

EMPIRE STATE EXCHANGE.

WATER VALLEY, N. Y. NOVEMBER, 1889. No. 1.

NOVEMBER.

wind is whistling wild and clear
ough naked trees of orchards serene,
dry leaves whirl now here, now
there,
ng and falling in the air,
in some nook, at last they lay
he close of the bleak November
day.



A SUMMER EXCURSION.

GENERALLY people who take
excursions go by rail, but we set
out on foot one bright midsummer
for a genuine summer excursion.
our course was to be through one
of the best museum grounds
here.— the Eighteen-mile creek.
started, and crossing several pas-
sage lots and woods soon reached the
of the B. & S. W. R. R., follow-
which, we soon reached the banks
of the creek. At the railroad bridge
banks are about eighty feet high;
walked along and soon found a
to descend to the creek bottom;

the water being low there was a fine
slatestone walk for us, which was as
warm as a stove, in places where the
direct rays of the hot, summer sun
shone upon it; in the stream, as we
walked along, hundreds of minnows
darted away in front, while the slug-
gish mullet lay basking in the sum-
mer sunshine.

Far above us clinging to the very
edge of the slaty banks, were storm
driven pines and rugged oaks, while
the cedar tops bowed to the coming of
the summer wind; where there was a
bit of soil in the crevices of the rocks,
there the wild columbine and the pale
corydalis had planted themselves, and
at places where the banks were shady
the scrubby yew and shield fern fea-
tioned the rocks.

At times, our path led under syc-
amore and shady beech trees or under
arbors of wild fox grape where pretty
Herb Robert shows its blue flowers in
spring time. At last we came to a
place where we ascended and found
great beds of winter green; we gath-
ered some and went on. We had, as
yet, found nothing of note in the
geological line excepting natural

alum which is formed by the evaporation of water leaching through the clayey soil, but when we descended to the creek bottom again we found little tentaculites in a sort of pumice-like brown flint and also some crystalized calcite (pellet form) on the disintegrated surface of a septaria concretion, broken open most probably when it fell from the high bank.

When we had secured some small specimens of this beautiful mineral we again went on.

Huge concretions hung over our heads at times, some that lay in the creek bed were eight, or more, feet through. When visiting the Museum of Natural Sciences, at Buffalo N. Y., last summer I noticed a fine specimen of septaria claystone which was found not far from here. The rural folks use the smaller septaria as an ornament to the front door step.

We soon reached the "forks of the creek" where the N. and S. branches join, here on the sloping bank the saxifrage grows luxuriantly and several other wild flowers are spontaneous. It was at this place that we pounced upon a block of Trenton limestone and secured several fine fossils. We then started for home by way of the N. branch, and as it was getting late in the afternoon we had to hurry to get home before dark.

We found plenty of sweet

and blue cohosh that was growing under the trees which grew where bank slopes to the creek. At one place where sedge grass covered the soil the Apios or Wild Bean in full bloom, as was also the H. Mirt with its cardinal rays.

Soon we bid adieu to the creek started crosslots for home which being reached after dark, we were to find supper ready, and the way things disappeared showed that appetites had not been impaired. A Summer Excursion.



A COLLECTORS MATCH CASE

A peculiar but pretty match case is made as follows. Take a square round block of wood two inches diameter and an inch high, a two inches long and 1/2 inch thick, fasten securely in the middle of stand and paint them green; get a nice mussel or clam shell, pretty white, and fasten on the end of stick; get two large live crabs kill them, boil them till they are pretty red color, but not too tender glue one on each side of the stick feet around it, and the claws holding the shell; cover the top of stand with pebbles and a small basket for matches, and a tin around the stem, and a tin.

NUMISMATICS.

CHINESE COINS.

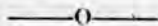
Of all foreign coins, that of the Chinese is the most widely known of any coin to-day, as it is found both in the cabinets of the curiosity collector and the numismatist; and in any collections it is the sole representative symbol of a nation twenty five hundred years old, the most ancient in the world, an empire occupying one third of the whole eastern continent—a nation whose laws, habits and coins are changed but little in the earliest traditions.

The square opening in the centre of a Chinese coin, is surrounded on the top, by four characters in relief, and which is a smooth border, while the back has but two characters.

It is more sensibly made in one way than many of the coins of more civilized nations even the United States, that it is not so easily lost because it can be strung on a cord around the neck or attached to the clothing.

There is one thing, that the Chinese coin lacks and that is artistic expression more so than many other of our modern coinage though the coins of the United States are rather degraded in those of ancient times in the fine-

ness of design. Take for instance, the eagle on our silver dollars or quarters, what a queer make up it is; with cut-short duck wings and general runt appearance, what a difference to the birds on the ancient Greek Agrigentum medal, and the head of Liberty to that of a female on the Carthagian coin, struck four hundred years before Christ.



Chevalier Antoine DeKontski, the world famed composer and pianist who resides at this place was, in his earlier years greatly devoted to numismatics. "He spent, he says, over 50,000 francs on a coin collection, and wrote a work on the subject, which was published in Paris in 1844, and became a standard work on the subject. The now venerable musician relates that he was so enthusiastic a coin collector that on one occasion, having just given four highly-successful concerts at Dantzic, he spent the entire proceeds at a coin sale which happened to be held on the day following the last concert. His entire collection, which was left in Paris was stolen while he was on a professional visit to St. Petersburg. For his accomplishments in the field of numismatics he was nominated a member of the Academies of Science of Paris and Berlin.

ARCHAEOLOGY.

INDIAN RELICS OF
WESTERN N. Y.

PART I.



CENTURIES ago there lived and roamed a tribe of men whose most conspicuous art was a skill in making implements of flint and other rocks, and, though they have long since been forgotten, their bones have

mouldered away, and nothing remains to tell us how or when they lived except tradition, yet they left an imperishable monument to themselves in the working of their implements in the rocks that fast forever.

If they made implements from wood, bone, or other material than stone, we hardly know as they would have nearly all decayed by now, but the flint, granite, and quartz is quite indestructible, and relics of these materials are numerous.

We once found a bone arrow-head which had decayed but little, it is a rarity.

In Erie Co. the Indians inhabited the ridges of land, the most formidable tribe seems to have had possession of the pine ridge which extends

from Buffalo southwest-ward.

Upon this ridge the drift rocks are mostly of flint which they used making their drills and arrow points and heads.

Spear heads were also made from the same material, but pestles, hammer stones, and celts are of quartz or fine grained granite.

In the manufacture of their axes and tomahawks they selected such stones as ironstone &c. which could be ground to a fine edge.

Drills were of two varieties; the bone drill was flattened sharp pointed widening out at the head, while the stone drill was more rounded, slightly flattened but not widened at the head.

There were many varieties of spear heads the commonest being the leaf-shaped unnotched and the triangular notched.

Arrow heads are found of various sizes and forms, the leaf-shaped being the commonest; then there is the angular war point, the bird point, the notched pointed and the barbed arrow heads.

We have not, as yet, found any of the drill, pointed arrow heads.

At one place we found the site where there was an "ancient arrow-head makers' shop" and this we describe in our next.

GEOLOGY.

CONCRETIONS.

By U. R. Perrine.

Concretions are masses of rock formed by the tendency of matter to collect about a centre; there are several varieties;—some are found in clay beds and of most fantastic shape are popularly supposed to be formed by the water; these are called water-stones; others found in coal mines are termed iron nodules, — but all have a foreign object in their centres, — a fossil shell, fish-tooth, etc., — the nuclei of their formation.

Along the shores of Lake Erie and the river and creek beds in the Marcellus Shale, calcareous concretions are very plentiful. Their form is generally that of a flattened sphere, — but they are as round as a ball, — and their size from one inch up to nine feet in diameter. These calcareous formations commonly have cracks, formed, as is said, by shrinkage, — which are filled with spar and crystals. At one place we found one about three feet in diameter, one half having been broken off, the surface of disintegration of the other half was completely covered with beautiful crystals of calcite, of a pellet-like form.

In some of our western states, and

on the coast of Durham, England, the concretions are in the form of cannon balls.

When the internal cracks of a concretion have become filled with spar, they are termed septaria, — from septum, a division, — and when cut and polished, present an attractive and ornamental appearance.

In the calcareous concretions, the seams of spar make them somewhat resemble turtles, and many of the country folk think they are the petrified remains of that animal, and can hardly be made to think otherwise.



“And another world—a world of coal and iron—in all its magnificence and riches, lies interred under these glittering stores of lime and salt!

How strangely contrasting in their qualities and structure the two formations. But except that a wise and far-seeing Providence collected and garnered up the waste and decay of both for man's use, no principle have we to guide us when speculating on their mineral properties and arrangement—no natural law certainly, self-acting upon matter and evolving new creations of its own, organic or inorganic, to reveal His inscrutable purposes.”

J. Anderson.

THE
Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine - - Editor.

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Advertisements must be in by the 25th, and exchanges by the 20th, to insure insertion in next number.

Manuscript always in demand.

Perrine Bro's & Co., Publishers.
 Water Valley, Erie Co., N. Y.

Vol. 1. November, 1889. No. 1.

This is the initial number of the **EMPIRE STATE EXCHANGE**, - a paper to be devoted exclusively to collectors and exchangers, young and old. In the columns will be found each month articles on the different branches of Natural History, Mineralogy, Archaeology, Numismatics, etc, together with the latest scientific and other news for every kind of collecting, and only the advertisements of reliable dealers. In the future we intend to enlarge in the number of pages if not in size if we have the support which we think we deserve.

-Articles on subjects treated in columns are solicited from all.

-Advertisements should be in early for our next issue as there will be a rush for the Christmas number.

-A Philadelphia dept will be started when we find a suitable person to conduct the same.

-The best catalogue we have received, is from L. W. Still, whose ad. appears on the last page. Be sure to send for it at once.

-We intend to have an exchange column in our next issue, free to subscribers - given the preference. Don't forget to send in a notice if we want a full column.

-In our next issue will be found following instructive and interesting articles. An October Outing; Snake Catching; Snake Charming; Mining Minerals; Home made Collected Cases and Cabinets; Mistaken Identity; The Blue Jay; In a Coal Mine; Christmas Chat; Indian Relics; Western New York, Part II; and many more interesting sketches.

-As time passes Erie County is developing its mineral resources. Zoar oil excitement has somewhat commenced to wane when another discovery is made, this time near the Station where a very valuable

of aluminum is said to have been found; a leading assayer from Philadelphia will soon visit the place and we most earnestly hope that the examination will not prove as unsatisfactory as the one of Hamburg did many years ago!

November is with us once more and in it comes the collectors' last trips of this year; then the insect net, the box and collecting case must be put away for the season, together with the stone hammer, the chisel, and the mallet, and now the exchange season has begun. Nearly every collector exchanges specimens to complete his collections, and all such need a good exchange paper which we think we have in the EMPIRE STATE EXCHANGE. We want you to subscribe for it. Look at our Premium List, unaccepted.

—()—

PERPETUAL PASTE FOR LABELS.

Dissolve a teaspoonful alum in a quart of water. When cold, stir in flour till the consistency of thick cream is reached. Add as much powdered resin as will be needed, and throw in half a dozen eggs to give it a nice odor. Have on hand a teacup of boiling water. Pour the flour mixture into it, stirring all the time. In a few minutes it will be of the consistency of mush; let it stand a few minutes to use softened with warm water.

NOVEMBER NOTES.

—

☞ Circulation of this issue 1,000. Our advertising rates are very cheap.

—

Black Squirrels are more numerous here now than they have been for many years.

—

The bones of Lord Howe who was killed at the battle of Ticouderoga, were recently unearthed by workmen who were digging a sewer.

—

There is a spot in Siberia about thirty miles square where the ground has not thawed out for the last 100 years, and where it is frozen to a depth of sixty feet.

—

Few collectors know that the government issues a stamp of the denomination of \$60. Such stamps are used in second-class mail matter, and are rarely seen by the general public.

—

A short time ago, Fred Hout of Rockford, Ill., and John Kent of Rochester, N. Y., while out hunting at Holland Center, killed a monster fox on the arm of Z. Davis, measuring 4 ft. 6½ inches from tip to tip, stood 17 inches high and weighed 17½ lbs. Mr. Kent was the lucky marksman who killed the giant.

ORNITHOLOGY.

NESTING OF THE WOODCOCK.

By an Observer.

It was on a bright, sunshiny day in the early part of last May, that I started out in quest of Woodcock's eggs. I made my way towards a patch of ferns which grow at the edge of a woods that I knew the Woodcock to frequent. When I arrived at the place, I commenced to look carefully beneath every bunch of withered fern, but could not see any thing in the shape of a nest and was about to give up the search when I was suddenly confronted with a pair of bright eyes watching me from beneath the ferns, and, upon looking closer I found them to belong to a Woodcock sitting on its nest. I walked towards it but it looked me steadily in the eye and did not fly until I almost touched it when it jumped off and fluttered away, revealing to my gaze a set of four fine eggs. They were spotted chiefly at the larger end with brown on a ground color of buff. The nest was composed of dead fern leaves laid together in the shape and size of a robin's nest and was slightly raised above the surrounding surface. The measurements of the eggs were 1.25 X 1.50.

BIRD NOTES.

'O'er hill and dale the black southward fly,
And the last blooms of Autumn
ered lie.'

A sea eagle was shot at Westburg about a month ago.

A large crane was seen on the Green mile creek at this place recently.

The first flock of wild geese back October 5th. The first arrivals this year we have in our book as follows;—

March 4 th, 1889, — Crow, Chelch
14th, Wild Geese, — saw two near Buffalo. Robins, Blue and Blackbirds.

15th, Song Sparrow, Coi Hawk.

16th, Killdeer Plover.

17th, Slender-billed Nuthatch.

Capturing a Monkey-faced Owl.

A report comes from Norristown to the effect that John Jones, a hunter, shot with a small rifle an owl of bright yellow and white with a face like a monkey and a dark mark on its breast resembling a

BOTANICAL.

LICHENS.

pendent.

A most remarkable fact has recently been noted that certain species of lichens will only grow on certain rocks. Lichens that will be found on rocks of one character are not found on rocks wholly different. Whether this be wholly correct or not, the statement does not appear to have been challenged, and seems to have been accepted by lichenologists as a fact. It is interesting as showing one fact in science may be brought to bear on other branches of science, to note that this one is brought in to aid the archaeologist.

There has been a discussion as to the origin of the rock that forms the wall of the fortification of Chester in England. As the rock is evidently found in the vicinity, but is found only in the wall, built by the Romans, it has been assumed that the rock must have been brought there. Confirmation of this, it is now ascertained that lichens, common on the rocks in the vicinity, do not grow on the stones. Local stones used in building are covered by the local lichens, but none are found on these stones. It is stated that other

lichens do grow on the stone, not found in the vicinity, but whether identical with those on Italian rocks is not noted. But the whole subject is a very curious one.

PLANT GALLS

On entering a forest or wood lot of oak trees in fall or in spring just after the snow has left the ground, one may see numerous brown or yellowish balls, some adhering while others are detached from the withered leaves. These are the gall-nuts of commerce, used for making ink and are produced by an insect called the gall-fly, (*CYNIPS QUERCUS-FOLII*), which after puncturing a leaf deposits an egg in the wound which causes the spherical excrescence. Gall-nuts and excrescences formed or produced by different insects are found on various plants, as, for instance, on the stem of the common golden-rod (*SOLIDAGO*), or on the stems of the hickory which are in the form of shot or pellets and the insect which produces them is called the Hickory stem Gall-louse; opening one of these bullet-like galls, which are hollow and of a leathery texture one may find the walls covered with minute white and yellow spores.

MINERALOGY.

CHROME IRON ON THE PACIFIC.

A Santa Rosa paper says: "A specimen of chrome iron ore, taken from the surface of the land of J. D. Cooper, about ten miles north of Fort Ross, near the Plantation House, indicates there must be a valuable deposit of this mineral in that vicinity. The piece exhibited by Mr. Cooper, and picked up by him as a cropping, is almost pure mineral, no steel chisel or sledge hammer having any effect upon it. If, as is supposed, there is a ledge of this ore in that locality, it will, when developed, add largely to the mineral wealth, not only of the country, but of the State, as this mineral is not only valuable, but rare. In the same vicinity a considerable deposit of almost pure bitumen has also been found. Being but about three miles from the coast, these deposits may become the means of making that part of the country rich and valuable.

EDEN VALLEY MINERALS.

Yellow calcite, calc spar, laminated limestone, flour spar, crystalized cal-

cite, sphalerite, garnet in gneiss and granite, bronzed slate, septa claystone, iron pyritic nodule, shale, natural alum, ferruginous claystone. Besides those named above many of the more common minerals are found at that place.

FINE MINERALS OF NEW YORK AND WHERE TO FIND THEM.

Allanite.- Moriah. Apatite.- Hamond. Biotite.- Greenwood Furnace. Calcite.- Antwerp and Gouverneur. Chalcopyrite.- Ellenville. Chromite.- Edenville, Brewster. Chrysoberyl.- Greenfield. Clintonite.- Amsterdam. Coecolite.- Long Pond. Danburite.- Russell. Epidote.- Amity. Feldspar.- Warwick, Rossie. Fluorite.- Johnsbury. Garnet.- Greenfield. Gieschite.- Natural Bridge. Graphite.- Conderoga. Mica.- Monroe, Pargas, Rossie. Pulogopite.- Port Henry. Pyrite.- Schoharie. Pyroxene.- Dickinson. Quartz Crystals.- Little Falls, Millville, Salisbury, Fowler. Scapolite.- Diana. Sphene.- Diana, Monticello. Spinel.- Warwick, Amity. Strontianite.- Schoharie. Tale.- Amity. Tamarine.- Crown Point, Gouverneur. Greenfield. Tremolite.- Edwards. Gouverneur. Zircon.- Johnsbury.

EXCHANGES.

A column will hereafter be devoted to exchanges. Free to all, subscribers given the preference. No paid advertisements inserted.

A CHANCE.

Want to have a GRAND CHRISTMAS NUMBER and to induce archaeologists and others to send in original specimens we make this offer; to the one who sends the best sketch, etc., on the subject treated in our columns will give a fine Indian axe. For the second best, one collector's pocket knife;—handy to weigh packages, specimens, etc; can be folded up, and easily carried in the pocket. Every collector needs one. The third best specimen of Indian bead work from Seneca Falls. All Mss. sent us shall be returned to this office.

O

We intend to publish soon a receipt book for collectors and though we have already a goodly number of valuable receipts there is yet room for more. The book will include for all collectors a list of collecting and an appendix of collectors directory. Send us two specimens and we will insert your name in the directory.

THE
Empire State Exchange
PREMIUM LIST.

Any one sending twenty five cents for one years subscription to the EMPIRE STATE EXCHANGE can select any one of the following fine premiums.—

1. 1 fine 5 in. star fish, postage 3 cts.
2. 2 (1½ x 2) minerals, post. 4 cts.
3. 6 Curiosities, post. 4 cts.
4. 6 fine Fossils, post. 3 cts.
5. 1 large Horse-shoe crab and two skates eggs, post. 3 cts.
6. 1 doz. small King Crabs, post. 3 cts.
7. 4 dif. Birds eggs, post. 3 cts.
8. 200 Data Blanks, post. 1 ct.
9. 200 Labels, post. 1 ct.
10. 10 pkt. Vegetable seeds, post. 2 cts.
11. 5 pkts. Flower Seeds, post. 2 cts.
12. 25 named Botanical Specimens mounted, post. 5 cts.
13. 4 spring Bulbs, post. 2 cts.
14. 3 Perennial Plants, post. 4 cts.
15. 100 Foreign Stamps, post. 2 cts.
16. one fine specimen of Native Alum and one Agate, post. 3 cts.
17. 10 different shells, post. 3 cts.
18. Nut and Burr collection of ten specimens, post. 4 cts.
19. 3 Relics, post. 4 cts.
20. 10 dif. Wood specimens, post. 4 cts.

ADVERTISEMENTS.

Only advertisements of reliable dealers are admitted to our columns.

GEM Arrows of Oregon, W. T. and the great West. Sioux, Apache, Pueblo and Navajo Indian Relics, from a feathered arrow to a buckskin suit.

White river group of fossils. Teeth of the extinct mammalian Fauna of this region. Green river fossil fish, finest in the world. Cheyenne River Ammonites placenta, Scaphites, Baculites, Nantilus, Gasteropod etc.

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LIMITED TO

GEOLOGY and

OTHER

SCIENTIFICALLY and

PUBLISHED



COLLECTORS.

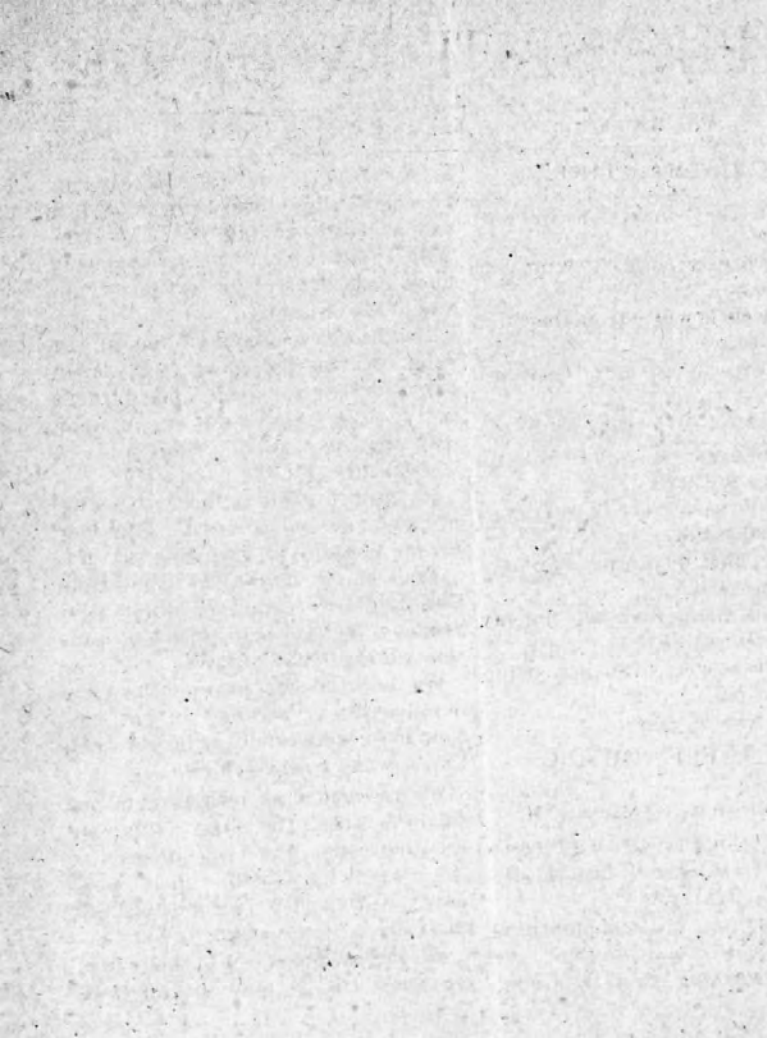
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GEOLOGY, and
Natural Sciences
EXCHANGES.

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EMPIRE STATE EXCHANGE.

WATER VALLEY, N. Y. DECEMBER 1889.

No. 2.

CHRISTMAS TIME.

out in the country white with
snow
trees are bare and the wind doth
blow.

Smoke curls white from the chim-
ney top,

pile down beneath the corn doth
top

the beech fires ruddy glow,

white-breasted snow birds flit
here and there

ere the woods are in plenty or
ground is bare,

under the hemlocks the par-
tridges hide,

aid of their lives at the gay
Christmas tide,

the bitter-sweet branches swing
to and fro.

AN OCTOBER CUTTING.

By Randolph Maynor

WE had long talked of a "fossil-
izing trip" and at last set the
day for taking it.

It was a sunny autumn morning
and two collectors might have
been seen walking briskly along,

each with a grape basket on his arm,
through valleys, over hills and ridges
on a road leading to Lake Erie.
The collectors in question were
none other than the writer of this
and his brother.

We had been about an hour on the
road which led past fruit laden
orchards, flower bedecked gardens
and golden corn fields when upon
reaching the top of a ridge we had
a beautiful view.

In the distance was the Queen City
of the Lakes, surmounted with her
canopy of smoke, guarding the Ni-
agara's source, and in the front Lake
Erie laid, - as calm and quiet as a
sleeping babe, - in the arms of Can-
ada and the United States.

We loitered but a moment to view
the pleasant scene, and in half an
hour more were standing on old Lake
Erie's wave washed shore.

We proceeded at once to chip out
spirifers from the shaly cliffs; we
secured some fine specimens of
one beautiful fossil shell com-
monly called "petrified butterflies,"
but none of our specimens were en-
tirely perfect as the tips of the wings
are very fragile and although we

tried our very best to secure a few perfect ones but to no avail.

At some places we chipped out crinoid stems $\frac{1}{4}$ of an inch in diameter and several inches long but they broke up in small pieces.

Then we also detected the tracings of delicate facoids on some of the rocks.

We hardly realized how fast the time had slipped away as we worked on at our pleasant task of bringing to light forms on which "man had ne'er gazed before," and surprised to find Old Sol in his noontide place.

We ate our lunch, after which we quit the cliff-rocks and directed the strokes of our hammers to the rocks washed up by the waves. These were richer in fossils than those we had left, we found "lens-eyed toads" with their perfectly preserved eyes, some perfect but most of them were in pieces; the trilobite's body is divided into three segments, all of which we found separately but the middle part was far the less plentiful, and I account for it in this way; that the trilobite being an associate of the orthoceras it was preyed upon by that animal, which sometimes rejected the head and may-be always the tail.

We found 2 var. of trilobites and 2 var. of orthoceras. The largest var. of shell that we found was *Jur-*

fer arenosus and another shell fossil was the horn coral of which we found many small ones washed up by the waves. One shell somewhat like a goode, being covered with minute calcite crystals.

After we had split and chipped many of the washed-up rocks, being contented with the results that we had secured all the varieties to be found at that place, sun was just setting when we started for home, and on the way came across a large boulder of red syenitic gneiss of which we took some specimens. (This rock is not common here.)

The next day one might have seen from showy labels, attached to the collected specimens on our shelves (from a locality marked in old maps as Hamburg-on-the-Lake) the following:-

Minerals: Snowy Marble, Claystone, Spiriferous or Shell stone, White Granular Quartz, and Crystallized Calcite.

Fossils: Cup Coral, Honey-comb Coral, Horn Coral, Bunch Coral, *ATRYPA RETICULARIS*, *APHYCUS HARLANI*, *ORTHOCERAS CLARIS*, *ORTHOCERAS PHALLOIDES*, *SPIRIFER ARENOSUS*, *SPIRIFER MUCRONATUS*, *ZAPHRENTES PROLIFERA*.

NUMISMATICS.

RARE OLD COINS.

the coin collector a crack? The average man thinks he is. To the initiated it seems a pure waste of time to occupy days, months, and even years in the collecting of battered and worn coins.

Professor Edwin Froissard, numismatist and archaeologist, shed a good deal of light on the subject, while talking with the writer. The professor is a good authority on numismatics. Moreover, he is in a communicative mood.

What makes people collect coins? asks the professor. "Well, I'll tell you."

In the first place, they do so from a natural desire to preserve. In other words, they can't bear to see things destroyed. The second reason is a feeling of curiosity, a desire to become acquainted with things of the past.

And indeed it is one of the most and most satisfactory ways of doing so, for it brings us into contact with the period to which the coins belong.

The French have a very appropriate name for coins. They call them "monuments, and so they are." The professor was gradually becoming enthused. The next moment he was down into a small safe and produced a box containing innumera-

erable envelopes, all filled with coins. "Now, here are some Egyptian coins of the period of Ptolemy I and II. These coins represent a phase of Greek art.

Professor Froissard here handed one of the coins to a reporter. It was about the size of a silver half dollar, but much heavier, being of pure gold. On one side were the profiles of Ptolemy I and his wife; on the reverse Ptolemy II and wife were represented. The engraving is very fine. The professor then proceeded to explain.

"These coins are made of the purest gold. They are worth \$150 to a numismatist on account of their rarity and perfect condition. The remarkable state of preservation in which old coins are found is due to the fact that the ancients hoarded their money, putting it away in secret places, hiding it in vases etc. To this very day coins are found in the exact condition in which they were originally struck at the mints. The oldest coins which have ever been discovered were struck about 700 B. C. In other words, they are over two thousand five hundred years old. They were struck in the Greek cities of Asia Minor from a native and natural metal called electroid or pale gold."—New York Star.

(CONCLUDED IN OUR NEXT.)

AN OMAHA BUREAU.

INDIAN RELICS OF
WESTERN N.Y.

1852.

