenon from which a sagacious public infers the presence of a combine is a rise of price, but in law this is not proof. In the Coal Vend case, Mr. Justice Isaacs considered that the rise in price could only be attributed to an intention on the part of the defendants to use their combination to compel the public to pay an exorbitant price for coal, but on appeal this decision was upset. The burden of proof was on the Crown, and it could not be assumed in the absence of proof that the price was excessive. The higher court even held that nowadays cut-throat competition is not necessarily good for the public, and there is much modern legislation which seems to incorporate this view. However, in future cases of this kind the Crown in Australia would stand in a better position, as by an amending act the defendant, when an agreement of the kind specified has been proved, will have the onus of establishing that there was no unlawful intent and no detriment to the public. But it will still be necessary for the Crown to prove the existence of the agreement and in future it may be expected that companies which act on an understanding will not parade any written documents. There is in fact, as a rule, no need for anything in writing, as it is to the interest of each party to abide by the understanding so long as the others do.

The breaking up of the European bounties on sugar by the Brussels Convention has been discussed from many points of view, but we think that the effect on Australia has hardly been noticed

here. It enabled the Government to reduce the duty. The Commonwealth Government in 1901 considered that German beet sugars could be landed in Australia at some £10 per ton below the prices at which home grown sugars were selling in Australia. The import duty on beet sugars was therefore put at £10 per ton. This meant that at that time the consumer in Australia was required to pay £10 per ton more for his sugar than he would have paid had those German beet sugars been admitted free. But the consumer in Australia was prepared to pay the large additional price to keep alive the Australian sugar producers. It was a protection of some 80 per cent. given to the home grower.

The present active import duty is £6 per ton, and it was by this amount that the Commonwealth Government provided that the price of Australian grown sugars should be kept up for the protection of the home producer, and which extra price the home consumers have at this time to pay for their sugar. The duty of £6 per ton means, approximately, two thirds of a penny per pound. At an average consumption of 100 lbs. per head, the extra cost of sugar to the consumer is 5s. 6d. per person, or some £1 8s. per family of five members per year. In the aggregate, it amounts to some £1,200,000 per year for the Commonwealth. This amount is to be accepted as the extra price that the consumers of Australia are required to pay for their sugars under the import duty, unless it can be shown that that extra price is lessened by some other incidence.

There is a bounty of £3 per ton on sugar grown in Australia by white labour, and an excise of £4 on that grown by black labour. This leaves a protection of £2 on the latter, which is something of an anomaly, considering the sacrifice made by the country to make sugar a white industry. It is curious that, while the bounty has reduced the sugar grown in Queensland by black labour to 10 per cent., it has had no effect in New South Wales, where the proportion of labour remained the same as before the legislation. It seems clear that the bounty is necessary if the white production is to be kept up. One reason put forward for maintaining if not increasing it, is that abuses used to occur in the treatment of Kanaka labourers. This used to be suspected at the time, but there was always a difficulty in getting the facts. A recent report published by the Commonwealth remarks as follows:—

“Many, and honorable producers, will employ the alien for cheapness. Others, in addition to the reason of cheapness, will take the alien because they do not like the white man; and because they can more easily control the alien and deprive him of those considerations which the white man calls his ‘rights,’ but which the alien may lose for the want of a facile recourse to the law of the land. The

examples of violation of the provisions of the Queensland Pacific Islanders Act, which provided that the Kanaka should not be employed 'except in tropical or semi-tropical agriculture'—all these indicate the haste with which the cheaper alien would be used to supplant the white man, and not only in agriculture, but in other branches of occupation, in which during the past eight years the white man has had no competitor. Fair-minded and honorable employers would strive to engage labour at the lowest cost, but they would treat the labour reasonably, as they did prior to Federal legislation. Some others, we are warranted in believing, would also do as they did before. They would secure the alien at the very lowest rate, and, in addition to giving him less compensation than his due, the alien would most probably have to submit to treatment such as is on record as prevailing, at given places, before Federal legislation came into operation."

The Australian Royal Commission, which has recently reported, recommends that a customs duty should be substituted for the above-mentioned duty and bounty. This Commission was appointed largely in consequence of complaints of the influence of the Colonial Sugar Refining Company, which has large interests in Australia and also in Fiji. As to this matter, the Commission finds that the dominant position of the company enables it to control the price paid to the grower, and to exclude effective competition, and recommends that the price to be paid to the grower should be fixed on a sliding scale following the price of refined sugar. The creation of a monopoly is no unusual result when outside competition is shut out, and popular discontent at the results is inevitable. The remedy favoured by the Labour Leaders is the nationalization of the industry, but the Commission declares against this as regards sugar.

The terms on which Crown lands may be alienated have been much under discussion lately and it is interesting to see how the problem is being dealt with in the Northern Territory of Australia. It is necessary in the first instance to make some distinctions in respect of the quality of the land, and in the new scheme the primary division is, as usual in Australia, into pastoral and agricultural, and a third class is for mixed farming and grazing. Pastoral land is sub-divided into three classes, and can be taken up in large areas, viz., 300 square miles for the best, 600 for the medium, and 1,500 for the third class. In agricultural land the maximum of the first class is 1,280 acres and of the second 2,500. In the mixed class the limit for the best land is 12,800 acres, and for the second class

38,400. These appear to be liberal figures and for first class land represent larger concessions than were allowed in the original scheme ; but of course the vast extent of the territory invites liberality in this respect. It is, however, to be remarked that leases in perpetuity are abolished, and lands of the first class are held for 21 years, and others for 42 years. The Government is thus securing the "unearned increment," which is fairly certain in time to be a substantial asset, and the periods are shorter than those fixed in East Africa.

Comparatively young colonies are expected to show a greater number of men than of women, an excess the other way being a sign that the rough pioneering is accomplished and that the population has settled down to civilised habits. This stage has now been reached in parts of Australia, where in Victoria, South Australia and Tasmania there is a majority of women. Western Australia lags behind in this respect, there being two single men there to every single woman, and here the marriage rate is lowest ; it is highest in South Australia, where there are nearly two more marriageable women than men in each 100 of the population. Mining is responsible for the disproportionate number of men in Western Australia, but when any special immigration for such purposes ceases the usual result soon asserts itself.

The South African Land Settlement Act of 1912 will probably have a great influence on the development of the country. Under it the Minister of Land can acquire land, to help "closer settlement," by purchase or exchange, and in particular he is empowered to do so at the request of any applicant who is prepared to contribute at least one-fifth of the purchase price. Where no such contribution is made, the applicant must be qualified to utilize the land and must work it beneficially ; during the first year no rent is required, for the second and third, 2 per cent., and for the fourth and fifth, $3\frac{1}{2}$ per cent. of the purchase price. He has the right of purchase during the five years. If not less than ten years have expired from the date of the commencement of the lease, and all instalments and other moneys due to the Government have been paid, the colonist is entitled to obtain a Crown grant. A Crown grant is the same as freehold, with the exception that the Government reserves the mineral rights and certain minor matters relative to servitudes, roads, outspans, and the payment of taxes. A settler may at any time pay in sums of over £100 to the credit account of the purchase price of his holding. But if, on the other hand, he does not wish to secure a Crown grant on the completion of his ten years, he can continue half-yearly payments at

4 per cent. for twenty years, which, added to his first five years' lease, will enable him to obtain full title to his farm after a period of twenty-five years. Holdings may be offered for allotments to applicants overseas through the High Commissioner in London.

The difficulty will be to find the land. It has been pointed out in South Africa that 95 per cent. of the land in Australia is Crown land, while in South Africa it is practically all private property and that, therefore, expropriation will be necessary. In practice, however, this point has already been reached in Australia and New Zealand. It is not a question of having land somewhere but of having land in convenient positions. If expropriation is necessary in Australia it is certainly necessary in South Africa, where, as we have remarked before, the farms are usually of enormous size, and are not and cannot be properly developed by the owners. The difficulty, will, no doubt, be found to be smaller than would appear on a first view, and in the competition for settlers it is necessary to make the attempt. The Government proposes to apply £750,000 this year for the purpose, and it will be money well spent.

There is no reason why, if land is made available in this way for closer settlement, a great pastoral industry should not spring up in South Africa. The recent achievements of Australia are conspicuous. But there a cow can be bought for £8, which would cost £30 in South Africa. There is more than one cause for the difference, but the principal is that Australia is healthy for cattle, and South Africa, at any rate till recently, has not been. In Natal the farms were swept by the tick, till the farmers took a lesson from Australia and adopted the dipping process. Eventually South Africa will become the greatest cattle country in the British Empire, and this will be due to arsenite of soda.

Another industry in which Natal could do exceedingly well is tea. The Natal tea is said to be the healthiest in the world, as it contains the least tannin. But at present the industry is stationary. For tea picking the Asiatic is so far indispensable: his particular temperament, to say nothing of his long training, fits him admirably for the work, and the Zulu is a poor substitute. The result is that the Natal planter turns to sugar. There are now some 65,000 acres under sugar cane, and a production in value of about £1,500,000 a year. Sugar in this climate takes two years to mature, but the small holder does very well with it. Some day tea may be put on the same level, if someone will invent a tea-picking machine. It is

reported from America that after an expenditure of a quarter-of-a-million dollars the E. Clements Horst Company have invented a successful hop-picking machine, and if this could be done for tea an enormous benefit would be given to the British Empire.

The progress of the South African freights arrangements is a matter of interest to all countries to which shipping facilities are important. The campaign of the Union Government was really against the combination of Steamship Companies, and the Post Office Act was successful in bringing about the discontinuance of rebates. The combination however has not been broken up; in fact it appears to be stronger than before, for it is reported that an understanding has been arrived at which embraces every British and German shipping line engaged in the South and East African trade. This understanding, as usual in such matters, is apparently founded on a partition of spheres of influence: the British lines securing the British cargo for South Africa, the German the Continental cargo for East Africa. This makes for high rates. The British lines in place of the rebates are relying on a form of agreement, which it was originally intended all shippers would have to sign. But the question has been raised in South Africa whether such a proceeding on the part of the Union Castle Company would not be in contravention of the mail contract, which provides that the Company shall not offer to any person any rebate or discount on conditions that such persons shall ship goods by the ships of particular lines to the exclusion of others. It is probable however that the Companies will avoid coming to close quarters with this issue by not penalizing the shippers who do not sign the agreement. They remain masters of the situation so long as they hold together. It is noteworthy that the arrangement depends simply on an understanding. There is no binding agreement which could be seized upon by any one as proving an intention to establish a monopoly. Whether the understanding will be effective as a means of keeping up the rates depends on the question whether there will be any substantial competitors from outside. The withdrawal of rebates and penalties makes the freight market theoretically open, but this may only be so on the surface. It is open to any outside company to come into the business and cut rates, but no company will take lower rates than it can help, and if a successful attempt is made to secure freight by offering lower terms, the end is that the new company is taken into the combine. This happened in the case of the Houston Line, which set up a competition with the Conference Lines and which accordingly the South African Governments were anxious to encourage, and the result was that the Conference

Lines became stronger than ever. In effect this is what is happening to steamship business all over the world.

There is no direct communication between this country and the Bahamas, so naturally the United States secure most of the trade. The United Kingdom makes a very fair show under the circumstances, but Canada is a very poor third, the exports to the Dominion being only, in 1911, £29,349, as against £98,975 to the United States. The Canadian trade, however, showed a substantial increase over that of the previous year, and in a colony which has been the first to suggest political incorporation with the Dominion it may reasonably be expected that the increase will continue. Probably development would be easier if the staple articles were better prepared for the market. When colonial products are of uncertain quality they tend to fall into the hands of a few brokers and prices suffer accordingly. The market is naturally firmer when the quality is known to be good and fairly uniform, and this is the reason why government inspection and grading are being more and more adopted. Sisal is the mainstay of the colony, though sponges reach a higher value, but much improvement will have to be effected before a firm market can be secured. This is what the Commissioner of Long Island says about it:—

“Sisal, after all, is the most important plant. It is cultivated more extensively than any or all of the above named, and gives better and surer results. It suffers less from drought or neglect and can be reaped at will.

“Yet the most thriftless and wasteful cannot cut, clean, sell, and squander away his entire crop in a day. The people of this district have realised its value and are daily extending their cultivations. The fibre is pronounced good and obtains a ready sale at a fairly good price sometimes. Yet nothing is being done to foster the industry or enhance its value. It rather seems as though all concerned have made up to do all in their power to depreciate its value. They cut the leaf before it is ripe, allow it to lie in the sun for days until the fibre is discoloured, they soak it in all sorts of dirty pools, they only half clean it, then when half dried they bundle it together and present to the buyer who packs and exports it to foreign markets. They contrive to get rid of it, and so things go on. The properly matured and cleaned fibre presents an altogether different appearance and would certainly attract attention and tend to an advance of price.

“I persuaded the people here into exercising more care and attention on this industry in the hope that their efforts would receive encouragement from the buyers, who, I hoped, would see what could

“be done and would be done if a difference was made in the price of good and bad stuff. Numbers united and resolved to put none but carefully-prepared fibre on the market and for a few months it gave one pleasure to see them vieing with each other in the handling of the leaf from the tree to the buyer’s counter. Two or three cargoes resembling very nearly the machine-cleaned stuff were sent to Nassau and sold but no difference was made in prices. Outsiders jeered saying that they got just as much for the ordinary rubbish as was paid for what so much care was bestowed upon. Results—the good work discontinued, the old methods returned to, and hand-cleaned sisal is daily becoming worse. The public ought not to be allowed to ruin so valuable an industry. The Government ought to put on restrictions ere it becomes too late. There is no other way of saving the industry and we cannot afford to lose it.”

The export of the fresh fruit has almost entirely ceased, although a prominent buyer is now trying the experiment of shipping a cargo to the United States. The importation of new stock, a chemical analysis of the soil, and expert advice as to suitable fertilizers are urgently needed, and it is hoped the Legislature will take this matter seriously in hand next session, especially as there is now no Board of Agriculture in the Colony.

In Jamaica some districts suffered severely from drought in the autumn, and the people experienced great hardships; indeed it was reported that some cases had occurred of death by starvation, an extraordinary occurrence in such a climate, and, though the report was officially contradicted, there were admittedly some deaths from under-feeding, and the question of relief required immediate attention. Another misfortune was a five days’ hurricane, accompanied by a tidal wave, which swept the entire western end of the island—the severest visitation of the kind since 1744. But Jamaica has a wonderful power of recovery from these troubles.

The West African Currency Board, which has recently been constituted in London, has adopted a design for the new silver coinage and will take steps to have a supply minted, but there is no great demand on the West Coast for silver till October. One object of the scheme is to obtain the profit which is now made in respect of the difference between the bullion and face value of silver coin. During the last 26 years West Africa has absorbed over $6\frac{1}{2}$ million pounds (face value), and it is clearly to the advantage of the colonies that the profit on this large and constant supply should go to them instead of to the Treasury. No doubt an alteration of currency is a

delicate matter, and some misgivings have not unnaturally been expressed in commercial quarters. But it will not be in any way difficult to ensure that the coinage shall be in as good a position as regards convertibility as at present. This will be done by the establishment of one centre in each colony which shall be bound to issue drafts on London in exchange for silver, whether it is West African or United Kingdom coins, which is paid in at that centre, and by the maintenance of an adequate reserve in London. The profits on the minting will be devoted to that reserve until it is large enough to cover any demands. It is expected that the new coins will readily be accepted by the natives in most districts. In the slack season a considerable amount of silver comes in to the Bank of British West Africa, and on such occasions the Bank will take the opportunity to repatriate United Kingdom coin to the extent that the Royal Mint is willing to accept it at face value. The result will be gradually to establish the new currency. For the convenience of travellers who have some of the local coins in their possession on arrival in this country, arrangements will be made for the exchange of such coins at London and Liverpool.

In Northern Nigeria it is the dry season that is inconvenient to the tin industry. In many cases the work has to be suspended for lack of water. The lack of timber in the country adds to the difficulty. The original difficulty, that of transport, has been greatly reduced by the Bauchi light railway and the improvement of the roads, and the journey from this country to Naraguta, which used to take up nearly forty days, can now be done in twenty-one. The natives move to the mines when the rains are over, and return home when they begin again, a movement which is not altogether convenient for the mines. So far the Hausas have fallen in most readily with the ways of the white man, but the pagan tribes, which constitute the largest part of the population of the Bauchi plateau, are beginning to imitate them, though it will take a long time to overcome the shyness which is a result of their ancestral habits. They are a strong and patient race, and if handled judiciously will eventually become a very useful asset for the industry. The output from alluvial increases steadily, and last year amounted to over 3,000 tons, about twice as much as in 1911. There is now good reason to suppose that the fields have been only very partially prospected, and with the improvement of transport, better methods will be introduced. The prospects for the price of tin are good, though there has been a set-back lately. It depends largely on the constantly growing demand for petrol tins. No other material is suitable for this

purpose, and one company which is putting up works in Wales has begun by ordering one million tins.

Extensive improvements are contemplated in Sierra Leone, the most important being an Export Wharf, which would cost quite £250,000, and sanitation works at Freetown, estimated at £170,000. Extensions of the railway in various directions are also proposed. These works would be spread over several years, and the increasing revenue of the colony appears to make it possible that they could be carried through with the annual surplus funds.

French Equatorial Africa, often rather misleadingly called the French Congo, has made great strides in the last three years, and is now looking forward to a loan which will enable it to make fuller use of its resources. The economical history of the possession is instructive. The first period of its existence, from 1885 to 1899, was one of inactivity, the "scramble for Africa" being followed, as soon as the exciting international questions were over, by prolonged indifference. Then began the practice of making vast grants of territory to companies, an easy policy when the Government wishes to avoid the usual obligations, and in a short time two-thirds of the possession were conceded in this way. One reason for this step was the coming of foreign enterprise, to check which it seemed necessary to create definite rights for French subjects. No doubt the companies brought in capital which otherwise would not have been forthcoming and so started the commercial movement. But it was soon found that they stood in the way of the organisation of the country. The Government could not take in hand the improvement of the natives or prevent abuses. In 1910 a great effort was made to retrieve the situation. The result was to induce eleven companies to consent to a reduction of their leases to ten years from that date, and become simply commercial bodies. Moreover, a vast amount of land was surrendered, and more is to come after short intervals. Apparently the policy of the Government is to offer the companies inducements to compromise in the shape of better administration in their territories, and it is anticipated that the remaining companies will soon come into the arrangement. No doubt the authorities have managed the matter adroitly, as no compensation in money has been paid. The road is now clear for state railways and other developments, and an extensive programme has been prepared.

The Uganda annual report remarks that the opening of the Busoga Railway, the first railway in the Protectorate as now

constituted, marks a most important step in advance. The railway opens up the large and fertile cotton-growing areas of the Eastern Province around the borders of Lake Kioga, and the steamer service on this lake is being largely increased to meet the growing traffic. This service will be connected with Lake Albert by a motor road, and it will then be possible to go from Mombasa to Nimule or to the western border of the Congo by train, steamer, and motor without recourse to travel by "safari." It has been shown that Uganda can produce valuable crops, and the problem to be solved now is to provide for the transport of cotton, coffee, and other products at reasonable rates to the Uganda Railway system. The Imperial loan of £125,000 is to be spent entirely on the improvement of internal communication. A most important result of the extension of wagon, motor, and railway transport will be the release for more productive labour of the thousands of natives who are still employed in the wasteful and expensive system of human portage.

The growing interest shown in Uganda by planters has been a most marked feature of the year. The number of estates has rapidly increased and the demand for land exceeds the immediately available supply. The natural result has been an appreciable increase in the price of agricultural land. The natives realise the value of the land in their possession, and though they have not the capital or the knowledge to develop it at present, are by no means eager to part with it.

In East Africa the condition and stock of game in the two reserves are satisfactory—an important consideration to a country which relies much on the sportsman. In the Northern Reserve and the Northern Province generally there are large numbers of rhinoceroses and elephants, and now that the system of government purchase of old ivory has been stopped the prospect of the preservation of elephants are good.

During the past year landholders who own land in good game districts have adopted the custom of leasing the shooting over their farms to visiting sportsmen or have charged a certain sum for a particular animal. In this way a visitor is able to obtain a great deal of shooting and a fair variety of trophies at a very much lower figure than the £50 sportsman's licence. This money goes into the pocket of the landholders instead of into the Government revenue, and as thus a great inducement is held out to landholders to protect the game on their land, this custom is to be cordially welcomed as being greatly in the interest of game preservation.

The glories of East African sport have been put visually before the British public at an ancient house of entertainment now known

as the "Holborn Empire." Mr. Paul J. Rainey, an American sportsman, conceived the novel idea of penetrating into equatorial Africa to hunt that monarch of beasts, the lion, with a pack of hounds. While Mr. Rainey was anxious to accomplish this, he also had the hope that he might bring back to the people something new in the shape of knowledge of animal life, and with this object, carried with him elaborate moving picture apparatus. The safari was formed at Nairobi, and the expedition seems to have been completely successful. There can be no doubt that the kinemato-graph is the most effective way of describing a colony, and it will be used more and more for this purpose. The following extract from the programme will serve as an example of the scenes exhibited.

"VI.—THE LION HUNT.—Pet monkey playing around the camp—The hunting dogs allow him to pull their tails and climb all over them—He annoys Mr. Rainey and his friends while they are at dinner, and they chase him to the roof of the tent with a seltzer bottle—Masai Chiefs arrive with notice that lions are in the vicinity—Start of the lion hunt—The trailing dogs set out followed by the hunters on horseback—They locate the scent and start off at top speed—Exciting chase—Lion finally brought to bay by the dogs in a thicket—Battle between the dogs and lion—He is routed and runs to another thicket, where the dogs hold him—View of the lion."

A similar attraction will soon be found in a government office. By way of advertising Australia and its resources, it is proposed to incorporate in the Commonwealth Building a biograph theatre, in which the films screened will be exclusively those depicting Australian scenes.

In the Federated Malay States the opium farm system has been abolished and the sale of chandu (prepared opium) made a government monopoly. The facilities for smoking have been much curtailed and the consumption of the drug has fallen nearly 50 per cent. since 1908. Nevertheless the new arrangement has greatly benefited the Government revenues. This is due to a variety of causes, amongst others, the enormous increase in the Government selling price of chandu, the cheapness of raw opium, the increase of population, the high price of tin, and the profits made in the rubber boom of 1910. In 1911 the revenue derived from opium was \$6,841,235, or more than one-sixth of the total revenue. It is very satisfactory that so far the repression of the traffic has not injured, but, on the contrary, helped the revenue, but this source of profit will soon be largely reduced and probably eliminated altogether eventually. The higher standard of administrative morality has

also been exemplified by the decision to suppress gaming, the public revenue from which, in 1912, was expected to be the very respectable sum of \$1,851,820.

It is one of the difficulties of a high class policy that it has to suppress those habits which form the most convenient object of taxation. The gamblers do not object to the tax, but it is very different with the more respectable exploiters. Thus the Government has been severely assailed for imposing "heavy taxation on a permanent agricultural industry," which is, of course, rubber. This complaint was made in particular by a company which is paying a modest return of 75 per cent. What happens is that the producers, after paying the Government exaction of £3 an acre, make a profit out of it of some £60.

In Mauritius the 1912 sugar crop has been somewhat disappointing, the output being, in consequence of wet weather, substantially less than in 1911. A more ominous matter for the future is the enormous production of beet sugar in Europe, which, excluding Russia, exceeded six million tons—nearly double that of 1911, and the great drop in price, following from this, from 15s. per cwt. to 9s. 6d. The price of beet sugar, however, affects Mauritius less than many other places, as she has convenient markets in India and South Africa, the new crop promises well, and the price has hardened. The colony has, unfortunately, lost one of its most useful and popular men by the death of Mr. Maurice Ulcoq.