Some people say that
the use of the relic of
Sagoyewing, his hands are
to be traced from studying the
temperament.

Those who reach this way, not
that something will be found
out—something important. Taken
from the water of the prehistoric soil
then.

That is the process upon the place
and the house, as he pointed out
to the land, it is the same which is the
way to which it has always been so.

A thoughtful student comes along
determined to find the cause of the in-
fertility of the soil. He carefully looks
about and finds a few spores, arrow
heads, then a few more, than in the
value which he finds himself in the
shape, and some broken arrow heads.
At the ingenuity is subject to the
size of an arrow, arrow-heads, clay,
and the subsequent discovery of the
shell, human, and human-works.
The process is still more. But now it
is the soil itself to change growth. Why
will these things which will be found
at running trout near the surface

now, while corn etc. is started
with?

The surface soil is a rich sand
and to look at it one would
wonder how things can be done
all the time. The surface of
soil we find the down to the
which we do not an old place
where the soil has not been
by the plow, and at night
find that a black layer of
the soil! We have reached the
ground upon which the
insects feed, and those of
these are the remains of the
tree in which they lived. The
black, and then plucking the
spine of water, then by they
in very easily, respiratory
working process with their
lungs.

Another point that they
the black is this way, to find
the fragments that are found
a human work, then the
most plentiful in the district
and these found in the surface
brought up to the plow.

This probably may point
that these are the results of
sure the soil to be preserved
rightly.

Now, whether the details
wheat, corn about three in
surface soil in a country. The
thing they left in when a year

THE EMPIRE STATE EXCHANGE.

LIST OF INDIAN RELICS.

AR. POINTS } Triangular.

matched } long, rotary,
long, serrated,
slender,
short.

unmatched, short. } convex butt,
concave butt,
square butt. } blunt,
sharp.

unmatched, rotary.

AR. POINTS } Short. } deep notched, blunt pointed heads,
unnotched, blunt pointed.

convex b.
concave bt.

AR. POINTS } Long. } leaf-shaped.

unnotched } square butt,
convex butt,
chiseled butt.

AR. POINTS } Long. } triangular.

notched, shallow
stemmed,
small drill pointed,
big triangular, sharp pointed.

AR. POINTS. Flints serrated, notched.

AR. HEADS. } LEAF-SHAPED. Unnotched.

AR. HEADS. } TRIANGULAR. Necked.

AR. HEADS. } STONE DRILL. Round with a flat butt.

AR. HEADS. } BONE DRILL. Flat with a wide butt.

REPLICATED BY
AT OR NEAR THE
SITE OF AN AR-
ROW MAKER, N. Y.

would have lasted of not 400 years as the land has been used some 800 years or their ancestry can never be determined.

As the relics enumerated in this table, we have also found flint blacks, an unwill' eight pound, one pounder eight inch and a large four inch hammer but the rarest find, I think, a grinding-stone on which the

Indians whetted and sharpened their implements. This is a flat stone about 6 x 8 inches with a transverse ridge near the center the top of which is slightly hollowed, two inches wide and very smooth while the other part of the stone is rough.

As soon as possible, we intend to make excavations, and we may then give our readers more about the relics of the ancient arrow maker.

(CONCLUDED IN OUR NEXT.)

THE
Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine - - Editor.

SUBSCRIPTION

One Year, 25 c. | Six months, 15 c.

ADVERTISING RATES.

$\frac{1}{2}$ inch, .15 1 inch, .25
 1 column, \$1.20 1 page, \$2.00

Liberal discount on standing ads.

Terms, strictly cash.

Advertisements must be in by the 25th, and exchanges by the 20th, to insure insertion in next number.

Manuscript always in demand.

Perrine Bro's & Co., Publishers
 Water Valley, Erie Co., N. Y.

Vol. 1. December, 1889. No. 2.

- Merry Christmas to all.
- Well, we have a column of exchanges in this number; a pagefull next.
- Persons sending letters of inquiry to this office, should always enclose stamp for reply.
- A number of interesting articles were crowded out of this issue but will appear later on.
- One page for Philately this month; probably another extra page next month as other parties besides Mr. Hale have tendered us their services.

- We will exchange with all collecting or scientific papers and magazines BUT WE POSITIVELY CANNOT RECEIVE SUBSCRIPTIONS TO OUR PER IN CURIOS, ETC, NOR ANYTHING BESIDES CASH.

- Articles on collecting, etc., are cheerfully solicited from all. Please take notice, that for the prizes offered in the last number so few persons sent in their Mss. that we will extend offer 'till Jan. 1st, 1890, so as to give all a chance to secure a prize.

- Collectors, hurry up. Send in something for publication. Try to secure the prize. You will thus help the paper, help our readers, and lastly, yourself. We intend soon to issue a page for Entomology, one for Zoology, and another for the curious collector. Who will volunteer to conduct any one of the three departments named.

- We have secured the services of Mr. William B. Hale, as conductor of the Philatelic Department. He is well entitled to that position and has been for the last 6 years prominent in the literature of Philately, and 11 yrs. a dealer in stamps. Mr. Hale has edited two journals and associated and contributor to almost all. Our readers will with us rejoice in securing the services of such an experienced Philatelist.

In our last issue we spoke of a distinguished collector of this place, and the person of Edison the great inventor we have a collector who was born in this county, though he collects for a different purpose than most of our readers do, as can be seen by the following:-

EDISON'S WORKSHOP.

Edison at Work

Edison lives in Llewellyn Park, Orange, N. J., where a few years ago he built a handsome house, situated on a hill, commanding a fine view of the country between Orange and New York. Not far from his home is his workshop. The main part is two hundred feet in length, fifty feet wide, and the roof is fifty feet high. There are three-story wings, and in the rear can be seen the tall brick chimney, at the base of which are the engine rooms. One room in the main building is a library, elegantly furnished, and the books are scientific and intended for the use of those employed in the establishment. Lectures are also given once a week for the benefit of the employes, in the lecture room, which is over the library. The room next the library, would be most interesting to us, for here are the desks, drawers, and bottles are found samples of almost "every imaginable." All kinds of feath-

ers and furs, snake skins, bones, and teeth of such creatures as narwhals, rhinoceri and sharks; gums and splines, etc. The reason for having such a collection is that Mr. Edison has to try a great many things in his experiments before he finds the right one; and he does not wish to send to Africa for an ostrich feather, or Labrador for a seal's tooth, when he happens to need one.

One of the finest entomological (insect) collections in America is owned by Rev. Dr. W. J. Holland of Pittsburg. It includes 100,000 specimens and 20,000 species.

PIERRE, S. D., Nov. 19.—To-day while digging a cellar a mile above town on the river, the workmen discovered seven human bodies, four seemed to be bodies of soldiers and the others Indians.

ISHPEMING, Mich., Nov. 25. A lot of about two hundred pounds of quartz, carrying gold at the rate of \$50,000 a ton, was taken from the main shaft of the Michigan gold mine. Assays of three samples of quartz from the Michigan gave \$21,620.71, \$51,552.92, and \$110,958.50 per ton respectively. The latter is the richest gold bearing rock ever taken from an American mine.

PHILATELY.

MY OWN CORNER.

By William B. Hale.

—This little corner will be covered every month by something new. It will be fresh, valuable, interesting and wholly correct. Watch it.

—The most supreme shah of Persia is very indignant at some of the bogus overcharges which have appeared on the beautiful "phiz" of his stamps and will institute a rigid investigation.

—A recent ruse adopted by the small boy is in returning stamps to say "I enclose amount due" and send perhaps half of it. Dealers should always look over their remittances.

—Few collectors are aware that there is an official seal stamp of the United States; the color is pink and rose, and is four and one fourth inches long by two and one fourth deep. Very good size.

—Ye scribe can testify in the case of one of the A. P. A. members that sent in his resignation, that he had by "crooked ways" reason to believe that he would be, and took this way. I hope for the sake of the moral tone of the Association that all others

will get out.

—Did you know the contract printing the U.S. stamps was to be awarded a Philadelphia man? you did, did you know that by "going to qualify" according to specifications of the contract it transferred to the American Bank Note Co., of New York? It is so.

—A fact some know that it is a matter of time only, when the 90 cent postage now used will be taking just so much jump in price that the 24 cent '69 is a while ago. The wise ones are selling them.

—Why do the larger dealers die while smaller ones are doing to the wall? Echo answers "and sand." That is it. The "big" buys out the small dealers stock customers the "sand" keeps in open ground.

—I may explain why small dealers go to the wall. There are three or four in a company. Each one has not much money or collection. If one wants to fill his collection he takes the share cash as it comes. Bye and bye the stock is about gone and no cash to buy more. The owners are dissatisfied and the company grumbles. Consequence:—Bank stock is sold and the trade turned and partners financially minus.

BOTANICAL.

BLADDER PLUMS.

Several years ago, while passing a Plum tree, I noticed many white dery-looking things, which upon examination, proved to be what Dr. Pers. in his "Vegetable Teratology" figures as 'Bladder Plums'; they were very soft and flabby, and were edible, and after a few weeks, they began to shrivel and turn black, and the second week of July, had all fallen.

When opened, no stone was disclosed, but in place of it was a small green body, borne upon a slender stalk, attached to the inner wall, and hanging down to the base. The stalks were thin, but yet showed slight sutures characteristic of the plum and peach.

It is said that the fruit of the cultivated plum is sometimes similarly deformed, but none have, as yet, come under my observation.

The tree above referred to, has never been seen to bear many of the bladder-like fruits.

Have any of our readers ever found any of these monstrosities?

Some of the most valuable kinds of tea now bring \$1,000 an oz in Ceylon.

INTRODUCTION OF WEEDS.

Some people in planting new flowers, sometimes introduce troublesome weeds unawares; such is the case with the Ground Ivy which was brought from England as a fine addition to the flower garden, but in a short time it proved to be a very troublesome weed; the same may be said of the Toned Flax or "Butter and Eggs" which is now very common along roadsides, and which, when it gets in a pasture lot stays. This has spread over a greater area of country than any other weed introduced in this way.

WATER PROOF PAPER.

Excellent water-proof paper for wrapping plants, cuttings and the like, may be made from old newspapers as follows:- Apply with a flat varnish brush a mixture of Copal varnish, boiled linseed oil and turpentine equal parts, and lay out the sheets for a few minutes to dry.

The largest order of plants is the Compositae with 1000 species; the next largest is the Leguminosae, and the third largest is the Order of Grasses.

MINERALOGY.

DEARER THAN GOLD.

Chicago Evening Journal.

Fully ninety-nine persons in every hundred, if asked to name the most precious metals, would mention gold as first, platinum as second, and silver as third. If asked to name others, a few might add nickel, and a very few aluminum to the list. Let us see how near the truth they would be. Gold is worth about 240 dol., per pound, troy; platinum 130 dol., and silver about 12 dol. Nickel would be quoted at about 60 cts. and pure aluminum 8 or 10 dol. to the troy pound.

We will now compare these prices with those of the rarer and less well-known of the metals. To take them in alphabetical order, barium sells for 975 dol. a pound, when it is sold at all, and calcium is worth 1,800 dol. a pound. Cerium is a shade higher—its cost is 100 dol. an ounce, or 1,920 dol. a pound.

These begin to look like fabulous prices, but they do not reach the highest point; chromium brings 200 dol.; cobalt falls to about half the price of silver, while didymium is the same price as cerium, and 10 dol. cheaper on the ounce than calcium, or just

1,680 dol. per pound.

If the value of the Vanderbilt is not overstated, it amounts to nearly \$200,000,000. With this sum could purchase 312 tons of gold, have something left over, but couldn't buy two tons of gold that rare metal being worth 100 dol. an ounce. With this metal the highest price is reached, and it will be called the rarest and most precious of metals.

Glucinum is worth 250 dol. per pound; indium 158 dol.; iridium 658 dol. per pound; lanthanum 175 dol.; lithium 160 dol. per ounce; Niobium costs 127 dol. per ounce; and osmium, palladium, platinum, potassium, rhodium bring respectively 640, 130, 32 and 512 dol. per pound.

Thus we see that the common received opinion as to what are the most precious metals is quite erroneous. Barium is more than three times as valuable as gold, and gallium more than 162 times as costly. Many of the metals are twice or thrice as valuable. Aluminum, now costing \$8 or \$9 a pound, will finally be produced as cheaply as iron. When this can be done it will put the latter metal out of its present use. It possesses great strength, tenacity, and elasticity, with great lightness of weight.

GEOLOGY.

I BECAME A COLLECTOR.

was walking down the street one day and seeing a friend trying to split a piece of stone with a hammer. I stopped and asked him what he was going to do.

He replied that he thought there was a fossil in it, and that he would split it open before he could get it out.

I was interested at once: a fossil was something new to me.

Finally he succeeded in breaking it in two, and in the center was the impression of a small shell; this explained to me in a few words what a shell shell.

This new discovery (to me) deeply interested me, and I finally arranged matters with my friend to go out after some that afternoon.

I started for the ground he had pointed out that afternoon (Seminary Hill, situated in the central part of Albany City and now used as a public park) we reached the hill in about fifteen minutes. I followed my friend to the foot of the hill on the northern side, where he said we could begin operations.

There is a vein of coal running through the hill about fourteen inches in thickness; this vein is covered with limestone and is full of fossils. We collected some of the best and returned home.

These were the first specimens I had ever collected, I still retain some of them and have never regretted the day when I became wrapped up in this study, there is always something new to learn.— R. S. Boyd

SALT AND GAS IN KANSAS.

At Ellsworth, Ellsworth Co., Kansas, as a matter purely of speculation some persons recently made up their mind to drill the earth to see what they could find. They were told by individuals learned in the geology of the region that the work would be fruitless, and advised not to waste time and money, as there were no favorable indications. But the speculative venture ahead with the drilling, and at a depth of 740 feet they struck a bed of pyrosalt, 100 feet thick, at which shale was encountered 100 feet, and then, at a depth of 1,100 feet, a vein of natural gas was struck. That promises to yield fuel in unlimited quantities.

ZOOLOGY.

THE BLUE JAY.

The Blue Jay is one of the best known of our bright plumaged birds, though, like its' near relative—the crow it is very cautious, and is also a very inquisitive bird.

The Jay, like all of the Garruline birds, will eat animal or vegetable substances with equal relish, and is a great plunderer of other birds' nests as it is very fond of young birds, and eggs are eaten with great voracity by these birds. In the fall it lives on berries and other fruits along with caterpillars, moths, and most especially the plump grub of the May-beetle; another favorite food of the Blue Jay is the chestnut; it may be seen carrying them off on many a day—after the burrs open—for use at some future time most probably out of reach of the frisky squirrels.

I think that they put them in old nests in high trees, but I am not sure.

The nest of the Blue Jay is generally made of sticks and twigs, and is flat with a slight depression for the eggs; it is generally placed in the tops of hemlocks or on the end of a pine-tree limb, but it sometimes ventures near the habitation of man and one that I once found, was in the crotch of an

old apple tree, only a dozen feet from our house. I also found one in a willow, partly blown over, eight feet from the ground.

The color of the eggs is greenish brown dotted with a darker shade of brown.—R. M.

WHALEBONE.

Few persons know what the whalebone of commerce represents a living animal. A writer describes it:

Whalebone, in fact, represents a enormous development of the cartilage of the whale, and exists in the living animal in the form of two rows of plates, which, like a great double-edged saw, may or depend from its palate.

From 150 to 200 of these plates are found in the mouth of a whale, and the largest plates may measure from six to twelve feet in length. The edges of these whalebone plates exhibit a fringed or frayed-out appearance, and the whole apparatus is adapted to serve as a kind of grasper or strainer.

Thus when the whale fills the mouth with water, large numbers of small animals, allied to jelly-fishes, and like, are drawn into the esophageal mouth. Thus it is somewhat surprising to reflect that the largest animal is supported by the smallest beings.

EMPIRE STATE EXCHANGER

WATER VALLEY, N. Y. NOVEMBER, 1889.

No. 4

NOVEMBER.

and is whistling wild and clear
with naked trees of orchards sere,
leaves whirl now here, now
ere,
and falling in the air,
some nook, at last they lay
close of the bleak November
y.

SUMMER EXCURSION.

TRALLY people who take
excursions go by rail, but we set
on foot one bright midsummer
genuine summer excursion.
course was to be through our
best museum ground
the Eighteen-mile creek,
and crossing several pas-
sages woods soon reached the
the B. & S. W. R. R., follow-
ing, we soon reached the banks
of the creek. At the railroad bridge
the banks are about eighty feet high;
we ascended along and soon found a
path to descend to the creek bottom;

the water being low there was a fine
slatestone walk for us, which was as
warm as a stove, in places where the
direct rays of the hot, summer sun
shone upon it; in the stream, as we
walked along, hundreds of minnows
darted away in front, while the slug-
gish mullet lay basking in the sum-
mer sunshine.

Far above us clinging to the very
edge of the slaty banks, were storm-
driven pines and rugged oaks, while
the cedar tops bowed to the coming of
the summer wind; where there was a
bit of soil in the crevices of the rocks,
there the wild columbine and the pale
corydalis had planted themselves, and
at places where the banks were shady
the scrubby yew and shield fern festooned the rocks.

At times, our path led under sycamore
and shady beech trees or under
arches of wild fox grape where pretty
Herb Robert shows its blue flowers in
spring time. At last we came to a
place where we ascended and found
great beds of winter green; we gath-
ered some and went on. We had, as
yet, found nothing of note in the
geological line excepting natural

ARCHAEOLOGY.

INDIAN RELICS OF
WESTERN N. Y.

PART I.



CENTURIES AGO there lived and roamed a tribe of men whose most conspicuous art was a skill in making implements of flint and other rocks, and, though they have long since been forgotten, their bones have mouldered away, and nothing remains to tell us how or when they lived except tradition, yet they left an unperishable monument to themselves in the working of their implements ^{from} the rocks that fast forever.

If they made implements from wood, bone, or other material than stone, we hardly know as they would have nearly all decayed by now, but the flint, granite, and quartz is quite indestructible, and relics of these materials are numerous.

We once found a bone arrow-head which had decayed but little, it is a rarity.

In Erie Co. the Indians inhabited the ridges of land, the most formidable tribe seems to have had possession of the pine ridge which extends

from Buffalo southwest-ward.

Upon this ridge the drift rocks mostly of flint which they used making their drills and arrow points and heads.

Spear heads were also made of the same material, but pestles, hammer stones, and celts are of quartz or fine grained granite.

In the manufacture of their arrow heads and tomahawks they selected stones as ironstone &c. which could be ground to a fine edge.

Drills were of two varieties, one of bone drill was flattened sharp pointed widening out at the head, while the stone drill was more rounded, slightly flattened but not widened at the head.

There were many varieties of arrow heads the commonest being the triangular shaped unnotched and the triangular notched.

Arrow heads are found of various sizes and forms, the leaf-shaped being the commonest; then there is the angular war point, the bird point, the notched pointed and the barbed arrow heads.

We have not, as yet, found any of the drill, pointed arrow heads.

At one place we found the remains where there was an "ancient head makers' soap" and this we will describe in our next.

GEOLOGY.

CONCRETIONS.

By U. R. Perrine.

Concretions are masses of rock formed by the tendency of matter to collect about a centre; there are several varieties;—some are found in clay beds and of most fantastic forms are popularly supposed to be formed by the water; these are called *water-stones*; others found in coal mines are termed *iron nodules*,—but all have some foreign object in their centres,—a fossil shell, fish-tooth, etc,— the seed of their formation.

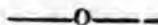
Along the shores of Lake Erie and the river and creek beds in the Marcellus shale, calcareous concretions are very plentiful. Their form is generally that of a flattened sphere,—but they are as round as a ball,—and their diameter from one inch up to nine feet in diameter. These calcareous formations commonly have cracks, formed, it is said, by shrinkage,—which are filled with spar and crystals. At one place we found one about three feet in diameter, one half having been broken off, the surface of disintegration of the other half was completely covered with the beautiful crystals of calcite, of a prismatic-like form.

In some of our western states, and

on the coast of Durham, England, the concretions are in the form of cannon balls.

When the internal cracks of a concretion have become filled with spar, they are termed *septaria*,—from *septum*, a division,—and when cut and polished, present an attractive and ornamental appearance.

In the calcareous concretions, the seams of spar make them somewhat resemble turtles, and many of the country folk think they are the petrified remains of that animal, and can hardly be made to think otherwise.



“And another world—a world of coal and iron—in all its magnificence and riches, lies interred under these glittering stores of lime and salt!

How strangely contrasting in their qualities and structure the two formations. But except that a wise and far-seeing Providence collected and garnered up the waste and decay of both for man's use, no principle have we to guide us when speculating on their mineral properties and arrangement—no natural law certainly, self-acting upon matter and evolving new creations of its own, organic or inorganic, to reveal His inscrutable purposes.”

J. Anderson.

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Perrine Bro's & Co. Publishers.
 Water Valley, Erie Co., N. Y.

Vol. I. November, 1889. No. 1.

This is the initial number of the **EMPIRE STATE EXCHANGE**, - a paper to be devoted exclusively to collectors and exchangers, young and old. In the columns will be found each month articles on the different branches of Natural History, Mineralogy, Archaeology, Numismatics, etc., together with the latest scientific and other news for every kind of collecting, and only the advertisements of reliable dealers. In the future we intend to enlarge in the number of pages if not in size if we have the support which we think we deserve.

-Articles on subjects treated in columns are solicited from all.

-Advertisements should be in for our next issue as there will rush for the Christmas number.

-A Philadelphia dept will be when we find a suitable person to direct the same.

-The best catalogue we have received, is from L. W. St. whose ad. appears on the last. Be sure to send for it at once.

-We intend to have an exchange column in our next issue, free subscribers given the preference. Dont forget to send in a note we want a full column.

-In our next issue will be found following instructive and interesting articles. An October Outing; Catching; Snake Charming; Mining Minerals; Home made Coal; Caus and Cabinets; Mistaken Identity; The Blue Jay; In a Coal; Christmas Chat; Indian Re Western New York, Part II; many more interesting sketches.

-As time passes Erie County developing its mineral resources. Zoar oil excitement has commenced to wane when and recovery is made, this time next Station where a very

of aluminum is said to have been
 id; a leading assayer from Phila-
 phia will soon visit the place and we
 estly hope that the examination
 not prove as unsatisfactory as the
 of Hamburg did many years ago!

November is with us once more and
 h it comes the collectors last trips
 this year; then the insect net, the
 and collecting case must be put
 for the season, together with
 stone hammer the chisel, and the
 anvil press, and now the exchange-
 season has begun. Nearly every
 exchanges specimens to complete
 er collections, and all such need
 d exchange paper which we think
 have in the EMPIRE STATE EX-
 ANGE. We want you to subscribe
 to. Look at our Premium List,
 unequalled.

—O—

PERPETUAL PASTE FOR LABELS.

olve a teaspoonful alum in a qt.
 Water. When cold, stir in flour 'til
 the consistency of thick cream
 such powdered resin as will in-
 time, and throw in half a dozen
 to give it a nice odor. Have on
 are a teacup of boiling water;
 the flour mixture into it, stirring
 at the time. In a few minutes it
 of the consistency of mush; let
 to use soften with warm water.

NOVEMBER NOTES.

—
 77 Circulation of this issue 1,000.
 our advertising rates are very cheap.

—
 Black Squirrels are more numer-
 ous here now than they have been for
 many years.

—
 The bones of Lord Howe who was
 killed at the battle of Ticouderoga,
 were recently unearthed by workmen
 who were digging a sewer.

—
 There is a spot in Siberia about
 thirty miles square where the ground
 has not thawed out for the last 100
 years, and where it is frozen to a depth
 of sixty feet.

—
 Few collectors know that the gov-
 ernment issues a stamp of the denomi-
 nation of \$60. Such stamps are used
 in second-class mail matter, and are
 rarely seen by the general public.

—
 A short time ago, Fred Hout of Rock-
 ford, Ill., and John Kent of Rochester
 N. Y., while out hunting at Holland
 Center, killed a monster fox on the
 farm of Z. Davis, measuring 4 ft. 6½
 inches from tip to tip, stood 17 inches
 high and weighed 17½ lbs. Mr. Kent
 was the lucky marksman who killed
 the giant.

ORNYTHOLOGY.

NESTING OF THE WOODCOCK.

By an Observer

It was on a bright, sunny day in the early part of last May, that I started out in quest of Woodcocks' eggs. I made my way towards a patch of ferns which grow at the edge of a woods that I knew the Woodcock frequented. When I arrived at the place, I commenced to look carefully beneath every bunch of withered fern, but could not see any thing in the shape of a nest and was about to give up the search when I was suddenly confronted with a pair of bright eyes peering at me from beneath the ferns, and, upon looking closer I found them to belong to a Woodcock sitting on its nest. I walked towards it but it looked me steadily in the eye and did not fly until I almost touched it when it jumped off and fluttered away, revealing to my gaze a set of four fine eggs. They were spotted chiefly at the larger end with brown on a ground color of buff. The nest was composed of dead fern leaves laid together in the shape and size of a robin's nest and was slightly raised above the surrounding surface. The measurements of the eggs were 1.25 x 1.50.

BIRD NOTES.

"O'er hill and dale the black
southward fly,
And the last blooms of Autumn
ered lie."

A sea eagle was shot at Westburg about a month ago.

A large crane was seen on the ten mile creek at this place recently.

The first flock of wild geese back October 5th. The first arrivals this year we have in our book as follows:-

March 4th, 1889, - Crow, Chel-
14th, Wild Geese, - saw two
near Buffalo. Robins, Bla-
and Blackbirds.

15th, Song Sparrow, (hawk.

16th, Killdeer Plover.

17th, Slender-billed Nuthatch.

Capturing a Monkey-faced

A report comes from Norris in the effect that John Jones, a boy, got with a small rifle an owl of bright yellow and white with a face like a monkey and a mark on its breast resembling

BOTANICAL.

LICHENS.

dependent.

A most remarkable fact has recently been noted that certain species of lichens will only grow on certain rocks. Lichens that will be found on rocks of one character are not found on rocks wholly different. Whether this be wholly correct or not, the statement does not appear to have been challenged, and seems to have been accepted by lichenologists as correct. It is interesting as showing that one fact in science may be brought to bear on other branches of diligence, to note that this one is being brought in to aid the archaeologist. There has been a discussion as to the origin of the rock that forms the wall of the fortification of Chester, England. As the rock is evidently found in the vicinity, but is found only in the wall, built by the Romans, must have been brought there. In confirmation of this, it is now asserted that lichens, common on the rocks in the vicinity, do not grow on the stones. Local stone used in building are covered by the usual mass of lichen, but none are found on the stones. It is stated that other

lichens do grow on the stone, not found in the vicinity, but whether identical with those on Italian rocks is not noted. But the whole subject is a very curious one.

PLANT GALLS

On entering a forest or wood lot of oak trees in fall or in spring just after the snow has left the ground, one may see numerous brown or yellowish balls, some adhering while others are detached from the withered leaves. These are the gall nuts of commerce, used for making ink and are produced by an insect called the gall-fly, (*CYNIPS QUERCUS-FOLI.*), which after puncturing a leaf deposits an egg in the wound which causes the spherical excrescence. Gall-nuts and excrescences formed or produced by different insects are found on various plants, as, for instance, on the stem of the common golden-rod (*SOLIDAGO*), or on the stems of the hickory where they are in the form of shot or pellets and the insect which produces them is called the Hickory stem Gall-louse; opening one of these bullet-like galls, which are hollow and of a leathery texture one may find the walls covered with minute white and yellow spores.

MINERALOGY.

CHROME IRON ON THE PACIFIC.

A Santa Rosa paper says: "A specimen of chrome iron ore, taken from the surface of the land of J. D. Cooper, about ten miles north of Fort Ross, near the Plantation House, indicates there must be a valuable deposit of this mineral in that vicinity. The piece exhibited by Mr. Cooper, and picked up by him as a cropping, is almost pure mineral, no steel chisel or sledge hammer having any effect upon it. If, as is supposed, there is a ledge of this ore in that locality, it will, when developed, add largely to the mineral wealth, not only of the country, but of the State, as this mineral is not only valuable, but rare. In the same vicinity a considerable deposit of almost pure bitumen has also been found. Being but about three miles from the coast, these deposits may become the means of making that part of the country rich and valuable.

EDEN VALLEY MINERALS.

Yellow calcite, calc spar, laminated limestone, fluor spar, crystalized cal-

cite, sphalerite, garnet in gneiss, granite, bronzed slate, soapstone, claystone, iron pyritic nodule, shale, natural alum, ferruginous claystone. Besides those named above many of the more common minerals are found at that place.

FINE MINERALS OF NEW YORK AND WHERE TO FIND THEM.

Allanite.- Morish. Apatite.-
Diamond. Biotite.- Greenwood Furn.
Calcite.- Antwerp and Gouverneur.
Chalcopyrite.- Ellenville. Chlo-
rite.- Edenville, Brewster. Cleve-
berl.- Greenfield. Clintonite.- As-
Coccolite.- Long Pond. Daubentonite.-
Russel. Epidote.- Amity. Feldspar.-
Warwick, Rossie. Fluorite.- John-
sbury. Garnet.- Greenfield. Glauco-
phane.- Natural Bridge. Graphite.-
Conderoga. Mica.- Monroe, Pargoy,
Rossie. Pallogopite.- Port Jervis.
Pyrite.- Schoharie. Pyroxene.-
Quartz Crystals.- Little Falls, John-
sville, Salisbury, Fowler. Scapolite.-
Diana. Spinel.- Diana, Newburgh.
Spinel.- Warwick, Amity, Schoharie.
ite.- Schoharie. Tale.- Amity, or
maline.- Crown Point, Gouverneur.
Greenfield. Tremolite.- Edwardsburgh.
Gouverneur. Zircon.- Johnsbury.

EXCHANGES.

This column will hereafter be devoted to exchangers. Free to all, subscribers given the preference. No unclassified advertisements inserted.

A CHANCE.

Want to have a GRAND CHRISTMAS NUMBER and to induce archaeologists and others to send in original specimens we make this offer; to the one who sends the best sketch, etc., on any subject treated in our columns we will give a fine Indian axe. For the second best, one collectors pocket knife—handy to weigh packages, specimens, etc; can be folded up, and easily carried in the pocket. Every collector needs one. The third best specimen of Indian bead work from Seneca Falls. All Mss. sent us shall be sent to this office.

O

We intend to publish soon a receipt book for collectors and though we have already a goodly number of valuable receipts there is yet room for more. The book will include for all collectors and an appendix of collecting sites directory. Send us two specimens and we will insert your name in our directory.

THE
Empire State Exchange
PREMIUM LIST.

Any one sending twenty five cents for one years subscription to the EMPIRE STATE EXCHANGE can select any one of the following fine premiums.—

- | | |
|---|----------------|
| 1. 1 fine 5 in. star fish, | postage 3 cts. |
| 2. 2 (1½ x 2) minerals, | post. 4 cts. |
| 3. 6 Curiosities, | post. 4 cts. |
| 4. 6 fine Fossils, | post. 3 cts. |
| 5. 1 large Horse-shoe crab and two skates eggs, | post. 3 cts. |
| 6. 1 doz. small King Crabs, | post. 3 cts. |
| 7. 4 dif. Birds eggs, | post. 3 cts. |
| 8. 200 Data Blanks, | post. 1 ct. |
| 9. 200 Labels, | post. 1 ct. |
| 10. 10 pkt. Vegetable seeds, | post. 2 cts. |
| 11. 5 pkts. Flower Seeds, | post. 2 cts. |
| 12. 25 named Botanical Specimens mounted, | post. 5 cts. |
| 13. 4 Spring Bulbs, | post. 2 cts. |
| 14. 3 Perennial Plants, | post. 4 cts. |
| 15. 100 Foreign Stamps, | post. 2 cts. |
| 16. one fine specimen of Native Alum and one Agate, | post. 3 cts. |
| 17. 10 different shells, | post. 3 cts. |
| 18. Nut and Burr collection of ten specimens, | post. 4 cts. |
| 19. 3 Relics, | post. 4 cts. |
| 20. 10 dif. Wood specimens, | post. 4 cts. |

ADVERTISEMENTS.

Only advertisements of reliable dealers are admitted to our columns.

GEM Arrows of Oregon, W. T. and the great West. Sioux, Apache, Pueblo and Navajo Indian Relics, from a feathered arrow to a buckskin suit.

White river group of fossils. Teeth of the extinct mammalian Fauna of this region. Green river fossil fish, finest in the world. Cheyenne River Ammonites placenta, Scaphites, Baculites, Nautilus, Gasteropod etc.

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PIGEON HAWK,

— and MANY other

eggs,

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JOB PRINTING

Done very **CHEAP**

— } THE { —

CHRISTMAS

NUMBER,

EMPIRE STATE

EXCHANGE

SPECIALY for

COLLECTORS.

SPECIALY

SPECIALY

AND TO

MINERALOGY,

and

GEOLOGY, and

other

Natural Sciences

and

EXCHANGES.

SPECIALY

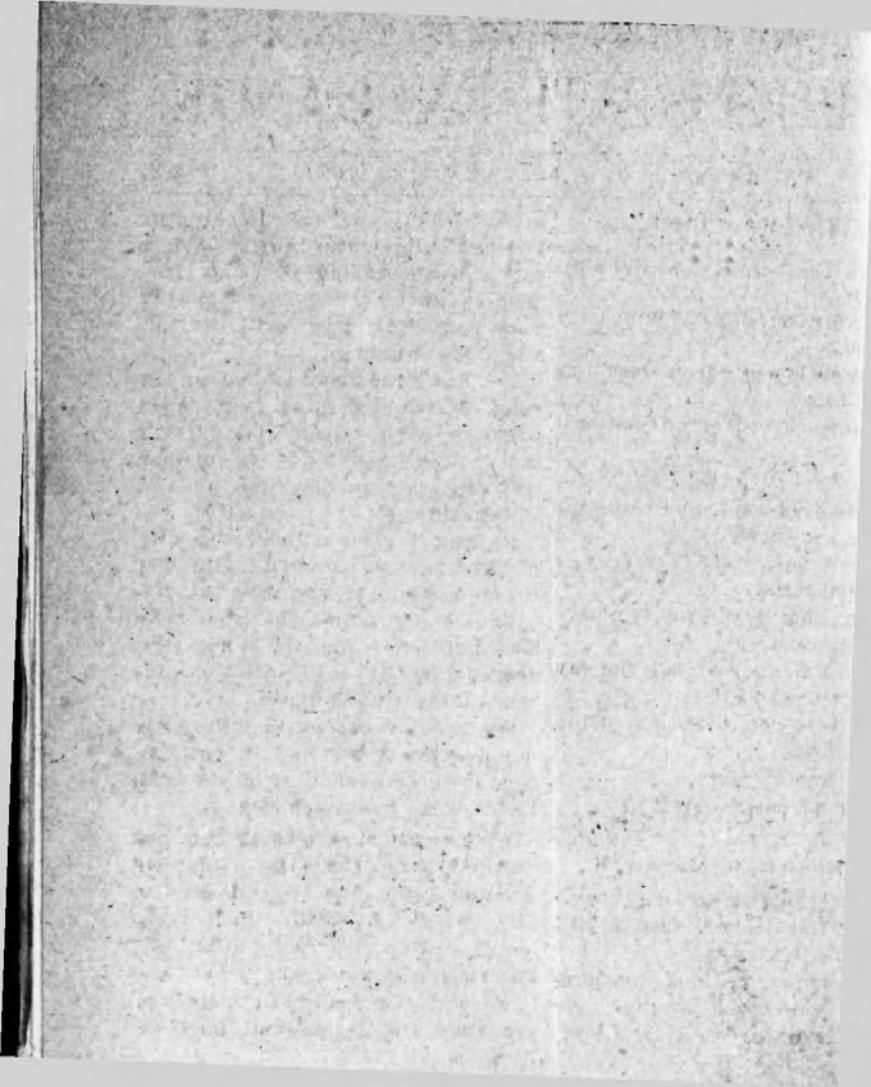
SPECIALY



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Brooks & Co. Publishers, Water Valley 7, E. 100, N. Y.



EMPIRE STATE EXCHANGE.

WATER VALLEY, N. Y., DECEMBER 1889.

No. 2.

CHRISTMAS TIDE.

ent in the country white with
snow
ices are bare and the wind doth
blow,
smoke curls white from the chim-
ney top,
le down beneath the corn doth
top
le beech fires ruddy glow,
white-breasted snow birds flit
here and there
ere the woods are in plenty or
ground is bare,
nder the hemlocks the par-
tridges hide,
ield of their lives at the gay
Christmas tide,
the bitter-sweet branches swing
au-anté-foe.

AN OCTOBER CUTTING.

By Randolph Marino

I had long talked of a "fossil-
izing trip" and at last set it
day for taking it.
as a sunny autumn morning
two collectors might have
been walking briskly along,

each with a grape basket on his arm,
through valleys, over hills and ridges
on a road leading to Lake Erie.
The collectors in question were
none other than the writer of this
and his brother.

We had been about an hour on the
road which led past fruit laden
orchards, flower bedecked gardens
and golden corn fields when upon
reaching the top of a ridge we had
a beautiful view.

In the distance was the Queen City
of the Lakes, surmounted with her
canopy of smoke, guarding the Ni-
agara's source, and in the front Lake
Erie laid, - as calm and quiet as a
sleeping babe, - in the arms of Can-
ada and the United States.

We loitered but a moment to view
the pleasant scene, and in half an
hour more were standing on old Lake
Erie's wave washed shore.

We proceeded at once to chip out
spirifers from the shaly cliffs; we
secured some fine specimens of
our beautiful fossil shell com-
monly called "petrified butterflies,"
but none of our specimens were en-
tirely perfect as the tips of the wings
are very fragile and although we

tried our very best to secure a few perfect ones but to no avail.

At some places we clipped out crinoid stems $\frac{1}{4}$ of an inch in diameter and several inches long but they broke up in small pieces.

Then we also detected the tracings of delicate fucoids on some of the rocks.

We hardly realized how fast the time had slipped away as we worked on at our pleasant task of bringing to light forms on which "man had ne'er gazed before," and surprised to find Old Sol in his noontide place.

We ate our lunch, after which we quit the cliff-rocks and directed the strokes of our hammers to the rocks washed up by the waves. These were richer in fossils than those we had left, we found "leus-eyed toads" with their perfectly preserved eyes, some perfect but most of them were in pieces; the trilobite's body is divided into three segments, all of which we found separately but the middle part was far the less plentiful, and I account for it in this way; that the trilobite being an associate of the orthoceras it was preyed upon by that animal, which sometimes rejected the head and may-be always the tail.

We found 2 var. of trilobites and 2 var. of orthoceras. The largest var. of shell that we found was spiri-

fer arenosus and another shell fossil was the horn coral of which we found many small ones washed up by the waves. One shell somewhat like a geode, being covered with minute calcite crystals.

After we had split and clipped many of the washed-up rocks, being contented with the things that we had secured all the varieties to be found at that place, sun was just setting when we started for home, and on the way came a large boulder of red syenitic phyry of which we took some specimens. (This rock is not common here.)

The next day one might have seen from showy labels, attached to the collected specimens on our shelves (from a locality marked in old maps- Hamburg-on-the-Lake) the following:-

Minerals: Snowy Marble, Claystone, Spiriferous or Shell stone, White Granular Quartz, Crystallized Calcite.

Fossils: Cup Coral, Honey-comb Coral, Horn Coral, Bunch Coral, *ATRYPA RETICULARIS*, *ARTHRICUS HARLANI*, *ORTHOCERAS CLARIS*, *ORTHOCERAS PHALLOIDES*, *SPIRIFER ARENOSUS*, *SPIRIFER MUCRONATUS*, *ZAPHRENUS PROLIFERA*.

NUMISMATICS.

RARE OLD COINS.

the coin collector a crank? The average man thinks he is. To the initiated it seems a pure waste of time to occupy days, months, and even years, in the collecting of battered and old coins.

Professor Edwin Froissard, numismatist and archaeologist, shed a good deal of light on the subject, while talking with me. The professor is a good authority on numismatics. Moreover, he was in a communicative mood.

"What makes people collect coins?"

asked the professor. "Well, I'll tell you."

In the first place, they do so out of a natural desire to preserve. In other words, they can't bear to see anything destroyed. The second motive is a feeling of curiosity, a desire to become acquainted with history.

And indeed it is one of the most and most satisfactory ways of doing so, for it brings us into contact with the period to which the coins belong.

The French have a very appropriate name for coins. They call them "monuments, and so they are."

The professor was gradually becoming enthused. The next moment he had

erable envelopes, all filled with coins.

"Now, here are some Egyptian coins of the period of Ptolemy I and II. These coins represent a phase of Greek art.

Professor Froissard here handed one of the coins to a reporter. It was about the size of a silver half dollar, but much heavier, being of pure gold. On one side were the profiles of Ptolemy I and his wife; on the reverse Ptolemy II and wife were represented. The engraving is very fine. The professor then proceeded to explain.

"These coins are made of the purest gold. They are worth \$150 to a numismatist on account of their rarity and perfect condition. The remarkable state of preservation in which old coins are found is due to the fact that the ancients hoarded their money, putting it away in secret places, hiding it in vases etc. To this very day coins are found in the exact condition in which they were originally struck at the mints. The oldest coins which have ever been found were struck about 700 B.C. In other words, they are over two thousand five hundred years old. They were struck in the Greek cities of Asia Minor from a native and natural metal called electroid or pale gold."—New York Star.

(CONCLUDED IN OUR NEXT.)

ARCHAEOLOGY.

INDIAN RELICS OF
WESTERN N. Y.

PART II

SOME people say "there's no use of plying into every thing; no benefit can be derived from studying the forgotten past."

Those who read this may note that something can be found out—something instructive learned from the relics of the prehistoric red man.

"That is the poorest spot on the place" said the farmer, as he pointed out a barren knoll, "I don't know what is the matter with it, it has always been so."

A thoughtful student comes along determined to find the cause of the infertility of the spot; he carefully looks about and finds a few perfect arrow heads, then a few more, then at another visit he finds handfulls of flint chips and some broken arrow heads; Ah! the mystery is solved,—it is the site of an ancient arrow-makers shop, and the subsequent discovery of the 'anvil', hammer, and hammer-stones but proves it still more. But why is the soil hostile to plant growth? Why will weeds—those kinds with rhizomes or running roots near the surface

grow, while corn etc. is stunted and small?

The surface soil is a rich sand and to look at it one would think it would grow plants finely, but it is not the case. The surface soil is good we must dig down to find it, which we do near an old pine where the soil has not been disturbed by the plow, and at eight feet depth find a black layer of charcoal! We have reached a spot of land, upon which the ancient inhabitants trod, and these traces are the remains of the fires in which they heated the blocks, and then plunging the spring of water, near by, they cooled off very easily, preparatory to the pecking process with their hammer-stones.

Another proof that they used the blocks in this way, is that the fragments show no traces of a hammer struck them; the most plentiful at the charcoal, and those found on the surface were brought up by the plow.

They probably used pine for their fires, and this would cause the soil to be poisoned roughly.

Now-a-days the debris, in woods, forms about three inches of surface soil in a century, and since they left or were exter-

TABLE OF INDIAN RELICS.

WAR POINTS } Triangular.

patched. { long, rotary,
 long, serrated,
 slender,
 short.
 unnotched, short. { convex butt
 concave butt.
 square butt. } blunt.
 unnotched, rotary. } sharp.

Short. { deep notched, blunt pointed heads. } concave b.
 unnotched, blunt pointed. } convex bt.
 Long. { leaf-shaped. { unnotched } square butt.
 notched, shallow } convex butt.
 stopped, } chiseled butt
 semitrill pointed,
 triangular, } big triangular, sharp pointed.

POINT. Finely serrated, notched.

HEADS. { LEAF-SHAPED. Unnotched,

{ TRIANGULAR. Necked,

{ STONE DRILL. Round with a flat butt.

{ BONE DRILL. Flat with a wide butt.

RELICS FOUND AT OR NEAR THE SITE OF AN AR- ROW SHOP, N.Y.
--

would have lapsed of not
 400 years as the land has
 cleared some fifty years or
 their ancestry can never be
 determined.

the relics enumerated in
 table, we have also found
 that blocks, an anvil eight
 pounds, one pounder eight in-
 ches, and a large four inch ham-
 mer, the rarest find, I think,
 a grinding-stone on which the

Indians whetted and sharpened
 their implements. This is a flat stone
 about 6 x 8 inches with a transverse
 ridge near the center the top of which
 is slightly hollowed, two inches wide
 and very smooth while the other part
 of the stone is rough.

As soon as possible, we intend to
 make excavations, and we may then
 give our readers more about the re-
 lics of the 'ancient arrow maker.'

(CONCLUDED IN OUR NEXT.)

THE
Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine - - Editor.

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Advertisements must be in by the 25th, and exchanges by the 20th, to insure insertion in next number.

Manuscript always in demand.

Perrine Bro's & Co. Publishers.
 Water Valley, Erie Co., N. Y.

Vol. 1. December, 1889. No. 2.

- Merry Christmas to all.
- Well, we have a column of exchanges in this number; a page full next.
- Persons sending letters of inquiry to this office, should always enclose stamp for reply.
- A number of interesting articles were crowded out of this issue but will appear later on.
- One page for Philately this month; probably another extra page next month as other parties besides Mr. Hale have tendered us their services.

- We will exchange with all collecting or scientific papers and magazines BUT WE POSITIVELY CANNOT RECEIVE SUBSCRIPTIONS TO OTHER PERIODICALS, ETC., NOR ANYTHING BESIDES CASH.

- Articles on collecting, etc., are respectfully solicited from all. Please take notice, that for the prizes in the last number so few persons in their Mass. that we will extend offer 'till Jan. 1st, 1890, so as to give all a chance to secure a prize.

- Collectors, hurry up. Send in articles for publication. Try to win the prize. You will thus help to improve our paper, help our readers, and hasten our course. We intend soon to publish a page for Entomology, one for Zoology, and another for the current collector. Who will volunteer to conduct any one of the three departments named.

- We have secured the services of Mr. William B. Hale, as conductor of the Philatelic Department. Well entitled to that position has been for the last 6 years prominent in the literature of Philately, and 11 yrs. a dealer in stamps. Mr. Hale has edited two journals and assisted as author and contributor to almost all philatelic journals. Our readers will with us rejoice in securing the services of such an eminent Philatelist.

In our last issue we spoke of a distinguished collector of this place, and the person of Edison the great inventor we have a collector who was born in this county, though he collects for a different purpose than most of our readers do, as can be seen by the following:-

EDISON'S WORKSHOP.

Edison at Work

Edison lives in Llewellyn Park, Orange, N. J., where a few years ago he built a handsome house, situated on a hill, commanding a fine view of the country between Orange and New York. Not far from his home is his workshop. The main part is two hundred feet in length, fifty feet wide, and fifty feet high. There are one-story wings, and in the rear to be seen the tall brick chimney, at the base of which are the engine flues. One room in the main building is a library, elegantly furnished, and the books are scientific, intended for the use of those employed in the establishment. Lectures are also given once a week for the benefit of the employes, in the lecture room, which is over the library. The room next the library, would be most interesting to us, for here boxes, drawers, and bottles are filled with samples of almost "every thing imaginable." All kinds of feathers

and furs, snake skins, bones, and teeth of such creatures as narwhals, rhinoceri and sharks; gums and spices, etc. The reason for having such a collection is that Mr. Edison has to try a great many things in his experiments before he finds the right one; and he does not wish to send to Africa for an ostrich feather, or Labrador for a seal's tooth, when he happens to need one.

One of the finest entomological (insect) collections in America is owned by Rev. Dr. W. J. Holland of Pittsburg. It includes 100,000 specimens and 20,000 species.

PIERRE, S. D., Nov. 19.—To-day while digging a cellar a mile above town on the river, the workmen discovered seven human bodies, four seemed to be bodies of soldiers and the others Indians.

ISHPEMING, Mich, Nov. 25. A lot of about two hundred pounds of quartz, carrying gold at the rate of \$50,000 a ton, was taken from the main shaft of the Michigan gold mine. Assays of three samples of quartz from the Michigan gave \$21,620.71, \$51,552.92, and \$110,958.50 per ton respectively. The latter is the richest gold bearing rock ever taken from an American mine.

PHILADELPHIA.

MY OWN CORNER.

By William B. Hale.

- This little corner will be covered every month by some thing new. It will be fresh, valuable, interesting and wholly correct. Watch it.
- The most supreme shah of Persia is very indignant at some of the bogus charges, which have appeared on the beautiful "plaz" of his stamps and will institute a rigid investigation.
- A recent ruse adopted by the small boy is in returning stamps to say "I enclose amount due" and send perhaps half of it. Dealers should always look over their remittances.
- Few collectors are aware that there is an official seal stamp of the United States; the color is pink and rose, and is four and one fourth inches long by two and one fourth deep. Very good size.
- Ye scribe can testify in the case of one of the A. P. A. members that sent in his resignation, that he had by "crooked ways" reason to believe that he would be, and took this way. I hope for the sake of the moral tone of the Association that all others
- will get out.
- Did you know the contract printing the U.S. stamps was awarded a Philadelphia man you did, did you know that by "ing to qualify" according to specifications of the contract transferred to the American Note Co., of New York? It is
- A fact some know that it is a matter of time only, when the 90 cent stamp now used will be taking just a jump in price that the 24 cent stamp a while ago. The wise ones are salting them.
- Why do the larger dealers flourish while smaller ones are to the wall? Echo answers and saud." That is it. The large buys out the small dealers stock customers the "sand" keeps in open ground.
- I may explain why small dealers go to the wall. There are three or four in a company. Each one has not much money or collection. When one wants to fill his collection he takes the share cash as it comes. Bye and bye the stock is absorbed and no cash to buy more. The stock is sold and the trade turns sour. Some are dissatisfied and they grumble. Consequences—
- The stock is sold and the trade turns sour and partners financially injured.

BOTANICAL.

BLADDER PLUMS.

Several years ago, while passing a Plum tree, I noticed many white fleshy-looking things, which upon examination, proved to be what Dr. Ross, in his "Vegetable Teratology" figures as "Bladder Plums"; they were very soft and flabby, and were edible, and after a few weeks, they began to shrivel and turn black, and in the second week of July, had all fallen.

When opened, no stone was disclosed, but in place of it was a small fleshy body, borne upon a slender stalk, attached to the inner wall, and hanging down to the base. The stalks were thin, but yet showed slight tubercle suture characteristic of the plum and peach.

It is said that the fruit of the cultivated plum is sometimes similarly deformed, but none have, as yet, come under my observation.

The tree above referred to, has never before borne many of the bladder

plums. Have any of our readers ever found any of these monstrosities?

Some of the most valuable kinds of tea will bring \$1,000 an oz in Ceylon.

INTRODUCTION OF WEEDS.

Some people in planting new flowers, sometimes introduce troublesome weeds unawares; such is the case with the Ground Ivy which was brought from England as a fine addition to the flower garden, but in a short time it proved to be a very troublesome weed; the same may be said of the Toad Flax or "Butter and Eggs" which is now very common along roadsides, and which, when it gets in a pasture lot stays. This has spread over a greater area of country than any other weed introduced in this way.

WATER PROOF PAPER.

Excellent water-proof paper for wrapping plants, cuttings and the like, may be made from old news papers as follows:- Apply with a flat varnish brush a mixture of Copal varnish, boiled linseed oil and turpentine equal parts, and lay out the sheets for a few minutes to dry.

The largest order of plants is the Compositae with 9000 species; the next largest is the Leguminosae, and the third largest is the Order of Grasses.

MINERALOGY.**DEARER THAN GOLD.**

Chicago Evening Journal.

Fully ninety-nine persons in every hundred, if asked to name the most precious metals, would mention gold as first, platinum as second, and silver as third. If asked to name others, a few might add nickel, and a very few aluminum to the list. Let us see how near the truth they would be. Gold is worth about 240 dols. per pound troy; platinum 130 dols. and silver about 12 dols. Nickel would be quoted at about 60 cts. and pure aluminum 8 or 10 dols. to the troy pound.

We will now compare these prices with those of the rarer and less well-known of the metals. To take them in alphabetical order, barium sells for 975 dols. a pound, when it is sold at all, and calcium is worth 1,800 dols. a pound. Cerium is a shade higher—its cost is 100 dols. an ounce, or 1,920 dols. a pound.

These begin to look like fabulous prices, but they do not reach the highest point; chromium brings 200 dols.; cobalt falls to about half the price of silver, while didymium is the same price as cerium, and 10 dols. cheaper on the ounce than calcium, or just

1,680 dols. per pound.

If the wealth of the Vanderbilts is not overstated, it amounts to about \$200,000,000. With this sum they could purchase 312 tons of gold, and have something left over, but they couldn't buy two tons of gallium, that rare metal being worth 100,000 dols. an ounce. With this metal the highest price is reached, and it will be called the rarest and most precious of metals.

Glucium is worth 250 dols. per pound; indium 158 dols.; iridium 658 dols. per pound; lanthanum 175 dols. per pound; lithium 160 dols. per ounce; Niobium costs 127 dols. per ounce; and osmium, palladium, platinum, potassium, rhodium bring respectively 640, 130, 32 and 512 dols. per pound.

Thus we see that the common received opinion as to what are the most precious metals is quite erroneous. Barium is more than 100 times as valuable as gold, and gallium more than 162 times as costly. Many of the metals are twice or thrice as valuable. Aluminum, now costing \$8 or \$9 a pound, will finally be produced as cheaply as iron. When this can be done it will pull the latter metal out of its present position; it possesses great strength, ductility, and elasticity, with a great lightness of weight.

GEOLOGY.

I BECAME A COLLECTOR.

was walking down the street one day and seeing a friend trying to split a piece of stone with a hammer. I stopped and asked him what he was going to do.

He replied that he thought there was a fossil in it, and, that he would split it open before he could get it out.

I was interested at once: a fossil was something new to me.

Finally he succeeded in breaking it in two, and in the center was the impression of a small shell; this he explained to me in a few words was a fossil shell.

This new discovery (to me) deeply interested me, and I finally argued matters with my friend to go digging after some that afternoon.

We started for the ground he had selected that afternoon (Seminary Hill, situated in the central part of Albany City and now used as a public park) we reached the hill in about fifteen minutes. I followed my friend to the foot of the hill on the northern side, where he said we would begin operations.

There is a vein of coal running through the hill about fourteen inches in thickness; this vein is covered with limestone and is full of fossils we collected some of the best and returned home.

These were the first specimens I had ever collected, I still retain some of them and have never regretted the day when I became wrapped up in this study, there is always something new to learn.— R. S. Boyd

SALT AND GAS IN KANSAS.

At Ellsworth, Ellsworth Co., Kansas, as a matter purely of speculation, some persons recently made up a fund to drill the earth to see what they would find. They were told by individuals learned in the geology of the region that the work would be fruitless, and advised not to waste the money, as there were no favorable indications. But the speculators went ahead with the drilling, and at a depth of 740 feet they struck a bed of pure salt, 150 feet thick, above which shale was encountered for 200 feet, and then, at a depth of 1,100 feet, a vein of natural gas was struck that promises to yield fuel in unlimited quantities.

ZOOLOGY.

THE BLUE JAY.

The Blue Jay is one of the best known of our bright plumaged birds though, like its' near relative—the crow it is very cautious, and is also a very inquisitive bird.

The Jay, like all of the Garruline birds, will eat animal or vegetable substances with equal relish, and is a great plunderer of other birds' nests as it is very fond of young birds, and eggs are eaten with great voracity by these birds. In the fall it lives on berries and other fruits along with caterpillars, moths, and most especially the plump grub of the May-beetle; another favorite food of the Blue Jay is the chestnut; it may be seen carrying them off on many a day—after the burrs open—for use at some future time most probably out of reach of the frisky squirrels.

I think that they put them in old nests in high trees, but I am not sure.

The nest of the Blue Jay is generally made of sticks and twigs, and is flat with a slight depression for the eggs; it is generally placed in the tops of hemlocks or on the end of a pine-tree limb, but it sometimes ventures near the habitation of man and one that I once found, was in the crotch of an

old apple tree, only a dozen feet from our house. I also found one in a willow, partly blown over eight feet from the ground.

The color of the eggs is greenish brown dotted with a darker shade of brown.—R. M.

—o—
WHALEBONE.

Few persons know what the whalebone of commerce represents a living animal. A writer thus describes it:

Whalebone, in fact, represents a enormous development of the jawbone of the whale, and exists in the living animal in the form of two rows of plates which, like a great double-edged saw, hang or depend from its palate.

From 150 to 200 of these plates are found in the mouth of a whale, and the largest plates may measure from six to twelve feet in length. The edges of these whalebone plates exhibit a fringed or frayed-out appearance, and the whole apparatus is adapted to serve as a kind of grasper or strainer.

Thus when the whale fills the water with water, large numbers of small animals, allied to jelly-fishes and like, are drawn into the capacious mouth. Thus it is somewhat to reflect that the largest animal is supported by smallest beings.

THE EMPIRE STATE EXCHANGE.

CHANGES.