Malta has a greater density of population than any other country in the world, and as its industries are small and the depôt and coal trade are diminishing, there is a considerable emigration. This is aided by two private organisations, subsidised by the rich Maltese. Most of the emigrants go to North Africa; there are 15,000 in Algeria, 12,000 in Tunis, and 7,000 in Egypt. In Algeria they have contributed greatly to the commercial development, and some have distinguished themselves in the service of public functions. France has every reason to congratulate herself on these accessions, and it seems regrettable that British colonies have taken so little trouble to obtain labour from this source. Some Maltese have gone to Western Australia and have created a favourable impression there.

The moral of the Tanjong Pagar case is that the authority which invites tenders for the execution of a work must be careful not to make any statements for the guidance of the contractor which are not known to be absolutely correct. It is the ordinary course for the

authority to state what it knows about the circumstances, with the proviso to the effect that the contractor must not accept the statement, but must ascertain everything for himself. There is no intent to deceive and no suppression of facts in such a proceeding; the authority honestly sets out what it believes to be the case, and warns the contractor that he should form his own unbiassed opinion. But in practice it is often the case that the tenderer neither does nor can do this. He cannot possibly form an opinion without going to the expense of himself making separate investigations, an operation which would cost a good deal of money. In such circumstances the contractor is generally content to rely on the information received, and to run the risk of any inaccuracies, and it is generally thought that the contractor can only recover damages for any misrepresentation if such misrepresentation is fraudulent. Some doubt has been cast upon this view by the arguments put forward in this case, where it was suggested that if the contractor could prove that he was in fact deceived, however innocently, he could claim damages for any loss incurred. Whether this suggestion has any foundation in law still remains to be definitely decided, as no judgment was delivered in the Tanjong Pagar case, but in view of the doubt it may now be a better policy in similar cases to entrust a firm of contractors with the work of making the preliminary tests and to give that firm the order if the work is decided upon and the price tendered seems reasonable. This prevents any misunderstanding, and in such engineering matters little if anything is lost by selecting an approved firm instead of inviting competition.

It sometimes happens that a Colonial Government would be willing to assist in the education of the sons of officers who have done good service but have been unable to leave their families in possession of sufficient means of providing a first-rate education. A difficulty of this kind has brought about a rather peculiar arrangement with Christ's Hospital, under which the sum of £500 has been paid by the Government of the Straits Settlements and the F.M.S. to secure the means of presenting boys properly qualified for admission to the school. The money has to be paid in the name of some person who becomes a Governor; and the Secretary of State has nominated a member of the Colonial Office for this purpose, who will be officially insured for £500, so that in the event of his death another Governor could be recommended for election.

The school is in a healthy position and gives an excellent training, and it is to be hoped that the example set by this case will be followed by others.

The Marine Insurance Fund administered by the Crown agents on behalf of certain governments continues to make steady progress, and the past year, which was a disastrous one to underwriters generally, has shown satisfactory results. Prominent features of the business transacted have been the prompt settlement of small and irritating claims which in the past have been the source of much correspondence, and the payment, as an act of grace, of a large number of claims which contained no evidence to show that the loss or damage was caused by a peril insured against—claims which most insurance companies would decline to meet. The liabilities under this latter head have amounted to as much as £1,670 in two years. Rather heavy losses have been sustained by the breakage of cast iron pipes on the West Coast of Africa, but this has been counteracted by the absence of any claims of importance from the East, where the immunity from loss has been remarkable, having regard to the numerous severe gales encountered.

Altogether, the scheme has, so far, met with undoubted good fortune, and it is hoped that the time is not far distant when all governments participating will realize material benefits in the shape of reduced premiums, attended with full protection.

NOVA SCOTIA IN 1813.

At the beginning of 1813 Moscow was in flames, and the downfall of the terrible Bonaparte had begun. The French war at this period was brought home to Canada by the occasional arrival of a captured ship, but the great events were far away at the time when the news of a European battle took more than two months to reach the other side of the Atlantic. A much more important matter was the war with the United States, in that year at its height. The political and social conditions of this momentous period are vividly set out in a number of passages which are reproduced by the "Acadian Recorder" of Halifax, on the occasion of its centenary. The "Recorder" may well be congratulated on being able to carry back its records to such interesting material, and to a time when the population of Canada was only 375,000, and that of the United States 8,000,000, while Australasia had not yet received a single white settler. It is interesting to note that, though the whole civilized world was in a hurly-burly of war, the "Recorder" at the very commencement struck a bold and sanguine note. The editor affirmed that the British Empire never stood upon more extensive and firm foundations of solid greatness than at that most eventful period: "We cannot extend our views round the wide circle of her distant possessions without finding some animating prospect, or some circumstances to alleviate the evils necessarily resulting from a state of warfare." No doubt the strong martial spirit of the time had much to do with this feeling, but there were some very material considerations in its favour. Great Britain's naval successes had cleared the seas for Colonial produce; the Baltic had been opened, India secured, and the West Indian Islands strengthened for commerce. Naval operations meant active business for such ports as Halifax, and the agriculturists inland profited by the demand for supplies. Before the American war Nova Scotia depended largely on the New England States for flour and provisions, but the

interruption of intercourse was, as it proved, bad for New England and good for Canada, as it stimulated production, and in no long time the Maritime Provinces made themselves practically independent in this respect. In 1812 the sole exports from Nova Scotia were of timber and dried fish, for, as usual with young settlements, industry was confined to the most obvious products of the country, and the war contributed to enlarge the enterprise of the colonists. Then there were the profits from privateering and the sale of captured ships; on one day, the 9th of April, 1813, no less than 33 French or American vessels were sold at auction with their cargoes. The Maritime Provinces also entered fully into the spirit of the wars, and furnished many recruits for His Majesty's ships; four or five of these rose to be Admirals. That their help was officially appreciated is shown by the spirited invitations addressed to them, which indeed might be commended to the present Admiralty for imitation if needs be. We quote specimens of this rollicking century-old style.

"NOW OR NEVER."

"All able-bodied seamen and sturdy landmen, willing to serve His Majesty and enrich themselves, are invited forthwith to enter His Majesty's ship *Tartarus*, Captain John Pascoe, fitting with all expedition to take more American Indiamen. She will be ready for sea in a few days. Those fond of pumping and hard work need not apply. The *Tartarus* is as light as a bottle; sails like a witch, scuds like a mudian, and lays too like a gannet, has one deck to sleep under, and another to dine on. Dry hammocks, regular meals, and plenty of grog, the main brace always spliced when it rains or blows hard. A few months more cruising, just to enable her brave crew to make yankee dollars enough to enable them to marry their sweethearts, buy farms, and live snug during the peace that is now close aboard of us."

"His Majesty's and Provincial Bounties.

"Able seamen	£10	5	0	sterling
"Ordinary	2	10	0	
"Landmen.	1	10	0	

"God save the King."

"Halifax, Feb. 16, 1813."

"ALL TIGHT LADS.

"who are willing to serve His Majesty in that fast-sailing, excellent sea-boat, the *Canso*, of 12 guns, commanded by Lieut. Croke, now fitting out for a short cruise, to protect the trade of the British Provinces and pick up a few straggling American Bordeaux men, will meet with an honest, hearty welcome from a sailor's friend, by applying on board that vessel at the naval yard.'

"WHAT SHOULD SAILORS DO ON SHORE."

"While King, Country and Fortune point to the ocean! His Majesty's schooner *Pictou*, of 12 guns, commanded by Lieut. Stephens, as fine a vessel of her size as ever floated on salt water, wants a few jolly spirited fellows to complete her complement for a short cruise, who may all fairly expect to dash in coaches on their return, as well as other folk! Apply on board at the naval yard. May 21, 1813."

Truly Halifax was in the movement, as it would probably be again in the case of a great war. The "*Recorder*" sums up the state of things thus:—"Merchantmen and transports, convoyed by frigates, appeared in the harbor and disappeared. The stir and movement in our waters was incessant and this accompanied by the firing of salutes or gun practice, kept the little world of Halifax constantly on the *qui vive*. The population, gathered in from the four corners of the earth, was largely cosmopolitan. The prisoners of war, the crews of captured vessels, sailors, marines, soldiers, fishermen, traders, officials—all on the move, made the Grand Parade, Water and Hollis Streets lively, and filled the taverns and drinking places. Such an increase of population trebled the rents and doubled the price of provisions. British gold was never more abundant. War hath her victories no less renowned than peace, for out of the tempers and confusion of war more than one Haligonian emerged with a comfortable fortune."

A great number of prisoners were taken, both French and American, and many of these were allowed to hire themselves out to farmers and other employers, and settled down. All this increase of activity told heavily when the war was ended. Canadian trade with the United States was practically stopped in the years 1812, 1813 and 1814, but in 1815 it was seven times as much as it had been in 1811.

For all this public feeling was very bitter against the United States. Bonaparte was looked upon with reprobation but still as a sort of exotic phenomenon, while the people of the United States were kith and kin, and the hardest language was reserved for them. An editorial of the "*Recorder*" in 1813 no doubt represents the popular view. "It will not be soon forgotten that in the year 1812 America enlisted under the banner of the second Attila, and declared war against her kindred and friends. Some excuse might be found for the nations in Europe who have submitted to the Usurper's power; from the influence of example immediately before them, from various local interests connecting them with their prostrate neighbours, and indeed, some from their inability to escape the pangs of

the oppressors; but America, separated by a wide ocean from a people totally different from her own in manners, customs, habits and language; America, whose government professes to be in its nature as widely opposed to France as vice is to virtue; with no local or natural attachments, or congeniality of any kind whatever; for America to join such a nation, governed by such a man as Bonaparte and take a part in his vile schemes of fraud and violence, to assist in oppressing those whom he oppresses, and at last to lift her puny arms against the unconquered and unconquerable champion of the civilised world. How can such egregious folly and wickedness be possibly accounted for, but from motives the most dishonorable in the persons entrusted with its government, and the most pitiable blindness in the people who trust them."

The American war, however, was conducted, as James Munroe, the United States Secretary of State, stated it was the desire of his country that it should be, "with the utmost regard to humanity." There was a good deal of the sporting spirit in it, and both sides scored successes over which a great amount of jubilation was displayed. There was not much else than war news to interest the worthy citizens of Nova Scotia at this period, for they stood aloof from the racial troubles which distracted Canada and proceeded gradually on their way to self-government without any turmoil.

News from abroad usually came by men-of-war, and in those days must have been exciting notwithstanding the fact that it was some ten weeks old. When a European paper arrived, which was a rare event, it was usually taken to the principal Coffee House and read out there. The burden of the European stories was Bonaparte, but the war with the United States supplied more absorbing material, and at the beginning of 1813 Canada was rejoicing over the surrender of General Hall's army to General Brock at Detroit; as to which the British general proudly explained in his despatch how 2,500 troops had surrendered to him, when he had not more than 700, including militia, and about 600 Indians. The proprietor of the "Recorder" showed from the first the enterprise characteristic of his class, and caused, in fact, some resentment by rowing out to meet the ships and intercept the news.

The social customs were much the same as at home, accentuated by the strong emotions of an exciting period. The leading feature was strong drink. "'Rum' was spelled in large letters as an esteemed article of commerce and consumption. The junk or case bottle was on almost every table. Spirits were served out regularly to the army and navy. There were no Temperance Societies. When the people jubilated, strong drink entered largely into their

enthusiasm ; when the orators of the day made speeches, they did so with the moral support of 'good old Jamaica' ; toasts were drunk publicly, almost at street corners, by the greatest in the land, and the 'ardent' was brought out at a family social gathering as a basket of apples would be now. Old inhabitants tell of the punch-bowl being passed around at church-choir practices. It was no disgrace to be drunk ; some of the historical anecdotes of the great statesmen of less than one hundred years ago are prefaced with the intimation of their having been 'as full as a tick' on the occasions. There was, too, a great deal of company kept, all over the peninsula ; and the public dinners of that day would be considered 'terrors' in the present generation. They lasted frequently for ten or twelve hours, and, as a speaker at a later banquet remarked, it was customary to send a boy around to unloosen the neckcloths of those who reclined under the table as a result of too deep potations." In such matters, as in many others, the young country faithfully copied the old. The colonists were, in a sense, fortunate in having the West Indies close at hand. At one time 80,000 gallons of West Indian rum were produced yearly by the Halifax distilleries. No doubt the habit of drinking was largely a concomitant of warfare ; the disbursements to soldiers and sailors were heavy, and the money was spent in the liquor shops. When Wolfe was in Halifax, drilling his men for the last attack on Louisbourg, he complained in his despatches of the inefficiency of the service owing to the almost universal drunkenness of the men and officers. However, at the beginning of the nineteenth century the consumption of alcohol was diminishing, and a change for the better had set in. It was quite time. Since the battle of Trafalgar in 1805 there had been many stains on our naval reputation. Much was done to restore the old pride when in 1813 the *Shannon* brought the *Chesapeake* into Halifax. The fight had lasted only thirteen minutes, but it had been truly terrific : in those minutes 252 men were killed or wounded.

Considerable attention, on the other hand, was given to education. A public school had been established in Halifax with the help of a curious expedient, to wit, a public lottery with 5,000 tickets at £1 each, of which the very reasonable sum of £750 only was to be taken for the building. In 1813 there came into operation the Common School Act of 1811, under which free instruction was given in elementary schools, and grammar schools were founded for higher work.

Religious education was undenominational, the Bible being read but without note or comment. The higher education was provided

by King's College at Windsor, which received a provincial grant of £444 a year and £1,000 from the Imperial Government, but only four or five students joined in a year. Certainly education, toleration and civil order were honoured, and the annals of Salem, N.E., were held up as a "melancholy illustration of a singular anomaly, that of persons flying from persecution becoming the most bitter persecutors themselves." No such feeling showed itself in Nova Scotia, and there was in these early days a respect for law and a security of life and property which have remained characteristic of the country to the present day. To maintain religious habits there was a statute providing that "a person absenting himself from public worship for the space of three months, without proper cause, if the head of a family, shall pay a fine of five shillings," and children were also liable to be fined for the like offence. A warden and constable walked through the town to enforce this rule, as is still done in the ancient universities of this country. It is not clear whether the obligation extended to members of all denominations, but it would not have been of much use otherwise, as Nova Scotia rejoiced in an extraordinary rich collection of religious persuasions. This fact, no doubt, contributed to toleration, not so much because the churches approved of the principle as because, under the circumstances, it was the only *modus vivendi*. The only body in those days in America which stood for religious freedom and separation of Church and State was the Baptists, the first of whom in the Maritime Provinces were Germans. Perhaps the advocacy of these principles has had much to do with the steady progress of this body in the New World. In the United States there are now 6,000,000 members, while in Europe the whole congregation is about one-tenth of this number.

Notwithstanding the wars the Nova Scotians kept up an active social life and maintained the customs of the mother country. In the height of the military excitement the convenances were observed. The following advertisement from a February, 1813, number of the "Recorder" may be quoted as an example of the persistency of human nature in such matters: "In the spring I expect to be replenished with a larger variety of useful merchandise; all warranted of the best British manufacture; and in addition to the description of goods already submitted to your inspection, I propose a brilliant little selection of early London spring fashions in millinery and dresses, ladies' slate coloured kid shoes, Jean and Nanking lacing boots, silk and cotton hose, straw bonnets, coloured worsted and white cotton fringes, cambric and other gloves, lace veils, sewing silks and cottons, elegant tortoiseshell and other hair combs,

a little of good perfumery, some pretty beads and necklaces, gentlemen's braces, gloves and sundry other articles of utility and fashion, all of which (if I am rendered so happy as to have them preserved from the enemies and the dangers of the seas) I am determined on selling as reasonable as the heavy expenses of importation will possibly admit."

To-day the men of Boston and other cities of the United States invade the Province in thousands every year; but they are welcomed, for they come as tourists, to enjoy the beautiful forests and shining waters of a restful land.

THE POLICY OF EMIGRATION.

There are two conflicting points of view with regard to emigration from this or indeed any country. On the one side there is the consideration that the departure of a large number of workers represents an economic loss to the land which they leave. On the other, there is the benefit which these workers may gain by removing to another place where their opportunities are better. One may be said to be the national point of view, the other the individual, and whatever may be the details the distinction runs through all the controversies on the subject. Thus the official view in this country is on the whole that the emigration is sufficiently large and is in no need of further encouragement, while a great number of philanthropic bodies are constantly working hard to assist men, women and children to get away to countries where they will presumably have a better chance.

The main causes of migration in all ages are poverty and unemployment. In hard times it is a necessary remedy. Thus it was at a period of great distress that Parliament voted the sum of £50,000 to send 5,000 people to South Africa. These people could not be used at the time in this country, but what they were worth is shown by the fact that they turned a wilderness into a garden. But this was ninety-two years ago. During this period conditions have become more stable and emigration more easy. The outgoing tide is now, or will soon be, according to high authority, as large as is compatible with safety. Mr. Burns, in giving evidence before the Dominions Royal Commission, stated that the Mother-country cannot safely go beyond 300,000 emigrants a year, this figure representing 60 per cent. of the natural increase of population of the United Kingdom by births over deaths. In 1911, the emigration numbered 262,000, of whom 80 per cent. went to the Colonies. In 1912, the figures were much the same, but as the steamship accommodation

improves they will probably go up. It is argued therefore that as the emigration is so good it is sufficient to let well alone. On the whole the Labour Party takes this view. They consider that the man who leaves the country does so because he cannot stay, and that the proper remedy is to seek means for enabling him to stay. Thus Mr. Burns gives as one reason why further state aid should not be given to emigration, the vast indirect expenditure which this country incurs on health, sanitation and education, through which a million lives have been saved in the last ten years, of which number a very large proportion has gone to the Dominions and other countries. The County Councils appear on the whole to be of the same opinion. These authorities are empowered to borrow money for emigration purposes but apparently they have never done so, but consider that the emigration is sufficiently great as it is. The only direct help given officially is that represented by the working of the Unemployed Workmen's Act, 1905, under which about £200,000 has been spent from rates and government grants in the emigration of 21,000 persons. This is not a large sum for seven years, but none of the departments see any necessity for further expenditure. So far as emigration is assisted, the work must be largely one of selection, and for such work government offices cannot be said to be particularly well suited, while philanthropic bodies are. Thus the emigration of women and children has increased to an extraordinary extent and Mr. Burns observed that, having regard to the personal and distinct relationships which occur in connection with these classes, such emigration is better left to those private and voluntary organizations that are now doing this work so well. There are nearly 2,000 agents in the United Kingdom engaged in emigration business. They may make deceptive statements, but it is believed that such cases are not numerous compared with the bulk of emigration, and the Emigrants' Information Office is always ready to give advice.

On the other side there is a strong body of opinion that the emigration is even now not sufficient and should be stimulated by some additional means. Two considerations are at work here—a belief that in certain respects the country is overcrowded, and a desire to strengthen the Colonies with a British population. There can be no question that a man who emigrates generally finds a more interesting and profitable career, but the immediate point is whether it is for the good of this country that he should be tempted to go. It appears to be generally agreed that the agricultural districts are being sufficiently exploited, but the idea is entertained that there are large numbers of people who have been attracted to the towns and who are going more or less to the wall there, or at any rate

deteriorating physically. Thus in London the weekly excess of births over deaths is about 1,000 every week. It is argued that no multiplication of small holdings, or other agricultural development, can keep pace with such an increase. At present in the large industrial towns there is practically no surplus labour, and the tendency is to further expansion, but this argument does not appeal to those who give weight to the evils attaching to life in great towns. They do not want to keep a large reserve of labour in this country, however convenient it may prove on occasion, because this reserve is practically in the big towns, and represents men and women who will suffer sometimes from unemployment and at all times from overcrowding. That there is a strong belief among close observers that there is a large class for whose conditions emigration is the best remedy is shewn by the numbers of active workers who have formed themselves into societies to promote emigration. This consideration is helped by the argument that the process builds up the Empire with a British population. It is true that the Empire is not a unit commercially, and Great Britain could not be expected to regard with complacency a drain which would enrich the Colonies to her own loss. But it is not the best who go, and when emigrants prosper, as usually they do, there is an economic gain to the Empire of which the Mother-country gets a part. It is objected that whatever room would be created here in this way would be filled up by poor emigrants from abroad, and in this there is considerable force, but it may be replied that the new-comers are in due course converted into good British subjects and are available to strengthen the supplies for home and colonial demands.

Thus one view is that the State has now no inducement to subsidise emigration. The workers may better themselves by going, but that is their affair; the State does not benefit and may lose. The other is that there is a large surplus population, which should be helped to go in the interests of the general community. The problem turns on the question whether the alleged large surplus population is a fact. The question might readily be answered in the affirmative if the very poor and unfit were to be considered, but this class must be ruled out; the Colonies are not for them. Of skilled labour there is no substantial surplus. Between these two there is the able-bodied but unskilled class, which, from a variety of causes, including the rapid introduction of labour-saving machinery and defective training, shows a more or less constant surplus. This class is very suitable for the Colonies and would supply increased numbers of emigrants if State aid were given. Thus Australia gets as many emigrants as she wants. This is because the Governments pay part of the

expenses. This enables them to select the emigrants themselves, and they do not particularly want the societies or the services of any British office. The Agent-General for Western Australia put this very clearly as follows:—

“ My experience (perhaps I have been unfortunate in connection with private societies) is that they try to get away the sort of individual you do not want. They are mostly philanthropic institutions, and a man who is rather a nuisance to the neighbourhood they want to get out there. I am not strongly in favour of them. My experience has not been altogether satisfactory. It has been very limited. But the interests of the Government and the society are usually not in common ; and where you have to pay the piper and assist a man, you want the best article you can get. The imperative condition of the Government side of the work founded on the interests of the State is that only particular classes of emigrants can be assisted, whereas in the case of private societies it is largely a question of philanthropic interest, and the relief of persons who are in a more or less destitute condition, and whose experience of work in this country is not such as to fit them for the different and more arduous conditions of Australian life.

“ 2135. The next question is with reference to the suggestion for a central department in the United Kingdom. It has been suggested that a central department should be formed in the United Kingdom, to deal with all matters connected with migration from this country, now falling under the purview of the Home Office, Colonial Office, Board of Trade, Local Government Board, Emigrants' Information Office, etc. In view of your actual experience of the work of the various Government offices now concerned with migration, have you any views as to the establishment of such a department or any suggestions as to its work or functions?—You will understand I feel very strongly that the persons who are selecting and regulating the emigration should be people with absolute local knowledge. Consequently I do not know that it is going to be of any great advantage. That is how I feel about it. I think the responsible men dealing with the work should be thoroughly experienced with regard to local conditions, and it does not seem to me that any purely British office could deal with it as well as the Dominion.”

On the other hand Canada does not pay towards passages, and is very well satisfied with the societies ; this satisfaction, however, is largely due to the children's emigration, which is a big item in the case of Canada, and very well handled by philanthropic bodies. The demand therefore for State aid from this country is practically

limited to the case of Canada, but it would be embarrassing to subsidize emigration to that Dominion and not to other places. On the whole it may be said that as regards the general body of emigrants the movement is determined, not by what the Government does here, but by the attractions which the Colonies offer. These attractions are made use of by the Colonial Governments according to the policy of the time, sometimes freely, sometimes with reservations. Thus, in November last, the New South Wales Government decided to close down upon the importation of artisans as immigrants and to assist, in future, only the immigration of wives and children of nominators. This was because a much larger number of artisans had arrived than had been estimated as required to make up the shortage of skilled labour in certain trades. In consequence, the nominated passages fell from about 370 a week in March to 180 a week. A memorandum regarding the Government policy in regard to immigration issued by the Premier stated: "When the land policy of the Cabinet has become effectual and large additional areas thrown open for settlement, then the problem of obtaining settlers and other immigrants will be carefully reconsidered in the light of the new opportunities which the large opening up of Crown lands will provide." All this means that the Colonies are virtually buyers of labour, and it is for them to fix their terms from time to time, according to their requirements. If the terms are good they will get the labour, without any Government assistance here. If they are not good, it would be mischievous to try to stimulate emigration artificially.