Column is free to all, but subscribers will be seated at the first to disengage advertisements. Write your exchanges on the paper and apart from

change.- minerals, fossils, specialties for scientific books published. U. R. Perrine, Water Valley, N. Y.

lot of Indian arrows, gold holder, club skates, common maps and revenue stamps, exchange for rare U. S. stamps. Catalogue or most any- Vol. S. M. Myers, A. P. A. 777., Centre, Indiana.

all kinds of books, rubber philatelic papers etc, to exchange for stamps.

papers for \$1.50 worth of Scotts' prices. Box 504., Geneva, Neb.

gehog quills, gneiss, soapstone, granite, amigdaloid etc. All for a dime before eagle cents, or 5 U.S. half T. Hill, Johnson, Vt.

TAKE NOTICE!

You have before you the second number of **A NEW PAPER FOR COLLECTORS.** It is not a paper to be run merely for money; neither is it to be published for mere pleasure, but as **A MAGAZINE FOR ALL COLLECTORS, YOUNG AND OLD,- EAST, WEST, NORTH, and SOUTH.**

IT HAS COME TO STAY. It is a good advertising medium.

It is the paper for the collecting millions.— For the botanist, the archaeologist, numismatist, philatelist, geologist, and all other collectors.

WE WANT

500 subscribers before Jan. 1st. and in order to secure them we offer 20 different premiums each one worth as much as the subscription price of this paper.

ISN'T THIS LIBERAL?

Send 25 cts at once for one year's subscription and (if you remit enough to pay postage) we will send any one of the premiums

FREE.

See Nov. number for premium list. **Perrine Bro's & Co.**

Water Valley, Erie Co., N. Y.

THE EMPIRE STATE EXCHANGE.

1 HUNDRED DOLLARS PAID

To any collector who acting as my agent or buying for his own collection. Write sending reference and find out about it. I will answer you. I guarantee to send fine rare stamps at very low prices with discount.

WILLIAM B. HALE, WILLIAMSVILLE, MASS.

5000 different to-day. Tomorrow some will be gone; send early.

GROSS AGATE 5 CTS.

Electric Stone 5 cts.

SEND FOR LIST. Lead Ore 5 cts.

R. S. BOYD, 81 ADAMS ST.

ALLEGHENY, PA.

SOON TO BE PUBLISHED

THE

COLLECTOR

RECEIPT

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Don't your collection need
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FLEXIBLE SAND STONE $1\frac{1}{2} \times 3\frac{1}{2}$ in. 25c

HORSE SHOE CRABS $3\frac{1}{2}$ in. long, 25c

SEA HORSES 3 .. long 25c

STAR FISH 3 .. across 20c

SHARKS' EGGS 6 .. long 15c

TRILOBITE perfect 1 25c

DOZ. ARROW HEADS 30c

POLISHED AGATE $1\frac{1}{2} \times 1\frac{1}{2}$ 25c

ALL POST PAID. SEND EARLY.

Fletcher M. Noe, 1 & 3 Cyclorama

Place, NAPLES, N. Y.

WITH APPENDIX COLLECTOR
DIRECTORY AND CATALOGUE

This book is intended to fill a
felt want of many collectors
having a receipt book to refer
any time. It will contain many
valuable receipts such as petrified
wood, etc. cleaning and polishing
shells, and a hundred or more
as good.

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collector on receipt of only six two-cent
stamps.

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copy.

SEND on your subscrip-
tion before Jan. 1st.
and secure a pre-
mium.
PERRINE BRO'S & CO.

Perrine Bro's & Co,
Water Valley

— } THE { —

JAN.

1890.

EMPIRE STATE

EXCHANGE

MONTHLY for

COLLECTORS.

DEVOTED TO

Geology and
the other
sciences and

MINERALOGY,

GEOLOGY, and
Natural Sciences
EXCHANGES.



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Marine Bro's & Co., Publishers, Water Valley, N. Y.

OPEN LETTER TO ALL OUR

BROTHER COLLECTORS

Dear Friends:-

You have before you the third number of paper devoted to every kind of collecting.— A monthly magazine in you can advertise your specimens to exchange, free, and freely express your ideas with other collectors. We mean to make the **EMPIRE EXCHANGE** one of the best collecting papers a going, but in order we must have some aid from the collecting world; do not be deterred subscribing with the fact that our magazine is small,— we know of that are smaller; remember that “good things are done up in small packages and precious things are not large in size. Are you a subscriber, why not? Do you collect in any of the fields of science represented by the **EMPIRE STATE EXCHANGE**. If you do, subscribe, and you will not regret it;— your quarter will be well spent. If you don't, subscribe, and write an article on your hobby, send it in, and we will publish it if others will probably turn in, and “keep the ball a rolling.” we announced last month, our premium offers expired Jan. 1st, but make the following offers,— good 'till Feb 10th.

25 mounted flower specimens, [see p. 32]; 5 fine fossils; 5 horse shells [Postage 3cts extra for ea. premium.] Hoping to hear from you soon

Yours in collecting,

Jan. 1st, 1890.

PERCIVAL BROS & CO

Frankford Stamp Co., Stamp Importers, Frankford, Pa.

Dear sir:—

In February we issue **THE UNIVERSAL PHILATELIC ADVERTISER**. This Journal will be published for the firm's advertisements, but advertisements to a limited space, will be accepted at 50 cts. an inch for 2 inches \$2.50 a column, and \$4.50 a page. [3 times for \$12.00.] It will have an extensive circulation throughout the world, especially the U. S., Can. and Mex. It will be advertised in all the philatelic journals and will prove a good advertising medium for you.

1200 copies of the first three numbers will be sent to the 3500 names in McKee's address book. If you wish space bear from you at once. Subscription 10 cents a year.

Yours Respectfully,

ALFRED C. UELLEY, Manager. A. P.

— { THE } —
EMPIRE STATE EXCHANGE.

WATER VALLEY, N. Y. January, 1890.

No. 3.

* * * * *
The brook,
with sparkling frost-work,
as gay
with its fringe of summer flow-
ers.
Alas,
with its spires, the path
of streams,
the preceding valleys, hid before
the rising trees, lay visible
the bare grove, and my fa-
vorite haunts
now to me. Nor was I slow
to come
among them, when the clouds, from
their still skirts,
shed on down on earth the feath-
ery snow,
all was white."

— o —
HISTORIC SPOT.

—
On a sultry August day I took a
light steamer for a trip down the
Ohio river; this was not a very
long trip lasting about one half hour.
I landed at Chartiers and walked
up the river bank about one half
mile and came to an Indian mound
which I had intended to visit.
This mound is about eight feet high

and fifteen feet in diameter; the earth
is clay mixed with gravel and it was
opened about three years ago and all
the dirt carefully sifted but all it re-
vealed was a few arrow heads and
fragments of bones; in the center
of the mound was found cinders and
fragments of charred bones; I can-
not recollect whether they were
bones of a human being or of an ani-
mal.

The location of this mound is very
commanding being situated on a
promontory extending into the Ohio
river, at least 75 feet high; the In-
dian here could see for 20 miles up
the river; he could see across the riv-
er, also down it, and back of him he
could see a mile at least. So this
mound was probably used to give
warning on the approach of the en-
emy.

I found numerous chippings of
flint which is not found in this lo-
cality, but nothing of value.

At the foot of this promontory there
is a hole in the river 40 feet deep in
which it is said the French threw
their cannon in their retreat from
Fort Duquesne and in which they
still remain.
R. S. Boyd.

NUMISMATICS.

CABINET MEETING

Conducted by Geo. F. Heath,
Monroe, Mich.

NO one will gainsay but that the student of coins, or the numismatist, has a study worthy of his noblest endeavor. Many of the wisest of the past and present have devoted their time and attention to this science.

Monarchs and princes have not deemed it beneath their dignity to gather together these pieces of the world's exchange, "more historic than written history," and the immense collections of coins in our National, state and collegiate museums only attest the attention and value in which they are held by governments, legislators and educators. Indeed there is no other collecting that opens up so wide, instructing and fascinating a field of research; the science of coinage offers.

Into this charming and most delightful field would we introduce such readers of the EMPIRE STATE EXCHANGE as have not tasted the lotus, (to those that have, no invitation is necessary,) assuring them at the outset, that "its paths are paths of pleas-

antness, and all its ways are
Every month we propose a "cabinet meeting" and gather you around our cabinets, and their treasures.

All are invited to bring identified coins with you, or that will interest the cabinet will discuss and locate them, "knatty" questions that hang long burdens on your mind, them too, for in council their wisdom, and from the dark may come.

If you have any duplicates, some brother may exchange with you; and now a brief preliminary remark to your chairs a little closer? declare the meeting open for

Named and seconded, F. Heath of Monroe, Mich. the meetings for this carried.

Also: "that we elect to keep a record of the meeting same to our official Jimmie Brown was elected.

Also: "that the EMPIRE EXCHANGE be declared our gad.

Also: "that we must two pages of our official

POSTAGE STAMP COLLECTING.

Geo. F. Heath

in W. S. Mc. Lean's Guide for 1889.

There is something peculiarly fascinating in these bright bits of paper that come to us from nearly every land and clime. Just where the harm lies it would be difficult to say. It may be the influences they bring acting upon our imaginative faculties. We feel the cold invigorating breath of the snows of Scandinavia, the languor and enchantment of the Orient, and the warmth of the sunny Italian clime. We see the Nile and the mute ruins along its banks, and beyond historic Greece; and we see in our albums the steppes of Russia, the pampas and dense forests of South America, the impenetrable jungles of India, the vine clad hills of France and Germany, and emblems of the free in our own right and best native land. But wherever the subtle charm may lie, this we know, when once we are under its sway, no lotus of North Africa's land ever held its victims in more binding and lasting servitude than does our Goddess PHILATELIA exert over her willing subjects.

to surrender ourselves, and have plenty of room to do it in."

"that our cabinet meetings be the last Saturday evening in each month?"

Mr. President," said John Brown, "I have a coin to home with a camel on it like to know where it's from. And I one with an elephant on it?"

Will Gates, "I have one with a rooster; and I have one with a hen on them, said Mr. Brown.

And I one with a bee on," chimed another.

And I one with a man's head on a coin?"

And I one with a man's head on a coin?"

And I one with the devil on it?"

"I don't know how long this would be kept up if the President would rapped "order" and told them to drop the matter up and bring these to the next meeting.

Resolved, and seconded, "that we adjourn to meet Jan, 25th."

Resolved, with three cheers, "that we adjourn to meet Jan, 25th, 1889. James Brown, Secy."

umor has it that an Agassiz committee will be formed at this place to publish the EMPIRE STATE EXCHANGE as a special organ.

THE EMPIRE STATE EXCHANGE.

PHILATELICAL.

IN THE STAMP WORLD.

—Things are vigorously happening in the World, in stamp matters. Antioquia, Medellin, Argentine, Austrian Levant, Brazil Republic, Br. Bechuanaland, Br. North Borneo, Ceylon, Columbia, Costa Rica, Germany, Gibraltar, Greece, Holkau, Mauritius, Nossibey, Salvador, Sebang, Shanghai, Sina Leone, Spain, Sweden, Transvaal, Uruguay and Venezuela all have new issues; quite a formidable list, isn't it; and besides Persia and the United States will have new issues.

—The new issue of Spain has a portrait of the baby king and is very unique. The Brazil Republic design is a globe with stars on it one for each state.

—Mr William B. Hale of Williamsville, Mass. has bought the well known and valuable "Brown" collection. Mr Hale buys a great many collections and has recently bought out nine dealers in all.

—The "Stamp Collectors' World" has been sold out to the "New England Philatelist" 53 Harvard St., Brookline, Mass.

—As some complaint has been made against certain collectors who are apparently dishonest or at least not straight-forward, I am urging their addresses that others may avoid being deceived and lose by their schemes.*

C. P. K——, Utica, Ohio
C. M. D——, Winchester
G—H——, Suspension Bridge
——Stamp Co., Minneapolis
H. G. B——, Gaunogue, Ct
E. L——, Jr, Howard St, N.Y.

—For the benefit of collectors and stamp buyers, I have prepared a list of the best way to obtain stamps. You send to some reliable collector a written reference from your Post Master, or business friend, attesting your honesty and ask for a set of sheets, he will send you a set of sheets neatly placed on sheets of paper and each one marked, you have only to make selection and buy what you really want.

—o—

We are in receipt of a very little book for stamp collectors, "Stamp Collectors' Vest Pocket Dictionary and Guide." It has 64 pages, a cover and is published by J. Lyons, Portland, Me.

*The full addresses may be obtained by writing to the conductor of the department. Collectors, use

BRIC-A-BRAC.**Y FIND of CONTINENTAL SCRIP.**

BEING a collector of the curious things of this world, I attend many sales, where old and cast articles are sold. I often get pieces that have real merit, as antiques, for a mere trifle, getting as much as a wagon load some times for a few dollars. I take them home to my study as I call it, always to be met with the question, "what in the world are you going to do with all that old stuff?" but my dear readers, I like it; I look at an old piece of furniture one hundred years old, and think if it could speak; what tales it could tell us of days that are past and gone.

One day I found which I am going to tell you of, was very valuable, and happily I found it in this way.

I attended a sale, at which many things were to be disposed of, including before the days of the rebellion. I purchased among other things an old stuffed chair, the back and straight, for fifty dollars, the seat being worn thread-bare. I took it home, ripped off the cushion, and when I saw what was underneath it, my eyes enlarged considerably, for among the grass

with which it had been stuffed I saw several rolls of Continental money, which on opening I found very rare, some had the appearance of never having been in circulation, being in the original sheets, most others being much worn, and from nearly every state in the Union, as it was then - time and space forbade a full description which I may give at some future time. I also found an old letter dated 1782, very legible, a number of old Spanish and English coins, dates running from 1600 to 1780 and last but not least a Popax ring of very old and rare workmanship, which I am wearing on my finger as I write this. How these things ever came where I found them, I know not, - but as they were hidden there by some one is sure. I would give much to know their history, but that must remain in doubt also. I offered to return them to the owner of the chair but he knowing my love for such things refused to accept them saying I bought the chair and all it contained therefore I remained the happy possessor of what I had found. CURIO.

Why don't the county fairs give premiums on bric-a-brac? Are they not as worthy of it as many other of the exhibits? At the Erie Co Fair many articles receive premiums while valuable bric-a-brac have none.

THE
Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine - - Editor.

SUBSCRIPTION.

One Year, 25c. | Six months, 15c.

ADVERTISING RATES.

½ inch, .15	1 inch, .25
1 column, \$1.20	1 page, \$2.00

Liberal discount on standing ads.

Terms, strictly cash.

Advertisements must be in by the 25th, and exchanges by the 20th, to insure insertion in the next number.

Manuscript always in demand.

PERRINE BROS & CO. PUBLISHERS,
 WATER VALLEY, N. Y.

Vol. I. January, 1890. No. 3.

—A Happy New Year!

—We announce with pleasure to our readers that Mr. W. B. Hale will answer any queries in the stamp line on receipt of stamp for reply.

—Did we get those 500 subscribers? No, but we have a good list for a starter, and before long, or by the time we enlarge, the EMPIRE STATE EXCHANGE will be looked upon as the typical collectors magazine of the

Empire State. How that club you were going to for us. Remember, that a five yearly subscribers bring paper one year free. clubs roll in!

—Perrie Bros & Co., Water Valley, N. Y., present to the col fraternity this month the State Exchange in 12-page. Its appearance is neat, and some very readable matter line.—Western Philatelist.

Thanks, brothers Beardsley Reimers, we entertain the opinion of your paper.

—With this issue, Mr. Geo. F. of Monroe, Mich., takes com of the Numismatic Depart of this paper. Mr. Heath, w the way, is a good authority on has just concluded the publi of the 'Numismatist,' on as he informed his readers. coin collector will not support nal in their interest, be it good indifferent." [Shame on the collectors! Are they too mis spare a few of their coppers to port a good paper devoted to their hobby?]

We trust that Mr Heath will subscribe for the EMPIRE EXCHANGE, and thus secure a treat each month, in hearing he has to say.

JANUARY JOTTINGS.

1000 copies every month.

is an exchange for next issue, and, at least, two pages full.

next number will be well filled with choice reading matter for collectors—cream, not skimmed milk."

would call the attention of book to the ad. of H. H. Otis, of N. Y. Mr. Otis is a well-liked and reliable dealer.

those who read our paper, if see any thing that does not suit taste; write us; we would like to get a correspondence column for collectors can EXCHANGE

interested in natural history might do well to send to the Experiment Station at Amesbury, N. H. It tells about the bad habits of the striped prairie dog and is free to any address.

collectors who have porcupine quills in their collection do not show them up to good advantage.

Here is a good way to do them; Take a small potato cut in two and stick the quills in the potato in every direction. When the potato dries they will be straight.

—Received with thanks:— The Garner from London, Eng., The Great Divide, The Red Man, The Western Philatelist, Philatelic Gazette, Exchangers Monthly, Moral and Scientific Companion, American Collector, Stamp Crank, Philatelic Express, Clipper, Corona Newsletter, The Numismatist, Tiny Philatelist, The Oologist, One Dime, The Circular, Universal Collector, The Naturalist, Philatelic Tribune and Advertiser, and others. Come again.

—It is said that the great impetus of collecting was given by the World's Fair at Philadelphia in 1876. Now that it's almost certain we are to have a World's Fair in 1892, we earnestly hope that it will give collecting such a grand start as the Centennial did.

The Youths Companion, in recently speaking of the Fair, said:—

"A case of butterflies, moths, or snails peculiar to their own neighborhood, arranged in scientific order, a volume of pressed leaves from all the trees in the nearest forest, with their common and scientific names either of these would be of interest to visitors from another part of the world."

Collectors, prepare your cabinets for the Fair for though it is two years ahead yet it will soon be here. Let us impress foreigners of the vastness of American collecting.

BOTANY.

THE LIVER LEAF.

HEPATICA.

BOTANY comes in closer contact with the farmer than any other branch of the natural sciences. The agriculturalist may get glimpses of astronomy; he may see the heavens more clearly than those who live in the smoky cities, yet what is that to him;— he cares not whether Saturn or Venus is shining in his face.

Botanical forms surround the farmer, the market gardener, and the fruit grower on all sides; the weeds in their crops;— the cockle in the wheat field; the pursley in the tomato patch; and the thistles between the strawberry rows; the grass on which their livestock feed; the cereals for the grist mill; their woodlands that supply the city with lumber for its houses, stores, and manufacturing places; that keep the planing mills, the saw mills, and hundreds of other mills and factories busy, and the farming household warm when winter winds are whistling 'round the chimney-tops.

The native plants a farmer first learns the names of are those termed weeds,— those which are noxious and

hard to keep within their proper bounds of growth,— the woodland trees and waste places.

So it was with me that being a boy I learned the names of the first, then the trees, and after reading some books on botany for about all the names to the best of my life on our farm.

The *Hepatica Acutiloba* of our prettiest spring wild-blossoming soon after the snow melts with its delicately perfumed and tinted, rosy and bluish, mostly white flowers.

The common name— Liver-leaf is in allusion to the leaf,— especially in the round lobed species, which does not grow here— that has a considerable resemblance to a liver. The plant grows in the shaded, rich woods to the height of six inches; its leaves remain green throughout the year.

Its roots are fibrous and are not attached to a common rootstalk; the flowers bloom in April and continue to the first or middle of May.

RANDOLPH

FLOWERS FROM THE IDLE RIVER;— A fine collection of plant specimens, recently preserved and mounted, for a club of 6 E.S. E.

ORNITHOLOGY.

THE AMERICAN CROSSBILL.

Loxia curvirostris Americana.

The American Crossbill, known so by the name of Red Crossbill, is one of the handsomest of our birds, as well as one of the most peculiar.

These birds have long been celebrated on account of the singular form of their beak, from which they derive its name. In these birds the two mandibles-- which are rather long, black at the base, and much curved, cross each other at the points, when the bill is closed.

In different individuals, even of the same species, the upper and lower mandibles are found variously directed to the right and left. The structure, when first seen, looks not unlike a malformation, and to prohibit the bird from picking seeds or feeding itself in any way.

But when seen feeding it speedily over itself to be favored with all the ordinary faculties of birds, and to be as capable of obtaining food as any of the straight-billed birds. The crossbills obtain their food, the seeds of firs and pines, by tearing up the cones. They bring the points of the mandibles together--which they can do so as to pick up a very small seed, and insert them into the cone, when

a powerful lateral movement widens the opening quite sufficiently, and the tongue, which terminates in a singular movable scoop, is inserted to detach the seed. It is also very fond of apple-pips, and settling on a tree where ripe apples are to be found, attacks the fruit with its beak, and in a very few moments cuts a hole fairly into the core, from which it daintily picks out the seeds rejecting the ripe pulpy fruit in which they have been enveloped. As the crossbill is rather a voracious bird, the havoc which it will make in an orchard may be imagined.

The male, as is the case with all birds, has the most beautiful plumage. The throat and breast are red with here and there a few feathers of drab and yellowish green, while the head and back are prettily colored with a variegated mixture of green, brown, and red, all of which have a peculiar metallic lustre; wings black, turning to a brownish hue at the shoulders; abdomen, drab; tail, black; tail coverts, bright red; bill black and blue--fourths of an inch in length.

Although Dame Nature has not decked the female with quite so lavish a hand, she is, never-the-less, very prettily arrayed. The throat, head and breast are clothed in a mixture of yellow, green and red; back, red

green and black; tail feathers, black with white margin; tail coverts, bright yellow; abdomen, drab; wings black and white. The total length of the crossbill, from tip of beak to extremity of tail, is six inches. The tail has a very deep notch in the end, which is very conspicuous when flying. The nest is generally built in fir trees in a somewhat shaded spot, and contains generally four greenish-white eggs, spotted and dotted with varying shades of lavender-brown, with a few heavy spots of dark purple-brown. The eggs average in size .75 by .56.—J.

—o—

THE YELLOW BREASTED CHAT.

ICTERIA VIRIDIS.

By Ornt.

This remarkable bird would be a great addition to the list of our cage birds. Beauty of plumage and excellence of voice recommend him to our notice. The song of the Chat is indeed singular, its peculiarity consisting in its ventriloquism, throwing its singular voice, as it were, in different directions, and its notes are very pleasing and varied.

The nest, composed of leaves, grape-vine bark, grass, etc., is built

usually in small cedars and thickets. The eggs are four in number, of a light flesh sprinkled all over with spots of dish brown. They measure .96 of an inch long by a trifle of an inch wide.

In their wild state their food consists of wild strawberries, blackberries, etc., and also different forms of insect life; in confinement they require the same treatment as a nightingale.

Their plumage is handsome, the whole upper parts of the body olive green, and the whole lower portion of the body rich yellow.

As before remarked, this handsome bird would be a great addition to our aviaries and the attention of breeders should be bestowed upon

—o—

OUT OF SEASON.

We saw a flock of wild geese south-west ward, on Thanksgiving day.

The city of Buffalo and other places in the Empire was visited by the strange phenomenon of a midwinter thunder storm early Sunday morning Dec. 2.

On Christmas eve we heard peals of thunder.

ARCHAEOLOGY

INDIAN RELICS OF WESTERN N.Y.

PART III.

THE celt was an instrument used principally for skinning, but some thin it was used for various other purposes in and around the wigwam.

The common kind of celt is a flattened one with rounded edges and about five times as long as broad. It was usually made of fine grained stone, and it was one of the principal implements of the Indians equipment after the Indian killed his game. The celt came quickly into use and it must have been carried with him on his hunting expeditions. Some celts are more like scrapers or true celts, and still others are flaked axe-shaped; the latter were used for chipping out canoes, etc.

Several years ago I found an implement which has been an enigma to me and the description of which will include this article on the Indian Relics of Western New York.

It was fashioned somewhat like a hammer but had a depression for the hand

to clasp on, (A), the point at B being very sharp it could also be used as a



chipping hammer, the hand clasping the end of the stone C.

When used as a celt, the hand fit as easy as could be in the neck or depression which has a lot of seemingly dry clay hardened like stone and might not this indicate that it was used for a potters tool? It might well be called a combination tool.

The common celts are about five inches long but this relic is eight inches in length by three inches in width and 1 inch thick; the color of the stone, which is very hard, is a clay or yellowish-brown and grey.

This rare and unique relic of the past was found not far from a small stream (Hampton Brook, Eden, N.Y.) and we prize it as one of the most valuable specimens of our s' lives.

FINIS.

—o—

One way to mount arrow points is to attach them to sheets of cardboard cut in the form of an arrow head having one for every state.

EXCHANGES.

This column is free to all, but subscribers will be seated at the first table. No disguised advertisements inserted. Write your exchanges on one side of the paper and apart from the letter.

A collection of stamps, U. S. and foreign, to exchange for a type-writer. J. C. Bekey, Mt. Ayr, Iowa.

A new banjo valued at \$7.50 to exchange for a collection of stamps. Geo. H. Hakes, Belvidere, Ill.

I will exchange stamps from my sheets for rare United States stamps. William B. Hale, Williamsvill, Mass.

To exchange; newspaper headings, heading for heading, or will pay cash, write to George L. White, Mt. Morris N. Y.

Rare coins to exchange for curiosities, Indian relics, stamps, or coins. send of 5 and receive n l e. C. S. Billman, La Grange, Ind.

Ten varieties Canada bill stamps (catalogued at about 20c or over, for every stamp catalogued at 10c or over — 2 law stamps or receipt for making rubber stamps for same. F. Y. W. Brathwaite, Port Perry, Ont., Can.

30 different foreign stamps square-cut envelope stamps for of the following U. S. stamps me 1872—12ct.—90ct. 1888—90ct. Chas Welen, 87 White Chicago, Ill.

Will exchange 4 fine bird arrow heads from Willamette ley, Oregon, for a perfect square 6 inches in length, or perfect axe, 3 lbs in weight. C. E. Thornton, Ind.

A 19 x 27 picture of any "general" for 1000 U. S. stamps issue; or for 200 square cut stamps; or for 75 3/4 or 5 etc. or for 5 special delivery stamps. Geo H. Hakes, Belvidere, Ill.

Persons having stamps, minerals or any kind of curiosities that they would like to exchange for magazines such as Col Scribners, American, &c. papers, etc. will do well if they write to me; my list for yours. A. J. Collector, New Chester, Adm.

Curiosities from Long Island, rattlesnakes rattlesnakes, laws, books, novels, stamps, philatelic goods for Indian curiosities, books, papers, or photographs. The American Indian. Fred Rowell, Stamford, Conn.

THE EMPIRE STATE EXCHANGE.

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ing were awarded as follows.-

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HUNDRED DOLLARS PAID.

Collector who acting as my agent or buying for his own collection, sending reference and find out about it, I will answer you, I guarantee fine rare stamps at very low prices with discount.

WILLIAM B. HALE, WILLIAMSVILLE, MASS.

Different to-day. To-morrow some will be gone; send early.

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Petrified Wood, 5c.

Barnacles, 5c.

PER LIST. Satin Spar, 5c.

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SAND STONE 1 1/2 x 3 1/2 in. 25c.

WIDE CRABS 3 1/2 in. long. 25c.

LOGS 3 " long 25c.

PERFECT 3 " across 20c.

LOGS 6 " long 15c.

PERFECT 1 " long 25c.

Arrow heads 30c.

AGATE 1 1/2 x 1 1/2 25c.

POST PAID. SEND EARLY.

Fletcher M. Nee,

148 Cyclorama Place,

INDIANAPOLIS, IND.

IN PRESS.

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A copy of the Receipt Book and this paper one year for only thirty cents.

Perrine Bro's Co., Water Valley, N. Y.

STAMPS.

100 stamps 4cts. Sheets on approval at 3 1/2. Wanted to buy stamps in small collections. Send price and description.

**FRED J. GARWOOD STAMP DEALER
140 Hoyt St, Buffalo, N. Y.**

The address of Fletcher M. Nee was incorrectly printed in our last number, - Naples, N. Y. Please note the correct address.



CORRECTION.

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Bookseller, Publisher and
Stationer.

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COLLEC**

THE RED

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exclusive y to your
lished n. o. dly-
year - "One" sup
Fred Rowell, & C

UNIVERSAL PHILATELIC ADVERTISER

to be issued on 24th Feb. 10,000 copies of nos. 1, 2, & 3 go to collectors in all parts of the world who are anxious to exchange stamps and coins.

For collectors desiring foreign exchanges we have set aside a collector's exchange page. Notices inserted at 50c per inch. (30c a $\frac{1}{2}$). Subscription is 25c. a year. Full prospectus in Feb. Dealers rates on application.

Frankford Stamp Co.,
PHILADELPHIA, PA.