It may, however, be urged that there are certain classes which may be treated specially. There are so many "blind-alley" occupations in this country, and such a high standard of skilled labour that the problem of what to do with the boys and girls becomes constantly more difficult. Financial help towards their emigration was forcibly advocated by Sir A. Spicer. Then the great surplus of unmarried women makes an increased emigration of this class desirable, and there may be added the case of old soldiers who in great numbers degenerate for want of industrial training to useless positions. There is no question that such people will be, in many cases, of little use here, either to themselves or to their country—in the Colonies they will be of great use. It is in this conversion of an ineffective into an effective worker that the State encouragement of emigration finds its chief justification. Such sections of society as the above are capable of improvement, and there is abundant evidence that they do improve when they get to Colonies where land is easily obtained. The object of nations should be not so much to maintain their numbers of inhabitants as to raise the standard of living, and the retention in a country of a large class

which is doomed to live, more or less, from hand to mouth in demoralising surroundings is likely to increase the difficulties of social reform.

It may further be urged that State organization and help are justifiable in order to direct emigration to the Colonies which would otherwise go to foreign countries. The tide is now beginning to set that way, and the Emigrants' Information Bureau may fairly receive credit for some of this movement, but still some forty out of every hundred emigrants from this country pass to foreign flags. This consideration was in past years practically neglected, as, indeed, was inevitable in times when the inducements held out by our Colonies were comparatively weak. Now the inducements are much stronger, and in addition, the Dominions have grown so much in power that their good feeling to the Mother-country is a vastly more important consideration. The men and women who emigrate to a Colony are the best instruments for keeping up this feeling; they are real bonds of empire.

REVIEWS AND NOTICES.

A United West Indies.—By The Hon. C. GIDEON MURRAY, Administrator of St. Vincent. (*The West Strand Publishing Co., Ltd.* 1s. net.)

THERE is general agreement that it is very desirable to secure as much uniformity and co-operation as possible amongst the West Indian islands, but differences arise as soon as it is suggested that some form of political federation would be the best means of furthering this purpose. The first essential condition of federation is the existence of a national feeling. This feeling was to be found in Australia and South Africa, and probably in both cases the principal influence in determining the policy was the desire to recognise and develop it. The mere fact that certain states have some material interests in common is not sufficient. These can be discussed in conferences *ad hoc*, and this is habitually done, not only between British Colonies, but between countries under different flags. It may be doubted whether the West Indians have a national feeling in this sense *qua* West Indians; there are on the contrary many indications that each large island has a strong local feeling in which the other members of the group are little considered. It is as well to remember as part explanation of this, that the distances between the islands are very considerable, and that the inter-colonial trade is trifling compared with that done with the outside world. Perhaps the second essential condition of federation is that there should be a personnel able and willing to carry on the political system, but in the West Indies such men are not numerous, and those who do take an active interest in administrative questions prefer those that are local. This difficulty is the same on a small scale as that which attends proposals for a representative Imperial Parliament.

Nevertheless, federation, if it could be effected, would have some valuable advantages, and such events as the Canadian Trade Agreement and the opening of the Panama Canal have given additional importance to the proposals. Mr. Murray's book is therefore welcome, as we trust that it will stimulate interest in the subject, and help to remove that indifference which he admits prevails on the part of any one island to the rest. It not only sets out the material facts clearly and succinctly, but presents the excellent features of a definite proposal embodied in a draft bill. In this it is proposed:—

(1) To appoint a Federal Council for the West Indies, on which there shall be an unofficial majority, mainly elected by and from the members of the various local legislatures.

(2) To appoint a High Commissioner for the West Indies, who would be *ex officio* President of the Federal Council, and who would be empowered to summon, in special circumstances, special sessions of the Council.

(3) To appoint a Secretary for West Indian affairs, and also a Legal Adviser, responsible to the High Commissioner.

(4) To hold sessions of the Federal Council once a year.

(5) That the Federal Council should have supreme powers of legislation in certain important matters of common interest, specifically delegated to it by the Federal Colonies, and also in subjects submitted by two or more of the federated Colonies, with respect to which the Legislatures of the several Colonies can legislate within their own limits. (The Council would, of course, in addition, have deliberative powers on any matters submitted by members for discussion in accordance with standing orders.)

(6) That the number of members for each Colony to be appointed on the Federal Council should be in proportion to population, to be revised automatically in accordance with and at each decennial official census, the quota being one member for every 50,000 population or part thereof, but no adhering Colony being represented by less than two members. On this basis there would, taking the 1911 official census, be for a commencement seven Representatives for Trinidad and Tobago, six for British Guiana, four for Barbados, three for Antiqua (one of whom should represent Montserrat), and two for each of the other federated Colonies.

(7) The Federal Council to have no powers whatsoever over taxation, including Customs and Excise, but in order to provide funds wherewith to carry out the objects of the Central Government, the adhering Colonies to surrender each year for that purpose such percentage of their Revenues as may be decided upon, not exceeding say three to four per cent.

(8) That provision should be made for the entrance into the Federation of any British West Indian Colony, not included in the original Act.

The subjects to be dealt with are as follows:—

- (a) Trade relationship between the Colonies, and between the Colonies and other countries.
- (b) Steamship communication between the Colonies, and between the Colonies and other countries.
- (c) Intercolonial and foreign mail, telegraph and telephone services.
- (d) Wireless telegraphy.
- (e) Quarantine.
- (f) Merchant shipping.
- (g) Defence.
- (h) Lighthouses, lightships, beacons and buoys.
- (i) Astronomical, meteorological, seismic, and other like observations.
- (j) Currency, coinage and legal tender.
- (k) Weights and measures.
- (l) Copyright.
- (m) Bankruptcy and insolvency.
- (n) Companies.
- (o) Negotiable instruments.
- (p) Patents of inventions, designs and trade marks.
- (q) Fisheries.
- (r) The service of civil process of the courts of any Colony out of the jurisdiction of the Colony in which it is issued and within any other Colony.
- (s) The service of civil process of the courts of law of any Colony beyond the limits of the Colony, and within any other Colony.
- (t) The enforcement of criminal process beyond the limits of the Colony in which it is issued within any other Colony, and the extradition of offenders.
- (u) Any matter which at the request of the Legislatures of the Colonies, His Majesty by Order in Council shall think fit to refer to the Council.
- (v) Such matters as may be referred to the Council by the Legislatures of any two or more Colonies with respect to which the Legislatures of the several Colonies can legislate within their own limits, and as to which it is deemed desirable that there should be a law of general application. Provided that in such cases the Acts of the Council shall

extend only to the Colonies by whose Legislatures the matter shall have been so referred to it, and such other Colonies as may afterwards adopt the same.

The Handbook of Cyprus.—By H. C. LUKACH and D. J. JARDINE.
(*E. Stanford.* 5s. net.)

This is a new edition of a handbook which appeared in several years, the last being 1909, but it is practically a new work, and the authors have gone much beyond the usual range of such productions. Cyprus has been burdened from the commencement of our administration with the payment of the "tribute" of £92,799, which, under the Convention of 1878, was made payable to Turkey. The island was taken over in a somewhat light-hearted way, and there was a spirit of optimism at the start which showed itself in a great number of reports setting out schemes of improvements. The cold fit soon ensued when it was found that the tribute practically beggared Cyprus, and the reports lay neglected on the shelves. It may be, as the authors say, and they have official warranty for the statement, that the amount to be paid to the Porte was fixed after careful scrutiny by the British Government, but no allowance was made for the fact that this sum represented all that could be extracted from the island, and that a much greater expenditure would have to be incurred to support such an administration as Great Britain, if only in self-respect, would have to set up. The result has been that in every year but three the Colonial Office has had to apply to the Treasury for a grant to make up the deficit, and this meant that for a long period nothing could be done that was not absolutely necessary. Nevertheless, a great improvement has been effected in every direction. The population in 1878 was 180,000, it is now 274,108. "In 1878 the imports and exports amounted in value respectively to £177,651 and £157,328, as compared with £635,427 and £702,803 in 1911—which represents an increase of 357 per cent. on imports, and 446 per cent. on exports. The fact that there is hardly a village in Cyprus which has not repaired, enlarged, or rebuilt its church or mosque indicates that the villager shares with the townsman this growth of prosperity. The standard of comfort has been greatly improved, as is demonstrated by the nature of the imports and the enhanced cost of living. Power and responsibility have been given to the people through popularly elected Municipal Councils and Mukhtars. In 1878 there was not a single printing-press in the island; now no fewer than 21 newspapers are published—an eloquent proof of material and educational advancement."

It is true that the liberty of the press and the increase of education have been accompanied by much railing against British rule. The population is mostly Greek, and Greece is very near. The authors observe: "In the early years of the occupation, the British administration was welcomed as the advent of a golden age of equity, prosperity, and security. Writing on June 19, 1884, the Commissioner of Larnaca reported that on his last tour through his District the answer of the villagers to the question 'Have you any complaints?' was invariably 'What complaints should we have? God save our Queen!' But the generation that remembers the old order of things is passing away. The old evils are forgotten. The Cypriot of to-day, educated and living under conditions where every man's rights, whatever his creed or nationality, are carefully guarded, where women are safe, and justice is administered without corruption or favour, remains, in many cases, wilfully blind to the progress of which he himself is the most conclusive proof." No doubt the evils of Turkish rule are almost forgotten, but it is only fair to concede that the Greek Cypriot compares British rule, not with Turkish, but with what he could hope to get from Greece, and in such a comparison national feeling plays a great part. The case of Cyprus is, however, very different from that of the Ionian Islands. We only "occupy" Cyprus and that conditionally, and there could be no cession to Greece without Turkey's consent. It is to be hoped, therefore, that the Greek Cypriot will soon make up his mind whether, to use the author's expression, "it shall be with or without his co-operation that further steps are taken to bring Cyprus into line with the more civilised countries of Europe." They add:—

"The future of this island should be a bright one, if only the Cypriot will whole-heartedly and energetically extend to the Administration the co-operation which is sorely needed and so constantly solicited. Financially, the country finds itself for the first time for many centuries on a secure and certain basis. The revenue tends to rise from year to year; and this increase is not due to additional taxation, but to the greater prosperity of the people themselves. The spade-work, undertaken so conscientiously and performed so well by the pioneers, is now receiving its due reward; and the Surplus Balance Appropriation Law of 1912, which provided for an extraordinary expenditure of £24,600 from a surplus of £55,242 19s. 1c.p. (excluding the sum of £90,000 permanently set aside as a reserve), in addition to an increased estimate for expenditure on ordinary services of £8,878, may be fairly regarded as an earnest of future financial stability and increased expenditure on works destined for the public good. But material prosperity is not the only, nor even the greatest, factor in the civilising of a nation.

There are other and higher considerations; for it is not on an increasing revenue, on a system of perfect roads, or even on an express-train service throughout the island, that real progress will ultimately depend. The ever-increasing number of literates is a hopeful sign of a sadly-needed moral and intellectual awakening."

Education is not compulsory, but 85 per cent. of the child population is enrolled in the schools.

It may be expected that Cyprus will before long become better known, as Mt. Troödos, the ancient Mt. Olympus, the meeting-place of the gods, is really a unique attraction for residents in Egypt and the Levant. At a height of 6,000 feet it enjoys a keen pure air laden with the scent of pine forests. It can be reached from Cairo in thirty hours; the season is from the middle of June to early in October. Railway extension, as mentioned in another place, may bring Mt. Troödos nearer to the tourist world. Visitors will find everything they require in this excellent handbook, which reviews the past and describes the present with unflagging spirit. Fortunate are they who can see the panorama of landscape from Troödos. "On three sides range after range of hill-tops; to the north the majestic expanse of the Mesaoria, yellow and brown, the blue bay of Morphou, the olive-green patch where Nicosia swelters in the heat, Famagusta grey on the sky-line, and, hanging over the plain like a curtain, the mountains of Kyrenia. On the other side of the hill, where Government House lies, a new scene presents itself. The sea by Limassol and the Salt Lake glitter in the distance, and the green of a thousand vineyards between Troödos and the sea gladdens the weary eye. As the sun sets over Paphos, where Venus once and again yoked her swans to repair to her lover at Delium, this landscape with its myriad colours is almost incomparable."

In the Shadow of the Bush.—By P. AMAURY TALBOT, of the Nigerian Political Service. (*W. Heinemann.* 18s. net.)

This book is a description of the manners and customs of the Ekoi people, who are on both sides of the boundary between Southern Nigeria and the Cameroons, from a standpoint as near as possible to their own; and a large collection of stories and legends helps the reader to follow the workings of the native mind. To a European they are mostly extremely fanciful and inconsequential. Behind them is the melancholy and tragedy of the mysterious all-enfolding bush, the terror of primitive man at the dangers, seen and unseen, with which he is surrounded. The secret society is an ancient result of this state of mind, and the Ekoi country has many examples of it, the chief being the Egbo Club, which, before the

coming of the white man, ruled the country, and still has enormous influence. Very little is known of the Egbo beliefs or powers, but Mr. Talbot takes a respectful view of them, stating that "certainly a considerable amount of hypnotism, clairvoyance and spiritualism is taught, and only too many proofs have been given, that some of the powers of Nature are known and utilised by initiates, in a way forgotten or unknown to their white rulers. For instance, some of the esoteric members seem to have the power of calling up shadow forms of absent persons."

Unfortunately, while Mr. Talbot raises our expectations by this opinion, no authenticated case of performance is given. However, the religion of the Ekoi is a fascinating study, especially as it has much in common with the Egyptian. It is probably an ancient form of Minoan belief, for whereas in the representations which have been discovered of Minoan tree and bird worship, the tree is almost conventionalised into a pillar, and later as a mere pedestal for the bird, among the Ekoi it is still the real tree. We seem to touch the beginning of the belief in the following description:—

"The smallest town has its 'Juju' tree. There are many varieties of these, but each stands alone, usually in an open space before the Egbo house. They are generally bound round with tie-tie, or surrounded by a little fence festooned with linked rings of the same. On the branches of these trees hang countless nests of one kind or another of the weaver bird. Even the smallest child knows that these are sacred, for on them depends the prosperity of the town. Should they be injured or driven away the women would become barren and cattle cease to bear. The birds know that they are safe and flit fearlessly hither and thither, keeping up such a loud twittering and crying that it is almost impossible to hear oneself speak in the neighbourhood."

There is a Biblical touch in the native custom by which a man who wishes to marry an Ekoi maiden must serve her people some considerable time, usually from two to three years. Even then his possession is far from secure. "Divorce is extremely easy under native law. The most common rite for freeing a wife is to rub white chalk on both her hands. If a woman wishes to free herself without the consent of her husband, she usually rakes out the fire and pours water on the embers till they die out. She then cuts her hair and covers herself with white paint. After this, even if both parties wished it, she could never return to her husband. Such a case occurred on December 3rd, 1908, when Awaw Otu stated on oath:

"Machott was my wife. One day she pulled out the kitchen fire on to the floor, and poured water on it till it died out. Then she cut her hair and covered herself with white. This is against our rule; so now she cannot come back to me as my wife."

"By old law also, it appeared that a woman could divorce herself by giving a slave or 'member' to her husband instead of herself. This will be seen from the following case, which incidentally throws a curious sidelight on the relations of husband and wife:—

"On December 4th, 1908, Awato Otu stated: 'One day I was lying down by the fireplace in my compound. My other wife asked me to come and dine. Then my wife Machott caught me and beat me, and prevented me from going to my food. She then abused me. I replied, "Look at you with a mouth as wide as a bag!" Then she said, "Here is my member Ndo Tammi. You can have her instead of me. I give her to you."

Viewed as Mr. Talbot views it, bush life is crowded with incident, and a cultivated interest in native beliefs must add greatly to the attraction which West Africa, in spite of its drawbacks, exercises over its visitors.

History of the Basuto, Ancient and Modern.—By D. F. ELLENBERGER, V.D.M. (*Caxton Publishing Co., Ltd.*)

This work was written by a missionary of the Paris Evangelical Mission Society, which has carried on its work in Basutoland since 1833, and the translation has been done by Mr. J. C. Macgregor, Assistant Commissioner. The history virtually stops at the year 1833, and is based largely on traditions which will soon cease to exist as such. It represents the knowledge and beliefs of the intelligent old man of the people.

Basutoland is a favoured part of South Africa, fertile and well watered, though it suffers severely at times from drought. The inhabitants, who are of the Basuto race, have been in occupation of it for some centuries, but it was only comparatively recently that they were united under one king, Moshesh. This potentate reached the apogee of his glory by a great victory over the Batlakoa in 1853, and almost immediately afterwards the Basutos came into communication with the government of the Orange Free State and the modern period began. The Basutos appear to have come in various streams from the north. They found the Bushmen in possession, but probably they were accepted peaceably as neighbours; primitive peoples do not question the right of new-comers to the occupation of land, providing they are not dangerously near, and the first quarrels are caused by raids of cattle. Later on come the contests for chieftainship, a grim business which depends for success mostly on the ability of the claimant to provide food. On the whole, however, the early history of the Basutos was fairly tranquil, and great trouble did not come upon them till the Zulu invasion burst in upon them in 1822. It

was in 1824 that an incident occurred which marked the coming of civilization. A Wesleyan missionary, Mr. S. Broadbent, had then been living for about a year with the Barolong. "He had built himself a stone house consisting of two rooms, and, in spite of the rumours of war, he remained at his post until, his health failing, he left with his wife and family in the waggon of a passing missionary on April 22. It was two days after this that the Bataung, having dispersed the Barolong and looking round for plunder, came upon this house. It was the first time they had ever seen anything of the kind, and thought it must be some sort of fort. The chief held a council of war, at which it was decided that the bravest men must advance upon it, for who knew what might be hidden inside? In such estimation was the valour of those who advanced upon the house held by their fellows, that the names of some of them have been preserved and handed down to posterity. They were Chakane, Mathabeng, Mokhampanyane, Ralepao, Mokhabe, Koloko, and others. The doors and windows were smashed in with great stones cast at them, and as no one came out, the heroes went warily in. There they found many things of interest whereat they marvelled greatly, viz. tables, chairs, beds, boxes, iron pots and pans, crockery, linen, men's, women's, and children's clothes, books, pictures, sugar, coffee, rice, and even a telescope, but this last-named article they smashed immediately, being highly suspicious of the glass at each end, which they took to be the eyes of something uncanny. A pair of the reverend gentleman's nether garments caused great curiosity: at first they thought they were a pair of bags sewn together, as indeed in a sense they were, but they could not see the use of bags like that which could hold nothing. The shoes and boots, the use of which they might have guessed, puzzled them, and they cut them up. They were delighted with the softness of the linen, and some coloured calico prints and a dog-chain took their fancy. There was a large pistol on the wall, which they took to be a whistle, but, in order to make it less cumbersome, they thought to burn away the wooden stock, holding it in the fire by the barrel. But the thing was loaded and the heat of the fire exploded the charge, which lodged in the stomach of the man who was holding it, and so he died. The table-knives were very welcome, but they had no use for pocket-knives as they could not open them.

They also found some bags of gunpowder, which some thought was seed, and some thought was medicine. They could not decide what it was until one savant threw a quantity in the fire in order to test it. They soon discovered that there was some witchcraft about it, for they were blown away from the fire, round which they were seated, and severely singed. The fire itself was scattered and extinguished by the explosion, and after the one blinding flash they

were left in darkness. From that time the house of the missionary came to be called *Ntlo ea Sethunya* ("the House of the Detonation").

The collection of traditions is remarkable for its detail, and some interesting chapters are added on customs and beliefs. A special account is given of cannibalism, which from small beginnings spread over the whole country between the Orange and the Vaal, depopulating the land and stopping all friendly intercourse between tribes and villages. Murder and robbery were the order of the day, and people dared not move about except in large armed parties. Even then, if the party were not large, it would probably prefer to travel by night to avoid enemies. But even at night the man-eaters lay in wait, and more often than not succeeded in capturing caravans.

Cannibalism, it is remarked, is a sort of mental aberration brought about by the pangs of hunger, which render a man incapable of realising the horror of it, or of anything except his own suffering and misery. Those who became addicted to it formed themselves into secret associations, as much to justify themselves as to encourage each other. These associations were numerous, and each one had its leader, who, of course, was the most ravenous and blood-thirsty of the lot. For all that it is improbable that the idea of eating their fellow-men would have occurred to the South African Bantu had the example not been set by strangers from the north. In the first part of this work it is related how the Bavenda, who came from the sources of the Kassai, practised the custom of eating prisoners of war. They kept up this horrid practice until quite recently, and news of it, no doubt, filtered through to the cis-Vaal tribes. In time many districts became infested with cannibals, and no doubt the practice was stimulated by the losses of grain and milk caused by raids. As practised by the Basuto it became madness. "All human instinct, all reason, fellowship, intellect, everything in fact which raises the human being over the brute beast, became extinct or obliterated. They practised cruelty for its own sake and the pleasure it gave them, torturing their victims in a fiendish manner before dispatching them. Children were butchered or roasted alive under the eyes of their parents, or vice versa; women in the presence of their husbands. They would bind the hands of captured people, and drive them before them as they would cattle. If any one resisted, he was killed and eaten at once, to save the trouble of driving him. The women of the cannibals were just as blood-thirsty. They would frequently accompany their husbands on the man-hunt, so as to miss no part of the feast." But, as has often been remarked, the habit is not deep-seated, and though in its day it caused a vast loss of life it entirely disappeared at the touch of civilization. The change of thought may be seen from the confession of a converted Basuto: "Oh, how vile I was! I sucked

wickedness with my mother's milk, and the depravity of my parents. Later on came the terrible wars, ruin, and starvation. I lived on roots, grass seed, and even ate pot-clay to try thereby to stay my hunger. The hand of the Amangwane was heavy on the land; all the tribes were at war with each other, and every one was a fugitive. Day by day men began to eat men, and I too tasted human flesh. From that time I shunned my fellows, dreading to be eaten too. What horrible days followed that on which I cut off the arm of my mother's brother and cooked and ate it! I also ate my father's brother, every bit of him, and many others. Even as Ezekiel saw in a vision the dried bones of a whole nation draw near to each other and assume form, so, with terror, do I see the bones I have picked reunite with their fellows and rise up in judgment against me." Notwithstanding this grievous lapse the Basutos were extremely polite and had numerous and precise rules of etiquette. In fact their formalism was extraordinary, and is a strong example of the fact that uncivilized nations are most fettered by custom. Their wit and wisdom is collected in a great number of maxims or proverbs, many of them so far fetched as to be rather cryptic to the European.

Mr. Macgregor apologises for the imperfections of his translations, but whatever they may be, his rendering is admirably clear. The book, as he observes, will be the last word on the ancient history of the Basuto.

The Land of the New Guinea Pygmies.—By CAPT. C. G. RAWLING, C.I.E., F.R.G.S. (*Seeley Service & Co. 16s. Net*).

New Guinea now offers greater opportunities to the explorer than any other part of the world, for much of it still remains unknown, while the collector finds abundant material. This work is the result of a British Ornithologists' Union expedition to a part of the Dutch section of the island, where the great central range of mountains comes near the coast. New Guinea has long enjoyed a reputation for cunning and brutality, and many are the stories of treacherous murders, the outrages being usually followed by cannibalism. It is said that the prevalence of this custom is due, in the majority of cases, simply to the liking for human flesh; sometimes an enemy is eaten as an act of revenge, but there is no idea that in so doing the good qualities of the deceased are acquired. There is related a story of how a Bonarua woman dug up her recently deceased husband to feed a friend. This act caused much indignation at the time, not so much because there was considered to be anything wrong in the eating of the flesh when exhumed, but because the men of the tribe

disliked the idea of being devoured by their own wives. There is however hope for the natives, as they display that inestimable quality, keenness for trade. At first a boat could be bought for a knife or a handkerchief, but towards the end of the visitors stay the price had risen to two axes. European commerce however is likely to cry a halt before the pests of this part of New Guinea. Mosquitoes abound in clouds, but are outdone by leeches, which dangle from every leaf and branch and drop on the unsuspecting wayfarer. "Their bites often result in nasty sores which, in this damp climate, do not readily respond to doctoring, and sometimes become so bad as to necessitate the sufferer being invalided out of the country. So insidious is the attack of these hateful creatures that one is often unaware of their presence till a stream of blood welling through the clothing shows that one of them has been sucking blood from a vein, in which case a bandage must be applied to stop the bleeding.

The worst of all places for them to attach themselves is the eyeball. So light and unsuspected is their attack that on several occasions two or three crept between the eyelids without their presence being detected, and the first intimation received was the blurring of the vision. It is almost better when this happens to let them have their fill of blood and drop off when satiated, than to remove them by force, for less damage is done thereby to the flesh, but in either case very severe inflammation of the eyes is the result. But even these wretches are not the worst, the pride of place being taken by the bluebottles, which are of immense size, exist in millions and devour everything that can be eaten. "A nice land indeed," sums up the author.

However, the country is admirable for the collection of naturalists' specimens. On one occasion the market was particularly brisk. A native was secured to obtain a human skull. "For this he was to get a knife and handkerchief. The prospective desecrator of graves—for I looked upon him as such—at once walked to the bank opposite the village and, with a voice which could be heard by every soul, brazened forth the fact that we were collecting human skulls. I did my best to prevent this outburst, but it was too late. In a moment the village was in an uproar, but to our intense surprise, instead of any hostile demonstration taking place, at least a dozen men emerged from the huts, each with a skull tucked under his arm. Down the beach and through the water they raced to our tents, each striving to be the first to dispose of his relic, delighted at the idea that trade goods could be so easily obtained and no manual labour required in return." Some hints which would be useful to future explorers are given as to the value of trade articles. Knives are sought after, but as no one wants

many the demand soon ceases. The only article which never fails is, it is satisfactory to record, cloth, and here quality and condition are immaterial. The most disappointing article was the looking-glass. "It was not that the men did not want to have a look at themselves, but that they did not seem to want to do it more than once. I would be the last to suggest that they were deficient in looks, or that vanity went for nothing with them, but however little pleasure they themselves received from the experiment, it was to us a never-failing source of amusement. The candidate in the beauty competition, for such it seemed to be when an expectant crowd had collected round, settled himself on his haunches, and when comfortable, confidently raised the glass before his eyes. This invariably led to the development of a broad smile—the first impression was good. But the longer he looked and the more carefully he examined himself in detail the more disappointed he became. The smile vanished, giving place to a look of surprise, and then, as the defects of hair, eyes, and nose became impressed on his mind, the confident air changed to one of disapproval. With a sigh the glass would be passed to the next competitor, who would be fidgeting in rear, eagerly awaiting his turn." The book abounds in interesting descriptions of the country and its inhabitants, and the title hardly does it justice, as only a comparatively small space is devoted to the account of the Pygmies. A suggestive chapter is given in which it is submitted that the various tribes of Pygmies scattered about the East and Africa are the descendants of one ancient race.

Les Lois et l'Administration de la Rhodésie.—Par HENRI ROLIN.
(*Etabliss. Emile Bruylant, Brussels.* 12 francs.)

This large volume contains the fruits of a very wide and painstaking enquiry. The legal position in Rhodesia presents some curious points to a foreigner. In Southern Rhodesia the Cape law was established; in Northern Rhodesia the English law. The first step was the result of the influence of Cecil Rhodes, and the constitutional differences between the two provinces must be borne in mind; at the same time it may be admitted that such a fundamental legal difference is very peculiar. Apart from this the author has some forcible observations on this time-honoured British practice of professing to apply the laws of an old country to a new one where everything is different. It is true that the laws are only applied so far as they are not inapplicable, but the task of deciding what is applicable makes the judges to a great extent law-makers. The South African Company is described as essentially capitalist, and the

author expresses doubts whether its rule is entirely satisfactory from the point of view of the well-being of all the inhabitants. He argues that the Imperial Parliament has no control over the policy followed ; it does not take part in making the laws, nor does it control the finance. The only role which it fills is to hear complaints of "atrocités," but it is contended that it is little competent to deal with these and its intervention is of little efficiency. The company has wisely left it practically to the "men on the spot" to make the laws and direct the administration. The author considers that, at any rate recently, it has been liberal so far as the whites are concerned, but that it has failed to construct a policy in the interests of the blacks. He admits, however, that there are no "atrocités," and his point seems to be that, as the company claims the land, it should take steps to form a class of native proprietors, after the manner adopted in the Cape under the Glen Grey Act. Whatever may be thought of the author's views on these questions of policy, his account of the legal and administrative machinery is remarkably ample and clear.

The Organization of Imperial Studies in London.—By SIDNEY Low. (*Henry Frowde, Oxford University Press.* 1s. net.)

This is a plea for a School of Imperial Learning, which is to undertake, not only teaching, but also research. Mr. Low observes that the Colonial Office, "conscious of the limitations of the English public-school system, takes some steps to furnish its future pro-consuls and magistrates with a certain amount of necessary information," but it must be admitted that these measures are of a very mild and partial character in comparison with the training which is given in France and Germany. The vital difference is that our instruction is only provided for men already appointed to the Colonial service, and these can spare little time for it; abroad the instruction precedes appointment, and substantial time is allowed for it. However, Mr. Low does not propose that the course should include technical and industrial subjects, as it does at Hamburg and Paris; and in this he is certainly right so far as any serious requirements are concerned, as technical posts are given for qualifications which require a regular professional course for several years. It is true that every governor and many of the higher officials of the Crown Colonies have to pick up some knowledge of civil engineering, geology, agriculture, and other such matters, but they do not put themselves forward as experts, nor is it desirable that they should. The subjects selected by Mr. Low are (1) Indian History, (2) Colonial History, (3) the Laws and Institutions of the British Empire,

(4) Imperial economics, and (5) Imperial ethnology and geography, and his idea is that the Colonial Office should require its probationers to qualify in these subjects before taking up their appointments or within a specified period after doing so. As he observes, the London School of Economics has shown that there are plenty of young bankers, merchants, financiers and manufacturers, who are eager to combine the practical work of their professions with a knowledge of its higher principles and wider relations, and he believes that a School of Imperial Studies would have the same experience. No one will dispute the fact that it would be an advantage if our young colonial officers could start their careers with a better knowledge of the subjects which will come into their work. The difficulty is to make a selection which will be appropriate and also fit into reasonable space. Much of the knowledge which is most appropriate, such as that relating to government accounts and finance, cannot well be acquired from text-books, and it would be difficult to find competent teachers. The limitation to Imperial laws, economics, etc., seems to shut out foreign materials, or at any rate, to relegate them to the background; but a colonial student of some particular question will often find greater help from a foreign country than from any other British possession. Mr. Low, however, might reply that these are matters for research, and as this Journal itself represents an effort, very imperfect, to collect from various colonial sources items of common interest, we appreciate the value of the proposal to place Imperial studies on a more stable basis.

Bulletin of the Imperial Institute, Vol. X., No. 4. (*John Murray.*
2s. 6d. net.)

It appears that the quality of Gold Coast cocoa has improved considerably in the last two years, since exporters had adopted the practice of fermenting the beans; the fermented product realises at Hamburg from 1 to 2½ marks more per 50 kilos than the unfermented cocoa. An account is given of samples of crude petroleum obtained at Bonyere in the Axim district, and yielding oils of commercial value. An examination has been made of the Nyasaland cottons, where the only types now favoured are the Egyptian, at elevations below 2,000 feet, and the American, at higher positions. By careful selection of "improved" American Upland varieties, a type of cotton has been evolved which has now become acclimatised and is recognised as a distinct commercial variety under the name of "Nyasaland Upland." At the present time this cotton is regarded as the best grown in Nyasaland from Upland seed, and is valued at 2d. or more

above that of "middling" American. Of the total area under European cultivation in the Protectorate in 1912, 23,300 acres were devoted to Nyasaland Upland and 755 acres to Egyptian cotton.

A very full review is given of recent papers and literature dealing with tropical products.

The Oil Palm and its Varieties.—By I. H. I. FARQUHAR, B.Sc., N.D.A., Conservator of Forests, Southern Nigeria. Edited and Revised by H. N. THOMPSON, Chief Conservator of Forests, Southern Nigeria. (*Published by the Crown Agents for the Colonies.* 3s. net.)

The exports of oil and kernels in 1910 from Southern and Northern Nigeria reached the value of £4,193,049.

There is no doubt, it is stated, that the merchants buy all the oil and kernels the natives bring them, and this is a large proportion of the available supply within such areas as are served by easy land and waterways, but a large number of palm trees are not worked for oil and kernels, especially in the districts of Kwale, Aboh, Asaba, and to some extent in those of Warri and Sapele. This, however, is not as large a number as many people would make believe, and the statement of palm fruits and nuts rotting on the roadsides often refers to those that are spread out on the roadside to dry before cracking them for kernels, the surface of government-made roads being a good drying ground for that purpose. A very large amount of the total palm oil available in Southern Nigeria is made use of, but this cannot be said of the available supply of palm kernels, which is not utilized to any such extent; however, the output of oil and kernels has increased enormously of late, chiefly owing to the opening up of waterways, markets, and roads, and to the settled condition of the country.

The waterways are the most important carriers of oil products, and they have been much improved by the Marine and Political Departments. Their continued improvement, combined with the employment of craft for travelling on them, will do more than anything else to increase the output of oil and kernels. The Okrika and Bonny people, who are keen traders, are most anxious to have a waterway cut through to the Imo River at Obibo, which will save them many miles of a rough water journey, and open up the Imo River and its numerous creeks, and a rich country to healthy rivalry and competition.

The presence of the railway is not likely to increase to any extent the amount of palm oil in the future, but a large increase in the export of kernels should be expected.

To increase the export of the palm oil products, cheap, plentiful labour is needed. It will become more plentiful with an increase in

population, whilst for the present hand machinery for the preparation of oil and kernels, which will liberate labour for other works, is most needed ; hand oil presses, nut-cracking machinery, decorticators, etc., the use of which will also improve the quality of the palm oil products.

At present insufficient available labour is a cause adversely affecting the palm oil and kernel industry. Southern Nigeria being a new and progressive country, the calls on labour are so many and varied that the latter is diverted to the works which attract the labourers most, and the old palm oil and kernel industry, being so well-known, is not now so attractive as the newer and less known forms of labour. These present more attraction for the workers in steady, constant work, regular hours, regular and fixed pay, and more enlivening surroundings than the collection and preparation of palm oil in the bush, carrying the produce to the markets and pulling the produce long journeys in canoes, either as a member of a house working for the head of the house, or as a labourer to a middleman, chief or private native individual.

The native, in addition, is not yet accustomed to the change brought about by the abolition of slavery and the setting up of the form of Domestic Government in its stead, which is designated as the House Rule. He has also not got accustomed to the number of free men about, and the power of money to command such men as labour, and from their economical use amass more money.

Mechanical transport, and mechanical means for preparing oil, will liberate labour as nothing else will, and if an increase of population follows, labour difficulties in the future should not be unsurmountable.

To obtain the best results the oil palm requires a heavy well-distributed rainfall of from 70 to 100 inches per annum, and a moist, fairly equable climate with a deep holding soil ; these conditions are found in the deep alluvial humus-covered soils of the forest regions and along the coast inwards for a distance of from 70 to 150 miles. These conditions prevail further inland still, along the valleys of rivers and streams which the oil palm follows into all parts of Southern Nigeria, though steadily diminishing in numbers as it recedes from the coast.

The rainfall of the localities referred to is practically the same along the shores of the lagoons as it is three or four miles farther back, where the ordinary variety of the oil palm grows so luxuriantly. The real factors that here determine the vigorous growth of the oil palm are the increased richness of the soil, due to the presence of decaying organic substances derived from the vegetation growing on it, and the simultaneous increase in the amount of water held in suspension by the soil.

These considerations explain the absence of the plant from the dry, open districts of the hinterland, where, owing to the destruction of the forests for farming, and the prevalence of "bush fires," the organic matter in the soil has been reduced in quantity, and the regulation of the supply of moisture in it has been so disturbed that at one time of the year there is often too much, and at other times too little of it to suit the majority of plants. The actual amount of rainfall in these districts is frequently quite sufficient to ensure luxuriant vegetation if a larger percentage of the rain-water could be held in suspension by the soil during the rains, as is the case with forest-covered soils. On the Gold Coast there has been a decline in the export of palm oil, probably caused by the rise of the cocoa industry. The oil palm begins to bear in four years under favourable circumstances; the palm is in full bearing at twelve and continues so for about fifty-five. It has been suggested that it should be grown in Malaya and other places, but no place seems so suitable to it as West Africa. A clear account is given of the tree and its products.

The report brings out the importance of mechanical means of preparing oil, and it is to be hoped that if, as is likely, serious competition arises in other parts of West Africa, the British possessions will not be left behindhand in this matter.

Forests of British Guiana.

Two reports have been issued by the Department of Lands and Mines at Georgetown. They are by Mr. C. W. Anderson, I.S.O., F.G.S., F.R.G.S.; one is a general account of the forests of the easily accessible districts, and the other is devoted to the North-Western district of the County of Essequibo. A very clear description is given of the sources of supply, and it is to be hoped that the information given will stimulate enterprise.

Insects Injurious to Economic Products.—By C. C. GOWDEY, B.Sc., Government Entomologist, Uganda.

This useful paper describes the insects which attack the various staple products and the method of dealing with them. Mr. Gowdey, explains that generally one of four methods is adopted in combating any insect pest. First, the application of a stomach poison on the food for those insects which chew and swallow solid food. Most stomach poisons act as irritants, causing inflammation of the alimentary canal and the ultimate death of the insect. Second, treating those insects that suck the juices of plants with a contact poison.

Third, the use of a gas or vapour for killing insects which are so located that they cannot be reached by any other means. Fourth, the employment of cultural methods for those insects that cannot be attacked by any of the preceding methods.

The majority of stomach poisons and many of the contact insecticides are applied in the form of a fine spray on the foliage or other parts of the plant. It consists of diluting the insecticide to the proper strength with water and applying by means of a spray pump.

At times both a stomach poison as well as a contact insecticide can be applied in the form of a dust spray. It consists of dusting the insecticide on to the plants. In applying an arsenical insecticide in this manner it is usually diluted with flour, or some similar material, which can be easily dusted on the plants. Experiments do not justify the use of dust sprays in preference to liquid sprays.

Descriptions are given of the various substances used.

Panama Canal.

The 1911-12 report of the Isthmian Canal Commission will be studied with interest by engineers, as it gives a very full account of the work done. Some places in the West Indies are looking forward to a share in the supply of coal on the new route, but a fairly liberal preparation will be made on the spot, as provision is being made for 16,000 tons of coal at the Atlantic terminus and 8,000 at the Pacific. There will be three dry docks and ample repair shops. The sanitation work has been remarkable, but there is no ground for an impression which has become general that there has been an extensive clearing of land. Out of 278,848 acres in the zone less than 1,200 have been cleared, and thus almost the entire territory is in its original state as regards bush and jungle.

BUSINESS NOTES.

Rubber.

PRICES in 1912 were on the whole a little lower than in 1911, and this may mark the process by which rubber is, according to many authorities, to drop gradually to 3s. a lb., or less. It is becoming increasingly plain that the future rests with plantations, as they can in the east produce at 1s. a lb., which at anything like the present price yields an extremely high profit, and would easily bear a drop to 2s. 6d. It does not seem likely however that any great change will occur for three or four years, but many new plantations will then be actively producing and a critical period will occur. The new Brazil law, especially the reduction of the export tax, which is at present 22 per cent. of the value and is to be brought down gradually to one half that amount, will no doubt stimulate production, but the great cost of labour and the difficulty of collection militate against any great extension.

It has been estimated that the world's production of wild and plantation rubber, in the 12 months ended with June 30, 1912, amounted to 93,669 tons, as compared with 79,302 tons in the previous year and 76,026 tons in 1909-10. The world's stocks of rubber on July 1, 1912, are reported to have been 10,181 tons, as against 12,563 tons on the same date in 1911. The considerable expansion in consumption in 1911-12 is attributed largely to the lower level of prices prevailing during the year.

Samples have been sent home of rubber prepared by a process for which a patent has been granted in the Malay States, and which imitates the native method of making fine hard para. The latex is coagulated in thin layers by the action of smoke and heat alone, and no chemicals are used. The breaking strain appears to be nearly equal to that of fine hard para, but the loss in washing and drying is higher, being 3·3 per cent.; the resin content is considerably higher. The rubber would not, it is believed, command a higher figure than other grades of smoked sheet on the market.

In the West Indies it is calculated that a man can tap 25 trees per day, and that he will get four ounces of rubber per tree, or say

six pounds altogether. The man's cost may be put at 2s. a day, so that the cost per lb. is 4d. In Malaya the cost of tapping appears to be increasing, and is now over \$1 10 cents. a day.

Coffee.

In the Journal of the Jamaica Agricultural Society, Mr. H. Q. Levy, Agricultural Instructor, advises a distance between the trees of at least 8 by 8 feet. He observes that this space will look rather wide for the first few years, but later it will be found just barely sufficient to accommodate the growth of healthy trees, and in the case of "long top coffee" after the lapse of eight or ten years, even that distance will be found too close for the best results. Indeed, for "long top" 10 by 10 is better. In Costa Rica and other large coffee producing centres, the trees are never planted closer than ten feet apart, many wider; the result is a healthy, wide spreading tree, bearing its crop year after year, not only on the tops of the trees, or on the outside of the fields, but each individual plant fulfills its function, by carrying its crop evenly scattered over the whole tree. In this way the planter gets the full benefit of the time and labour expended on his cultivation.

Planting is often done crudely, and it should be borne in mind that the coffee tree is a surface feeder and should not be planted deep, but so that when the soil is put in it will not cover the highest root deeper than half-an-inch.

Cotton.

In South Africa, as in the West Indies, the planters' dread is destruction by pests. In some cases the loss has been 75 per cent. The most important pest is the Spring Cotton Boll Worm, and, unfortunately, it seems impossible to deal with its depredations directly. However, a successful attempt has been made to grow cotton at Rustenburg, and it appears that the plant resists drought well. In such places cotton may enjoy fair exemption from pests, and, if so, the vast Kalahari Desert will become one of the greatest cotton fields in the world.

Teff.

This hay crop was introduced to the world by Kew Gardens. The seed came from Abyssinia. It grows quickly and resists drought. It has been a success in British Guiana and Australia. It thrives in dry sandy regions, but cannot compete with Lucerne when there is enough rain for this crop. Under good conditions it matures in two months from seed, and the yield is very heavy. The use of it is spreading in South Africa, and it is likely to cause a great development of the dairying industry.

Insecticides.

Serious damage has been done to sugar cane plantations in Mauritius by a beetle to which the name *Phytalus Smithi* has been given and which is fully described in a report by Mr. D. d'Emmerez de Charmoy, Curator of the Museum. The same beetle is found in Barbados, but is apparently kept in check there by a parasite, and the scientific method would be to combat the pest by introducing this parasite. The following report on the results of various insecticides is of general interest.

"*Paris Green*" (*Arseniate of Soda*). Larvæ introduced in soil containing 2 per cent. of this substance were apparently quite unaffected.

"*Vaporite*." This substance, recommended by Mr. E. Green, the Government Entomologist of Ceylon, gave very good results when tried experimentally in the laboratory, but when applied on a large scale in the fields, although under various conditions and with every precaution to ensure success, it gave no practical results.

"*Cyanide of Potash*" was also of no use as it only killed the larvæ which came into actual contact with the chemical while those at a distance escaped altogether; besides the quantity of cyanide to inject the ground thoroughly would be such as to bring the cost to about Rs. 350 per acre.

"*Durandine and Pretroleum Emulsion*." A 1 per cent. solution of the former and a 7 per cent. diluted solution of the latter gave very good results, but the price is prohibitive.

Sulphydes. Various preparations of these were tried and found ineffective.

Pretroleum and Creoline. An emulsion containing these two substances gave the best results, not only by reason of its insecticidal power but also of its relatively low cost, which on an average would be Rs. 100 per acre, unless of course the transport of the necessary water has to be reckoned with which would render the operation more expensive.

The following is the formula for this mixture: Dissolve 500 grams of common soap in nine litres of boiling water. Add gradually eighteen litres of pretroleum, stirring the while until the solution acquires a viscid consistency. To 800 c.c. of this emulsion add 200 c.c. of creoline or to 700 c.c. add 300 c.c. of phenyl. To either of these mixtures add a hundred times their volume of water and the solution is ready. It requires on an average about ten litres for each cane hole.

Concrete.

The President of the Concrete Institute in his address pointed out that if cement is to be kept up to its full strength it is absolutely necessary that when it is received on the site of the works it should be stored in air-tight wooden bins: and if this is done cement may be kept for many years and be just as good after the lapse of time as it was when freshly made, whereas if the cement be stored in sacks, and even a very small amount of moist air plays upon them, then the cement is rapidly hydrated and cakes in the sack. If, as is often the case, this cement be rubbed through a sieve, it becomes almost absolutely useless for purposes of concrete-making. He mentioned the case of a contractor who bought cement in the month of October. The whole winter was a bad one, and he had very little opportunity of using the cement. It was stored in a shed through which the wind could blow freely, and he was rather astonished when the spring came and the cement was used that it would not set. He then wrote to the manufacturers, and when the matter was investigated the true cause of the mischief was found out.

White Ants and Bottles.

Considerable loss is caused in some countries by ants devouring the corks in bottles. The simplest plan is to take the bottles out of their wrappings and stand them up; the insects cannot then climb up them. Another plan is to capsule the bottles and then dip them in boiling wax.

Motor Fire Engines in Sydney.

Sydney prides itself on being one of the first cities of the world to adopt motor fire apparatus, and Superintendent Webb, the chief officer of the fire brigade, speaks highly of the satisfaction given by such machines in actual service. The latest consignment has just been shipped from England, and comprises three petrol pumps of the Merryweather "Hatfield" type, each driven by a powerful four-cylinder motor, and capable of delivering 400 gallons per minute. The Sydney brigade also possesses two other Merryweather motor fire appliances, the first being a chemical engine supplied in 1904, and the second a salvage van supplied in 1907. Sydney continues to lead the way in the Antipodes, and its fleet of motor fire appliances far exceeds that of any other Australian brigade.

Stamps.

Much excitement has been caused in the philatelic world by the report that the royal cipher watermark used for the stamps of Great Britain would be employed for future issues of British Colonial stamps. There was, however, no truth in the rumour, and it is difficult to account for the publication of such reports.

The next issue of MALTA 4d. stamps will be in a dark green colour. The St. Paul's shipwreck design will be used for the 10s. stamp only, and the 1908 Nyasaland King's Head Model H "Postage Revenue" design for the 2s. and 5s. value. The Grand Harbour design, now used for the one farthing stamp, will be applied to the 4d. value instead, and the one farthing stamp will be in Model D unified issue.

BRITISH GUIANA.—Two and twelve cent. stamps of the new design are being supplied.

GOLD COAST.—Stamps of values from $\frac{1}{2}$ d. to 20s. are being supplied of the new design.

ENGINEERING NOTES.

South Africa.