Do you know a good thing
when you see it? If so, write at once to **W. L. Babcock**, Eden, N. Y. for his latest price list of U. S. and Foreign stamps. It will be sent post free. Agents will find choice bargains on my approval sheets. I allow 40 per cent commission. A special feature of my trade is that I offer to exchange stamps with all responsible persons. Write for particulars.

W. L. BABCOCK,
EDEN, N. Y.

The following articles changed for anything in line, except postage stamps, unless especially desired.

Relics from Mt. Vernon, of Geo. Washington, pieces of Fort Sumpter, Charleston Almanac good for 100 yd from the Great American Confederate Buttons from Southern States, Buller's rind, Antietam, Gettysburg, Vicksburg, and battlefields, Brass belt buttons all the above battlefields, Rebel Ram, Merrimac, Thur medals, Confederate stamps, Shark's teeth from town Harbor, S. C.

J. A. SWINGLEY, 25 S.
Baltimore, Md.

STANTON'S BARGAIN ANNOUNCEMENT

12 varieties of Asiatic stamps, var. of Jamaica 4c, 10 var. dian 5c, South Australia 1c, mine 6c, Nova Scotia 1c blue to 2c, mauve 7c, Japanese entire 5c, Canada Bill \$1, Sweden official oval blue. Orders under 25c must cost stamp extra. All our 25 var. of stamps two cents. Revenue Catalogue cloth. American Philatelic Directory of the largest] only 18c. See of the Philatelic Tribune when you mention this paper.

F. J. Stanton, SMYER

SUBSCRIBE AT ONCE FOR THIS PAPER

PIRE STATE EXCHANGE.

WATER VALLEY, N. Y. February, 1890.

No. 4.

the slim tree's topmost bough,
the robin's early song;
one and all that now
spring-time hastes along.
a tidings dost thou bring,
harbinger of spring!

— o —

NO TRESPASSING.

often does the young collector
the above warning when
passed along the road, he is
careful not to trespass on that
ad.

it one to be that way with
doubt I got to climbing the
did reach when on the fence;
ed to think nothing of going
side and finally paid no at-
the boards or warning.

ness on an old man's place
by called Old Whiskers, from
mass of hair on his face, and
light was to "stick" the dog
never we passed his house
with salt or bird seed any
trespassed upon his land.

had been on it the week

before and discovered a humming-
bird's nest but did not disturb it; it
was in a tall tree growing at the very
edge of a creek about ten feet wide.

Saturday came and four of us start-
ed for Old Whisker's woods; Harry
took an air gun along and Jack insist-
ed on taking his old muzzle loader
along which kept more noise than a
cannon and was sure to bring Old
Whiskers down upon us.

We had been in the woods about
3 hours, when suddenly we spied Old
Whiskers coming through the trees
on a run; he had his gun with him,
and as soon as he saw that we saw
him, he let fly both barrels at us.

The bird seed rattled around us like
hall, and Jack and Harry got some of
it on the neck which made them give
an unearthly yell.

We ran for all there was in us,
Frank and I going one way and Har-
ry and Jack another; we gained the
road in a short time and was happy
to find Old Whiskers had given up
the chase. I have paid particular at-
tention to those sign boards ever since
and dont want the above experience
to happen again.

R.S. Boyd.

BRIC-A-BRAC.

TRIALS of a WOOD COLLECTOR.

BY INI SCRIPTIS.

One day last autumn two young men might have been seen wending their way toward a small wood in the limits of Eden Valley, N. Y.:

One was no more nor less than R. M. of this paper, the other was an acquaintance whom, for convenience sake we will call G—.

He had been making an afternoon call on R. M. and after seeing his fine collection of different woods was seized with a desire to possess one also and as there were some varieties of wood not found at his home. R. M. offered to get some for him and their march was directed toward a wood near by.

After a short walk R. M. took the axe from his shoulder and proceeded to fall a small shrub known as Indian currant. Cutting this in two suitable pieces, they went on their way and soon secured the following:-

Green osier dogwood, fringe tree, red osier dogwood, cucumber tree,

etc., etc., but the one that to tell about is a near relative common poison ivy.

In their search for the kinds of wood R. M. found sapling which he declared sumac and undoubtedly he as you may find farther on.

After the receipt of this he returned for home with his piece. Now you may be getting the idea the fun has hardly begun. Juice oozed out of the sumac on his hands and his brother handled it but did not notice on their hands.

In the night they began to itch and in the morning they were covered with pimples, and the swelling was so great that I will not describe the sufferings and tribulations of the next few weeks for they cannot be described in words, but all these things were caused by contact with the sumac. All the different woods were secured by contact with the sumac and had to be consigned to the fire.

You ask if there is a moral to the tale. Yes. Moral.— Beware of sumac.

The construction of the bridge has already become a very important industry in Eng-

NUMISMATICS.

RARE OLD COINS.

CONTINUED FROM NO. 2.]

—

A whitish green color is caused by the silver in it. The coins are lump or globular in form, and stamped on one side with a design pertaining to the particular city. The coinage of the Greek cities and colonies soon assumed an importance, each city or colony having its own type. It is the desire of a collector to obtain all the coins, as they are of very high artistic merit and exceedingly varied.

There are very few collectors of these coins in America, but those who are advanced and critical in their tastes. There are Greek coins highly valued by our collectors which are very rare and cannot be found in European museums. No one can form a good collection of them without expending a small fortune, and the whole collection will not fill two or three small trays. I know of one gentleman who has such a collection, and it is valued at \$5,000.

The best purely Greek coins belong to the period extending from 400 B. C. to 300 B. C. This includes the coinage of Alexander the Great.

The 'drachma' and 'di-drachma' were coined about 400 B. C. They are of pure silver. The only emblem on them is a representation of a grain of barley with the husks on."

Here Professor Froissard exhibited some of the odd looking pieces of money.

The tetra-drachma contains on one side the head of Persiphon, and on the reverse a splendid engraving of 'Biga,' or victorious chariot. This is emblematic of victory. Around the profile on the obverse side is the inscription of the city to which the coin belongs. In this case it is, as you see, Syracuse. This is the exact condition in which these coins were found in the excavations. No two of them are alike--that is cast from the same dies, although they resemble each other in general design. The coins of the time of Alexander the Great are remarkably fine in execution. On one side is the portrait of Alexander. On the reverse a winged figure of victory is represented. You will observe how remarkably fine the engraving is, and its superiority to that on the Roman coins which I will show you.

"The latter are very interesting historically. Their silver coins, unfortunately, are only the size of a dime.

(CONCLUDED ON PAGE 43.)

PHILATELY.**STAMP MATTERS.**

By William E. Hale.

—The rarest stamp of the United States is the Provisional 5 cent stamp of Baltimore. It is seldom met with, and brings a large price. The rarest stamp of Canada is the 6 pence of Nova Scotia cut and used for 3d. In such a case it must have the whole of the original envelope to sell well.

—The American Philatelic Association of stamp collectors now numbers over 800, or a membership number reaching to over 930. For an advanced collector this is doubtless the best association he could join.

—A London stamp dealer is selling forgeries of stamps for genuine. Also S. Allen Taylor, who was arrested in 1887 for the same offense is again in the trade, but does not this time say his goods are genuine. Collectors should only use their money for genuine stamps,

—Some time ago I predicted a big rise in the price of the 90c. Purple-1849. It seems I was right as they have doubled already.

—I here give a few statistics for col-

lectors. Last year 279 million envelopes were used in the United States. Also the varieties of envelopes are 396 in number. This is about a half of the number used in the whole world.

—A certain yankee has paid a large sum of money for the privilege of printing advertisements on the back of postage stamps, but was refused.

—Most stamp dealers are now selling stamps; an exception is Mr. William B. Hale, who is not trying to buy anything in the line that is rare or cheap. Doubtless you have won the export trade is supplying and accumulating here and with hundreds of supply, furnishing a considerable trade.

A DESCRIPTIVE
STATISTICAL REVIEW
OF THE
United States Internal
Revenue
Stamps.

BY W. LA VERNE B.

THE Internal Revenue
of 1862 made it necessary
for Lincoln to appoint a
Commissioner of Internal Revenue. He

S. Boutwell of Mass, first Internal Revenue commissioner of the U. S. He held the office of Revenue Commissioner for nine months and resigned to represent a Mass. district in Congress. No stamps were sold until after his official notification, date about November 15th, 1863. During 1863, the receipts from Internal Revenue amounted to \$37,000.

During the next two years or until the end of the war the receipts were \$320,000. During 1866 the receipts were more than any preceding or succeeding year, amounting to the enormous sum of \$310,000,000 exclusive of direct tax and the receipts from the lands.

The receipts from the sale of adhesive stamps during 1863-4-5-6 (..) were 36 million dollars. The provided document stamps to be used under the following headings: Government, Bill of Lading, Bond, Bank Check, Certificate, Party, Contract, Concession, Entry of Goods, Express, Exchange, Insurance, Life Insurance, Manifest, Mortgage, Original, Passage Ticket, Power of Attorney, Probate of Will, Protest, and Warehouse Receipt.

Playing Card and Proprietary stamps came under the same act, but they were used for different articles such as playing cards, photographs, etc. Stamps were also issued by the same act called U. S. Internal Revenue Stamps with no particular heading and were used in stamping different articles.

The original bill called for only the following headings,-

Express, Foreign Exchange, Insurance, Life Insurance, Protest, Playing cards, Passage Ticket, Proprietary, and Telegraph. The rest were substituted afterwards principally by the action of Senator T. O. Howe of Wisconsin, and other great Revenue Reformers of the Senate.

Mr. J. J. Lewis of Pa. who succeeded Mr. Boutwell in 1863 called the attention of Congress in one of his reports to the need of cotton stamps and by an act of June, 1864 the commissioner (Lewis) was authorized to have prepared for the use in taxing cotton certain adhesive stamps, which were called "cotton stamps."

The stamps were made of sheet brass 238 millimeters long by 25 wide at one end tapering to a point. They had no fixed value but denoted that the tax was paid. The tax being regulated by the weight of the cotton.

[CONTINUED IN OUR NEXT.]

THE
Empire State Exchange.
 A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - Editor.

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Terms, strictly cash.

Advertisements and exchange notices must be in the 1st of the month to insure insertion in next number.

Manuscript always in DEMAND.

PUBLISHED BY

PERRINE BRO'S, Water Valley, N. Y.

Vol. I. FEBRUARY, 1890. No. 4.

—We see that other papers are "casting votes for the World's fair." We would like to see it in the Empire City. St. Louis our second choice.

—From "Auld Aingland," the Alarm; placed in our curio. cabinet—as a sample of English amateur journalism vs. American—beside the American Collector:

—We hear that Santa Claus offers a prize of \$20 to the amateur making the best collection of postage stamps

before Jan. 1st, 1891. Any who has been engaged to philatelic articles, will side the contest.

—Thanks to Mr. Miller for kind words bespoken E. in the columns of the

—Also, to D. O. Hall, for of the "exact outline of flint lance head in the w. ins. long, 4½ ins. wide. carry before the king as of power.' Found in Ill, now in his collection. gest in the National museum is 3½ inches wide

NORTHERN PHALAROPE

The Oologist.

Oct. 25 I had a Northern brought to me alive and in good health but for a left side of the head, widely deprived that orb of inform-d that several found dead at the foot of electric light towers, probably been attracted liant light and flown wooden railing that lights. The towers is and consists of five erected on an iron frame.

The phalarope is a very men around here. C.C.T.

...dall in Farm and Home
 ...now of the fate of the lit-
 ...wren. It is fast becom-
 ...ct, and the chief cause is the
 ...age,
 ...and other causes made us
 ...this number, but next
 ...out on the usual date.

NOTICE.

...TION OF CO-PARTNERSHIP.
 ...his day, the firm doing busi-
 ...its place—Perrine Br's & Co,
 ...mutual consent, dissolved, the
 ...es named to continue the
 ...and all accounts are paya-
 ...
 ...Clarence Hubbard.
 ...R. Perrine.
 ...C. Perrine.
 ...I. Perrine.
 ...Warrior Valley, Feb. 15, 1890.

RARE OLD COINS.

...PRINTED FROM PAGE 39.]

...are consequently no scope
 ...design. They are called de-
 ...Roman art was inferior to
 ...ek. But the Roman bronze
 ...ake up for the deficiency of
 ...ulus. They are very in-

...teresting. There are a larger num-
 ...ber of collectors of these coins, be-
 ...cause they are not so rare, and are
 ...easier mastered than the Greek. They
 ...are only one-fifth as valuable on an
 ...average.

...“The largest bronze coins are about
 ...the size of an American dollar. They
 ...bear an engraving of the head of the
 ...reigning Roman emperor, and on the
 ...reverse side some historical episode
 ...is pictured. Of course these engrav-
 ...ings are emblematic of some victory.
 ...They are not figurative mythologi-
 ...cal like the Greek engravings. The
 ...earliest coins of Rome were of bronze.
 ...They are very large and massive.
 ...The largest weighs a pound and was
 ...called ‘aes.’ This was about 500 B.C.
 ...They gradually diminished in weight
 ...but their nominal value was retained.

...“The Roman gold coins were, as a
 ...rule, small, like the silver ones. Some
 ...however, were quite large. They
 ...are known as medallions and are ex-
 ...ceedingly rare. Now, here are some
 ...samples of the small gold and silver
 ...coins. The former are called the Ro-
 ...man ‘aureus.’ This one was struck
 ...during the reign of Augustus Cæsar;
 ...the engraving is a perfect likeness of
 ...the emperor. There is a gold piece
 ...of the time of Tiberius, and another
 ...coined while Claudius was emperor.
 ...Portraits are excellent.”—N. Y. Star.

NEWS.

OLD ROMAN COUNTERFEITERS.

At a meeting of the Society of Antiquaries in Newcastle, England, recently Dr. Bruce told about a discovery in his private collection of coins. Among them was one upon which he set great store, being a scarce gold coin of Allectus, who, having murdered his predecessor, ruled in Britain for three years, about the close of the third century. It was valued at \$200 or \$250. Doubts raised in regard to its weight led to an assay by an expert, it was found to be copper, silvered over, then gilded and touched with varnish. Quite a panic may be expected among collectors from the discovery of the skillful counterfeiting by our Roman ancestors.

—o—

FINDING OF AN OLD SILVER MINE.

There is a great deal of excitement at Gainesville, Mo., over the reported finding of an old silver mine in that county. A man is said to have found on the top of a high ridge a flat stone covered with rude letters, with these legible words following: "Follow this," and with a mark pointing to the east. Searching in the direction

indicated, he found a circular arch over with a stone. The finder excavated and found where drifts or runways were walled up. It is believed is an old silver mine and the marvellous stories were told the Indians but which was long ago and to find which many have been made.—Ex,

A LONG-TUSHED WOOD.

Last week W. C. Stimpson of Denmark, killed a woodchuck which had tusches of extraordinary length. One of these had entered its head and grew into the animal's brain, then up through its head, down one eye and curled across the other and again entered its head. The tush was fully six inches long. How the poor creature must have lived is strange. It was very fresh.— Ashtabula

—The great rabbit fence between New South Wales and South Australia will, when completed, be one mile long: one man will tend it.

—For the first time in the history of census-making in this country, the bureau which conducts that work finds itself compelled to act of congress to produce statistics regarding the fishes that inhabit the waters of the United States.

GEMMEROLOGY.

PRECIOUS STONES.

Chemical Composition, &c., &c.

By Jay

PART I.

DIAMOND. — The most precious of stones has been known from early times; the name, adamant, which the Greeks on account of its hardness. Its constituent and chemical composition is crystallized carbon. It possesses electrical properties, sun-burn, and its specific gravity

There is no other stone or substance that will cut or produce the slightest impression on the diamond except another diamond, and they have to be cut by grinding against each other, and the dust produced by this process is used for polishing them. The Diamond produces in various countries are India, Brazil, and Africa. It is also thought to exist in parts of Georgia and North Carolina of this country. Notwithstanding the persistence and countless costly experiments of the most celebrated scientists all over the

world, especially during the last three centuries, to create the Diamond by artificial means, there has been absolutely nothing as yet produced that bears the slightest resemblance to the real stone. The so-called imitations that are frequently advertised under a variety of fancy names, such as, "Alaska Diamonds," "Parisian Diamonds," "Lefever Diamonds," "Oplir Diamonds," &c., &c., are composed of a material called "strass" or Paste which can only be distinguished from ordinary glass by the presence of about 50 per cent of Oxide of Lead among its constituents. The commercial value of these artificial productions ranges from twenty-five to fifty cents per dozen.

There is such a very strongly marked individuality or distinctive character to the Diamond, that when the eye once becomes accustomed to its wonderful refractive power, it can at a glance be readily, and to a certainty distinguished from any other substance or stone without the aid of mechanical appliances.

Ruby, Sapphire, Emerald. — The chemical composition of these three precious stones is crystallized alumina nearly pure with only faint traces of foreign matter, generally the Oxide of Iron. Their specific gravity ranges from 3.5 to 4.2, and all po-

ETHNOLOGY.

THE BANNER STONE or CERIMONIAL AXE.

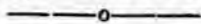
BY C. E. TRIBBETT.

All the stone relics or implements we find on the surface of the mounds the Banner stone is most beautifully and symmetrically shaped, generally made of a fine green or blue colored, stone. Some think they were used as a sign of war, but that is doubtful as they are to light and are broken; in my collecting I have nearly half the specimens broken or in some way injured. A great number of them being found in the same place where the perforation is. I have met with one peculiar specimen in my collecting, and only one other. In 1885 I purchased a Banner stone one half of a finely perforated banner stone $3\frac{1}{2}$ inches in length by $3\frac{1}{4}$ inches wide, this was in 1881, this summer (1889) I purchased another piece in the same place which I thought when I saw it, it looked like the first one I had bought and so it proved to be the two pieces together made a perfect banner stone $6\frac{1}{2}$ inches long and $3\frac{1}{4}$ inches wide and an inch thick; these two

pieces were found about one mile apart; if we could only know the history of that little banner stone how interesting it would be indeed.

I think these banner stones were used as an indication of rank in a tribe of these pre-historic people who made these emblems or ornaments. There is nothing to indicate the age of these very ancient implements and ornaments as an indication of the great age of some banner stones.

CONTINUED FROM LACK OF SPACE TO next NUMBER.



For the E.S.E.

This mild winter is particularly favorable for relic hunters. The frequent rains keep the ground soft and wash out the relics. There is no vegetation at this season to hide them. The writer has made a half dozen excursions up along the shores of the Monongahela river in W. Pa. during the recent warm days. His finds have been excellent indeed, comprising almost 100 perfect arrow and spear heads and many fragments. Three fine flint drills, one iron ore or steel celt. Two fragments of stone axe. Half a dozen hammer stones and several specimens of unknown name.

Several Indian village sites were located and a couple of Indian mounds located.

EXCHANGES.

This page is FREE to all, but SUBSCRIBERS ARE SEATED at the 1st table

2c orange proprietary FOR any U. S. that I have not got. Herbert Westfall Terra Haute, Ind.

Send for my list of minerals, curiosities, etc., to exchange for books on mineralogy. J. C. Berky. Mt. Ayr, Ia.

Directions for making a hectograph sent for 8 Philatelic papers. H. A. Parks, Box 86, Endicott, Nebraska.

Minerals and Books for others which I have not. Geological reports of Pa. for same of any other State or of U. S. C. W. Pike Steelton Pa.

California curiosities in wholesale quantities to exchange for Self-inking press, Steam Vulcanizer, tupe, etc. Chas. Turton, 1240 Flower St., Los Angeles, Cal.

Stereoscope, Sun Glass, Gold Pen, accordeon, razor, & combination microscope for Indian relics or coins. C. S. Billman, La Grange, Ind.

Gaskell's Hand Book of useful information for 12 cyps any kind of philatelic papers. 12 varieties of stamps for every 2c used; U. S. stamps any issue sent me. Address, Geo. P. Jacobson, Box 217, Calmar, Iowa.

I will give 1000 foreign stamps for every 100 revenue or department stamps sent me. 100 foreign for 10 revenue or departments. 100 foreign for 12 stamps before 1870. Will exchange

stamps from sheets. W. Edeu, N. Y. Member

I wish to get vols. of "Exchanger's" which I will pay a good price in coins, Fossils, Indian. Anyone having them for change, write to D. O. tensburg, Pa.

1000 stamp Papers to others, or stamps on a 1x1 Iowa mineral (latery 3 stamp papers sent Local to exchange. C. 39, Mt. Pleasant, Iowa.

A few coins, stamps, eggs, books, etc. to exchange stamp album, stamps, anything useful; publisher papers please send copy. J. Edw. Smith, Portland, Ore.

All kinds of foreign state bank bills to exchange S. coppers, other coins also a number of old coins and a few coin books. Chaplin. Conn.

Petrified wood muchatised and opalized, granite, calc spar, gold and quills of porcupine, skull eagle, coyote, badger, reading matter, printing. G. S. Gordon, Meadow

Insects, and plant back nos. of magazines same subjects in the EXCHANGE. U. R. Valley, N. Y.

THE EMPIRE STATE EXCHANGE.

THIS STAMP

is quite rare. I have in my stock a great many rare stamps and more common ones at regular prices with additional discount, also packets.

Price list free. Send to me for anything you want.

W. B. Hale, WILLIAMSVILLE, MASS.

Send 10c. for 4-5 c. specimens of Minerals or Curiosities; send quick and get good specimens; they must be

R. S. BOYD,

Adams St., ALLEGHENY PA.

NATURALIST

eight page, 24 column, illustrated monthly paper, devoted to Geology, Dology, Ornithology and in all branches of Natural History. Is official organ of the Kansas (Mo.) Academy of Sciences. It can be had with choice more than 50 valuable premiums for only 50 c. Send stamp for the copy.

THE NATURALIST

1603 N. 6th St.,

Wichita City, Kansas.

ONE DIME.

is an 8 page and cover philatelic paper published monthly, for only 10c. an year, and if you send a 2c. stamp I will send you a Gypsum Crystal, or 1 arrow head, or 1 piece of Petrified moss, or 4 unused Stamps, your name in Directory 1 time free. Exchange column free to subscribers. Ad rates 35c. per inch. Send for a sheet of stamps on approval at 50 per cent discount to beginners. Promise to return in 10 days, and address.

CHARLES W. PEUGH, KOSCIUSKO, IND.

THE Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Devoted to Philately, Numismatics, Bibliography, Natural Sciences and Exchanges. 12 pages of matter, only 25 cts a year. Advertising rates, 50 cts. an inch. Address—

PERRINE BROS., Water Valley, N. Y.

Publishers insert the above and receive same space in this paper.

YOUNG'S
Phil. Hand Book.

will appear in April 1890. All collectors remitting 15 c. silver will have name and address inserted free.

Advertising rates 60c per inch. \$1 for 2 inches. Larger rates upon application. It will have as contributors some of the oldest and best informed philatelists in the U. S. Address all communications to the publisher GEO. H. YOUNG, 18 Richards Ave., Portsmouth, N. H.

THE ALARM

Is a monthly Amateur containing amateur notes, amateur journalism, stamp 15-[25 cts.] 7/annum post cert Goss, Strietford, Manch

OWING to the which this number has issued, many errors otherwise would not printed. During our we fear some communication not answered. If there's write again; also, any no premiums if postage wa

A REMARKABLE OFFER!

\$.65 WORTH FOR ONLY 30 CTS!

Whoever sends us Thirty Cents we will Mail the following;

1 Horse-shoe Crab,	-	-	05
1 Skate's Egg,	-	-	04
1 fine Spirifer,	-	-	06
100 Data Blanks,	-	-	18
Empire State Exchange, 1 year			25
" " " " Nos 1 2 & 3			09

Total \$0.65

THIS OFFER EXPIRES APRIL 1ST.

ADDRESS,

PERRINE BRO'S, Water Valley, N. Y.

EMPIRE STATE

EXCHANGE



COLLECTORS.

MINERALOGY,
GEOLOGY, and
Natural Sciences
EXCHANGES.

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post office Water Valley, N. Y., as second class mail matter.

Bro's, Publishers, Water Valley, N. Y.

A few of the many
UNSOLICITED
TESTIMONIALS

RECEIVED BY US.

"I have received more answers
to my ad. in your paper than any
other stamp or curiosity paper that
I have advertised in for years."

W. L. BARCOCK, Eden, N. Y.

"Am well pleased with your paper:
it is as good as any I receive."

R. S. Boyd, Allegheny, Pa.

"Your Xmas number is a dandy."

R. T. James, Vernon Hill, Va.

"I like the style of your little journal
very much."

D. O. Hall, Spartensburg, Pa.

"Your little work is very interesting."

M. P. Scholey, Homestead, Pa.

"It is a good magazine."

R. M. Putnam, D.D.S., Palatine, Ill.

"Am in receipt of the K. S. Ex.,
and think well of it."

W. G. Phipps, Assayer Con., Cal., Va.,
Yinia, Nev.

BEHOLD
OUR BANNER

-500-

SUBSCRIBERS

BEFORE

THE 4th OF

JULY.

of Minerals, Fossils, Human Bones,
Curios, Etc. This collection at re-
tail would sell for over a dollar, but
in order to obtain more subscribers
we offer it FREE. For a club of two
we will send FREE 2 copies of the
"COLLECTORS' RECEIPT BOOK."
For the FIFTY 5 sub. club we
WILL GIVE ONE DOLLAR and
ONE DOLLARS worth advertising.

IRE STATE EXCHANGE.

WATER VALLEY N. Y. March & April, 1890

No. 5

ILD DICENTRA.

me if thou would'st

ny flower in bloom,—

at plant I know of,

ands near my home,

some morn in April,

ee, in early May;

the woodlands—

bright with flow'rets

a past the violets,

w, have hardly room,—

ed white wake-robins,

beauties—full in bloom.

a to a thicket

rushes sweetly sing,

ardant mosses,

diest flower of spring!

the drooping hemlocks,

airy-flowers are born,

om—the Wild Dicen-

hem Squirrel's Corn.

Now my friends do tell I pray thee—

With its hyacinth perfume—

Have you seen wild floral beauties

Sweeter than Dicentras' bloom.

R. M.

INSECT COLLECTING.

Farm and Home

“The cheapest and simplest manner of killing insects for collections is by the use of the poison bottle. A jelly tumbler with tin cover is of convenient shape and size for making one. Place some pieces of cyanide of potassium about the size of a pea in the bottom of the glass; pour in water to a depth of half an inch or less and slowly sprinkle on plaster of Paris till a hard dry cake is formed, having some loose plaster on top, by rolling the bottle about on its side, this loose plaster may be made to absorb any moisture remaining on the glass. Wipe the inside of the tumbler, pour off the loose plaster, wipe the tumbler again both inside and out, cover and your tumbler is ready for use.

NOMISMATICS.

CABINET MEETING

Conducted by Geo. F. Heath,
Monroe, Mich.

Meeting called to order; president in the chair.

Minutes of preceding meeting read and approved.

The secretary noted that there was no meeting in January, only a corporal guard being present. La grippe seemed to be at the bottom of the trouble.

The following preliminary remarks were made by the president:

Before entering upon the regular business of the evening I have a few words to say more particularly to those of you present (and I notice a number of new faces) who are beginning the collecting of coins.

When the president had concluded; Mr. James Robinson gave notice that his toes had been trodden on to a slight extent, that he collected dates, and would have a few words to say later in their defence.

Recess was declared to exhibit coins and do a little trading and exchanging.

After a number of coins were

shown, the gem of the evening a proof set of the Congo Free coins consisting of silver 1, 5 francs and of copper 1, 2, 5, 10 centimes were exhibited by Stanley.

The president remarked that was the nicest set ever struck for Africa and that the copper set were only pierced ones on this continent.

"What are the holes for?" one.

"To look through," suggested another.

They are to enable the native string them on wires or strings wear about their body, serving to ornament his form and show wealth. The native African is destitute of pockets.

The coins mentioned at the cabinet meeting were brought forth and identified.

The one with the bee, found from Ephesus, an old Greek coin a further explanation later.

The one with a man's head plate was of Nealta, Emmanuel lean 1786 and representing the of John the Baptist on a charge.

The coin with an elephant of Ceylon, Persia, India, and so the old Roman, have coins with the figure of an elephant, also mah.

the coin with a rooster was from
Laeca: with the hen, a German
of Henneberg:

one with a devil on, didn't
any devil at all, but a picture of
me with his trident and was on
old Roman.

alarm of fire in the vicinity
ed a hasty adjournment and num-
the hall was closed.

James Brown see'y.

22, 1890.

—o—

TIPS ON COIN COLLECTING.

FIRST as to arrangement of col-
lections. Small collections may
be laid flat in a series of shallow
boxes; but for collections of from
varieties or upwards, I have
after a long experience the
satisfactory way of arranging
is to place them in small boxes,
country or series by itself.

For this purpose I use the small fla-
powder boxes about $1\frac{3}{4} \times 2\frac{1}{2} \times \frac{3}{4}$
by the druggists, and which can
ought for from \$1.50 to \$1.75 per
dozen. These boxes will hold from
to thirty varieties each. Put
name on the top and arrange
in your case or cabinet.

Extra fine or rare coins, proofs &c.,
should be put in small envelopes to
prevent rubbing.

A few words in regard to the clean-
ing of coins.— Never use acids or
strong alkalis. In most instances a
soft brush, soap and warm water is
all that is necessary. Whiting or
powdered pumice stone may be used
after passing the coin through a weak
solution of ammonia and later polish-
ing with a soft flannel or chamols
skin. Anything not removed in this
way better be left alone.

I notice the following in a late num-
ber of The Scientific American;—

“Silver coins may be boiled in a soda
solution and scoured with brush and
whiting, Copper coins may be treat-
ed in the same way and then brushed
with plumbago, which will give them
a bronze appearance.”

In commencing a collection begin
with the coins of your own country.
I am not disposed to advise the col-
lecting of dates, but am well aware
that many think different in this re-
spect, but I collect only distinct var-
ieties. Life is too short, and some
dates are too scarce to commit the
folly of collecting them.

(TO BE CONTINUED)

PHILATELY.

A DESCRIPTIVE AND STATISTICAL REVIEW of the United States Internal Revenue Stamps.

BY W. LA VERNE BABCOCK.

Continued from Feb. No.

THE stamp headed Agreement was used on written agreement or contract, value 5 cts., color red. The stamps headed Inland Exchange were used on Inland Bills of Exchange. Stamps were issued for the following values,—

5 cts. tax on sums less than \$	100
10 " " "	200
15 " " "	350
20 " " "	500
30 " " "	750
40 " " "	1000
60 " " "	1500
\$1.00 " " "	4500
\$1.50 " " "	5000

A great many of these stamps were used and are therefore very plenty. The \$ 2.50 and \$ 3.50 Inland Exch. were issued for standing bills or notes of \$ 10,000 and above. The stamps headed Foreign Exchange were used in stamping foreign bills of Exchange

The tax being 3 cts. on all sums than \$ 150; five cts. when less than 250 dols., ten cts when less than hundred dols., fifteen cts when than 1000 dols., twenty cts when than 2250 dols., thirty cts when than 2750., etc., etc. The higher ones 1.30, 1.60, 1.90 were issued stamping bills or notes of 10,000 lars and above.

These stamps are also common. stamp headed "Bill of Lading" used on the written receipt of goods, etc. The tax on same was fixed at ten cts, color of stamp blue. Bill of Lading stamps were used on checks used by banks; value of stamp 2 cts, color orange and blue.

Bond stamps were used on certificates of stock and profit; value twenty cents; color red. The stamp headed "Surety Bond" was used on bonds for security; value of stamp 20 cents; color blue. The stamps headed Certificate were used on certificates of deposits and other specified purposes. values of stamps 2 ct blue and orange, five cent red, 10 cent blue, 20 ct.

Stamped according to the amount of money deposited. Chart Paper stamps were used on documents relating to the charter of a vessel, taxed according to the tonnage of a vessel. If under 300 tons, the tax was 3 dols; if under 600 the tax was 5 dols; over 600 tons it was 10 dols.

Stamps were issued for those values. Contract stamps were used on Bro-memorandum, value of stamp 25 cts. color blue.

Conveyance stamps were used on deed conveying property from person to another. The tax was proportion to the amount of prop-erty conveyed. Rates as follows, - 50 cts. on property valued less than \$400
 1.00 " " " \$1000
 2.00 " " " \$2500
 5.00 " " " \$5000
 10.00 " " " \$10,000
 20.00 " " " \$20,000
 for every extra 10,000 dols, an additional 20 dols.

Entry of Goods stamps were used for the entry of goods or mdse. The tax was 25 cts. when the value of goods does not exceed 100 dols. on 100 to 500 dols. it is 50 cts, and over 500 dols, it is one dol.

Express stamps were used on receipts issued by an Express Co. and the rate was regulated by the amt. paid for the transportation of the goods if under 25 cts. the Revenue was one cent, from 25 cts. to 1 dol. it was two cts. over 1 dol. it was five cts.

Life Insurance stamps were used on all property insurance policies and the tax was 25 cts. in all cases.

Life Insurance stamps were used on all life insurance policies, if issued for less than 1000 dols, the tax would be 25 cts. from 1000 to 5000 dols. it was fifty cts. over 5000 dols. it was one dol.

Manifest stamps were used on the invoices of ships cargo. Rated according to the tonnage of the vessel, if under 300 tons one dol. - 300 to 600 tons 3 dols, over 600 tons five dols.

The stamps headed Mortgage were used on mortgages on property, rated according to the amount mortgaged. The value of the stamps used were fifty cts. blue, one dol. red, two dols. red, five dols. red, ten dols. green.

The stamp headed Original Process used on legal document to commence a suit in court. Value fifty cts. Blue

Passage Ticket stamps used for tickets to a foreign country, if the ticket cost less than 30 dols, the tax was fifty cts, if more it was one dol.

Power of Attorney is used on all documents giving power to an Attorney to transact business for another. Rated according to amount of business transacted etc. Value's ten cent blue, twenty five cent red and one dollar red.

[CONCLUDED IN OUR NEXT.]

CONFEDERATE STAMPS.

—STAR—

DID the readers of the EMPIRE STATE EXCHANGE ever ask themselves whether the Confederate stamps were held too high by dealers or not; I venture they have not, nor even given the subject consideration.

The largest holders of these stamps will unanimously acknowledge that it is only with the greatest difficulty a stock of them can be got together and that frequently they have to pay for lots of several hundred at least sixty or seventy per cent of their retail selling price. This will readily explain why "wholesalers" do not quote them in their lists.

One of the leading southern dealers in fact, looks for a rapid advance in price in the near future and predicts the day will come when the very commonest of these relics of the "lost cause" will be considered a gem in any collection.

Most of those who have only been collecting two or three years can remember when the ten cent rose to worth but a dollar, to-day it is sold at two dollars and if five and

on the original envelope it is at least twenty five per cent

The advance toward speciality also tend to raise the price of stamps, in fact many varieties alleged exist even in the regular issues and when as it must some enterprising person placed a rare catalogue on the market must necessarily tend upwards.

It must be borne in mind the period that these were in circulation was brief, not over four years life for the very first issue, and few of the earlier issues were during the last two years of the confederacy, while the small five centers were only in issue a few years.

No one who has not tried knows how difficult it is to obtain used specimens of the two and twenty stamps. It is a wise collector grasps time by the forelock and while he may his regular issue of the stamps of the Confederacy does not wait until he sees them going up—up—up until they are far beyond the reach of any except a fat pocketbook.

— 0 —

Don't collect counterfeits.

NEWS.

By J. C.

Maldive Archipelago in the Indian Ocean is composed of 12,000 Islands.

Philatelists are already beginning to prepare for a worthy celebration on the 6th of May, next, for a semi-centennial of the introduction of postage stamps. Stamps were first introduced by the bookseller, James Chalmer, in 1840.

Two very interesting specimens of Labrador copal gum have just reached our country. They are neatly polished, and are full of prehistoric inclusions of various species, which thousands of years ago became embedded in the gum. What lends peculiar interest to these specimens is that the name of each gum is lost in antiquity and not only are the trees which are supposed to have produced them now extinct, but the very insects which in the gum do not belong to known species.

Writing on "Ancient Mining in North America" Prof. Newberry writes in the "American Antiquarian" of the great antiquity of the aboriginal workings. The ancient copper workings of Lake Superior were abandoned not less than 460 years ago; for heaps of rubbish around the pits were by the ancient miners were covered with forest trees that had reached their largest size.

A Tree Climbing Adventure.

ONE bright morning a friend and myself started out after bird's eggs; we were not very successful as all the nests we visited held eggs we did not want or ones in an advanced state of incubation.

It was near noon when we halted on the bank of the creek to eat our lunch.

Frank who was raking around and getting into scrapes started down the bank.

I sat down with my back against a tree to read a book I had brought with me and had got fairly interested when I was startled by a scream and splash in the creek.

I dropped the book and ran down the bank in the direction of the noise when I saw Frank struggling in the waters of the creek.

I rushed in and dragged him to shore; he was very pale and could not speak so excited was he.

I rubbed his hands and soon he began to laugh, but it was a very sick laugh.

When he had recovered from his fright he told me he had started to climb a tree after a nest and when up about 25 ft. fell from a limb directly over the water; he is not much the worse for his fall but he has never went after eggs since and says since one else can do the climbing.

E. S. Lutz.

THE
Empire State Exchange.
 A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, Editor.

SUBSCRIPTION

One Year, 25c. | Six Months, 15c.

ADVERTISING RATES

Made known on application.

Advertisements and exchange notices must be in by the 10th of May to insure insertion in next number.

Manuscript always in demand.

We exchange with all amateur papers.

PUBLISHED BY

Perrine Bros., Water Valley, N. Y.

Vol. I. March & April, 1890. No. 5.

EDITORIALS.

—Oh yes, we're here yet.

—Owing to other business we were compelled to issue this double number, but you will get 12 numbers any way.

—The EMPIRE STATE EXCHANGE sails gaily along on the journalistic sea. We have tacked a big banner to our main mast and it "means business;" see second page of cover.

—How do you like our cover?
 —Don't be afraid of hurting our feelings, but send on your exchange notices and we will publish them for you. It is the cheapest way to enlarge a collection, and many specimens can be secured not in the dealer's stock. Collectors should appreciate and use the exchange column more than they do.

—We shall have a collectors and dealers' directory in the next number. A two line card will be inserted in this column once for 10 cts, or 1 year for \$1.00. We offer it free (once) to all who subscribe before June 1st.

—H. J. Swentzel, Wilmington, De on receipt of Perrine Bro's Universal Collectors' Receipt Book, writes: "It is a very good book," and this is what every collector will say when they see it. We intend to publish another collection of receipts before long and we want all collectors to aid us. Send us two good receipts and we will publish your name, address, etc., in the Directory, once, free; for four receipts, two insertions, etc.

—A good bill of fare! Articles soon to be published;—Arizona, Salt Mine near Cracow. Collecting Minerals Preserving Skins of Birds, Quadrupeds, Fish, and Insects. Collecting Fossils. A Day at Fort Erie.

—A good bill of fare! Articles soon to be published;—Arizona, Salt Mine near Cracow. Collecting Minerals Preserving Skins of Birds, Quadrupeds, Fish, and Insects. Collecting Fossils. A Day at Fort Erie. **Jane Journey. Vegetable Curio**

OUR WATCH DOG.

IT & VICIOUS ONLY WHEN SWINDLERS ARE AROUND.

soon after the first number of the S. E. was published, R. T. James, Vernon Hill, Va. sent us an ad. in English which we declined, as we had his name in a fraud list in the Wakee Philatelist and in the Philatelic Tribune and Advertiser. We were very careful in regard to our advertisers. Mr. James wrote us that he could furnish good references, etc. to his reliability, and, subsequently we received the following:

Vernon Hill, Va., 8-11-90

This is to certify that I have known R. T. James and had dealings with him for years, and all ways, I say with pleasure, found him honest and upright in our business transactions. &c.

B. T. Dixon.

We forwarded the two papers above mentioned to Mr. James and soon received a letter from which we quote:

Trade or exchange in full, that I deal with W. A. Duncan was exact in his way. I sent him a Paragon coin that I got in ex. from Bert. A. H. Winchendon, Mass. I gave him but \$10. worth good Indian relief; it; Duncan was to send me a lot of stamps, (For'd) & old coins, which says he sent, but I have never rec'd from him, of which my depot agent testify, and I wrote him several times that I had not rec'd any thing

from him & for him to send receipt or return violin, & he kept writing that I had rec'd them & if I did not return them at once back to him & get violin he would expose me. I wrote him that he might do that if he wished, but he would have to take what follows. . . . I rec'd a letter from him a few days ago, that he had written agt. and found out I had not rec'd any package. He made no apology. * * * I have not rec'd violin or anything for it yet. All of the following parties & gentlemen will testify to square dealing in ex's & ads., viz: S.P. Seawell, Bensalem, N.C.; Wm. J. Edwards, 35 Charloote St., Utica, N. Y.; Seebach, Peru, Ill.; Allen & Co., Albany, N.Y.; C. Haddaway & Co., Easton, Md.; Howard & Co., Brockport, N. Y.; C. A. Hoover, 'Monthly Transcript,' P.O. Box 114, Lucasville, Ohio; T. F. Truman, M. D., Wells Bridge, N. Y.; and Mr. Alvan Davidson, & great many other collectors & papers; our P.M., Ass't P.M., or any firm or bank here.

Later, we received the following:
Ann Arbor, Mich, Mar. 24th, 1890.
Gents:

R. T. James, Vernon Hill, Va. writes that you refused his advertisement on account of a notice that appeared in Tribune & Advertiser saying he had swindled me.

The goods I sent were lost and I was rather hasty in writing F. J. Stanton. I had good grounds for believing myself swindled as you can find by investigating the matter.

W. A. Duncan, 6 Jefferson St.

REVIEWS.

The Erie Harbor is an independent journal published monthly, "not for money but morals, not for parties but principles, not for creeds, but christianity," at 50c a year. Erie, Pa.

The Western Philatelist is one of our most valued x's;— good print and good editorials. — One Dime is a regular visitor. [Never mind, Brother Peugh, if Vouste does "kick" at your way of spelling, we're all apt to make mistakes.] — The Philatelic Express is the cheapest paper we know of (only 15c a year) as it has so much valuable matter. — The Alarm is "a miniature amateur paper" from England. — No. 4 of Wisdom received. Less ad's please. — No. 2 also, of Central Philatelist. Wonder who is ed. — The Nebraska Philatelist is a fine paper for stamp collectors. Also the following;— Yankee Philatelist, [extra fine, 16 page Eastern number just out.] Curiosity Collector, American Stamp Journal, the Universal Collector, Stamp Advertiser, The Stamp World, Philatelic Gazette, Stamp Crank, and Ye Hoodle Philatelite. The last named has an interesting stamp story. — In the Nebraska Stamp News Editor Biggar, in response to an editorial in

the Southern Philatelist says:

"Now Bro. Luhn did you ever see a better gotten up or a better printed four page paper than the New York Stamp News. . . . One of the New Jersey Collectors, Exchange, etc. are no good representatives of the 'Art' or 'Science' of Philately."

What conceit! The copy we received only contained about 360 words of philatelic literature while our number had over 700 words of matter alone. Bro. Biggar's is $\frac{1}{2}$ advertising; this number of E. S. E. has only 4 out of 18 devoted to ad's.

If you wish to sub. for a dozen of this would be a good selection.

Literary Companion, The Nationalist, Exchangers Monthly, American Osprey, Figaro, The Rocket, Philatelic Field and Reporter, Red Maritime Companion, U. P. Advertiser, Moxley's Exchange and Advertiser and the Philatelic Tribune.

—The Oologist, published by E. Lattin of Albion, N. Y., is one of the most welcome and best exchanged and should be in the hands of every egg collector.

—
THE EDENIA CLUB

Full particulars next issue.

ORNITHOLOGY.

THE MEADOW LARK. (STURNELLA MAGNA.)

IS a common bird in the eastern part of North America, ranging from the Gulf of Mexico to Hudson Bay, and from the Atlantic to the Red River on the west. Further west it is replaced by the Western Meadow Lark. (S. M. Neg.)

The Meadow Lark is a nice looking bird, its back and wings being a mottled brown, and its throat and breast yellow with a deep black neck. Its bill is rather long, straight and pointed.

Its song consists of a few melodious notes, repeated, at an interval of half a minute, from the top of a fence or the top of a tree.

It is an early breeder, as it lays its eggs during the first half of May in its native locality.

The nest is invariably placed on the ground, usually in a pasture, sometimes in a thin grove amongst the tall grass. It is composed of grass, twigs, and is roofed over, with the entrance on the side. Being situated on the ground it is extremely hard to find.

The eggs are white spotted

with brown and are about the size of a flicker's egg.

The Meadow Lark is good eating but is hunted only where there are no larger game birds.— J. R. Craigie, Jackson Minn.

The Ruby-throated Humming Bird (TROCHILUS COLUBRIS.)

THIS, the smallest of our feathered beauties, is about $3\frac{1}{2}$ inches long. His plumage is golden green above, golden red about the throat; purple-brown on the wings and tail, and white beneath. All these hues have a brilliant metallic lustre, which changes with every movement.

Although he is small, he is very brave and has no fear of larger birds. He has even been known to alight on the head of an eagle and pull the white feathers out in mouthfuls, as the royal bird goes screaming through the air in unsuccessful attempts to get rid of his small tormentor.

The nest is very small, being about an inch and a half in diameter. It is usually placed on the top of a bough and rarely at the sides of the trunk, the outside is so nicely covered with lichens and bark that it resembles

very closely a knot of a tree. The inside is composed of vegetable down, such as that of the downy thistle.

The nesting place varies; sometimes an old apple tree is selected as a place of residence, and then again a low shrub in some garden, but in the south east a hickory or a black gum is mostly used. The eggs, two in number, are pearly white.

Jay.

—o—

THE CURLEW.

(NUMENIUS.)

—

THE curlew is a bird of the snipe family and is found in Europe and America. It is of an ashy color diversified with black, has a light colored breast covered with small brown spots, a long slim neck, small head, short tail, and long bony legs, but its most distinct feature is its long slim curved bill, which often exceeds the length of eight inches.

The curlew is hunted partly for its flesh which is excellent, and partly because its wild shy habits render the pursuit exciting.

These birds frequent the sea shore in winter but in summer they retire inland to bogs and marshes. They feed on worms and insects.

The curlew builds her nest of grass

on the ground in some secluded place and lays four eggs of a light color covered with small brown spots. The eggs are almost as large as a turkey egg and look somewhat like one.

When the nest is discovered the birds soar around above it, uttering a piercing cry, the sound of which is not unlike the name of the bird.

In America there are three distinct kinds of curlews. The largest is the long billed curlew (*Numenius longirostris*.) It stands about fourteen to sixteen inches high and its wing is about eleven inches long.

The short billed curlew (*Numenius borealis*) is about two thirds the size of the first and the Esquimaux curlew (*Numenius borealis*) is the smallest and is only found in the northern parts of America. — J. Edw. S.

—o—

BIRD ARRIVALS.

—

Eden, N. Y. 1890.

- Feb. 4, Shore Lark,
 " 8, Crow.
 " 27, Blue bird, Robin, Black
 Mar. 12, Red Shouldered Hawk.
 " 20, Song Sparrow.
 " 22, Meadow Lark.
 Apr. 1, Woodcock, Killdeer.
 " 3, Mourning Dove, Wren.

S.

ONIAOLOGY.

THE BANNER STONE

OR

CERIMONIAL AXE.

By C. E. Tribbit

CONTINUED FROM FEB. NO.

a fine and perfect one found
 set below the surface in the
 of a well, in this county.

in my collection fourteen all
 perfect specimens and several
 patterns of the banner stone.

the common pattern is the plain
 ped with a hole from $\frac{3}{8}$ to $\frac{1}{2}$
 diameter; then comes the cres-

cent butterfly-shaped ones, and
 the last named are very rare
 to find anything like perfect

specimens of them. In my search for
 geological specimens, it gives me

measure to find a perfect and
 banner-stone than any other re-
 lie, and hope to add many
 to my collection in the next

—o—

collector in Va. has a flint In-
 dian spear head, perfect, $7\frac{1}{8}$ inches
 2 inches wide found in Hal-

Jay.

INDIAN RELIC COLLECTING.

By Randolph Magno.

INDIAN relic collecting is one of
 the most fascinating pursuits of to-
 day and one in which there is a
 broad field to work. Arrow heads
 are the most sought for of any of the
 Red man's relics and their designs
 and shapes are many; their size ran-
 ges from the tiny "gem points" of
 the far west, to the spear-head-like
 arrows of the Wisconsin fields, and
 in fact can hardly be distinguished
 from spear heads, which are far less
 plentiful than arrow heads.

The Buffalo, N. Y. Museum of the
 Society of Natural Sciences has a
 large white quartz spear head about
 five or six inches long in its cab-
 inet of Indian relics.

Pottery is a nice thing to collect
 but whole specimens are so uncom-
 mon that a good collection is hard
 to make. In restoring pottery a good
 cement to use is made as follows;—
 boil equal parts of resin, beeswax,
 brick-dust and chalk together and
 heat the pieces to be cemented.

EXCHANGES.

This department is FREE to all but subscribers are seated at the first table.

Want Indian relics and rare U. S. coins, have to exchange jewelry, cutlery, notions, books &c., write at once, address,- C. S. Billman, La Grange, Ind.

Wanted U. S. half cents. Will give at the rate of two arrows or two foreign coins for each half cent sent me. Address,- Willard Throop, Box 151, Valparaiso, Neb.

I will allow 4 cts. in rare stamps from my approval sheets for every stamp, coin or curiosity paper sent me in lots of ten or more. W. J. Babcock, Eden, N. Y.

Foreign coppers, quartz crystals and stamps to exchange for U. S. coins. A quantity of thread to exchange for U. S. coins, foreign gold or silver or Indian relics. Horace S. Eaton, Chaplin, Connecticut.

25 var. foreign stamps for 100 sq. cut envelope stamps or for 5 department, local, revenue or telegraph stamps. Books, magazines, etc. for 5x7 on larger printing press and outfit. Receipts of all kinds for stamps. W. A. Duncan, Ann Arbor, Mich.

I will exchange any of the following minerals for two U. S. coppers

or two minerals for one Smoky and milky quartz, co tin ore, gypsum, trachite, mica, hornblend, aphanite, jasper, graphite, rhyolite, g and others all labeled. Will change for crystals. Minn Valparaiso, Neb.

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stamps. It will be sent
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 60 cts. Bronzed steatite mortars, 1 to 3 dol; skinners, 15 to
 measures, shaped after a wild turkeys egg 40 to 50 cts. Ham
 to 90 cts. Large fragments engraved steatite pottery, 20 to 40
 stone from rude stone houses now standing, 25c each; (CURIO
 beled shells 25c; humming bird's nest & set of eggs 1 dol; mete
 10 quartz crystals 1 dol; 10 var, small minerals, 25c; 25 good r
 one dol. 100 large & fine minerals from various countries, onl
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 copper cents five dols. 25 spec's woods one dol. 50 var. birds ne
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1890.

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other
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COLLECTORS.

MINERALOGY,
GEOLOGY and
Natural Sciences.
EXCHANGES.

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— THE —
EMPIRE STATE EXCHANGE.

WATER VALLEY, N. Y., MAY, 1880.

No. 6.

at the blooming apple trees,
as humming sounds of busy
bees,
from countless feathered throats
as forth the sound of merry
notes.
awn of light to eve of day
as what they seem to say,
- all to have a merry heart,
free from grief consuming,
cheerfully to bear our part,
better days are coming."

— — —
THE OUTLOOK.

— — —
This is the jubilee month for the
botanical collector as it has
more plants in flower than any
other. The archaeologist must hurry
his field work before the vegeta-
tion becomes too abundant; opening
can be done later on; a good
one can be made to run by horse
power where there are many or large
ones to be opened, we shall show
you one in some future num-

ber. They are becoming quite plenti-
ful. The entomologist must wait

until the latter part of June to se-
cure the more beautiful moths, mean-
while he can finish his cocoon collec-
tion. Search the newly plowed to-
mato fields for chrysalids of the
sphinx moth (tomato worm moth);
they are curiosities and if wished for
this purpose place them in alcohol for
a few days.

The mineralogist has probably
found many new specimens by break-
ing weather worn boulders, etc.: an
old tooth brush is handy to clean
minerals or fossils with.

The conchologist must look sharp
for helices, etc., just after rain storms
or at early evening; search in newly
cleared land. I found two, one day
last year on the under side of a corn
blade.

Geologists are filling their cabinets
fast now; their season is the shortest
of any kind of collectors.

Coin collectors should be always on
guard; country peddlers have many
coins you would like. I once saw
one who had a quart or more of large
coppers, etc., that I could have pro-
cured for face value. I was not a col-
lector then.—[U. R. P.]

PHILATELY.

A DESCRIPTIVE AND STATISTICAL REVIEW of the United States Internal Revenue Stamps.

BY W. LA VERNE BABCOCK

Continued from No. 5.

PROBATE of Will stamps were used on letters of administration etc. Rated according to the value of the estate, values fifty cent blue, one, two and five dollar red, ten dollar green and twenty dollar orange.

The stamps headed Protest were used on a protest of a note or a protest of illegal tax, value 25c. red.

Telegraph stamps were used on telegraph messages. If the charge was under 25 cts. the tax was one ct., if over 25 cts. it was 3 cts.

Warehouse Receipt stamps were used on all receipts for any goods etc. stored in warehouses, value of stamp 25 cts. color red.

Lense stamps were used on all documents that leased property. Rated according to the number of years leased; value of stamps were 50 cent blue and \$1.00 red.

Playing card stamps used on package of playing cards; values the stamps 1 ct. red, 2 cts. blue, orange, 3 cts. green, 4 cts. violet red. Private firms also used of their own in stamping cards.

Proprietary stamps (not used in medicine) were used in printing miscellaneous articles etc. of stamps, 1 ct. red, 2 cts. blue, orange, 3 cts. green, 4 cts. violet red, 6 cts. orange, 10 cents.

The stamps headed U. S. Internal Revenue stamps were used on miscellaneous articles; values 2 cts. orange; \$50 and \$200 green and red.

As you will see by the above stamps were used on every legitimate imaginable, from the most insignificant paper to the highest grade and probate of will documents.

Revenue stamps were issued on checks, liquors, cigars and articles not mentioned herein.

FINIS.

AUSTRALIAN STAMPS

BY WILLIAM B. HALE.

THE highest value stamps in the world for the prepayment of letters are issued by Victoria British province in Australia. Newspapers the United States

values that being the \$60.00 Victoria's issue is from 1 (2 cents) to 10 pounds (\$50.00) of assorted design used principally for revenue and document but also for postage. It would not be surprising that such high values were total-ly necessary. Not so; an instance in point, where last month a letter was recorded, weighing 238 oz., the value being 55.00. These are un-derstandably high. Perhaps it might be expected that the English registry is liable for loss, so coin, bullion, etc., are sent by mail, whereas the Express; hence they have heavy packages as mail matter.

FOR THE RARE POSTAGE STAMPS.

How really marvelous what prices are paid for some of the rarer post-stamps. Among the most valuable are the Guiana labels, and last of all the "blue four cent" of this colony, which was sold for 50 pounds sterling. About 30 pounds is the normal value of the New Brunswick five cent stamp with the head of Daniel O'Connell, and the famous Mulready wrap-pers, which there are said to be

only six or seven examples in exist-ence, is seldom to be had for less than 80 pounds. Still more precious, how-ever, are the Mauritius Stamp of 1847, for which 100 pounds has been paid, and the set of four 1852, Hawaiian stamps, which is valued at 300 pounds. And after all there is danger that the unlucky philatelist, for so does the stamp collector denominate himself, may pay his score of pounds for a for-gery. For, as one might well expect, the more high priced stamps are for-ged wholesale, and it is difficult for even the keenest connoisseur always to distinguish the genuine from the ficti-tious. Neither is it easy for the plain man who has weakness for philately, to be compassionate to the connoisseur when his keenness fails him at the pinch.

—*Edinburgh Scottish Leader.*

Pages 65 66 67 and 68 were printed by E. P. Thurston, of Hamburg, N. Y. whose adv. appears elsewhere.

Our thanks are tendered M. P. Schooley, for copy of the *Pittsburg Dispatch*, containing his article on "Opening a Mound." Archæologists should send for a copy. April 5.

THE EMPIRE STATE EXCHANGE.

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ULYSSES R. PERRINE, EDITOR.

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PUBLISHED BY

PERRINE BROTHERS.
WATER VALLEY, N. Y.

VOL. I, MAY, 1890. No. 6.

We are again late with this number but our patrons must not be discouraged "for better days are coming." We shall procure a new press before long and then will "catch up." The one we have has not the capacity suitable for our business.

The proceedings of the first meeting of the Edenia club next month.

Again we say send on your exchange notices and we will publish them for you. It is the cheapest way to enlarge a collection, and many specimens can be secured not in the

dealer's stock. Collectors should appreciate and use the exchange more than they do.

Our Dealers and Collector's Directory had to be left out of this issue. If you send a 2 cent stamp, mail you our premium list of names, etc., given FREE to subscribers.

HINTS ON COIN COLLECTION

[CONTINUED FROM NO. 5.]