THE outstanding feature of the railway returns for 1911 has been the continued increase in passenger traffic, reflecting clearly the enhanced prosperity of the country as the result of the exceptional expansion in trade which took place in 1910. It was hardly to be expected that this expansion would continue at the same rate during 1911, and this has proved to be the case, for whilst in 1910 the total revenue-earning tonnage increased by nearly 20 per cent. over the preceding year, the increase for the year under review is not quite $3\frac{1}{2}$ per cent. This indicates that, while the volume of trade has been well maintained, the country is passing through a comparatively quiescent period after the exceptional activity which characterized the year of Union, thus justifying the opinion expressed last year that "before any further general advance took place there was likely to be a lull."

One of the principles laid down by the South Africa Act is the provision to be made out of earnings "for the necessary outlays . . . for depreciation," and it is to this principle that the recommendation of a Select Committee is intended to give effect. By the establishment of a Renewals Fund, fed by regular annual contributions from revenue, each year will bear its own proportion of the depreciation that is continually going on, and it will be possible, even in times of financial depression, to carry out the necessary renewals as and when required, without burdening the State with fresh loan expenditure or the revenue of a particular year with heavy special disbursements which it might not be able to bear.

It is in fixing the scale of depreciation, that is, the amount that should be contributed yearly in respect of the various classes of assets, that the difficulty arises. The working life of a particular asset depends upon such a variety of circumstances that it is practically impossible to arrive at strictly accurate rates which will represent the annual depreciation that takes place in every case.

The best that can be done, therefore, is to estimate the life of each class of asset as nearly as possible in the light of the experience already acquired, and fix average rates at which the annual contributions should be made until the experience of future years proves such rates to be sufficient or otherwise.

Much has been said and written in regard to the effect which the present rates from the ports have on the cost of living at the principal inland centres, more particularly Pretoria, Johannesburg, Bloemfontein, and Kimberley, but a reduction of even 50 per cent.—were it practicable—in the rates on the majority of imported articles of every-day consumption, such as groceries, jams, biscuits, tea, and coffee, would hardly be more than a farthing per pound, and, instead of benefiting the consumer, would, in the majority of cases, merely go to swell the profits of the middleman.

On the other hand, reductions in the rates on such commodities as coal, paraffin, cement, timber, galvanized iron, and agricultural machinery should be of benefit to the actual consumers, particularly in the inland districts, and it is mainly in this direction that the important reductions in rates have recently been made.

These remarks are applicable to many other railways.

With the rapid increase in the size and power of railway locomotives of recent years the problem of mechanical stoking has engaged the attention of locomotive engineers, especially in the United States of America, and several more or less satisfactory contrivances have been evolved. Tests made in South Africa have demonstrated the usefulness of such an appliance, and as it becomes necessary to provide still larger engines, there is no doubt that a suitable mechanical stoker will become more and more a necessity. The one now being experimented with on these railways is an advance on any previous type tried, but further improvements are necessary before it can be said to be of practical value. When oil fuel is available at a cost which will compare with coal, locomotive work will be much simplified, and it is hoped that oil will yet be found in payable quantities in Africa south of the equator.

The locomotives ordered during 1911 include several of special design, notably the 12th class 4-8-2 heavy goods engine, fitted with the Schmidt superheater. This engine, designed by Mr. D. A. Hendrie, Chief Mechanical Engineer, is the best and most powerful of its type that has yet been introduced, and will prove most valuable for heavy traffic on sections where it is suited to work. It will be the heaviest non-articulated engine (91 tons 16 cwt. in working order) working on any line of less than 4-ft. 8½-in. gauge, and has been designed to haul a heavy load at a slightly higher speed than is possible with the present Mallet engines, although the latter are capable of hauling the heavier load.

It is, however, by no means certain that an increase in the speed of mineral trains is altogether desirable. The increased cost of maintenance of the permanent way, which the running of heavy loads at high speeds always entails, is generally found to outweigh any advantage that can be derived from a slight increase of speed in moving traffic of this class. The solution of the problem appears to lie rather in the direction of the development of the articulated locomotive or some other type of engine which, while not exceeding the maximum axle load laid down, should have a much greater tractive effort, and be capable of hauling still heavier loads, although at a comparatively slower speed.

The advancement in the power of locomotives during the past fifteen years has been very great, but until recently no marked increase has been made in the tractive force of the different types, each type showing a small improvement on the preceding one, with the result that there are now over one hundred different designs of engines on the South African railways.

Of late years the telephone, as a substitute for the telegraph, has come more and more to the front in railway working, not only as a means of providing a source of communication between the principal stations, but also for the transmission of the necessary "line clear" and other messages for the control of train movements. Experiments are being made with one of the latest selective calling and control systems, as largely used throughout America, the intention being to extend this, or a similar system of telephones, throughout the Union, linking up the principal points of distribution and curtailing telegraph working as far as possible.

It is now the practice to use the telephone, instead of the telegraph, for working trains on branch lines, and a considerable saving is effected in the first cost of the installation, as well as in the subsequent maintenance charges.

It is often noticeable that road motor transport does not pay of itself, but it opens up new districts and prepares the way for branch railways: "The principle point is this, that even if there is not a lot of money in such experiments for the railway companies, the effect of such services, if they be properly backed by the residents whom it is intended to benefit, is that the whole district becomes 'bettered.'"

Ceylon.

In view of the projected further extension to Pelmadulla, the completion report on the line from Avisawella to Ratnapura has been received at an opportune moment. The first portion of land was handed over to the construction staff in December, 1908, and the line was finally opened for traffic on the 18th April, 1912. This period—over three years—seems excessive for 27 miles of 2ft. 6in. track.

The explanation given is the heavy broken nature of the country traversed. The trace was uniformly difficult, cuttings and banks of 35 feet and upwards being regular features. Where these banks were formed on paddy land, very long leads had to be allowed. This fact, coupled with the constant settlement of the banks, caused the item "earthworks" to show a considerable excess. This subsidence of embankments on paddy lands is often extremely troublesome in Ceylon. As an instance, a certain bank on the Matara Railway, only four feet in height above the surface of the ground, necessitated the deposit of material sufficient to form a normal embankment 30 feet high, the displaced soft material being forced up in ridges parallel to the railway on either side. The heavy rainfall of the district caused much trouble with slips and washaways.

Throughout, the line is laid with $46\frac{1}{2}$ lb. rails taken from the Northern Railway, where the 80 lb. section is being substituted. The sleepers were supplied by the Forest Department, and consist mainly of palu, satin and milla woods. With the exception of the 3.59 curve leading into Ratnapura Station, the sharpest curve has a radius of 4.78 chains, and the steepest gradient is 1 in 80.

As usual, the cost of land was under-estimated but, nevertheless, the line has been built within the revised estimate of £191,000, which works out at £7,100 per mile. The whole of the works were carried out by petty contractors and departmental labour, many Singhalese being recruited locally. As is customary on the railways in Ceylon, station names and similar notices are painted in three languages, English, Singhalese and Tamil.

Profiting by the experience gained on this difficult line more rapid progress should be made with the extension to Pelmadulla, which is to be entrusted to the same staff. This extension will run through the most extensive and prosperous rubber district in the island.

Indo-Ceylon connection.

Through communication between Ceylon and India, via Mannar, should be established shortly. The line from Madawachohi to Talai Mannar and the piers at the extremity of Mannar Island are practically completed. Nor are the South Indian Railway authorities behind with their part of the programme. The first of their fleet of three turbine steamers was launched recently at the Glasgow shipyard of Messrs J. & A. Inglis, Ltd. The journey by these steamers from Dhaneshkodi on the Indian side to Mannar will occupy 75 minutes, and will be remarkable by reason of the certainty of a smooth water service throughout the year. This protection is

rendered by the reef known as "Adams' Bridge," steamers being able to choose whichever side affords protection from the prevailing monsoon.

The new bridge at Kalutara, on the Ceylon sea coast line, was opened to traffic on 25th November last. The new structure, which has been designed for railway traffic alone, comprises eight 150 ft. spans in comparison with twelve spans of 100 ft. in the old rail and road bridge. The latter has been left standing and will be turned over entirely to the road traffic which of late years, owing to the growth of the railway traffic, had been denied access to the bridge during four hours of the day.

Wood v. Steel Sleepers.

Local woods have, during past years, formed a considerable proportion of the sleepers used on the Ceylon Government Railways. The Forest Department has now intimated that the supply is practically at an end. In this circumstance several courses are open for adoption. The Government may, and probably will, decide to import either wood or steel sleepers. At the present time Karri and Jarrah appear to be the favourite timber sleepers and have given very good results. Steel sleepers were tried in Ceylon in 1894, but the cost was so high that the order was not repeated, and that at a time when the cost of material was much lower than it is at present. Timber prices, also, have been steadily advancing so that, doubtless, the Government will thoroughly reconsider the question before reaching a decision. A possible alternative is the reinforced concrete sleeper which could be made locally by machinery. Although concrete sleepers might be cheaper, it is doubtful whether they would conduce to smooth running.

Colombo Harbour.

It has been decided to place the administration of the Port of Colombo under a Port Commission. The post of Harbour Engineer, who will be one of the members of the Commission, has been given to Mr. A. D. Prouse, the Resident Engineer.

Considerable success has attended the deposit of wave-breaker blocks along the outer face of the South West Breakwater at Colombo. The blocks are so effective in dissipating and breaking up the sea that foot traffic is rendered practicable, even during the south-west monsoon. This block-work protection is now to be continued along the remainder of the Breakwater, thus increasing to a considerable degree the effective wharf frontage of the harbour.

Dredgers.

A bucket-hopper dredger, of 1,200 tons capacity, for use at Colombo, has been ordered from Messrs. Fleming & Ferguson, at a

figure in the neighbourhood of £70,000. The vessel is to be self-unloading, and will have a speed of ten knots when fully loaded. With the new craft at work, a large part of the harbour will be dredged to a depth of 36 feet, this being the depth to which the Suez Canal will have been dredged early in 1914. Bearing in mind, however, the great increases in the draught of vessels within recent years, the new dredger will be capable of working to a depth of 45 feet. This seems to allow an ample margin.

A smaller bucket-dredger, of 400 tons capacity only, has been ordered from Messrs. Lobnitz & Co. for service in Bermuda. She is designed to dredge to a depth of 34 feet.

Malay States.

1911 was again a satisfactory year. A striking feature was the great increase in the number of passengers carried—namely, 10,347,896, compared with 7,262,830 in 1909, an increase of 42.47 per cent. in two years. Goods traffic increased from 653,663 tons in 1910 to 780,780 tons in 1911, or 19.4 per cent. These increases have taxed the capacity of our rolling stock to its utmost limits, and a large programme for additional stock will be necessary to keep pace with the development of traffic. The gross earnings from all traffic increased by 20.28 per cent., working expenses increased by 4.3 per cent., the net earnings increased by 45.9 per cent. The dividend earned was 6.03 per cent., being the highest since 1903.

During the year exploration and survey work was for the most part in Kelantan territory. On account of the very difficult country met with north of Tembeling, it was found necessary to undertake careful trial surveys of two routes, viz., one east of Gunong Tahan and the other west of Gunong Tahan. The permanent survey of the east route up to the Pahang-Kelantan boundary, and 34 miles of trial survey in Kelantan had already been completed. A flying survey of the west route had also been completed up to the Pahang-Kelantan boundary. During 1911, the trial survey of the east route has been completed to Tanah Merah, 89th mile from the Pahang-Kelantan boundary. The trial survey of the west route from the boundary near Pulau has also been completed (with the exception of five miles) to the 86th mile, where it joins the east route. From this point the trial survey has been run to Kampong Laut—opposite Kota Bahru, the capital of Kelantan. The permanent survey from Tumpat—the port of Kelantan—to Kota Bahru has also been commenced, and will join the trial survey at Kampong Laut. The work of the surveyors was greatly hampered by the exceptional wet weather and sickness.

It is stated in the Kedah report that in 1911 negotiations were entered into between the Kedah Government and the Federated

Malay States with a view to the continuation of the railway from Bukit Mertajam through the Province to the Muda river and from thence across the river through Kedah to Alor Star.

Although negotiations are not finally completed yet, it is settled that this line shall be carried to Alor Star with a probable future extension to Perlis, and the survey of the route is already well in hand. The line will be built at the sole cost and risk of the Federated Malay States Railway Administration, who will also have the running of the line after it has been constructed. The revenue derived from the line will be the property of the Railway Administration.

It is believed that the line to Alor Star will in a few years become one of the best paying parts of the Federated Malay States Railway System.

Canton-Kowloon.

This railway has been constructed in two sections: one, eighty-nine miles in length, in Chinese territory, from Canton to the Shum-chun River, the northern limit of the British leased territory in the Kowloon peninsula; the other, twenty-two miles long, through the latter territory to Kowloon. The former section has been built by the British and Chinese Corporation; the latter by the Colonial Government.

The Chinese section of the line crosses the East River at Sheklung. The cultivated ground throughout the East River valley length is 7 ft. to 11 ft. 6 in. below the highest known flood. For purposes of cultivation the whole area is protected by high bunds or banks. Formation was carried 2 ft. 6 in. above the highest flood record for thirty years, which gave a bank averaging for many miles 14 ft. high, and at approaches 24 ft. or more. These banks have been protected against wave and flood-erosion by stone pitching. In times of excessive flood many miles of this portion of the line will be a causeway through open water 8 or 10 ft. deep. Its security will be aided materially by proper maintenance of the pitching; while the fact that floods rise slowly and backing up takes place evenly on both sides of the bank gives additional security.

The minor bridges and culverts and all the large bridges but three were built in cement concrete. Good cheap cement and good sand were procurable locally; but the objection of the Chinese to quarrying their native hills gave rise to considerable difficulty in obtaining stone, and granite for the larger bridges had to be brought from Hong-Kong, although good local stone was plentiful.

The steelwork for the bridges was designed by the consulting engineers to the British and Chinese Corporation (Sir John Wolfe Barry and Mr. A. J. Barry), and was built in England under their

inspection. It was designed generally in accordance with the standard Indian practice, but for a standard loading 10 per cent. above the Indian standard loading of 1903, having regard to the probable requirements of the future.

East Africa.

The annual report for 1911-12 states, of the Uganda Railway, that the capital cost of the system, excluding suspense account, now stands at £5,456,381, and including cost of steamers on Lake Victoria and works added from funds provided in the annual estimates, amounts to a gross total of £5,753,476. In addition, £98,486 was drawn against the completion of the Busoga Railway, which, although open for traffic and showing promise, will not be completed till the rails reach the terminus at Namasagali, the port a few miles lower down the river, and one more suitable for Nile navigation, than Kakindu, the terminus originally proposed.

During the year under review, the total revenue earned amounted to £360,224, as against £300,116 in 1910-11, showing an increase of 20 per cent., and the total expenditure of £228,852 as against £201,596, an increase of 13½ per cent. The profit is £131,372, as against £98,519 in the previous year, and the net increase is £32,853, or 33 per cent. This must be considered satisfactory, and shows that the development in traffic is progressive and fully sustained.

The railway accommodation has been overtaken by the traffic. Towards the end of the year a great amount of produce was held up at the ports on the lake. At Kisumu alone, it was reported that there were 1,500 tons, and some of the ocean steamers had to leave without full cargoes. More rolling stock is being provided, but the process takes time.

Nyasaland.

The British Central Africa Railway Co., Ltd., is arranging that when it has completed the railway between Port Herald and the Zambesi under its concession from the Portuguese Government, the Shire Highlands Railway Co. shall operate and maintain it. There are obvious conveniences in the administration of this line in connection with the existing railway.

It has been arranged that the Nyasaland Government will not exercise its right of expropriation of the railway before 1 January, 1937.

Nigeria.

In connection with the Durbar of the Northern Nigeria Emirs which was held by Sir Frederick Lugard at Kano on the 1st of January, the railway share of the transport arrangements consisted

in conveying 2,734 passengers, Chiefs and their followers from territories adjacent to the line, in 61 high-sided bogies and other vehicles. Twenty-two vehicles were also sent to Kano containing troops, and 16 vehicles with Europeans.

All these vehicles were made up into special trains, and in addition to these, a considerable number of passengers travelled by the ordinary trains.

The numbers that assembled to greet the Governor were computed to be 20,000 horsemen and 40,000 foot, and to those who had never seen before gatherings of the Mahomedan peoples of Central Africa the sight was absolutely unique.

The record trip so far on the railway was made in connection with the Durbar. A special train left Kano with Southern Nigeria officials at noon on Saturday and steamed into Iddo, 712 miles, by 7.30 a.m. on Monday morning. This is quite respectable going in any country.

A really extraordinary rush of traffic has taken the railway by surprise at Kano, as, although it was fully expected that Kano trade would develop rapidly, it was hardly anticipated that during what is practically the first full season of the line being really open for traffic, a trade in ground nuts would spring up which would severely tax the resources of the railway, in addition to the large amount of other traffic, which is expected about this season on the southern section. The European merchants from Lagos have now fully realised the possibilities of the interior and all the principal firms have now established themselves at Kano. It is expected that both the lines to Baro and Lagos will be fully occupied in dealing with this traffic for the next two or three months.

The palm kernel crop this year is apparently a somewhat doubtful quantity owing to the excessive dry weather and prolonged harmattan. There is very little oil yet in the nuts and very few purchases have been made so far of oil, by at any rate one of the leading firms dealing with this trade. Of course there is a large reserve of unharvested last season nuts which may come in even if this year's crop does turn out to be short.

It has been decided to take in hand an extensive remodelling of Iddo Yard in order to provide the very much needed extra facilities for dealing with traffic at this port. The work is far from easy as the available "good" land is very restricted.

The extension of the Bauchi line from railhead to Bukuru has already been commenced. This line will of course solve many vexed transport problems.

The amalgamation of the railways has taken place, and from 1st January, 1913, all the railway accounts are dealt with by the Nigerian Railway accounting staff, and as a matter of convenience

through the Southern Nigeria Treasury. Southern Nigeria is debited with payments, and any financial adjustments required pending amalgamation of the possessions are to be carried out locally.

An increase in nett revenue of £20,000 is shown in the interim report on the Lagos-Minna section for the first half of 1912. This is very satisfactory considering the small traffic on the new Jebba-Minna extension which was opened on the 1st January, 1912. Goods traffic accounted for most of the extra revenue, the season having been a good one for palm kernels, oil and cotton, all of which show increases. It is instructive to note an addition of 65 per cent to the number of third class passengers, principally owing to a reduction in fares.

Much better progress has been made of late with the construction of the important bridge over the south channel of the River Niger at Jebba. Passengers and rolling stock are at present transported by means of a ferry. The new structure comprises seven spans of 183 feet overall, and is probably the largest bridge in the whole of West Africa. Several of the piers and one abutment are finished completely, while the remainder of the work is in a forward state. April, 1914, is the date officially given for completion, but every effort is being made to finish the bridge by the end of the current year. As the northern channel of the Niger is spanned already, the completion of the new bridge will result in joining the two sections of the 800-mile railway which stretches from Lagos to Kano, thereby greatly increasing its value from a strategic standpoint. Moreover, the bridge will effect a considerable saving in time, as the present transport by means of the ferry is, naturally, a lengthy operation.

The 2 feet 6 inches gauge line from Zaria to the tinfields of Northern Nigeria is being extended from Rahamma, its present terminus to Bukaru. This new length will pass close to Naraguta, which is in the centre of the chief tin producing area. The gauge of this line will be altered gradually to 3 feet 6 inches. The desirability of avoiding a break of gauge was fully realised at the construction stage. Lack of funds, however, then made the question one, not of alternative gauges but of a 2 feet 6 inches line or none at all. Fortunately the bridges, culverts, etc., were made suitable for the wider gauge so that the conversion process should not be difficult. This work will be taken in hand at once on the section from Zaria to Duchi-N-Wai, a distance of 42 miles.

Lagos Harbour Works.

Satisfactory progress was made with the Moles in the second half of 1912, bringing the length of the East Mole to 8,009 feet and that of the West Mole to 1,072. Additional plant for the output of stone is on order and will greatly expedite the work next year.

The increased volume of the ebb tides due to the larger fresh water discharge during August, September and October led to an increase of draught and the direct or weather channel again opened, but owing to an exceptionally low rainfall the "fresh" discharge was considerably less than usual, and it was only possible to raise the draught gradually.

The order for the reclamation craft has been placed with Messrs. Fleming & Ferguson, and it is anticipated will be ready in July next.

The Railway Systems of West Africa. By CAPT. H. O. MANCE, D.S.O., R.E.

This lecture has been reprinted from the Journal of the Royal United Service Institution. Capt. Mance had a great part in the construction of the Baro-Kano Railway and was almost the only man who foresaw the rapid development of its traffic. The paper sets out the general factors which govern the location of railways in West Africa. It will usually pay quickest to build railways in more populous districts, and it is pointed out that Nigeria is by far the most densely populated part of West Africa. It may be politic to undertake a route which is more costly to construct by reason of physical difficulties, in order to attain lower ultimate expenses. The additional expenditure may be devoted to obtaining a shorter line through more difficult country, or to reducing the ruling grade. It is hardly necessary to point out that the added charge on traffic due to interest on increased capital expenditure remains constant, and the extra cost per ton mile therefore becomes less as the traffic increases, so that at a certain stage of development this extra cost is more than covered by the reduction of working expenses. A happy mean in this respect has been attained in Northern Nigeria on the Baro-Kano Railway. Here expenditure was not stinted where necessary to obtain the best possible grade, but in other respects a cheap line was constructed capable of being improved as traffic increases. This type of line is destined to play an important part in the development of West Africa.

A very useful account is given of the French and German Railway enterprises, as well as of the British. Capt. Mance considers that, even without artificial improvements to navigation, the Niger will be a formidable competitor of the Lagos Railway. Forcados, the ocean port for the Niger traffic, is a good harbour, accessible over a 19 ft. bar. From this port two independent lines of sternwheelers serve the Niger and Benue. Baro, the starting point of the Northern Nigerian Railway, has always been accessible during two and a half months by steamers drawing 11 feet and conveying 1,000 tons of cargo for nine and a half months by sternwheelers drawing four feet and conveying 200 tons of cargo; and all the year round by launches drawing two feet. The author discusses various extension

schemes and the influence on railway policy, which the foreign lines will exercise. As to Southern Nigeria he observes that the dense population will no doubt justify the construction of local lines not forming part of the main arteries of communication with the interior. To the east of the Niger a line some 60 miles long has been surveyed to connect Onitsha with the Udi coalfields, which are believed to be of considerable value. This line, if built, must obviously also connect with other future lines east of the Niger. A future line might run from Warri *via* Benin, with cross connections between the western line and Onitsha, Lokoja or Baro. Nor is it likely that the densest population of all round Ikot Ekpene will be left undeveloped; and whether this area will be best served by a line from a secondary coast port such as Bonny or Opobo, or by a line from the head of the permanent Cross River navigation at Itu, will be an interesting point.

The importance of improving the Lagos bar is shewn by the terms of the recent coal contract, under which the rates of freight vary considerably according to the draft of water.

Labour on the Gold Coast.

Mr. G. Marshall Harris, who was employed on the construction of the Accra Akwapim Railway, made some interesting remarks anent labour conditions on the Gold Coast in the course of an address to the members of the Institute of Civil Engineers of Ireland. The paper was reproduced in a recent issue of "South African Engineering," from which the following is taken:—

"After the arrival of the first party (*i.e.*, to construct the railway) considerable difficulty was experienced in getting together any local labour at all, and it was not until, at great expense, a large party of "boys" was brought down under a twelve months' agreement from the Kru coast that a start could be made. This agreement, or indentured labour, served a good purpose at the time, as it inspired confidence in the local "boys," who, when they had observed that payments were regularly made, came on in as large numbers as required, and they subsequently proved to be the better labourers. Among the West African natives are men gifted with intelligence of a high order, and in Accra are to be found craftsmen of nearly every kind, who, with a little direction, are capable of turning out excellent work. The ordinary labourers take to pick and shovel work well. They will not, however, under any circumstances, use wheelbarrows; everything is carried on their heads.

"Female labour is available, and was largely used in carrying of all kinds, including the water for the concrete, the concrete when mixed, and the earth from the cuttings and for the banks. The

women are very satisfactory, and are, as a rule, more industrious than the men. They will not, however, go far from the towns or villages. The earth is carried in baskets holding about 55 lbs. when heaped up; the usual average working quantity would be between 30 and 40 lbs. Native-made baskets can be procured readily; they are made from a strong vegetable fibre plaited, but they are neither so strong nor so well liked by the natives themselves as specially imported English baskets. These are of a wicker-work construction, and last much longer than the native baskets. Both the water and the mixed concrete are carried in ordinary galvanised iron buckets. One or two head women go with each gang of twenty or more. They usually give a hand in lifting the loaded baskets on to the carriers' heads. The boys do the pick and shovel work, fill the baskets, make the concrete, and fill the buckets. If ahead of their work, they will often help the carriers to get their loads up. A head boy or a second head boy will not, however, give any such assistance in the same way as a head woman will. If there is no other assistance at hand, the carriers help one another, and will stoop down with their loads on their heads to assist each other.

“Most of the stone-breaking for the concrete was done by female labour. The women are particularly fond of this work, though not very expert at it. They are, however, more satisfactory at the stone-breaking than boys, as they like the work and are more industrious. The women like working, and are keen on making money, but they are independent of this class of labour. There is no poverty in the country; neither men, women nor children need go hungry. The ordinary rate for women is 1s. per day, and for boys from 1s. 3d. to 1s. 6d. Skilled native labour is dear: good carpenters get up to 5s., blacksmiths and fitters more than this. The ordinary labourers come from various tribes, speaking different languages. Nearly all speak and understand a kind of English, only to be learned on the coast.

“The ordinary hours of work were from 6 a.m. to 11 a.m. and from 1 p.m. to 5.30 p.m. Saturday was a half holiday, work ceasing at 1 o'clock. This made a 54-hours' week. The boys are slow and lazy, and require a great deal of supervision; but some things they will do very well if left to themselves, when they know exactly what they have to do, as when lifting or shifting heavy articles without tackle. In such cases plain directions, with a promise of a shilling or so, or of an hour off when the work is done, give the best results. Nothing is gained by the white man trying to drive them. This must be done through their headmen. In keeping them in good humour lies the secret of getting good work out of them. They very rarely get hurt, notwithstanding the dangerous methods of working

and the careless and unnecessary way in which they expose themselves. Slow in thought and movement as they are, they are quite wonderful in their appreciation of impending danger, and remarkably quick in avoiding it."

Six sheets of a Secondeed Town Survey have been printed by Messrs. W. & A. K. Johnston, Edinburgh, and maps are being printed of Coomassie, Tarquah, Dunkwa, Winnetah, Saltpond and Kibbi.

Freetown Jetties.

A considerable extension of the lighterage accommodation at Freetown has been approved and is being put in hand at once. The two existing jetties will have their effective berthage lengths of 67 feet doubled and a new jetty with 120 feet of berthage on either side will be constructed at the eastern end of Government Wharf. In order to disturb as little as possible the trade of the port, the new jetty will be built before the extensions are taken in hand. In all probability the larger scheme for an export wharf at Fourah Bay will be deferred until these jetty works are completed.

St. Helena.

The wharf wall at Jamestown is badly situated. This is true in a double sense, for not only is the structure sadly in need of repair but it is also badly placed in that it faces north-west and is thus exposed to the full force of the Atlantic "rollers." An engineer has been sent out from England to consider the best means of effecting permanent repairs. To effect even temporary repairs has proved hitherto, to be beyond the resources of the Colony as regards skilled labour. Consequently, any scheme devised by the engineer will have, in all likelihood, to include the supply, from England, of the requisite labour, plant and materials, except sand and stone.

Trinidad.

The cost of the proposed Port of Spain station will substantially exceed the estimate, but the Committee to which the question was referred was of opinion that the entire scheme should be carried out. The present accommodation is inadequate for even the existing traffic, and as the colony in the course of a few years may become an important oil exporter it is prudent to allow for expansion.

Cyprus.

Mr. F. Bedford Glasier has visited Cyprus to report on the railway (gauge 2 feet 6 inches), and reports that the cost of construction at £1,641 per mile was distinctly low and that the supervision was careful and efficient. The line however is subject to severe competition by jack donkeys and camels, mule and bullock carts. The

third class fare is at the rate of two-thirds of a penny per mile, and it may be politic to reduce this to attract passengers. The competing cart traffic takes all commodities at the same charge as the line, and at present full trainloads are not secured. An extension to Evrykhou has been proposed (15 miles) as likely to increase the traffic; this would also give easier access to Troodos, which is 23 miles from Evrykhou. Larnaca has claims to be connected by rail with Nicosia, but being an open roadstead it does not possess the natural advantage of Famagusta, which was the ancient port of the Island till in 1571 the Turks closed it for strategical reasons, and it has not participated in the large increase of trade which has taken place during the last six or seven years.

Wireless Telegraphy in Trinidad.

It is stated in the annual report that uninterrupted communication was maintained during the year between the wireless stations at Trinidad and Tobago, which are owned and operated by the Government, and the transmission of messages was not materially affected by atmospheric disturbances. The Trinidad station is situated at North Post, some 9 miles from Port of Spain, communication being maintained by telephone.

Frequent communications were held with the United States Naval Station at San Juan, Porto Rico, distant some 550 nautical miles. Communication has also been held occasionally with the Direct West India Cable Company's ship-to-shore station at Bowden, Jamaica, distant 950 nautical miles, but the power of the installations both at Trinidad and Jamaica is not sufficient to ensure reliable results over such a distance. Messages were also exchanged under favourable conditions with Royal Mail Steamers up to 1,200 miles. During the day time communications were exchanged with H.M.S. "Aeolus" at every West Indian Island south of, and including, St. Kitts, and during the night messages were exchanged with her at Jamaica, Great Cayman and Bermuda.

The installation of a higher power ship-to-shore station at Port of Spain, with an apparatus of a more up-to-date character, has been decided on and will be undertaken during the current year. This will put an end to the present inconvenience inseparable from a station nine miles distant from headquarters, and the higher power of the new station will render communication easier and more certain.

The expenditure on wireless establishments in the colony during 1911-12 amounted in all to £1,075, while the revenue (including £100 paid by the Government for the transmission of the daily telegraphic news bulletin to Tobago), was £439. The number of messages passed at the Trinidad station was 1,461, and at the Tobago station 546. It is evident that a light power installation such as the

present one cannot be expected to pay. It fills up a gap in the cable system, but could not compete with it.

It is not the case, as reported, that His Majesty's Government have contemplated any scheme for the erection from Imperial funds of a wireless telegraph station in the West Indies.

Automatic Telephones.

According to Messrs. Preece, Cardew and Snell, the use of automatic systems for telephone exchanges is undoubtedly extending not only in America and Great Britain but also in Europe, while the Governments of Australia, New Zealand and South Africa have lately decided to install trial plants. It has not been demonstrated clearly so far that an automatic system is more economical than a manual system, but there is good reason to believe that such may be proved to be the case. It is noteworthy that, with one exception, namely Cuba, the automatic system has been tried only in temperate climates. It is to be feared that the satisfactory working of such exchanges would be interfered with by the hot damp atmosphere of the tropics and, more particularly, by the profuseness of the vegetation. The latter is a great drawback because all automatic systems are similar in that the subscriber's lines are permanently connected to the main battery. If, therefore, any wire comes into contact with the branches, or even leaves of trees, current flows through the line and part of the automatic apparatus, thus causing the apparatus to operate, possibly disturbing connections already made, or adding impulses when not required and making wrong connections. It is, therefore, absolutely essential that all lines are either kept entirely free of vegetation or placed underground.

The two systems which have been most used are those supplied by the Automatic Telephone Company and Siemens Bros. Both the systems, which are based on the fundamental Strowger patents, are now working in London, a 200-line exchange at the General Post Office and a similar one at Siemens' works. Possibly the Siemens system, which is in use all over Germany and Austria, is the more likely to succeed in the tropics, because in this system the various relays and other important apparatus are mounted on separate bases, easily removable from the frames, with the result that they are easier to clean, to inspect and to keep in working order. On the other hand the American system has been at work in Havana on the Island of Cuba for the last eighteen months or two years, and, so far as is known, is giving satisfaction. Where the automatic system is adopted in the tropics the Government should insist on the Contractors supplying a trained mechanic to take charge of the installation, and undertaking the maintenance for three years.

Contingencies.

It is of the highest importance that the item "Contingencies," which invariably appears in estimates for the construction of railways and similar undertakings, should be strictly reserved for contingencies. This term properly covers works found to be necessary and ordered to be included subsequent to the preparation of the estimate and of such a nature as cannot well be charged to any sub-head. A case has arisen recently in which a resident engineer had debited Contingencies with excess expenditure on Bridges and Telegraphs. This is a bad policy, for the reason that it destroys all record of the actual cost of the several items of construction. This is information which may be of the greatest value when further works of a similar character come to be undertaken in the locality. It is true, and rightly so, that the engineer in charge of a work abhors excesses, but it is recognised that estimates, even when endorsed by experts, are not infallible. When it is found on completion that the savings on certain sub-heads, assisted, if necessary, by the surplus left over from Contingencies, balance the excesses on other items, so that the work as a whole has been constructed within the estimate, the result must be deemed satisfactory.

Wireless Telegraphy in the Falklands.

Seldom has expenditure been justified so promptly as in the case of the wireless station recently erected by the Marconi Company in the Falkland Islands. On the 23rd of September, 1912, the station first established communication with the outer world and only seven weeks later the operator picked up the distress signals sent out by the stranded liner "Oravia." Tugs and launches proceeded at once to the scene of the disaster, the passengers being reassured meanwhile by the promises of help which came through by wireless. All the passengers were taken off without delay. Later, the captain sent an urgent message for immediate assistance as he felt obliged to abandon the vessel. The officers and crew and a large part of the mails were then removed. Altogether 400 people were rescued and as the population of Port Stanley numbers only 900 it was a considerable undertaking to make the necessary provision. Happily it was possible, by means of the wireless, to divert one of the Peninsular Steam Navigation Co.'s liners which, by carrying on the third class passengers to South America, relieved the strain on the Islanders' resources. The remainder were taken on later to their destinations. The Governor and people may well be proud, not only of this exploit, but of having broken down that terrible isolation which, hitherto, had cut them off from the rest of the world.

Internal Combustion Locomotive.

The South Australian Railways Commission has bought a locomotive of this kind for the haulage of traffic on light lines. The engine was ordered from Messrs. Ironside, Son and Dyckerhoff, of London, and is a 100 h.p. machine, and is capable of hauling 50 tons of loading at eight miles per hour on a grade of 1 in 70. Others will no doubt be ordered if this one is successful. They are particularly convenient on lines which are ill-supplied with water.

Modern Locomotives.

The tendency on colonial railways is to increase the weight and power. Produce is more important than passengers, and ability to draw heavy loads is more important than speed on such lines. It is economical, especially when local expenses are comparatively high, to run as few trains as possible, and to make up for this by making them capacious. The practical limit is the strength of the permanent way, and it is prudent to allow for this whenever the freight traffic is likely to grow. The Mallet engines used in the United States reach an axle-weight of 50,000 lbs. It is an additional convenience that large locomotives carry big supplies of coal and water, a very important consideration in some districts.

Wimperis Accelerometer.

This is an invention by Mr. H. E. Wimperis, A.M.I.C.E., M.I.E.E., of the Crown Agents' Office, and we are glad to find that it has been found successful on the South African Railways. Mr. Hoy reports on it as follows:—

“A small and inexpensive instrument, and one that should prove of great value to the Administration, has recently been purchased. This instrument—the Wimperis accelerometer—can be used for two purposes, either for recording acceleration and retardation of speed, enabling the tractive effort to be measured at all speeds, or as an equilibrat for recording the nature of the lay-out of the line and the extent to which the centrifugal force on curves is counteracted by the super-elevation of the outer rail. By its use it will be possible to determine the maximum permissible speeds, without exceeding the limits of safety, for all curves and straight track. Another useful feature of the instrument is that it detects and records all breaks of curvature, uneven packing and slacks in the track.”

Percolation Tests on Cement Mortars treated with Water-proofing Compounds.

The conclusion from tests made by the National Physical Laboratory appears to be that, with a mixture of two of sand to one

of cement, and a thickness of two inches under a pressure of 15 lbs. per square inch, no advantage is to be gained by the use of a waterproofing compound.

Renewal Funds.

These are not usual with state railways in Crown Colonies. The argument for the omission is that the depreciation is compensated for by the increase of general revenue caused by the railway. Such lines are an appreciating property. In India there are no renewal funds. But looking at a railway as a separate undertaking a renewal fund is necessary, especially during the first ten or fifteen years, when the annual cost of repairs is below what it will be eventually, and it may be advisable even in the case of a government line if it is built for a special and temporary purpose. Thus on the Gold Coast such a fund was in existence for a brief period in view of the importance of the mines, which might not be permanent, but was abolished when the growth of general trade put this consideration in the background. In self-governing colonies renewal funds are generally made obligatory, but this is part of the system for maintaining the credit of a colony as a borrower.

MEDICAL NOTES.

Blackwater.

The Secretary of State has asked for a special annual report on cases of this disease in the West and East African possessions, and the circular and replies are published in Cd. 6514. A report by Dr. W. M. Graham, Director of the Medical Research Institute, Lagos, published separately, discusses the evidence relating to the disease generally. The ætiology is unknown, in other words, the cause has not been discovered. It is not likely that the disease is malarial fever, with other symptoms added, for it is not always accompanied by malarial parasites. The favoured hypothesis is that "an unstable condition of the blood is produced by repeated or badly treated attacks of malarial fever, and that once this condition is produced a dose of quinine determines an hæmolysis, and this produces hæmoglobinuria." But there does not seem to be the direct ratio which one would expect in this case between the incidence and severity of malarial fever and blackwater. It may be caused by infection with a specific organism; but no such organism has been found, though a very thorough search has been made, and it does not appear that there is any incubation period within fixed limits. It may, however, be a specific disease, transmitted in some way not yet discovered, and there is a general belief that there is some link between the disease and sexual relations with native women.

Yellow Fever.

The Secretary of State has appointed a Commission to enquire into the question whether yellow fever exists in West Africa, and if so, what is its relation to other fevers. The members are: Sir J. K. Fowler, M.D., K.C.V.O. (Chairman); Major Sir Ronald Ross, M.D., K.C.B., I.M.S. (retired), F.R.S.; and Professor W. J. Simpson, M.D., C.M.G.; Mr. A. Fiddian, of the Colonial Office, has been appointed Secretary; and Mr. T. F. G. Mayer, M.R.C.S., L.R.C.P., Assistant Secretary.

Imperial Bureau of Entomology.

This Bureau has been established by the Secretary of State ; it is controlled by an honorary managing committee, which is composed of the same members as the present Entomological Research Committee ; and Mr. G. A. K. Marshall, the Scientific Secretary of the Committee, has been appointed Director. The Head Office is at the British Museum (Natural History), Cromwell Road, S.W. The funds for the purpose are contributed by the Imperial Treasury, the Dominions and many of the Crown Colonies.

Sleeping Sickness.

The Liverpool Annals of Tropical Medicine, in an article on the trypanosomes found in game and domestic animals in the Luangwa Valley, North Eastern Rhodesia, estimate that the percentage of game infected was 50 at one place, and 35 at another. Different species of buck appeared to vary greatly in susceptibility ; trypanosomes were now found in zebra, buffalo, wildebeest and bushpig, and only rarely in roan, hartebeest, huku, impala and warthog. Waterbuck, eland, bushbuck and kudu were the species found to be most heavily infected. To some extent these differences may be accounted for by the habitats of the animals, as those most affected are usually found in thick cover, where they are more exposed to the bites of tsetse flies than in the open, but probably specific differences in the degree of immunity are of much greater importance. It is remarkable that all the animals shot appeared to be in perfect condition, and presented no objective signs of disease. Evidently their tolerance to trypanosomes is very great. Unfortunately this is not the case with cattle and goats.

Dr. Warrington Yorke, in his address at Liverpool delivered after his research expedition in Rhodesia, contended that the big game is the reservoir of the human infection. It is true that observations taken from domestic animals are scanty, but this is not because they do not harbour human trypanosomes ; the point is that, at any rate, in Rhodesia, the parasite rapidly destroys such animals, while the big game live on and remain a source of danger. It is of course impossible to kill off the wild animals generally, but it is suggested that they should be exterminated in certain definite districts, and that after a couple of years or so a careful examination should be made in order to decide whether this process is effective.

Diseases of East Indians in British Guiana.

A British Guiana medical report shows that on the Providence Plantation the death rate of East Indians was 16.9 per thousand and the birth rate 35.3. This excellent result shows what can be achieved by the curative and preventive treatment of ankylostomiasis

and malaria, the two main causes of sickness and death among the plantation coolies. An efficient system for the disposal of night soil to a great extent prevented re-infection with the former disease, and very satisfactory results were obtained from the use of thymol, which, when continued for many weeks, cured the disease completely without producing any ill effects. A thymol pulverette, coated with chocolate, is obtainable.

Larvicides.

In our last number reference was made to the uselessness of petroleum on wind-swept lands, and to the use of carbolic acid in British Guiana. Carbolic acid is used on the Panama Canal Zone, and the last report of the Jamaica Malaria Commission gives the following particulars of it:—

The formula of the larvacide now in use on the Canal Zone has been kindly furnished by the Chief Sanitary Officer who states:—

“It can be used effectively in moving water as well as in continuous rainy periods and can be kept standardized. It loses its larvicidal properties soon after being applied. It kills all mosquito larvæ in a few minutes, while petroleum may take half an hour or more to affect the larvæ. Unless the film of petroleum is complete it is not effective. Also the petroleum film may be blown or washed away before becoming effective, while the larvacide affects the larvæ at once. Petroleum, as used here, will often unite with algæ and form a layer which breaks up in about a week and sinks.”

FORMULA FOR THE MANUFACTURE OF “LARVACIDE.”

150 U.S. gallons of crude carbolic acid, specific gravity not greater than .96 and containing not less than 15 per cent. of phenols and cresols, is heated to the boiling point of water, when 200 lbs. of powdered resin is added and constantly stirred until dissolved. Then 30 lbs. of caustic soda is added. The mixture is kept at the boiling point of water and stirred until it is in solution, when tests of a small portion in a test tube are made with water until perfect emulsion is attained. The larvacide is then ready for use.

The cost of this mixture varies with the price of the carbolic, but is usually about 20 cents a gallon.

In this connection Dr. Macdonald states:—

“The cyanide floating soluble pills recommended by some authorities, and larvicides in which carbolic and similar products in crude and emulsified form are component parts, require to be carefully considered in relation to plant life as well as to the life of fish and other natural enemies of the mosquito which abound in swamps and streams. On the whole crude kerosine oil is open to

the fewest objections, and is the most easily applied. A few rags on the end of a stick dipped in the tin and splashed on the surface of the water will form a film over a large space and one man can oil a considerable area in a single day. As the larvæ take on an average from five to seven days to breed out oiling twice a week is recommended.

"There is a larvicide that is greatly ignored, which is none other than the readily available elbow grease. It has been found by observation in certain stretches of gully in Kingston where double channelling was not possible that constant policing and moving on of possible Anopheline eggs and larvæ has prevented breeding out as effectually as in the stretches where weekly changing of the channels was carried out.

"It is possible if a weekly sweeping with pepper-rod brooms of irrigation channels in plantations is consistent with economy that even kerosine might in certain situations be dispensed with.

"The main theme in mosquito limitation is *persistence*; the mosquito must have nowhere to lay its head or rather eggs; and the constant moving on will beat it in the end."

East Africa.

The annual report comments on the large number of affections of the digestive system in the coast zone. The causes of these were variously ascribed to the admittedly bad quality of the grain exposed for sale, bad cooking, the effect of the dust which pervades the town of Mombasa during the dry season, and to chills induced by the cold land breeze which blows in the early hours of the morning. Enteritis, diarrhoea and tonsilitis were on the increase, being especially prevalent in Mombasa and Malindi during the month of January. Respiratory diseases, local injuries, and ulcers accounted for a large number of cases. One of the most noticeable features in Lamu is the amount of lunacy, mostly found amongst the old Arab families. This is probably largely due to the intermarriage of families, and to bhang and opium smoking, the bad effects of which are very apparent. There has also been an increase of diseases attributable to the agency of insects, and of dysentery. The sanitation of Mombasa is very bad, but the introduction of a pipe supply should lead to a definite drainage scheme. In the mountainous zone there is more malaria than there should be. It exists in places in which it should never have been allowed to get a hold, and yearly is a cause of a heavy mortality amongst Africans and Asiatics. The reason for this state of matters is two-fold: in the townships insufficient drains, not only public ones, but the almost total absence of domestic drains connecting houses with the roadside channels; and everywhere, owing to the race for development, a tendency to disregard the

unremunerative expense that sanitary reform entails, and the unproductive waste of time involved in keeping compounds in order. The attitude of the native towards mosquitoes is, of course, perfectly hopeless.

Enteric fever again showed an increase in the number of cases over last year. Though it is always difficult to trace the source of the infection, it is thought that the majority of patients contracted the disease from drinking water from streams which were known to be polluted. Contamination of food by flies and domestic agencies, and by dust storms in dry weather, all seemed possible sources of infection. During the year Nairobi was visited by its third visitation of plague. The epidemic lasted from the 3rd of May to the 16th of September. It originated in one of the back streets of the Indian Bazaar. In all there were 39 cases, 22 of whom died. Sporadic cases occurred further down the railway line, at Ulu, but its extension was controlled. The total death rate from this cause was 56.4 per cent. Each year makes it more certain that Ukambani may be regarded as one of the endemic centres of plague in the Protectorate.

Dysentery is also rife, generally during the rainy seasons in these highlands. The same causes may be given as at the coast. There was an undue amount of chicken-pox, usually looked upon as the precursor of small-pox, of which there was, fortunately, only one case in the prison.

In the Kenia and Nyanza Provinces malaria was especially prevalent; in both it is indigenous and frequent. Kisumu experienced its usual visitation of the plague, and the death rate among the cases was 76.56 per cent. Everything that was possible appears to have been done to improve this district.

Vaccine.

A vaccine farm instituted at Acera has been very successful, obtaining 90 per cent. of successes in vaccination. Lagos, however, would be the better position for such an establishment for the needs of West African colonies, as calves could be easily imported from Northern Nigeria, and there is cold storage, with greater transport facilities. The frequent failures of lymph sent overseas render such an establishment very desirable.

Snake Bite and its scientific treatment. By F. W. FITZSIMONS, F.Z.S., F.R.M.S. (*Longmans, Green & Co., 1s.*)

Immediate treatment is of course necessary in the case of snake bite, and a delay of a few minutes may mean the difference between life and death. The permanganate of potash application is a first aid remedy only and cannot be relied on to affect a cure. The real

antidote to the poison is anti-venomous serum, and this has only recently been prepared in a way which secures a high degree of anti-toxic value. It must be injected as quickly as possible after the application of permanganate, but the difficulty is that it is hardly ever available when wanted. The author has patented an outfit which contains in a small space everything which is required. The first-aid apparatus part of it can be carried in a waistcoat pocket, the rest comprises the ante-venomous serum, antiseptics, syringe and needles and other items. The mode of treatment is clearly explained in the book.

Drugs.