If the number or variety of coins issued were to be obtained in large quantities, there might be some objection for the collecting of a long series of dates; but with the myriad of coins, ancient, mediæval and modern, interesting and beautiful; so replete with history almost knocking at our doors for admission,—I repeat, it seems to me a waste of patience and money, to search for or purchase a few 1794, and 1804 dollars; 1800 cents; 1799, and 1804, cents; *genus omne*, or burdening our collections with coins whose only claim to notice happens to be a different figure or two.

Always aim to get the most valuable specimens possible, replacing

the good as opportunity
 rise some of the old coins,
 y provisional and oriental
 more modern times have been
 ruck and beauty is unknown
 but they possess oftentimes
 oric, as well as numismatic
 and should be collected.

RESPONDENTS WANTED.

n clippings, notes etc. of rare
 suitable for publication. We
 ne kind friend in R. I. for a
 e *Evening Bulletin* with an
 titled "A Friend of Birds &
 which we will try to publish
 xt.

stantial worth, as well as full
 ainment, is a little volume
 by the late B. K. Pierce, D.
 Audubon's Adventures; or,
 the Woods. John James
 was born in 1780, in what is
 isiana. He died in 1851,
 nderfully useful life spent
 born of an unconquerable
 or natural history. His ad-
 in forest, rivers, and moun-
 n a most thrilling narrative,
 be heartily recommended as
 in this volume. [Hunt and
 ew York. 12mo. 60 cents.]

In the Quaritch collection is the
 unique original print in Spanish text
 of Columbus' letter to the court of
 Spain. This edition was only discover-
 ed a few months ago. It is a large
 pamphlet of two leaves or four pages
 in a quadrate small folio shape, and
 is supposed to have been struck off at
 Barcelona in April, 1493, during
 Columbus' visit to the court.

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ORNITHOLOGY.

THE COW BIRD.

This bird is also called Cow pen Bird, Cow Blackbird, Cow pen Bunting etc. Like the European Cuckoo this bird never builds its own nest but always drops its eggs into the nests of other birds. From this peculiar manner of farming out their young the true number of eggs the female lays, is unknown. It is supposed that but one egg is laid in the same nest by the same bird, but nests are frequently found with two, three or even more eggs of the cow bird in them. The eggs are rounded oval, about .85x.67 inches in size, ground color white, thickly blotched with brown and purple. They are usually larger than those of the bird whose nest is used, and hatch from two to four days earlier. The Yellow Warbler, whose nest is frequently used usually builds a new nest upon the old one when thus defiled, sometimes making a third or fourth story and leaving the cow bird's egg buried in the lower story.

In color the cow bird is black with

a dark brown head. They are seen in barn-yards or perched on the backs of cattle in the pastures. They are found throughout the great West of North America.

J. R. C.

We dont want the



but we want 1,000 Subscribers

On May 10 "An Observer" reported a nest of four eggs of the Cow Bird which he left undisturbed. The next morning on visiting the nest he found that the eggs were cracked by frost.

A young stork! reported to have been caught at West Ham by Mr. King recently. It is now in the possession of J. Johengen.

QUESTION BOX.

Questions and ans. solicited from all.

Where can I get sea bird's eggs cheap for cash?—[R. M.]

What is the value of the 3c. (red-stamped) blue envelope, "War Dep't. U. S. A., Signal Service, Railway Bulletins," last issue.—[J. A. C.]

Why is a young lady like an arrow?
ANS.— Because she never goes off without a bow [bean], and is all in a quiver until she gets one.—F. J.

MINERALOGIST.

S. H. Wood, (former collector of curiosities, relics, fossils & minerals) desires to inform all correspondents, &c that he will devote his entire attention to mineral & fossil formations, also will still keep up his library of scientific literature. MT. AIR, IOWA.

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EXCHANGE

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300 Indian relics to exchange rare old U. S. coins type & c. enclosing stamp. C. S. Billings, Grange, Ind.

Wanted, Minerals, Fossils, relics. Cash or ex. Have a magnifier to ex. for above, C. Edinburg, Ind.

Wanted, U. S. and foreign exchange for books etc. Send list of articles to exchange. Vale, Cohoes, N. Y.

To Exchange, A Chicago file for the best offer in bird sets with complete data. H. Box 14, Edinburg, Ind.

50 Duke Cigarette picture stamps on each and 50 Duke cigarettes to exchange for 50 stamps in my collection of 4000 species.

If you want Canada Remedy for your man. A. Lionais, 1957, Montreal, Canada.

Nebraska Stamp

will enlarge to EIGHT, PAID the June number. Advertisers 15 cents per inch, Subscribers per year. Address:--

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Office. I have a large number of these, and a large
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supplies for collectors.

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 LATION for the June
 take advantage.
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CORAL, 5c.; Quartz Crystals, 5c.
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 tery, 5c.; Talc, 5c.; Vinc Ore, 5 cents.

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DO YOU KNOW a Good Thing
 when you see it? If so, write at
 once to W. L. Babcock, Eden, N. Y.
 for his latest price list of U. S. and
 Foreign stamps. It will be sent post
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 on my approval sheets. I allow 40 per
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 my trade is that I offer to exchange
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 Write for particulars.

W. L. BABCOCK,
 Eden, N. Y.

THE NATURALIST

is an eight page, 24 column, illustrated monthly paper devoted to,—Geology, Oology, Ornithology, and in fact all branches of Natural History.

It is official organ of the Kansas City [Mo.] Academy of Sciences.

Vol. IV can be had with choice from more than 50 valuable premium stores for only 50 cts. Send stamp for sample copy.

THE NATURALIST,
1308 N. 6th St.

Kansas City, Kansas.

WOULD YOU KNOW A GOOD Bargain if you should see it?

WELL, HERE IS ONE.

Eight year. Prince Edward Island unused, 50cts. 1857, 5ct. red, used, Cuba, catalogued by Scott 15cts., for only 10cts.; 12 for \$1.00.

AGENTS WANTED for our Approval Sheets, at 33½ per cent. commission, and every 20th one sending for sheet at 33½ per cent. commission, and selling over 50 cents worth, will receive a stamp, valued at 60 cents to \$1.00. The PHILATELIST RECORD, issued semi-monthly, 85 cents per year. Sample, 5 cents. Adv. rates, 60 cents per inch.

GOLDEN STAMP CO.

LAKE VIEW, MICHIGAN.

Mention E.S. C.

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We guarantee a circulation of

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ADVERTISERS

should take advantage of this

fact, and send in their orders

early.

PERRINE BROS.

WATER VALLEY, N.Y.



EMPIRE STATE EXCHANGE.

NEW SERIES.

L. I. WATER VALLEY, N. Y., JULY, 1890. NO VII.

CAMPING EXPERIENCE.

The collector in his annual outings is often compelled to spend the night in a tent.

On my trip I took with several others I got me a great deal about camping in a tent; and for the benefit of those that have not taken such a trip, a few points and words of caution may not come amiss, while those who have, know pretty much what it is

There were nine in the party; we went to collect Bird-skins, fossils and things that would enrich our cabinet and to have a good time.

We commenced by buying a 10x14 tent without a fly (or extra roof could call it) which is thing it should have, if you want to keep dry.

We bought ham, bacon, canned goods and wound up with 1 barrel of bread, 1 barrel of cakes, 1 barrel of crackers, which which was about ten times more than we needed, but we did not know that then.

We started early in the morning, I remember I enjoyed the ride very much better than I did coming home. We hauled our baggage about 10 miles, so as to get into the unbroken country and started to pitch our tents; then we found we had forgotten

the tent poles; but night was coming on, and we had to have some kind of shelter, so after opening about half a dozen boxes we found the ax and soon made the tent poles out of several saplings. Supper was soon cooked and eaten, and as we were all very tired, we all turned in, after singing "Tenting on the old camp ground."

We awoke in the morning all so stiff we could hardly move, from lying on the damp ground.

We slept on straw the second night but were kept on the move all night, snakes having joined us; not very agreeable bedfellows you may be sure.

It rained in the night or rather poured. I do not think it ever rained harder. It soaked everything through, the clothes, provisions, everything, so we packed up and came home.

I have been camping since but I go with everything that can contribute to comfort and would advise all others contemplating such a trip to do the same.

P. S. Many persons are not aware that there are at least six millions of people in this United States that are actively following some particular branch of collecting. Some collect bric-a-brac, Indian and war relics, coins, tags, eggs, plants, scalps and plumage of birds, and greatest of all, the stamps of different countries.

Ten million would be nearer the mark.

THE EMPIRE STATE EXCHANGE,

A MONTHLY FOR COLLECTORS.

SUBSCRIPTION:

ONE YEAR, 25c. | SIX MONTHS 15c.

*ADVERTISING RATES made known on application.**Advertisements and Exchange Notices must be in by the 10th of August, to insure insertion in next number.**Manuscript always in demand.**We exchange with all amateur papers.*

PUBLISHED BY

PERRINE BROTHERS,

WATER VALLEY, N. Y.

VOL. I. JULY, 1890, No. VII.

EDITORIAL.

We send out this number to keep the good faith of our subscribers and advertisers. Our new press has not yet come to hand, and so we had it printed by Mr. E. P. Thurston, of Hamburg, N. Y. We have enlarged in size of pages, as we thought it best to do so at the expiration of Vol. I. The next number will have the usual twelve pages, and also the cover.

PRECIOUS STONES.

THEIR CHEMICAL COMPOSITION.

BY JAY.

Continued from No 6

Onyx. The Onyx is the most celebrated variety of all the variously tinted Agates. Those that exhibit marked contrasts of color, in bands as black and white and carnation red in alternate layers, are most desirable on account of the resources offered by it to the cameo cutter and engraver.

Amethysts.—Are Crystals of Quartz of a beautiful violet color, and the

finest specimens are found within the environs of Carthage, in Spain. The ancients believed that wine when drunk from an amethyst cup lost the power of intoxication; accordingly, the attributes of Bacchus and Silenus are frequently found engraved upon many of the ancient cups, etc., of Amethyst.

This mode of imitating the ruby, sapphire and emerald, can be traced back to the fifteenth century. It is done by taking a thin flake of oriental garnet for the top, and a piece of quartz for the bottom of the stone, and uniting the two parts by means of a transparent cement, in which is incorporated a coloring matter in harmony with the stone that it is intended to represent. They are largely used in the manufacture of jewelry and are rapidly increasing in popularity in this and other countries, on account of their fascinating beauty and durability.

REMEMBER

Our regular edition contains 12 pages and cover. So do not be prevented from subscribing, by thinking this is our regular size. SEE GRAND OFFERS.

GRAND OFFERS.

For 33 cents, we will send the EMPIRE STATE EXCHANGE one year together with all back numbers (6) and a fine large Star Fish, 6 inches across.

Any person sending us a club of 25 subscribers, will receive a brand new Waterbury Watch!

Blue fish are remarkably plenty this season. A smack came into New York lately, with 14,000 on board, some weighing six pounds.

EXCHANGES.

Four volumes of GOLDEN DAYS to change for stamps. Old U. S. of all kinds South, and Central American preferred. Write W. A. DUNCAN. Ann Arbor, Michigan.

Wanted: Nos. of Capital City Philatelist, American Philatelist, Philatelist, Journal of America and American Journal of Philately. Five fine stamp papers for any of above.

S. H. WOOD.

3117 Marion St., Denver, Colo.

Will exchange an Excelsior Press. Case 4 1/2 x 7 1/2 5, fonts o type, and everything necessary for a printing outfit, cost 20 for a rubber tire Bicycle of same value. Address,

JUDSON N. BURTON,
Madison, N. Y.

5 c. each in stamps from sheets for every copy. P. J of A., A, J. of P., Am. Philatelist or any paper published before 1884; 4 c. each for every covered stamp paper sent me 5 c. each for every stamp paper sent without covers

W. L. BABCOCK
EDEN. N. Y.

500 foreign stamps for best offer in silver or foreign coin, Also a specimen of Lava, Topaz, Beryl and Obsidian for best offer in coin.

HORACE S. EATON,
Chaplin Conn.

Wanted: Vol. 3, Nos 1 5 and 12, Vol. 4. Nos. 6 and 7, of Exchange Monthly for any of which I will give ten stamp papers if in good condition.

S. H. WOOD

3117 Marion St. Denver Colo.

Have tin ore, 3 kinds, Silver, gold in sand, white gypsum, pet. or chalcidony, stactite. saph. Calcite, all kinds of quartz, pet.

wood., red cedar and sage root, shells, moss, and some government specimens, including teeth, petrified bone, and crystalized bone and water feld-spar, impression fern and rubies, etc. Will be exchanged for Indian relics or useful articles.

MRS. TILLIE NORMAN.

Phinney, Custer Co., So, Dak.

Minerals, fossils, shells, curiosities, stamp cases, etc. to exchange for the same. Wanted, books or reports on mineralogy

J. C. BERKEY, Collector.

Mt. Ayr, Iowa.

NIC--NACS.

Gummed, paper for hinges to mount postage stamps, should be cut 1-5x3/8 inches in size.

* * *

Glass oblongs, for holding wings of butterflies while setting can be cut out from broken window glass; size, about 1/2 x 3/4 inches, or larger.

NOTES.

The Alaska exploring party have named a lake in honor of W.H. Arkell, Lake Lake Arkell.

The Potto wattome Indians have agreed to sell 6,000,000 acres of their land to the government for \$1.25 per. acre.

Mrs. Mary Jaha, aged 75, and the last survivor of the Nipuck tribe of Indians, died at Webster, Mass, today.

Canadian Indians bury their dead by hanging them in large trees. The Siwash tribe had 300 of their ancestors hung up in this manner, and while hunters set the forest on fire, the bodies, dried by exposure, burned like tar-barrels. Among the Indians there was uncontrollable grief, and they threaten vengeance.

AN ADVERTISEMENT IS AN INVESTMENT THAT YIELDS SURE RETURNS.

63 Complete Love and Detective Stories and 100 Songs, 10c. **CARD CO.**, Cuyahoga Falls, O.

500 PARCELS of Mail, Free. 20 Lovely Photos. for only 10c. **HOME GUEST CO.**, Cuyahoga Falls, Ohio.

CURIOSITIES; Sea Shells, Indian Relics, Confederate Money, Minerals, Etc., Etc. Largest stock; Lowest Prices. Circulars free. Falls Novelty Co., Cuyahoga Falls, Ohio.

CORAL, 5c.; Quartz Crystals, 5c.; Cieroid Stems, 5c.; Indian Pottery, 5c.; Talc, 5c.; Zinc Ore, 5c. Send for List.

R. S. BOYD,
81 Adams Street,
Allegheny, Pa.

A PINT OF INK For only 5cts. To

introduce our Brilliant Black Ink, regular price 15 cents per package, we will send one full sized package on trial for only 5 cents. Each package will make 1 pint of the finest black ink. Equal to any that can be bought for 50 cents a pint. Agents wanted. **FALLS CHEMICAL CO.**, Cuyahoga Falls, Ohio.

YOU WANT IT THE N. Y. HERALD

Of April 15, 1865, the morning after President Lincoln's assassination, 25 years ago, containing a full account of the tragedy, Lee's surrender, Jeff Davis's last proclamation and all the war news of that exciting period. A valuable, interesting and rare relic. One copy, post paid, 10 cents, 3 for 25 cents. **FALLS NOVELTY CO.**, Cuyahoga Falls, Ohio.

NEBRASKA STAMP NEWS.

An Eight Page, Sixteen Column Philatelic journal. **LARGE CIRCULATION WEST OF THE MISSISSIPPI RIVER.**

ADVERTISING RATES.....15c per inch.

SUBSCRIPTION.....10c per year.

Sample free. Address,

EDWARD C. BRIGGS,
Fremont, Nebraska.

AGENTS WANTED

To sell stamps from our sheets at 30 per cent. commission. Send reference. A complete set of Honduras, 1878, unused, and guaranteed genuine, will be given to the agent selling the largest amount before Dec. 31, 1890.

CHAS. S. CHEVRIER
P. O. Box 579, Trenton, N. J.

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is money earned. Patronize our store and save money.

	PUB. PRICE. OUR
Agent Advertisers' Home,	.25
Youth's Delight,	.25
Young America	.25
The Summit,	.25
The Fury,	.35

\$1.35

We will send all five of the above for 90c., or any one at price named. all kinds of printing. Send for estimate. Address,

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Rosemond, Christian Co.

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Stamp Photographs are the size of cent green Postage Stamp, with Mark on the back and perforated edge; used on Cards, Letters, Locketts, etc. are the originators of them, and will them in lots of 25 for 35c, sell for 60c; \$1. sell \$1.50;—500 \$4 00, sell for \$6 00; \$6.00, sell for \$10.00. Made from a ture; a Bust Cabinet is the best.

Any person sending Five Dollars of orders, we will make a Life-Size Portrait, size 18x22, FREE. The portrait sells for \$12.00; made from any picture may send us. Send orders by mail return Original with your order verified.

Address—**CRAYON & STAMP PHOTOGRAPH CO.**, 958 3d Avenue, N. Y.

To Young Coin Collectors

FOR SALE.

Old U. S. Copper Cents. Write for prices.

Address,
A. M. MOORE,
Greenfield, Vt.

OUR LATEST INVENTION
THE IMPERIAL PRESSURE
PRINTING MACHINE
WHEN CLOSED IS
SIZE OF COMMON
NEW AGENTS
YOUR NAME ON THIS NOVELTY
Bottle of Ink 2c.—Postage 2c.—Circulars & Agent's terms

THALLMAN M'G CO., 17 E. Baltimore, Md.

AUG 1890

VOL. I.

NO. VIII.

— THE —



EMPIRE STATE EXCHANGE.

MONTHLY FOR

COLLECTORS.

DEVOTED TO
Mineralogy, Geology,
and NATURAL
HISTORY and
PHILATELY



MINERALOGY,
Geology, and to the
SCIENCES, to
EXCHANGES.

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PERRINE BRO'S PUBLISHERS,

Water Valley, Erie Co., N. Y.

EMPIRE STATE EXCHANGE.

DEVOTED TO THE COLLECTING MILLIONS.

Vol. I. WATER VALLEY, N. Y., AUGUST, 1890. No. VIII

FAREWELL TO SUMMER.

O farewell to the summer time,
For August now is near its close,—
Farewell to the song bird's chime,
And farewell to the blooming rose.
Autumnal sounds are in the air,
The cricket's note comes on the breeze,
Hear the mantis chirp, and, there,
Hark to the katy-dids high in the trees.
O summer time, sweet summer time
Stay with us, linger while you may,
And leave with but a parting smile.
As evening gives the close of day.

A JUNE JOURNEY.

By Randolph Magno.

IT was on a pleasant Saturday in June, last, when, having quit work earlier than usual, we started on a short collecting trip. Westward we went, over fences, through fields and meadows; 'till we reached the "southern branch," whose winding course we followed.

Our eyes were watching for the nest of the starling but after looking round a good many stumps and logs in an old pasture, unsuccessfully, we went on, and in a hemlock thicket flushed several ruffed grouse but could not find their nesting place.

After a while we returned, and, on our way home we saw a hole in the level top of a beech tree about 20 ft. up. Taking a club, we gave the tree several hard thumps and soon a Mrs

Woodpecker peered out to inquire why the rumpus. Five minutes elapsed, I had climbed the tree, pried open the hole, and five pearly white eggs on a soft bed of fine chips, were exposed to view; I took them, not that we did not have any Yellow Shafted Flickers eggs, but to see whether or not she would lay again. In closing the break necessitated to secure the eggs, a drove of cattle surrounded the tree but my companion below with clubs scared them away and I descended. (In a subsequent visit we found she had laid six more eggs.)

Not many rods from the Flicker domicile, an old dry limb 15 ft long with butt end up rested 12 ft. up in the crotch of a beech. Near the end of the limb was a hole and upon reaching the tree out flew a Redheaded Woodpecker. We took down the limb and tilted it up but no eggs rolled out and we replaced it.

As I was descending the limb, a branch suddenly gave way and down I went. I landed with feet in air, across a log but unhurt.

It was now quite dark but still we kept on collecting, and in crossing meadowland saw a small bird fly up. Searching around we found her nest with four eggs,—it was that of a grass finch. Still further on we started up a meadow lark but could not find its nest, and before long scared up another and this time were successful in finding a nest with four eggs.

On reaching home that night we found that our collection was somewhat enlarged by A June Journey.

PHILATELY.

PHILATELIC JOURNALISM.

By William B. Hale.

This topic perhaps seems a "chestnut." The article will be found otherwise.

Periodicals appear in various journals, "advice to beginners". As a stamp collector did you ever see an article on this topic of philatelic editing? I trust not. Now I am going to give you some points; you ask who are you of pulse as authority? I may not be an authority but many of the older collectors have seen me and my productions frequently and for some time; to our other friends I will say in my varied experience I have been in the capacity of editor or assistant editor of some six journals largely or wholly on philately, and have "managed philatelic Departments" "Queries answered" and "Journalistic counterfeit detector" in a good many of the Stamp, Curiosity and Amateur Journals. Besides this I furnish manuscript and notes to Stamp Journals very frequently.

My experience is varied. I associate with the young editor in his teens; the fresh youth from the country; the experienced editor and the old timer who is dealer, publisher and editor. I see their methods, profit by their failures and likewise their success and by my own experience.

Thus I find the various requisites unnecessary. Are you about to start! In with a stamp paper, we presume you are. Are you contemplating doing your own printing? If so work in a regu-

lar office a while to learn the ropes don't let your paper appear as an emphatic proof of amateur night-mar in the way of printing.

Altogether the best way is to buy out some stamp Journal which is or is about to suspend. You get well up at the first jump and have already manuscript, subscribers, advertising lists to send samples, and an established name. You can buy out for one half to one fifth what these it are and past expenditures have been to the former owner and would have been to yourself had you started on an independent method.

One thing is certain.- you can do nothing without cash, the smallest sum I ever knew used by any one who was successful was \$20.- But if perhaps if in buying out a Journal you get it "on time" it would not take as much. Another disadvantage in starting a new Journal find advertisers unwilling to pay in advance- to their advertising while an established Journal they will do so. Hence another disadvantage in starting a totally new Journal, not much cash coming in for say three months. This is almost totally eradicated in buying out another Journal, a method which the reader doubtless sees I have personally found the most preferable in many ways, namely: requiring less spot cash, bringing in more cash especially in quick time when it is most needed, having methods already outlined not having to organize such exchange relations with other Journals a valuable thing in its individual self.

A word about distributing sample copies, use good names, send to them three consecutive issues then stop. The person has then got so he knows what your Journal is; acquired a liking for it, in short he finds he wants

it, and when he finds he dont get it any more he just subscribes.

It works similariy with the dealer about advertising. If you have a large journal like "Philately" or P. J. of A. perhaps two consecutive numbers will do. Try this method, you will find it as have others, considerably better than a promiscuous distribution so common with the uninitiated. Do not use old directories as about a third have changed address or quit collecting. Hoping this may be of some profit to you, I beleive it may surely afford pleasure to those heretofore unfamiliiar with the "sanctum editorial."

NEWS.

—The gold excitement in Northwest Wyoming has reached fever heat and a regular stampede has set in.

—Several persons at Buffalo, N. Y. have been stung by scorpions lately, which have been carried from their southern homes in banana bunches.

—Immense deposits of marble have recently been uncovered north of Ishpeming and but a short distance from the gold belt noted in a former number of this magazine. Several companies are now at work and cannot keep up with their orders. Eastern quarrymen and dealers are looking the district over, and are investing in promising properties. The verde antique produced by the Clara Marble Company is pronounced by experts to be

the best in the world, and by far the best yet found in this country.

—At the New Orleans exhibition a few years ago, was a model of a mammoth 16 feet high, and including the curve of the tusks, 23 feet long.

—It was related that Mr. Wilkenson the learned explorer of Egypt, found a vase hermetically sealed in a mummy pit, which he sent to the British Museum. The vase was accidentally broken, and within were found a few peas dry, wrinkled, and hard as stone. They were planted under glass, and in thirty days sprang up and grew. They may have been buried since the days of Moses. What a wonderful thing is the life-power even in the humblest seed or plant.

—Professor Gunning says that Florida has nearly 300 species of grass yet not a one that would fatten sheep.

—A new oil well just north of Findlay, O., flowed 1,000 barrels the first hour, and the production of the first seven hours was 6,340 barrels. This breaks the record of oil wells in Ohio if not the world.

GRAND OFFER.

The first person sending in their subscription of 25 cts. or accepting any of our offers will receive FREE one fine inch across Star Fish. Who will be the first?

THE EMPIRE STATE EXCHANGE

WATER VALLEY, N. Y.

— THE —
Empire State Exchange.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - , Editor.

SUBSCRIPTION RATES:

One Year, 25c. | Six Months, 15c.

ADVERTISING RATES

made known on application; as a special inducement we will, for the next thirty days, insert a one inch ad. for only 30c.

✂ THIS OFFER holds good 30 days.

✂ Advertisements must be in by the 25th to insure insertion in the next number.

✂ Manuscript always in demand; that treating on collecting especially desired.

✂ We exchange with all worthy papers or magazines.

PUBLISHED BY

— P-E-R-R-I-N-E-B-R-O-T-H-E-R-S, —
 Water Valley, N. Y.

VOL. I. August, 1890. No. 8

— Our last number contained several curious mistakes although Mr. Thursten the printer, said he would have none. On the first page among others might be mentioned the 'Post Script' to Camping Experience. Our readers must have thought that the writer of that article had a remarkable divergent mind; there should have been no P. S. at all but instead a foot note having no connection with the rest and the last line was to be on top as a title. The printer forgot to give credit to Young Folks at Home, and Camping Experience was from the pen of R. S. Boyd. In the "ad." of E. C. Biggar, the name was made to read Briggs; many others might be mentioned but limited space forbids but this one more viz.- on p. 72 "at

the expiration of vol. I." should have read at the expiration of the first half of vol. I.

—To the editor of the Philatelic News and all others who published our exchange advertisement, would like to receive marked copies of the issue that contains the ad. Our exchanges are so many that it would take all our spare time hunting up the ads. if marked copies were not sent.

—Collectors and scientists (as well as farmers) may learn much by reading some of the reports of the agricultural experiment stations. Among others published lately of interest to our readers, we mention below, together with the post office address so that any one who wishes to obtain any of these documents can do so free of cost by writing to "Experiment Station" at post office given.

Florida Station at Lake City, B-9, entomological notes. Michigan Station at Agricultural College, B-62 the English Sparrow. N. J. Station, New Brunswick, B-K, Cramberry insects, illustrated. Ohio Station at Columbus, B-4, directions for collecting, preserving and studying plants, etc. U. S. dept. of Agriculture, Washington, D. C., nos. 10 to 16 on Insect Life

CAT BIRD CHARMED by a SNAKE.

One day while passing through an old orchard my attention was drawn towards an old stump forming part of a stump fence, by the plaintive crys of a pair of cat birds which were fluttering round it. Upon a closer observation I found the cause of the disturbance to be an adder which was coiled up in a slight hollow in the stump, with head erect and tongue darting in and out. The cat birds were growing weaker fast when I interfered & killed the snake.

NUMISMATICS.

ABOUT COINS.

COINS bearing an early date are not necessarily at a premium because they are old, as it is not the age of a coin that makes it valuable, but the demand for the same, and it is often that a coin of very recent date will bring a higher price than one several hundred years old.

In the first part of 1853 and 1873, half-dollars quarters, dimes and half-dimes were same as 1852 and 1872, without the arrows at each side of date while in the latter part of the years 1853 and 1873 two small arrow points were affixed to denote a change in weight of the coins.

In the first part of 1836 the half dollars were coined as in 1835, with edge lettered, while in the latter part they were issued with a ribbed edge like the silver coins of to-day.

In cleaning coins, the best method for gold and silver is hot water and soap, for copper the coin should be placed in sweet oil only, as the oil softens the dirt; should they be cleansed with acid or any deleterious matter, the coin will be ruined. It is best not to clean or scour any coin or medal you wish to sell; it will always bring more however black or green it may be, if offered as it was found. Many desirable coins are ruined by cleaning. Coins so poor that they cannot be deciphered have no value.

MINERALOGY.

SALT MINE NEAR CRACOW

In two parts.

By Jay.

Part I.