The cultivation of medicinal plants has been brought forward by several witnesses before the Dominions Royal Commission. In the British Pharmacopœia there are 147 drugs and chemicals of vegetable origin, and much special care is necessary for their proper production. Mr. J. H. E. Evans explained that the better the cultivation the greater the medicinal value of the plant, hence the higher money value. This is well shown by the comparative prices of medicinal herbs grown in England and in parts of the continent. Not only are the former richer in active principles, but they are dried and prepared for the market with more care, and also are free from admixture with foreign plants. Hence they demand in many cases four or five times the price. The cultivation of medicinal drugs is at present very largely the monopoly of countries outside the British Empire. Such cultivation, although requiring more skill than agriculture, is more profitable to the cultivators and labourers. The acreage required is not great and the crops can be handled as part of a general agricultural estate. England has been the great clearing house for the drug trade of the world; the cultivation of drugs in the Dutch and German colonies, and also in the United States of America, is, however, gradually attracting the trade away; direct transport from different parts of the world to the various centres of production has a similar effect. Cultivation in our Colonies would help their ports and shipping, as well as preserving the carrying trade for our Empire. Our Colonies also import now a great number of drugs which they could easily produce for themselves. Improvements in cultivation and increased output of material leads to the cheapening of the drug and consequent increase in use; in addition, with abundant supplies of raw material, new uses are often found for it in medicine and also in industries allied thereto. The following are instances of drug culture outside the country of origin, and prove the possibilities of using land otherwise unproductive for this purpose. Cinchona bark is the typical instance of the success which may attend

systematic and scientific drug cultivation. Indigenous to South America, attempts were made to cultivate this tree in India and Ceylon for the sake of its quinine; the efforts failed principally owing to failure to select the right species. The cultivation was undertaken by the Dutch Government in Java with the most satisfactory results, and the total output of bark from that district in 1911 was 19,000,000 lbs. The bark is worth 3d. to 4d. per lb. Coca leaves, also indigenous to South America, are now cultivated with success in Ceylon, Java and the West Indies. Had it not been for this cultivation, the supplies of this crude drug, which yields the important alkaloid cocaine, would have long ago been exhausted. Ipecacuanha, indigenous to Brazil, is now cultivated successfully in Selangor. A large proportion of our supplies come from that State. As the cultivation and collection in Brazil has recently been neglected for the more profitable harvesting of rubber, the additional source of supply is valuable, and the cultivation might be well extended to other localities. Kola nuts, yielding caffeine, indigenous to West Africa, are now cultivated in Ceylon. Cultivation and systematic collection in or near the country of origin provides us with many drugs in regular supply and of good quality. Typical examples are:—Senna leaves from India, buchu from South Africa, aloes from East and South Africa and West Indies, camphor from China and Japan, olive oil from southern Europe, sarsaparilla from Central America, nux vomica from India, opium from Turkey: various medicinal plants in Great Britain, but in limited quantities only.

Mr. E. M. Holmes, Curator of the Museum of the Pharmaceutical Society of Great Britain, stated that the conditions for successful culture can only be determined under experimental conditions, which the pioneer cannot afford to spend time on. A bureau of plant industry is therefore required to work in connection with already established botanical gardens, where the methods of reproduction by seed or cuttings, have already been ascertained. But the means of obtaining the greatest yield of products, and the problems of disease, whether insect or fungoid, require in the bureau of plant industry the services of a good horticulturist, an entomologist, and a mycologist, as well as a chemist, to ascertain the ingredients of the soil, and those required by the plant, and to obtain data as to the amount of active principles obtainable under the use of different soils and manures. These conditions have been ascertained concerning several American medicinal plants by the Bureau of Plant Industry in the United States, and experiments have been made with other plants in Germany, Austria, et cetera, and by the Dutch in Java. Various reports on the cultivation of tropical plants have appeared in the "Tropical Agriculturist" and the Kew Bulletins. A good deal of information concerning the cultivation of medicinal plants in Great

Britain has also been published in the Journal of the Pharmaceutical Society, all of which should be useful to those Colonies who wish to cultivate British plants, such as henbane, belladonna, aconite, peppermint, lavender, carraway, dill, digitalis, camomile, rose, rhubarb root, et cetera.

It would not be a difficult matter to extend the operations of the Government Botanical Gardens more to the cultivation of drugs, but the careful labour, requiring as it would, special attention and observation, would not be easy to find in the tropical Colonies. This is the difficulty in the way of producing high class tobaccos. Drugs are at present largely produced in countries where the labour is experienced and skilled for such purposes, and where great staple products do not monopolise the working population. Moreover there is little evidence to show what profit there is in the drug growing industry. Quinine, for instance, is now so low in price that the cultivation hardly pays. It used to be produced in Jamaica, but has now been ousted by products which pay better.

RECENT TRANSFERS AND PROMOTIONS MADE BY THE SECRETARY OF STATE.

- Mr. T. A. V. BEST (Colonial Secretary, Falkland Islands), Colonial Secretary, Leeward Islands.
- Capt. J. QUAYLE DICKSON, D.S.O. (Resident Commissioner Gilbert and Ellice Islands Protectorate), Colonial Secretary, Falkland Islands.
- Mr. G. A. GOODMAN (Attorney General, Barbados), Attorney General, Straits.
- Mr. E. V. PARODI (Puisne Judge, Northern Nigeria), Circuit and Protectorate Judge, Sierra Leone.
- Mr. T. W. HAYCRAFT (Police Magistrate and Coroner, Gibraltar), Puisne Judge, Mauritius.
- Mr. C. REES DAVIES, (Attorney General, British Honduras), Solicitor General, British Guiana.
- Mr. H. K. M. SISNETT (Registrar General, British Honduras), Stipendiary Magistrate, British Guiana.
- Mr. W. P. MICHELIN (Cantonment Magistrate, Ashanti), Police Magistrate and Coroner, Gibraltar.
- Mr. M. F. J. McDONNELL (Assistant District Commissioner, Gold Coast), Police Magistrate, and Inspector of Schools. Gambia.
- Mr. C. K. BANCROFT (Assistant Mycologist, Malay States), Assistant Director of Science and Agriculture, British Guiana.
- Mr. A. H. KIRBY (Scientific Assistant to the Imperial Commissioner of Agriculture for the West Indies), Assistant Director of Agriculture, Southern Nigeria.
- Mr. F. W. SOUTH (Mycologist and Lecturer in Agriculture, Imperial Department of Agriculture, West Indies), Chief Agricultural Inspector, Malay States.

- Mr. HERBERT HOLLIS**, A.M.I.C.E. (First Class Superintendent of Public Works, Jamaica) Colonial, Engineer, Gambia.
- Capt. W. T. E. WALLACE** (Assistant Superintendent of Telegraphs, Uganda), Assistant Postmaster General, Gold Coast.
- Mr. V. J. MONPLAISIR** (Postmaster, St. Vincent), Provincial Postmaster, Southern Nigeria.
- Mr. E. J. WORTLEY** (Headmaster of the Farm School, Hope Gardens, Jamaica), Director of Agriculture, Bermuda.
- Mr. H. J. SANKEY** (District Forest Officer, Union of South Africa), Assistant Conservator of Forests, Southern Nigeria.
- Dr. T. H. MASSEY** (Medical Officer, St. Vincent), Medical Officer, East Africa Protectorate.
- Capt. H. W. PEEBLES** (late Assistant Resident, Northern Nigeria) Clerk to Commissioner, Dominica.
- Mr. LEON BELMAR** (Revenue Officer, St. Lucia), Assistant Treasurer, Sierra Leone.

BENSON'S

NEW MODEL—EXTRA THIN "FIELD" WATCH.

BEST LONDON MADE HALF CHRONOMETER.

Breguet Sprung and Adjusted for all climates. The Best Watch for Travellers, with improvements only to be found in Benson's make. 18-carat Gold Cases, any style, rich monogram included.

£25; in Silver, £15.

An owner writes: "It is a watch of incomparable excellence."

For men of active life the "Field" is the Watch beyond all others.

The Economical and Equitable

"Times" Monthly Payment System

IS AVAILABLE

Illustrated Book No. 1 of Watches from £2, Chains and Rings (with size card), &c., post free.

62 & 64, LUDGATE HILL, E.C.

AND 25, OLD BOND STREET, W.



UNWATCHED BUOY AND BEACON LIGHTS.

WIGHAM'S PATENT.

IMPROVED
DUPLEX
PETROLEUM
LAMPS.

CHEAPEST
IN FIRST COST
AND UPKEEP.



SUPPLIED TO
CROWN AGENTS.

ADMIRALTY.

COLONIAL
GOVERNMENTS.

CATALOGUE AND FULL PARTICULARS FROM SOLE MAKERS:—

**EDMUNDSONS LTD., STAFFORD WORKS,
DUBLIN.**

Cables, "EDMUNDSONS DUBLIN."

A B C Code, 5th Edition.

G. GARNETT & SONS, Ltd.,

WORSTED & WOOLLEN MANUFACTURERS,
APPERLEY BRIDGE, YORKSHIRE,
ENGLAND.

MANUFACTURERS OF
PURE INDIGO SERGES,
SUNPROOF SUITINGS
AND
FOREIGN SERVICE FLANNELS.

CONTRACTORS TO ALL
H.M. GOVERNMENT OFFICES.

SOLE MAKERS OF
“GARBIRNETT” AND
“GARBIRCORD” REGD.

The ideal cloth for hard wear, sports and all out-door purposes; made in white, cream, khaki, drabs, and all other up to date shades. Remarkable for strength and lightness. Rainproofed.

OFFICIALS ON LEAVE OF ABSENCE IN THIS COUNTRY WITH DATE OF EXPIRATION OF LEAVE.

—

This List is compiled from the Leave Certificates sent to the Crown Agents for the Colonies. The Editors will be glad to receive notice of any other cases of Colonial Officials on Long Leave.

—

GOLD COAST.

ADAMS, C. H. C. ...	2 <i>Apl.</i> , '13	DEIGHTON, R. C. ...	8 <i>May</i> , '13
ATTERBURY, J. L. ...	12 <i>May</i> , '13	DUGGAN, J. C....	7 <i>May</i> , '13
ARCHER, Capt. F. J. E. ...	12 <i>Apl.</i> , '13	FILGATE, D. L. N. M. ...	17 <i>June</i> , '13
ADAIR, Miss S. ...	12 <i>Apl.</i> , '13	FORD, A. G. ...	21 <i>Apl.</i> , '13
BURTON, W. ...	12 <i>May</i> , '13	GREER, H. O. ...	2 <i>Apl.</i> , '13
BOGGS, Dr. C. W. S. ...	7 <i>Apl.</i> , '13	GUSH, Dr. H. W. ...	11 <i>Apl.</i> , '13
BURNETT, W. ...	7 <i>June</i> , '13	GALLIVAN, J. ...	21 <i>Apl.</i> , '13
BALLANTINE, J. A. ...	27 <i>June</i> , '13	GOUGH, F. H. ...	18 <i>May</i> , '13
BURBRIDGE, K. G. ...	22 <i>May</i> , '13	HOBART, Capt. E. H. ...	14 <i>June</i> , '13
BURKE, B. ...	<i>Due Back</i>	HOLLOWAY, J. H. ...	28 <i>May</i> , '13
	13 <i>June</i> , '13	HARMAN, H. A. A. F. ...	7 <i>Apl.</i> , '13
BILTCLIFFE, H. R. ...	14 <i>Apl.</i> , '13	HARDING, Col. C. ...	13 <i>Apl.</i> , '13
BERKELEY, H. M. H. ...	16 <i>Apl.</i> , '13	HUNTER, Dr. C. B. ...	6 <i>May</i> , '13
BRECKENRIDGE, Capt.		INGRAM, J. ...	7 <i>June</i> , '13
T. W. ...	2 <i>Apl.</i> , '13	JOHNSTONE, W. ...	14 <i>June</i> , '13
BEARD, S. R. H. ...	14 <i>Apl.</i> , '13	JONES, P. N. H....	12 <i>June</i> , '13
CHATFIELD, K. R. ...	21 <i>Apl.</i> , '13	LEGGE, Capt. P. A. ...	28 <i>May</i> , '13
CHILD, E. A. ...	12 <i>May</i> , '13	LEVER, T. ...	20 <i>Apl.</i> , '13
COZENS-HARDY, E. W. ...	14 <i>June</i> , '13	LEIGH, Maj. A. H. C. W. ...	25 <i>May</i> , '13
CUTFIELD, A. J....	7 <i>June</i> , '13	LORDEN, C. ...	7 <i>June</i> , '13
CORNEY, L. G. ...	14 <i>June</i> , '13	LOWE, E. M. D....	7 <i>June</i> , '13
CLARIDGE, Dr. W. W. ...	4 <i>July</i> , '13	LEAT, F. W. ...	21 <i>June</i> , '13
DAVENPORT, F. V. ...	17 <i>June</i> , '13	MCDONNELL, M. F. J. ...	2 <i>Apl.</i> , '13

GOLD COAST—*continued.*

MAIN, F. G. ...	12 June, '13	REW, Maj. C. E. D. O....	10 May, '13
MILES, T. ...	12 May, '13	RYAN, Dr. W. A. ...	26 Apl., '13
MAY, D. R. M. ...	21 Apl., '13	STOREY, Dr. F. H. ...	21 Apl., '13
MATHIESON, G. V. ...	21 Apl., '13	SMITH, C. F. ...	16 Apl., '13
MAXWELL, J. ...	7 Apl., '13	TRIMMER, J. ...	7 June, '13
NEWLANDS, H. S. ...	12 June, '13	VIVIAN, A. C. ...	28 May, '13
OMAN, D. J. ...	27 May, '13	WRIGHT, H. H....	7 June, '13
PARK, A. ...	17 May, '13	WHITE, Dr. R. O. ...	14 Apl., '13
POPHAM, H. B. ...	4 June, '13	WHITE, R. ...	21 Apl., '13
POTT, P. A. H. ...	4 June, '13	WHYTE, Dr. R. ...	26 Apl., '13
PETRIE, W. V. ...	7 June, '13		

SIERRA LEONE.

AITKEN, A. ...	<i>Due Back</i>	MCLEOD, Miss A. ...	21 June, '13
	20 Apl., '13	NICHOLSON, Dr. W. A....	25 May, '13
ASHLEY, J. E. ...	14 June, '13	OLDLAND, G. A. ...	6 Apl., '13
BALDWIN, R. de C. ...	6 July, '13	ORPEN, Dr. R. W. ...	16 Apl., '13
CLIFFORD, J. W. ...	4 May, '13	POWELL, Dr. E. J. ...	21 June, '13
DEARLE, W. E. ...	13 Apl., '13	ROXBURGH, R. ...	18 Apl., '13
DAVIES, W. A. L. ...	4 July, '13	RICHARDS, R. F. ...	1 June, '13
ESPEUT, R. W. ...	27 Apl., '13	RENSHAW, S. ...	10 May, '13
FORSTER, M. N....	13 Apl., '13	ROPER, E. A. ...	10 May, '13
FIRTH, S. ...	22 May, '13	SPILLANE, C. A. ...	10 July, '13
HOLLINS, N. C. ...	26 Apl., '13	STATON, L. J. ...	19 May, '13
HOOKE, R. S. ...	10 May, '13	VIRET, A. P. ...	16 Apl., '13
HEWER, T. D. ...	1 June, '13	WICKHAM, Capt. M. H.	
KREISTER, S. W. F. ...	19 May, '13	C. de C. de B. ...	9 Apl., '13
LECKY, A. ...	14 June, '13		

GAMBIA.

CHARTRES, Dr. E. A. ...	14 June, '13	VAUGHAN, E. ...	16 Apl., '13
O'FARRELL, C. A. ...	7 Apl., '13	WALSH, J. ...	4 May, '13

SOUTHERN NIGERIA.

ANDERSON, H. ...	27 Apl., '13	BRYANT, T. S. ...	7 June, '13
ASHLEY, F. N. ...	27 Apl., '13	BERKLEY, J. H....	14 June, '13
ADAMS, Capt. G. S. C....	20 May, '13	BURT, F. W. ...	21 Apl., '13
ALDER, J. F. ...	25 May, '13	BELL, G. G. ...	14 Apl., '13
ADCOCK, W. R. C. ...	15 July, '13	BURROUGH, Capt. H. S.	27 Apl., '13
BOOTH, J. ...	20 Apl., '13	CARTER, V. St. L. ...	18 May, '13
BATTEN, C. W. ...	13 May, '13	CLEWES, P. ...	7 June, '13
BOYSON, W. ...	8 May, '13	CHAPMAN, H. F. ...	25 Apl., '13
BLACK, W. J. ...	14 June, '13	CULLEN, R. A. ...	21 Apl., '13
BATTISON, W. H. ...	1 June, '13	CAVENDISH, R. C. A. ...	21 June, '13
BEARD, C. H. ...	1 July, '13	COGHILL, Dr. H. S. ...	2 Apl., '13
BLACKWELL, Maj. L. N.	21 June, '13	CULHAM, A. B. ...	25 May, '13
BUTTERWORTH, Capt. A.W.	6 Apl., '13	CLEWES, J. ...	18 May, '13

SOUTHERN NIGERIA—continued.

CARTER, O. G. ...	25 May, '13	MAIR, Major G. T., D.S.O....	23 Apr., '13
CLARK, R. C. ...	17 May, '13	MERRALL, E. W. ...	4 May, '13
CAKETT, J. W. ...	1 June, '13	MOORE, Capt. C. W. ...	6 Apr., '13
CONSTERDINE, D. T. ...	28 Apr., '13	MILNE-STEWART, J. D....	11 July, '13
CORBIN, J. C. ...	12 June, '13	MASON, T. ...	17 May, '13
DALTON, A. J. ...	1 June, '13	MAY, W. E. ...	25 May, '13
DRURY, G. F. ...	13 Apr., '13	MOLINEUX, C. R. N. ...	17 May, '13
DAYRELL, E. ...	4 May, '13	MCERVEL, A. G. ...	1 July, '13
DENNETT, R. E....	6 June, '13	NEVILLE, Miss E. K. ...	25 May, '13
DAVIDSON, T. ...	6 Apl., '13	NEEDS, H. E. ...	8 Apr., '13
EGGINS, F. K. ...	27 Apr., '13	NICOL, R. ...	1 June, '13
EDWARDS, W. W. ...	6 Apr., '13	ORTON, R. E. ...	21 June, '13
EDWARDS, P. H. ...	24 Apr., '13	PEACOCK, Dr. W. H. ...	18 Apr., '13
ELLINGHAM, C. ...	25 May, '13	PRICE, D. E. ...	7 June, '13
EVANS, T. ...	1 July, '13	PARNTER, A. S. ...	25 May, '13
FROST, C. E. C....	5 June, '13	PODEVIN, G. S. ...	22 June, '13
FARMER-COTGRAVE, R. W.	9 May, '13	PHILLIPPO, E. C. ...	21 Apr., '13
FRASER, F. I. V. ...	29 Apr., '13	PITCAIRN, W. E. ...	31 May, '13
GREENWOOD, E....	1 July, '13	POLLEN, J. M....	21 June, '13
GARDNER, P. J....	6 Apr., '13	RIDSDALE, D. W. ...	13 Apr., '13
GREENSTOCK, Lieut. A., R.N.R. ...	10 May, '13	RANSLEY, W. ...	14 Apr., '13
GOVIER, L. G. ...	25 May, '13	ROOTS, A. E. ...	Due Back 12 Aug., '13
GRANT, M. G. ...	17 June, '13	RUMANN, W. B....	14 June, '13
GALLAGHER, Dr. G. H....	25 May, '13	RUTHERFOORD, J. W. C.	27 Apr., '13
GINGELL, S. J. ...	24 May, '13	RICHARDSON, Capt. T. C.	15 Apr., '13
HATTON, L. C. ...	12 June, '13	RICHARDS, C. D. ...	27 Apr., '13
HOOPER, R. A. ...	14 Apr., '13	SARGANT, C. F. G. ...	14 June, '13
HOLLAND, E. T....	14 June, '13	STORY, W. ...	21 June, '13
HILL, G. C. ...	21 Apr., '13	SHERIFF, F. A. ...	4 May, '13
HISCOCK, Dr. R. C. ...	4 May, '13	SUTTON, A. W. ...	21 Apr., '13
HEARNshaw H. ...	14 Apl., '13	SMITH, W. ...	2 Apr., '13
HUMPHREY, R. J. P. ...	14 June, '13	SALIER, E. L. ...	22 July, '13
HANSON, E. C. ...	21 Apr., '13	SHEARER, H. S....	3 Apr., '13
HARCOURT, A. G. B., I.S.O. ...	14 June, '13	SOLOMON, N. V. S. ...	9 May, '13
HENDERSON, Lieut. P. D. R.N.R. ...	27 Apr., '13	STUBBS, W. W. ...	16 Apr., '13
HUBBARD, A. G. ...	10 July, '13	SUTHERLAND, R. C. ...	29 Aug., '13
HAWTAYNE, W. H. ...	22 Apr., '13	SKEPPER, W. ...	2 May, '13
HAWKES, J. A. ...	3 May, '13	TREZISE, F. J. ...	14 Apr., '13
HUGHES, I. L. ...	21 Apr., '13	WHITEHEAD, R. V. ...	30 Apr., '13
JOHNSON, J. ...	7 June, '13	WYNDHAM, Capt. J. ...	12 June, '13
JONES, A. R. ...	21 Apr., '13	WRIGHT, H. O. S. ...	17 June, '13
KNEILLER, H. G. L. St. J.	21 Apr., '13	WOOD, Maj. S. M. ...	Due Back 27 May, '13
LLOYD, T. ...	21 Apr., '13	WILLS, A. ...	8 Apr., '13
LAUNDER, N. W....	27 Apr., '13	WOODWARD, Lieut. A. S., R.N.R. ...	21 June, '13
LEADER, F. W. M. ...	27 Apr., '13	WARMAN, H. ...	27 Apr., '13
LADORDE, A. L. C. ...	13 May, '13	WALTON, J. H. ...	27 Apr., '13
MARTYN - CLARK, Dr. W. B. ...	6 Apr., '13	WITTMANN, A. R. ...	4 May, '13
MARTIN, H. ...	7 June, '13	WYLER, Dr. E. J. ...	6 Apr., '13
MAPLES, Dr. E. E. ...	21 May, '13	WILSON, T. ...	21 Apr., '13
MYTTON, A. R. ...	8 May, '13	WENNBERG, W. ...	6 Apr., '13

NORTHERN NIGERIA.

AYLING, J.	27 Apr., '13	HICKS, H. E.	17 May, '13
ANDERSON, Capt. G. ...	14 Apr., '13	HAUGHTON, T. H. ...	21 June, '13
BISSELL, Capt. F. E. ...	11 July, '13	HUNT, A. W.	21 June, '13
BOSTOCK, W. C.	20 May, '13	HENDERSON, D.	14 Apr., '13
BUDGEN, T. A. G.	12 Apr., '13	JOHNSON, Capt. A. E.,	
BRACKENBURY, Capt.		D.S.O.	1 July, '13
E. A.	16 Apr., '13	KNAPP, A. F. P.	24 June, '13
BOND, J.	21 June, '13	LYNCH, W.	27 Apr., '13
BLAKENEY, Maj. J. E. C.	2 June, '13	LONGBOURNE, F. C. ...	21 Apr., '13
BRADLEY, L. R.	28 May, '13	LINDSAY, Dr. J.	17 June, '13
BIFFEN, E. H.	3 May, '13	LLOYD-WILLIAMS, E. ...	6 Apr., '13
BOTHWELL, J.	6 Apr., '13	LA CHARD, L. W.	6 June, '13
BROWN, R. M.	7 June, '13	LARYMORE, Maj. H. O.,	
BERTON, T. G.	16 June, '13	C.M.G.	20 Sept., '13
BOVILL, H. E. W.	6 Apr., '13	MIDDLETON, H. H.	21 July, '13
BEIRNE, M.	6 May, '13	MASON, G. F.	15 Apr., '13
COLLARD, A. S.	31 Mar., '13	MILLER-STIRLING, H. J.	
CURRAN, J. P. C.	16 Apr., '13	G. S.	20 May, '13
CHANNELL, C. W.	7 June, '13	MORGAN, W.	21 June, '13
COURTNEY, Dr. B. J. ...	8 Apr., '13	MORGAN-OWEN, H. ...	19 May, '13
CLARK, Miss J. A.	18 May, '13	MUNRO, A.	7 June, '13
CANNING, H.	14 June, '13	MACGREGOR, G.	25 May, '13
CHISHOLM, G. S.	21 Apr., '13	MCDERMOTT, A. S.	21 Apr., '13
COCKS, E. W.	10 May, '13	MORRIS, E. H.	17 May, '13
CAMPBELL, A. B.	2 Apr., '13	NORMAN, Dr. G. B. ...	6 Apr., '13
CATOR, D.	30 Apr., '13	OAKES, O.	17 May, '13
COGAN, F. J. L.	1 May, '13	PRIESTLEY, Capt. B. ...	17 May, '13
COLES, Capt. R. G.	22 Apr., '13	PARODI, E. V.	3 Apr., '13
COCK, E. A. L.	6 Apr., '13	PURDON, Lieut. A. P.,	
CARTER, E. J.	1 July, '13	R.N.R.	2 Apr., '13
DUFF, E. C.	14 Apr., '13	RAY, S.	6 Apr., '13
DE PUTRON, P.	24 Apr., '13	RITCHIE, N. E.	4 Apr., '13
DARWELL, G.	17 Apr., '13	SMITH, F.	9 Apr., '13
DOYLE, P. J.	6 Apr., '13	SASSE, F. H.	11 Aug., '13
DEAN, F. W.	6 Apr., '13	SWAIN, J. W.	16 June, '13
DRUMMOND, S. H.	7 June, '13	SAUNDERS, C. W.	21 June, '13
DIX, E. W.	10 May, '13	SOPER, F. P. W.	17 June, '13
DAVIES, L. W.	9 June, '13	SLINGSBY, W. E.	3 Apr., '13
EDWARDS, H. J.	25 May, '13	SEYMOUR, A. R.	7 Apr., '13
FRANCIS, A. C.	10 Aug., '13	SWANN, Dr. A. J. T. ...	18 May, '13
FOWLER, Capt. W. M. ...	14 Apr., '13	STOBART, St. C. E. M. ...	7 July, '13
GROOM, A. H.	24 Apr., '13	THOMSON, W. B.	9 June, '13
GILBERT, E. A.	1 June, '13	TERRY, Capt. W. J.	17 June, '13
GOLDSMITH, H. S.,		TURNER, I.	4 June, '13
C.M.G.	9 May, '13	TAYLOR, Capt. S. C. ...	14 June, '13
GOODCHILD, O.	6 Apr., '13	VISCHER, H.	1 June, '13
GERAHTY, C. C.	17 June, '13	WATERS, C. L.	6 Apr., '13
GREENUP, C.	4 May, '13	WATERS, E.	6 Apr., '13
GARNIER, A. P.	14 June, '13	WATERHOUSE, J.	14 Apr., '13
HOWELL, J. P. W.	31 July, '13	WHITELEY, A. L.	8 Apr., '13
HOBBS, Capt. A. H.	13 June, '13	WILLAN, Dr. R.	21 June, '13

EAST AFRICA.

BIRCH, H. M. ...	30 Aug., '13	HUGHES, J. O. ...	8 June, '13
BROWN, Miss E. R. ...	1 June, '13	HILL, S. R. ...	24 May, '13
BONHAM-CARTER, A. T. ...	15 May, '13	HUNTER, C. S. ...	23 Apl., '13
BLACK, M. A. ...	23 May, '13	HAYWOOD, C. W. ...	9 Apr., '13
BREADING, Lt.-Col. G. R., D.S.O. ...	4 Apr., '13	ISHERWOOD, J. ...	Due back 26 Apr., '13
BESSLER, A. ...	4 Apr., '13	LAMB, F. M. ...	5 June, '13
CHAMIER, A. E. ...	3 Apl., '13	LEYS, Dr. N. ...	31 May, '13
CHERRETT, Dr. B. W. ...	8 May, '13	MURRAY, P. J. A. ...	5 May, '13
CRISFORD, G. N. ...	16 May, '13	MONTGOMERY, R. E. ...	Due back 22 June, '13
CROWTHER, A. T. ...	5 Apr., '13	McLEAN, J. A. ...	Due back 30 Apr., '13
CAMPBELL, W. T. G. ...	8 July, '13	RAINSFORD, R. F. ...	4 May, '13
DONOVAN, S. C. ...	18 Aug., '13	ROSS, W. McG. ...	16 June, '13
DYER, E. W. ...	Due back 26 Nov., '13	SIKES, H. L. ...	13 May, '13
ELLIOTT, Lieut. F. ...	16 July, '13	SWAN, H. A. ...	12 June, '13
FAWCETT, J. F. St. A. ...	25 May, '13	SCHOLEFIELD, S. W. J. ...	3 Aug., '13
HUNTER, J. A. ...	Due back 30 May, '13	SANDIFORD, C. C.B. ...	19 Oct., '13
HUDSON, A. E. ...	9 May, '13	THORNHILL, H. McC. ...	31 July, '13
HORNE, E. B. ...	19 May, '13	THOM, M. St. C. ...	28 May, '13
HAYES CORBETT, F. ...	18 June, '13	WOODHOUSE, C. W. ...	16 Aug., '13

UGANDA.

BORRILL, J. T. ...	24 Aug., '13	MARSHALL, Dr. C. H. ...	24 Aug., '13
BUCKLAND, J. D. ...	25 July, '13	PASKE-SMITH, R. ...	6 Aug., '13
DRYDEN, J. W. ...	18 June, '13	RIDGWAY, Dr. J. C. ...	...
FENNING, E. G. ...	19 July, '13	RICHARDSON, A. ...	18 June, '13
GATTRELL, E. M. ...	9 May, '13	REFORD, Dr. J. H. ...	29 May, '13
HALDANE, J. O. ...	13 May, '13	SNOWDEN, J. D. ...	25 June, '13
JACKSON, W. E. ...	6 July, '13	SMITH, T. W. ...	31 July, '13
MILNER, J. D. ...	24 June, '13	SKINNER, M. L. ...	20 July, '13
McCONNELL, Dr. R. E. ...	12 July, '13	WATERS, G. ...	17 Aug., '13

NYASALAND.

ARMBRUSTER, H. ...	8 July, '13	KEEBLE, J. B. ...	9 May, '13
BANNERMAN, J. G. ...	17 May, '13	MACMORLAND, J. ...	31 Aug., '13
BEAUMONT, G. N. ...	13 June, '13	PALLOT, Miss A. A. ...	14 July, '13
COSTLEY-WHITE, E. ...	19 May, '13	STORRS, F. J. T. ...	25 July, '13
COLVILLE, E. F. ...	12 July, '13	TATE, Lieut. H. N. ...	6 May, '13
DAVEY, Dr. J. B. ...	11 Apl., '13	WRIGHT, F. S. S. ...	3 Aug., '13
HUGHES, C. H. ...	22 July, '13		

SWAZILAND.

CLARK-PERKINS, Capt. R., D.S.O.	30 Apr., '13
-------------------------------------	-----	-----	--------------

BECHUANALAND.

COHEN, E.	30 June, '13
---------------	-----	-----	--------------

BRITISH HONDURAS.

WINTER, Dr. W. C. P.	4 May, '13
--------------------------	-----	-----	------------

FIJI.

ANDERSON, Miss M. C. ...	21 Aug., '13	EHRRHARDT, A., K.C. ...	5 June, '13
BLAIR, D. ...	15 Dec., '13		

MALTA.

ROUPELL, Lt.-Col. E. P. S., D.S.O. ... 6 May, '13

ST. LUCIA.

NICHOLLS, DR. L. ... 9 May, '13

S. KITTS.

MALONE, C. ... 20 June, '13

ST. HELENA.

ARNOLD, W. J. J. ... 30 Apr., '13

ANTIGUA.

THOMPSON, H. B. ... 20 June, '13

BRITISH SOLOMON ISLANDS PROTECTORATE.

PUGH, R. R. ... 5 Aug., '13

JAMAICA.

JACKSON, D. ... 21 Apr., '13 | WILLOUGHBY, P.R.A. ... 30 Apr., '13

TRINIDAD.

BURSLEM, W. ... 25 May, '13 | FRICKER, Miss A. ... 3 May, '13

BRITISH GUIANA.

GAINFORT, B. ...	... Steamer due	MACQUAIDE, Dr. T. B. W. ...	7 May, '13
	22 May, '13	MURLAND, C. C. ...	1 Nov., '13
GILCHRIST, W. J. ...	23 June, '13	WALLBRIDGE, H. A. ...	14 July, '13

MAURITIUS.

EDWARDS, C. H. ...	... Steamer leaving	HANNING, T. W. ...	22 June, '13
	12 Apr., '13	MORRISSEY, Rev. D. W. ...	16 Aug., '13
FOSTER, C. ...	14 June, '13	SMITH, G., C.M.G. ...	2 Aug., '13

STRAITS SETTLEMENTS.

ANTHONISZ, J. O. ...		LAWRENCE, J. W. ...	13 July, '13
BRYANT, A. T. ...	26 Dec., '13	LUCAS, T. J. ...	31 July, '13
BROOKE, Dr. G. E. ...	12 Aug., '13	LITTLEDYKE, S. ...	28 Sept., '13
BISHOP, D. A. ...	25 July, '13	MICHELL, W. C. ...	
CODRINGTON, S. ...	2 May, '13	MELVILLE, T. A. ...	13 Oct., '13
CONNOR, T. ...	30 Apr., '13	PATTISON, J. C. ...	31 Aug., '13
CLARKE, H. ...	23 June, '13	RICHARDS, H. G. ...	1 Nov., '13
DYSON, C. V. ...	25 May, '13	STEPHEN, Miss C. I. ...	17 June, '13
EVANS, J. R. ...	18 Dec., '13	SAUNDERS, C. J. ...	Steamer due
FORREST, C. O. ...	6 Nov., '13		3 May, '13
FOSTON, E. C. ...	27 Dec., '13	STALLWOOD, H. A. ...	Steamer due
FANE, J. ...	23 June, '13		14 May, '13
GIBSON, W. S. ...	24 July, '13	STEINMETZ, G. A. J. S. ...	15 Aug., '13
HAINES, Rev. F. W. ...	19 Aug., '13	TRUSDALE, W. H. ...	28 Sept., '13
JOYCE, J. ...	17 May, '13	WHITTLE, Dr. E. D. ...	12 Sept., '13
LEWIS, O. E. ...	16 May, '13		

TANGONG PAGAR DOCK.

FOLLETT, C. H. ...	... 11 Nov., '13	MORRIS, J. C. ...	... 29 June, '13
KING, W. ...	... 11 Nov., '13	PLUMB, A. J. ...	... 10 June, '13
KING, F. W. ...	... 11 Sept., '13		

WEI HAI WEI.

MUAT, Dr. W. M. 13 June, '13	WALTER, R. 16 May, '13
---------------------	------------------	----------------	-----------------

HONG KONG.

BOLTON, H. W. ...	... 27 Feb., '13	PARKE, Miss J. ...	... 7 Sept., '13
BECKWITH, COMM. C. W. M.	28 Nov., '13	PEPPERELL, W. A. ...	... 16 May, '13
CHAPMAN, A. ...	... 9 July, '13	ROBERTSON, W. Y. ...	... 18 Oct., '13
GOURLAY, Miss H. M. ...	... 5 Aug., '13	SUTHERLAND, A. R. ...	... 28 Nov., '13
KOCH, Dr. W. V. M. ...	... 30 Sept., '13	SEVERN, C. ...	...
KELLY, S. ...	... 31 July, '13	WOOD, A. E. ...	... 15 Nov., '13
KNIGHT, H. J. ...	... 15 July, '13	WOOD, J. R. ...	... 17 Sept., '13
MOORE, S. R. ...	... 12 Sept., '13	WOLFE, E. D. C. ...	... 27 July, '13
NOLAN, N. G. ...	... 2 Oct., '13		

PERAK.

ACTON, W. W. ...	... 18 Jan., '13	MORDEY, W. H. G. ...	... 15 July, '13
BOWERS, A. F. ...	... 31 July, '13	POTTS, A. B. ...	... 13 July, '13
EDGAR, T. ...	... 8 Aug., '13	STEVENS, G. R. ...	... 23 June, '14
HUNTER, H. P. ...	... 9 Sep., '13	SYMES, W. L. B. ...	... 20 May, '13
LAIDLAW, D. H. ...	... 29 May, '13	YOUNG, C. ...	... 8 May, '13

PAHANG.

CRANSTON, J. H. 28 Sept., '13	DREW, J. S. 12 May, '13
---------------------	-------------------	-----------------	-----------------

SELANGOR.

GROVES, T. ...	... 3 June, '13	MACGREGOR, T. J. ...	... 12 May, '13
KEIR, A. ...	... 3 July, '13	MYNOTT, A. R. ...	... 27 May, '13

KEDAH.

CAVENDISH, A. 18 Aug., '13	GILROY, P. 4 June, '13
-------------------	------------------	----------------	-----------------

FEDERATED MALAY STATES.

ALEXANDER, C. L. ...	... 17 June, '13	BODGER, W. ...	... 31 Jan., '14
ADAMS, T. S. ...	... 8 Sept., '13	BLACKLAW, C. F. S. ...	... 5 June, '13
BULLMORE, R. R. ...	... 4 Oct., '13	CAMPBELL, D. G., C.M.G.	Steamer due 9 May, '13
BARE, A. ...	... 14 June, '13	CLARKE, Dr. J. T. ...	... 30 Jan., '14
BURTON, H. ...	... 17 July, '13	COWAN, W. ...	... 31 July, '13
BURTON, W. ...	... 2 June, '13	CORNWALL, J. G. ...	... 18 Nov., '13
BARRY, D. M. ...	... 9 Jan., '14		

FEDERATED MALAY STATES—continued.

DURIE, W.	30 Apr., '13	MALLEY, T.	17 May, '13
DALY, M. D.	Steamer due	PRATT, H. C.	9 June, '13
	5 June, '13	POTTIE, J.	9 July, '13
FRANKLIN, A. E. C.	Steamer due	PEPYS, W. E.	23 June, '13
	15 May, '13	POSTLETHWAITE, J.	31 Aug., '13
FONSECA, A. H. D. R.	31 Aug., '13	RHODES, H.	20 May, '13
GREEN, W. H.	9 May, '13	REAY, J. MC. C.	28 Nov., '13
HOLLYWOOD, J. H.	2 July, '13	ROSS, W.	21 Aug., '13
HOWARD, T.	16 May, '13	SYMONDS, S. L.	7 Jan., '14
HINTON, H.	2 Aug., '13	SUGDEN, F. A.	31 Dec., '13
HEREFORD, G. A.	14 June, '13	STAFFORD, L. U.	17 Nov., '13
KENDALL, N.	14 Nov., '13	SUMMERS, A.	29 Sept., '13
KLOSS, C. B.	21 Aug., '13	SANGER-DAVIES, A. E.	11 Sept., '13
LYTH, N. R.	31 July, '13	SANSOM, C. H.	3 Sept., '13
MACINTYRE, DR. E. T.	31 July, '13	SIRCOM, H. S.	17 Sept., '13
MCLEAN, L.	Steamer due	TALBOT, F. W.	30 Oct., '13
	17 Apr., '13	THOMSON, H. W.	29 Jan., '14
MARKS, O.	8 Oct., '13	WELLINGTON, DR. A. R.	23 Sept., '13
MOIR, G.	12 Sept., '13	WOODS, DR. A. A.	Steamer due
MILLINGTON, W. M.	25 July, '13		11 June, '13

CEYLON.

ASERAPPA, DR. E. P.	24 June, '13	HILL, H. A.	4 Aug., '13
ALLSOP, J.	Steamer leav-	LUND, C. W.	23 Aug., '13
	ing 9 May, '13	LOVEGROVE, C. A.	22 Apl., '13
BOWES, F.	29 June, '13	MCLEOD, MISS E. ST. C.	23 May, '13
BOONE, A. P.	2 Dec., '13	MIDDLETON, J. C. C.	18 May, '13
BYRDE, R. L. W.	21 Oct., '13	MURRAY, W. A.	18 Apl., '13
BERTRAM, A.	26 May, '13	MACMILLAN, H. F.	16 Apl., '13
BARTLETT, F.	30 Apr., '13	ONION, T.	18 Mar., '13
BROWN, W.	13 July, '13	O'DELL, H. C.	12 May, '13
CHRISTOFFELSZ, DR. H. S.	1 Aug., '13	PASCOE, S. H.	9 Jan., '14
CAMPBELL, T. J. ST. A.	7 July, '13	REID, T.	Steamer due
COTTLE, H. C.	20 July, '13		26 May, '13
CUMBERLAND, C. R.	23 Oct., '13	SHIPTON, L.	9 May, '13
CAREY, T. A.	3 Feb., '14	STEVENSON, N.	11 Sept., '13
CARBERT, W. H. B.	5 Sept., '14	STAPLES, H. C.	7 May, '13
DE SILVA, DR. C. L. A.	14 Sept., '13	STURGESS, G. W.	Steamer due
DENHAM, E. B.	26 Sept., '13		12 May, '13
DE VOS, DR. C.	14 Sept., '13	TURNER, L. J. B.	19 May, '13
DE KRETZER, H. E.	27 June, '13	THORNHILL, G. K.	17 Sept., '13
FESTING, R. A. G.	28 Jan., '14	THEOBALD, CAPT. F. G.	23 Apl., '13
FRASER, J. G., C.M.G.	1 Oct., '13	VINEY, J. C.	Steamer leav-
FERNANDO, M. S.	17 May, '13		ing 9 May, '13
GODDARD, E.	27 May, '13	VAUGHAN, C. S.	3 May, '13
GIBBON, MISS A.	Steamer due	VAREY, J. A.	7 Oct., '13
	2 May, '13	WARMAN, S. E.	Steamer due
HAMER, T.	5 May, '13		31 May, '13
HUGHES, E. T.	19 Nov., '13	WICKS, C. A.	30 Apl., '13
HEDGELAND, A. J.	23 Apl., '13	WIJEYSEKERA, F. A.	4 July, '13
HERSEF, W. C.	4 Aug., '13		

**NORTHERN NIGERIA,
SOUTHERN NIGERIA,
GOLD COAST,
SIERRA LEONE,**

**BRITISH EAST AFRICA,
UGANDA,
NYASSALAND,
SOMALILAND.**

Information and Advice regarding necessary Equipment, Route and Transport
CAN BE OBTAINED GRATIS by Civil Officials and Military Officers appointed
to any of the above Colonies and Protectorates on application to:—

WAY & CO. Ltd.,
DEWAR HOUSE, 11, HAYMARKET,
LONDON, S.W.

AGENCY BUSINESS of every kind undertaken, also packing,
despatching, and forwarding of **Baggage** for shipment.

Complete Equipments purchased and deferred payments
arranged on special terms.

Accounts collected, Salaries drawn, Family and other remittances made, and
general Banking facilities granted.

BAGGAGE, &C., STORED. NEWSPAPERS AND PERIODICALS DESPATCHED.

Goods purchased and sent out to Customers, also to
Clubs, Messes, &c.

INSURANCE.

LIFE (WITH SPECIAL RATES FOR AFRICA), FIRE, MARINE, & ACCIDENT,
ALSO

TRUSTEE AND EXECUTOR BUSINESS. REVERSIONS.

WAY & CO. LTD., have made a careful study of **WINES and**
SPIRITS most suited for the Tropics. Their Wine List will be
sent on application, and the selections mentioned have been
supplied for several years and given great satisfaction.

PROVISIONS.—From all well known Manufacturers,
Special A and B Boxes for one man one week.

The “Handy-Cosy” Bed.

A Light Steel-frame Portable Folding Bed.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anne's Chambers, Westminster.

"St. Martin's-le-Grand"
THE POST OFFICE MAGAZINE.
23rd Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A List of the recent Promotions, Retirements, and Deaths in the Postal Service of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR G. FERARD.

Hon. Editor: EDWARD BENNETT.

Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—

c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Pratt & Co., 9, Essex St., W.C.

ADVERTISEMENTS.



LYSAGHT'S

GALVANIZED IRON.

THE STANDARD OF

QUALITY

IN THE CHIEF MARKETS OF THE WORLD.

JOHN LYSAGHT LIMITED, BRISTOL.

PACIFIC CABLE.

The ALL BRITISH ROUTE to
AUSTRALIA, NEW ZEALAND, AND FIJI,
Via CANADA.

3/- a Word from the United Kingdom.

Telegrams "Via Pacific" are accepted at any Postal Telegraph Office, or at the Offices of any of the Atlantic Cable Companies, which register addresses free. No charge for the words "Via Pacific."

Queen Anna's Chambers, Westminster.

"St. Martin's-le-Grand"
THE POST OFFICE MAGAZINE.
28th Year of Publication. & Published Quarterly.

DEVOTED TO
POST OFFICE, LITERARY, SCIENTIFIC and ARTISTIC SUBJECTS.

ALWAYS WELL ILLUSTRATED.

A Bill of the recent Promotions, Retirements, and Deaths in the Post Office of the United Kingdom appears every quarter.

Circulates throughout the Post Offices of the United Kingdom, the British Colonies, and Foreign Countries.

3/- PER ANNUM. SINGLE COPIES 9d.
Post Free.

N.B.—Any profit resulting after due provision has been made by the Management for an adequate reserve is applied to the assistance of Literary, Artistic or Benevolent enterprises within the Post Office. An Annual Balance Sheet is published in the Magazine.

Hon. Treasurer: ARTHUR C. FERARD. Hon. Editor: EDWARD BENNETT.
Assistant Editor: R. W. HATSWELL.

All Communications to be addressed—
c/o Messrs. W. P. GRIFFITH & SONS, Ltd., Old Bailey, London, E.C.

ADVERTISEMENTS—For Terms apply to Messrs. Frett & Co., 9, Essex St., W.C.

ADVERTISEMENTS.



LYSAGHT'S
GALVANIZED IRON.

THE STANDARD OF
QUALITY
IN THE CHIEF MARKETS OF THE WORLD.

JOHN LYSAGHT LIMITED, BRISTOL

CRAWFORD
1884

**RAILWAY SIGNALS
AND
SAFETY APPLIANCES.**

**SAXBY AND FARMER
LIMITED.**

(Original Inventors of the Interlocking System.)

ENGINEERS, IRONFOUNDERS AND CONTRACTORS.

UNION OF LOCK AND BLOCK SYSTEMS.

ECONOMICAL FACING POINT LOCKS.

**SIGNAL WORK OF EVERY DESCRIPTION,
MECHANICAL AND ELECTRICAL.**

**Wrought Iron and other Masts for Electric Light.
CONTRACTORS TO H.M. GOVERNMENT.**

Gold Medals and Highest Awards.

PARIS, 1867, 1876, 1878, 1879,
1881, and 1885.
VIENNA, 1873.
BRUSSELS, 1876 and 1888.
PHILADELPHIA, 1876.
MELBOURNE, 1880.
LONDON, 1882, 1885, and 1892.

ANTWERP, 1885.
BARCELONA, 1888.
EDINBURGH, 1890.
NIJNI NOVGOROD, 1896.
SOUTH AFRICA, 1899.
BUENOS AIRES, 1910.
ALLAHABAD, 1911.

HEAD OFFICES:

**53, Victoria Street, Westminster, London, S.W.
WORKS: Chippenham, Wilts.**

Telegraphic Address: "Signalmen, Vle., London." Telephone:—2285, Victoria.
Bentley's A.B.C. (5th Edition) A.B.C. and A1 Codes.