AT a small town near Cracow is a remarkable salt mine, excavated in a ridge of hills, at the northern extremity of the chain which joins to the Carpathian mountains, and has been wrought about 600 years. There are about eight openings or descents into this mine, two of which are in the town, and are chiefly used for letting down the workmen, and taking up the salt; the other six are used for taking in wood and other necessaries. The openings are about five feet square, and are lined throughout with timber; at the top of them is a large wheel with a rope as thick as a cable; this wheel is worked by a horse. When a stranger wishes to gratify his curiosity by seeing the works, he must descend by one of these holes, he must first put on a miners coat over his clothes; a miner who acts as guide then fastens a smaller rope to the main one, looped so as to form a seat, in which he places himself and taking the stranger in his lap, gives the signal to be let down. When several persons go down together the custom is, that when the first has descended about three yards, the wheel stops, and another miner adjusts himself as above described, and the rope again descends

another three yards, and so on until the whole company are seated; which being effected, the adventurers descend all together, frequently forty people go down in this way at one time. When the wheel is finally set a going it never stops until they are all down. The descent is very slow and the idea that their lives depend entirely on the strength of the rope, renders their journey extremely uncomfortable. As soon as the first miner touches the ground, he and his companion slip out of the rope, which keeps on descending 'till all the rest do the same. The place where they are set down is perfectly dark, and the miners having struck a light, each takes a stranger by the arm, when they all proceed along, continually descending passages and mennderings 'till they come to a certain ladder, by which they descend at an immense depth, and enveloped all the way in perfect darkness.

The damp, cold, and darkness of these places, and the horror of being so far beneath the surface of the earth, generally make strangers repent before they get thus far; but when at the bottom they are well rewarded for their pains by a sight that never could have been expected after so much horror. At the foot of the ladder, the stranger is received in a small dark cavern, walled up on every side. To increase the terror of the scene, it is usual for the guide to pretend the utmost alarm, through fear that his light may go out, declar-

ing that such an accident would be attended with the most fatal consequences. When arrived in the dressing chamber, he puts out his light as usual by accident; but after some time catches the stranger by the arm, and drags him through a narrow creek in to the body of the mine; when the bursts, at once, on his view, a little brilliant world, the lustre of which can scarcely be imagined or the effect of same be stood for a minute, seemingly.

(TO BE CONTINUED.)

—§—

NOTICE!

THE EMPIRE STATE EXCHANGE will go to a large number of persons this month, for the first time. Our aim is to make it the best general collecting paper published in the world and to give each month the largest 25 cts. worth of reading matter ever offered to the collector. This number is sent you because we want you on our subscription list. 10 cents will pay for it from now until Jan. 1, next.

See that you

SUBSCRIBE!

MINERALOGY.**BRASS**

THE majority of our readers know that there is no such thing as "Brass ore" but I received a communication one day for a piece of "Brass ore," of course I could not furnish it, or any one else. I informed my correspondent that it was made of Zinc and Copper, but that was all I knew about it. I was sorry I did not know more and so I concluded to find out and see for myself how it was made, this is the result.-

After weighing the proportions of Copper and Zinc they are put in crucibles sometimes Lead Tin or Antimony are added to change color or make it harder, according to the work it is to be used for. When melted it is poured into cast iron molds, making ingots from three to fourteen inches wide by twelve to sixty inches long and one to four inches thick, the ingot is then trimmed by cutting off with a pair of steam shears the rough end formed in casting. They are then taken to the rolls which are about twenty inches by three feet long, where it is only passed through the rolls a few times when it becomes hard and brittle and is taken to the annealing furnace where it is annealed and then put in a bath of sulphuric acid to cleanse it of smoke and oxide, this must be done every time it is annealed, it is then rolled down a little at a time to the required thickness, the brass used for making springs is tempered by passing through the rolls a sufficient number of times to give it a good spring, soft brass is not put through the rolls so often.-

R. S. Boyd

BOTANY.**AN HERBALISTIC RAMBLE.**

DID the readers of the EMPIRE STATE EXCHANGE ever feel that magnetic impulse for collecting and studying the tenants of the fields and woods that it took the greatest effort to refrain from buckling on the collecting can or case, and marching off to seek the company of the birds and flowers?

Such was it with me to-day, and, selecting my course to pursue, soon found myself (and three others who accompanied me) under the shading boughs of a beechen woodland, and, journeying along the banks of a winding brook soon gave vent to my feelings in exstastic Oh's in the finding of a flowering group of wood favorites which I had long sought for in bloom,- the princes pine. These rigid leaved evergreens with their umbels of waxy, pinkish flowers!

When the red warrior roamed at will through the aboriginal forests, hunting for the larger game, he pulled up the plant entire and carrying it home for its medicinal use, called it his Pipsissewa. There is a tale also that when Uncle Sam declared "he would have no tea" and dumped the British cargo into the Boston Harbor the patriots substituted a beverage made from the Princes Pine. Not far from this place, in a very dry situation, I found, a few years ago, a pretty variegated species which is known as the spotted chimaphila.

Near by, like a floral ghost, stood

a near relation to prince's ome, - the Indian pipe. This plant is, I think, one of the most curious around these parts; just a scaly stem with a drooping flower, that's all!

It seemed as if the heathworts were "all out for a holiday" for near by were lots of round-leaved pyrolas with their deliciously-fragrant and curiously formed, pure white flowers in pretty racemes. And then before finishing my trip, low down amongst the wool grass and weeds on a dry knoll, 'neath a little hemlock tree, I found a plant long sought for in vain,-- the one sided pyrola,--with its greenish flowers arranged along the side of the stem. But it had no fragrance, (unlike its round-leaved cousin) yet I valued it more as it is a rarer plant.

EXCHANGES.

This column is free to all, but subscribers will be given the preference.

Ex's for the next no. must be in by the 20th of September.

2 cts. worth of foreign for every U. S. 3 ct. vermilion. Not less than five at one time. E. Wilkinson, Broken Bow, Neb.

Wanted: The higher values of all U. S. stamps in any quantity. Good exchange in curios or stamps. 10 cts. in exchange for every 90 ct. any issue and 15 cts. for any 30. C. S. Chevrier & Bro., Box 579, Trenton, N. J.

Large rubber stamp m'fg outfit, large collection of museum stuff, magic lantern, lifting machine and a genuine mal-stone taken from an Indian mound. Make offers. R.T. James Vernon Hill, Halifax Co., Va.

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WATER VALLEY, N. Y.

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3 " " "	-.25

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 WATER VALLEY, N. Y.**

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To collectors and dealers wishing to fresh their stock of coins, stamps, papers, minerals, woods, Indian relics, war relics, and all kinds of foreign and sea curiosities, either single or quantity should consult the undersigned with stamp, and remember we have large stock at lowest wholesale price and on terms to suit the right party. **MAIL TRADE ONLY.** All specimens warranted true to name and carefully labeled according.

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To sell stamps from our sheets 30 per cent commission. Send reference. A complete set of Honduras 1878, unused guaranteed genuine will be given to the agent selling largest amount before Dec. 31, 1883.

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Monthly for

Collectors.

DEVOTED TO
ARCHAEOLOGY, GEOLOGY,
AND NATURAL SCIENCE,
PUBLISHED MONTHLY.



MINERALOGY,
GEOLOGY, AND TO THE
ARTS, NUMISMATICS,
AND EXCHANGES.

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—◆—THE—◆—

EMPIRE STATE EXCHANGE.

A MONTHLY DEVOTED TO THE COLLECTING MILLIONS.

Vol. I. WATER VALLEY, N. Y. SEPTEMBER, 1890. No. IX

SEPTEMBER.

Morning's frosty grow and cold,
Brown the grass on hill and wold;
Crows are cawing sharp and clear
Where the rustling corn grows sere;
Mustering flocks of blackbirds call;
Here and there a few leaves fall,
In the meadows larks sing sweet,
Whirps the cricket at our feet,—

In September.

Days are sunny warm and still:
A golden haze o'erhangs the hill,
The sun shines on the floor
Just within the open door;
Still the crickets call and creak,—
Never found, though long we seek,—
Soft comes faint report of gun;
Busy flies buzz in the sun,—

In September

Evenings chilly are, and damp,
Early lighted is the lamp;
Fire burns and kettle sings,
Smoke ascends in thin blue rings;
On the rug the children lie;
On the west the soft lights die;
From the elms a robin's song
Lingers out sweetly, lingers long,—

In September

E. Isaceth Cole.

LABELING SPECIMENS.

AFTER collecting and cleaning the specimens ready for the cabinet, the next thing is to prepare suitable labels to attach to them. A collection unlabeled is almost worthless, especially to any other than the collector of them, and he

is liable to forget about the facts concerning it; of course there are some collections, as those of medals, coins, tags, etc., where labeling is unnecessary.

The best way to arrange a collection is on shelves with steps raised up three or four inches above each other, or they may be placed in the same manner in a case. For botanical specimens this is the form of the blank to use:

FLORA OF
NO. NAME
HABITAT
DATE
COLLECTED BY

For shells this is the blank to use:

NO. ORDER
CLASS
NAME
LOCALITY
DATE
REMARKS

Crystals should be fixed in this way: Insert one end of a large copper wire in a wooden block and split the other end, like this: Y. Fix the crystal between the prongs and paste the label to the block.

Here is a blank for insects:

CLASS
NO. NAME
LOCALITY
REMARKS

This is our form of "data blanks" for bird's eggs:

NO. NAME
 LOCALITY
 NO OF EGGS IN SET DATE
 REMARKS

For the archaeological specimens blanks should be prepared like the following:

No. Name
 People used by
 Locality
 Remarks

With minerals and fossils it is best to mount them on polished, square blocks of wood, and attach the label to the block. A label with number of specimen might be glued to it so that if the specimen should be shifted, it could be replaced on its own block with little trouble. For minerals the best blank I know of is in following form:

NO. NAME
 LOCALITY
 DATE
 REMARKS
 COLLECTED BY

The date line might be discarded, if preferred, but think specimens are more interesting with data, and with some specimens, as bird's eggs, the data is absolutely necessary and can not be omitted. Here is a blank for fossils:

NO. KINGDOM
 SUB-KINGDOM
 CLASS
 NAME
 AGE FORMATION
 LOCALITY
 REMARKS

Some collectors do not label their specimens except with a number tag the numbers corresponding with the ones on the data list.

ZOOLOGY.

THE SALAMANDER.

Considerable ignorance exists, even among persons of education, as to the habits of the salamander. The mere mention of this little batrachian recalls to the mind of most people mystic ideas with respect to fire-eating and fire-inhabiting creatures, which has caused many of the poor little brutes to be burnt by experimental philosophers who should be far above a belief in such absurdities. The spotted salamander is the color of lampblack, with numerous large yellow spots and stripes, and is very common all over south-Europe, as well as in northern Africa. It haunts all manner of dark and cool places, such as cavities under logs of wood, and holes in old walls, where they can find a supply of insects, worms, or slugs. All the salamander's movements are performed with such absurd solemnity that the most hardened reptile-hater could not help being interested. Sometimes the operation of swallowing a worm will last twenty minutes.

“Generally, papers are full of trash but yours contains something sensible; why, I read about things that I never heard of before.”—C. M. Lyman, [Type Foundry,] Buffalo, N. Y.

PHILATELY.**"STAMPS OF SIAM."**

By William B. Hale.

THIS semi barbaric kingdom so long ruled over by its native princes in much eastern splendor is a part of what is known as Indo China but nearly distinct. Siam gives the white elephant some very pretty stamps.

The king's name is Phea Chulalongkorn, is thirty seven years of age and comparatively progressive, and from the fact that he succeeded to his kingdom at fifteen was called "the boy prince of Siam."

When the first issue of five varieties appeared in 1883 they created quite a furore. As a dealer I remember that the sale of the pretty stamps were enormous and at a very stiff figure. Their highest value was the 1 salung, orange-brown, in American money 16 cents was rather small for the steep rates of postage there, so in 1888 the 1 lotte was surcharged in two ways "1 tical," equivalent to 12 cents. This stamp always sells high on account of the scarcity of its use.

The second issue in "atts" appears in two colors to each specimen are not quite so taking as the first, being a trifle less elegant in a general sense. Values are 2, 3, 4, 8, 12, 24 and 64 atts, the last equaling "1 tical."

The stamps are by La Rue & Co. who engrave a large number of col-

onial and provincial stamps. Only approached in that line by our own American Bank Note Co. and now somewhat by the Hamilton Bank Note Co. of New York, whose work is unfortunately rather inferior.

The Siamese are rather queer and seldom post mark their stamps leaving them to pass through the local routes uncanceled until they arrive at Bangkok when the English authorities use their postmark to prevent any wrong use of the uncanceled stamps. A few Siamese Cities lately began to postmark stamps with their peculiar native post marks. It might be well to add that the king's portrait is a very life like one.

ODD MENTION.

"Ten Days with a Modern Stamp Dealer" is announced to appear from the pen of E. P. Newcomer. It will be illustrated, and will describe the author's visit with a leading dealer of the city of New York.

We have noticed that several of our contemporaries have, like ourselves, been the victims of J. T. Jeff and also of Guy Stewart, alias Golden Stamp Co. These gentlemen are both owing us bills for advertising, and have refused to settle. A melancholy result of misplaced confidence.—Stamp Collector's Journal.

Can philatelic and other advertisers find a better advertising medium than the EMPIRE STATE EXCHANGE? We believe not (for the money invested) and hope to have a fair share of their patronage.

ARCHAEOLOGY.

MOUND BUILDERS.

Buglio Saturday Tidings.

IN addition to the ordinary mounds so often described, fortified hills are numerous along the Great Miami river in the vicinity of Hamilton, Dayton and Piqua. Near Hamilton is one of the few ruins in the Ohio valley where are found double walls, that is, two walls of defense, one a few hundred feet beyond the other.

The valley of the Scioto river is perhaps the richest in these monuments. There are fewer fortified hills, but the inclosures are generally of greater extent, and they are additionally interesting on account of the variety of geometrical figures represented in their plans. One of the most extensive of these is on the north fork of Paint creek, near Chillicothe. It consists of two divisions, the largest containing 111 acres, the smaller 16 acres. The large inclosure is surrounded by a ditch and a wall 12 feet high. It contains six sepulchral mounds, from which several skeletons have been taken. Another ruin on Paint creek shows that the work originally consisted of two forts one square, the other circular, each containing about 27 acres. Within the inclosure were several mounds, and four wells, which still retain water, though much filled with stone and debris.

Among the mounds were two elliptical in shape—one 25 feet high, 330 feet long and 170 broad, constructed of stones and earth. Another is 8 feet high and similarly proportioned. Several human skeletons have been taken from these mounds, and also pieces of pottery, crystal trinkets and other articles of use and adornment. To the east of these inclosures is a rocky, precipitous hill, the summit encircled by a wall of undressed stones inclosing 130 acres. Within the inclosure has been found an immense quantity of cinders, as though at one time a furnace had been in operation there.

In the bed of the creek, just below the hill, are four wells, dug through the rock and laid around the top with hewn stone and covered with circular slabs having a small hole through the centre. It is thought that the creek has changed its channel since the wells were sunk. They were discovered by a man out rowing, who was attracted by the millstone like covering at the bottom of the stream. Similar works to those of Paint creek have been found all along the Scioto to its junction with the Ohio at Portsmouth, opposite which on the Kentucky side are extensive ruins, the first explorers of which report evidences of the remains of chimneys.

The present city of Circleville occupies the site of one of these works, now entirely leveled. It consists of two inclosures, one a circle, the

other a square, with its sides facing the points of the compass. The square inclosure had eight entrances, each defended by a mound; each side of the square was 59 rods long, and the wall 10 feet high. The circle was 69 rods in diameter, with double walls 20 feet high and a ditch between. There were a number of mounds within and without the inclosures, one in the center of the circular fort with a semi-circular pavement on the eastern side and ascended by a graded way. The town takes its name from the circular fortification.

The ancient works at Portsmouth, now partially leveled, were intricate in character. They consisted chiefly of parallel walls several feet in height, running from the water's edge a distance of four miles across the low lands to the summit of a large hill, where after a detour they terminated near several large sepulchral mounds. Three of these were six feet in height and covered each nearly an acre. Another was quite 20 feet in height. In the vicinity are unfinished mounds, one of them 25 feet high, and already containing the remains of many dead. There are the remains of several wells, now partially filled with stones and debris. From these mounds parallel walls run eastwardly over two miles to the river. The total length of embankment, with all detours, is given at twenty miles, and in many places the ruins are several feet high.

The ruins in the Muskingum valley are no less interesting than those already described. At the confluence of the river with the Ohio there were extensive works before encroached upon by the rapidly growing city. In the early history of the city there were two large inclosures and a large conical mound. The largest inclosure contained forty acres and the smaller twenty. The embankments were from six to ten feet high and thirty feet broad at the base. There were three gateways on each side of the large inclosure. A sort of covert way extended between parallel walls of earth 231 feet apart from the large inclosure to the river, and the way was so graded that these walls were twenty-one feet high which made the cut of the grade about sixteen ft.

Within the inclosure was a mound whose summit was reached by a graded ascent. The other inclosure had a gate way in the middle of each side and at the corners, each defended by a mound. There was within a conical mound, 115 feet in diameter, 30 feet high, and surrounded by a ditch and embankment. There were also excavations that could have served no other purpose so well as for reservoirs for the storage of water. Near Newark, in Licking county, an extensive succession of fortifications existed.

GEORGE S. MC DOWELL.

—THE—
EMPIRE STATE EXCHANGE,
 A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - Editor

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✂ Manuscript always in demand: that treating on collecting especially desired.

✂ We exchange with all worthy papers or magazines.

PUBLISHED BY

PERRINE BROTHERS,
 WATER VALLEY, N. Y.

V. I. September, 1890. No. IX

Entered at the P. O. at Water Valley, as second class matter

EDITORIAL.

We have on hand a limited number of our Universal Collectors Receipt books. Every collector should secure a copy. Price, only 12 cents. See ad. elsewhere.

A sample copy of this EMPIRE STATE EXCHANGE goes to hundreds of collectors all over the U. S. and Canada. We are certain you can glean 25 cents worth of information from its pages during an year. Try and be convinced.

NEW ONES.—The Aggasiz Bulletin, Gillman, Ill., and the Wamsutta Stamp News will appear soon. We wish them much success.

The Rising Age is, at least typographically, a gem.

The Amateur Press of Troy, Pa., is one of our finest printed and most interesting exchanges.

We have been informed that the Red Man will, before long, resume publication again. Good!

The Nebraska Stamp News has been discontinued. Mr. Biggar had to work on it at night "after doing a days work."

The Effort of Detroit, Mich. is unquestionably a good paper, and is also an old one, (old, at least, for an amateur paper) being now on the last half of volume 3.

The Messenger is the best representative of amateur journalism hailing from Wisconsin.

The "summer number" of the Stamp Advertiser was well "got up" but, like philatelic papers generally are, the contents looked quite "dry" and uninteresting.

The Oologist is—in our estimation—the best paper devoted to oology in the U. S.

A good name for One Dime would be "on time" as in this it never fails.

If the editor of the Empire State Stamp Journal would leave out some of his own advertisements he might secure second class rates.

HAPPENINGS

of interest to collectors and scientists.

*Tea meadows green, may now be seen,
Like the robes of a knight of old,
With thrifty asters and goldenrod,
All bordered in purple and gold.*

James Nasmyth, the celebrated English mechanical engineer and inventor of the steam hammer, is dead.

SAN FRANCISCO, Aug. 15.—Captain Erskine of the steamer St. Paul from Unalakleet says the Victoria poachers this year have secured 20,000 seal skins. In consequence, the North American Commercial company, which leases the seal rookeries from the government, finds its take this year reduced to 20,000 skins.

It is merely a matter of a few years, said the captain, when the seals will become extinct.

Starting on a Scientific Expedition.

An important scientific expedition has started for Mexico on the steamer City of Alexandria. Professor Angelo Heilprin, of the Philadelphia Academy of Natural Sciences, is in charge of the expedition, which is to explore regions of Yucatan and Mexico, which naturalists have not yet visited.

With Professor Heilprin are Witmer Stone, F. C. Baker, J. E. Ives and Robert Le Boutillier. Mr. Stone will attend to the botanical and ornithological subjects; Mr. Baker, to zoology and conchology, and Mr. Ives to marine zoology.

Mr. Le Boutillier is the photograp-

er of the expedition. The party will go to Progreso, Yucatan and next to the interior of that state. They will then explore the lowlands of Mexico and the volcanic belt reaching toward the Pacific. The expedition plans to climb the extinct volcanic mountain of Orizaba, and also the volcano of Calima, besides other places of interest. The principal object of the expedition is to determine the general structure of the basins of the Gulf of Mexico, about which scientific opinion is divided. The explorers hope to return in May. —New York Tribune.

An ingenious method has been devised by Mr. John Aitkin for counting the dust particles in the atmosphere. It was found that when the moisture is condensed in a rarified atmosphere, each raindrop has a dust particle for its nucleus, so that by sweeping a measured portion of the air into an exhausted receiver, by means of pure air, and counting the number of deposited drops, it is easy to calculate the number of dust particles in a given volume of impure air. The counting is managed by having the silver plate in the receiver divided into millimetre squares, so that it is only necessary to count the drops on one square millimetre. Mr. Aitken showed that the air of a hall contained 40,000 particles to the cubic centimetre, while a specimen of air taken near the roof of the hall gave 3,500,000 to the cubic centimetre. — Advocate.

BOTANY.

A WATER LILY BED

By Robert E. Ward.

THERE is a bed of water lilies at Lincoln Park, Chicago, which is as radiant and beautiful as it is curious and instructive. In it are represented fourteen varieties of the water lily. Of some kinds there are many plants, but most of them have but two representatives.

The pond, which is about 150 x 50 x 4 feet, is filled with water heated slightly above the ordinary temperature. It is cleaned daily by the gardener under whose especial care the lilies are. A curious water plant known as the African duckweed lines the shore and bears a purple flower of the size and much resembling a hyacinth. All the lily plants have their roots in boxes of mud, under the water which is stocked with gold and pearl fish.

The first plant encountered is the *Nymphaea tuberosa* which is the common water lily of America, and a good specimen. *Nymphaea flava*, the yellow water lily of Florida is of the same appearance as *N. tuberosa* save that it is yellow. *N. rubra* of India is also like the common plant except that its color is red.

Of the common yellow water lily, *Nymphaea latifolia*, there are no samples. *Nymphaea pygmaea*, the dwarf China water lily, is very interesting, being an exact counterpart of the *N. tu-*

berosa in miniature. The blossoms are the size of a walnut, and the leaves correspondingly small. The toothed water lily (*N. dentata*) has toothed leaves, like a buzz-saw, and large, fragrant, white flowers; its home is in Africa.

Another African variety is the *N. Zanzibarensis* of a deep purple color. *N. odorata rosea*, of a pinkish tint, is the Cape Cod lily of Massachusetts, and the *N. alba* comes from England. There are also several specimens of *N. Devonensis*, a hybrid of a deep red shade. The sacred lily of Egypt, *N. Lotus*, is of interest and brings up a vision of the Nile, of which, we are told, is lined by this plant its entire length. Two specimens of *Lotus*,--*Nelumbium nuciferum roseum*, [red] and *N. nuciferum album*, [white]-- are from Japan, while two large plants of *Victoria Regia* end the collection.

Truly the best is saved for the last. Here is a magnificent flower a foot in diameter, nestling among enormous leaves of three and four feet across, and shedding its fragrance for a long distance. The *Victoria Regia* plants in the collection are among the finest ever transported to this country. They thrive so well that they have flowered and seeded and plants have been propagated from those seeds. Their cultivation has been very successful and great care has been expended on them with pleasing results.



MINERALOGY.

SALT MINE NEAR CRACOW.

IN TWO PARTS.

BY JAY.

PART II.

IT is a spacious plain, containing a whole people, a kind of subterranean republic, with houses, carriages, roads, etc. This vast plain is scooped out of one immense bed of solid salt, bright and glittering as crystal; the whole space before him is formed of lofty arched vaults, supported by columns of salt, and roofed and floored with the same so that the whole fabric seems composed of the finest crystal.

A great many lights are continually burning in this place, for general use; the blaze of which reflected from every part of the mine, gives a more glittering prospect than any thing above ground can possibly exhibit.

To enhance the astonishing beauty of the scene, the salt, in many places, is tinged with all the colors of precious stones, as blue, yellow, purple, green, etc. which, combining, darts a radiance upon the eye, which it can hardly bear, and which has given many people occasion to compare it to the supposed magnificence of heaven. The roofs of the arches, are, in many places adorned with salt, hanging from the top in the form of icicles, and having all the

hues and colors of the rainbow. In various parts of this spacious plain stand the huts of the miners and families; some single, and others in clusters, like villages. They have very little communication with the world above ground, and many hundreds of people are born and live all their lives here.

Through the midst of the plain lies a road which is always filled with carriages loaded with masses of salt from the more distant parts of the mine, carrying them to the place where the rope belonging to the wheel receives them. The drivers of these carriages are all merry and singing, and the salt looks like a load of gems.

A great number of horses are kept here and when once let down they never see day light again; but some of the men take frequent occasions of going up and taking fresh air.

The instruments mostly used by the miners are pick-axes, hammers, and chisels, with which they dig out the salt in the form of huge cylinders, each of many hundred weight, this being found the most convenient form for getting them above ground where they are immediately broken into pieces and sent to the mills.

The finest kind of salt is frequently cut into toys which often pass for real crystal. Among the thousand wonders of this subterranean paradise, the most surprising is, that there runs through this place a constant stream of pure, fresh water,

sufficient to supply the inhabitants and their horses. The horses usually grow blind after they have been some time in the mine; but they do as well afterwards as before.

The known breadth of this mine is 1115 feet, its length is 6691 feet, and its depth is 743 feet.

— o —

AGATES.

IN a variety of trap-rock called amygdaloid, or almond-stone, are curious cavities containing nodules and geodes of various minerals; such as agates, quartz, calcareous spar, and zeolites. Depending as stalactites from the walls of these cavities are spikes of chalcedony, deposited by the slow evaporation of water charged with minute atoms of silica. They are milky-white, colored, or bluish, and belong to the family of agates. When the agate is of a delicate green and clear or translucent, it bears the name of chrysoprase. If the agate is of a deep green, it is a heliotrope; if it is a sky blue, it is a sapphire.

When an agate, sawn in two and polished, presents in the interior the appearance of herbs and shrubs, it is arborized agate, and a moss agate when the cloudy convolutions take the shape of delicate mosses, and are then very beautiful. These shapes and picturesque markings are produced by the oxides of various metals, such as iron or manganese, dissolved to a fluid and slowly penetrat-

ing the stone in its formative state.

If the color is a beautiful cherry red, the agate takes the name of carnelian. When it is a brown or gray red, it is a sard-onyx, which, however, appears of a deep blood-red when held up to the light. The sardonyx was so esteemed by Mithridates that he had a collection of four thousand of them. Polycrates, the tyrant of Samos, held them in like favor, and finding himself dangerously lucky in everything, he grew alarmed, and made a sacrifice to Fortune of that which he held most precious, which was a fine onyx, that he tossed into the sea as an offering to that fickle divinity. What was his chagrin to find his onyx returned him, a day or two after, in the stomach of a fish!

Nodules of agate, sawn across, sometime present the appearance of bastions and fortifications; sometimes they are hollow, lined with crystals, and even filled with water and again the folds and layers may give a striking resemblance to an eyeball with its open lids; and it is then called eyed-agate.

From the onyx are cut beautiful cameos, so managed as to have one layer furnish the figure in white or pale amber, while the flesh tint below makes a background. From a magnificent onyx-agate drawn from India and Arabia, the ancients cut wonderful forms of classic beauty. There exists in the Imperial library Paris, an agate Constantine, with a wreath in his hand.

→*EXCHANGES.*←

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Crystalizing Grasses--Pulverize 1 pound of best white alum, and dissolve it over a slow fire in a quart of pure soft water; do not let it boil, and be careful to keep everything out of the solution that would possibly stain it; a new earthen bowl is the best dish to heat it in; tie the stems of the grasses together and suspend in the liquid when it is milk warm, and let the whole stand 24 hours; then remove and dry in the sun five hours.

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1890.

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Collectors,

MINERALOGY,
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RECENTLY, AND

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EMPIRE STATE EXCHANGE.

A MONTHLY DEVOTED TO THE COLLECTING MILLICKS.

Vol. I. WATER VALLEY, N. Y., OCTOBER, 1890. No. X.

OCTOBER.



ADORNED with a thousand colors bright

The frosted forests stand,
While peace and plenty is in sight
Throughout the entire land.

The corn is gathered in the stacks.

The cricket creeps beneath our feet.

The golden grain is in the sacks.

While the farmers

plough for winter wheat.

HINTS TO YOUNG COLLECTORS.

AS far as I have noticed, all collections are started by getting a few minerals and curiosities, keeping them in a box and adding now and then some new one that you have chanced to come across.

This is the way a great many collections were formed which to-day are worth hundreds of dollars and which are the pride of the owner.

If the beginner has started with a box, I would advise him to get rid of the box as soon as possible; because the best his minerals are not shown up

to advantage, and second they are broken and scratched.

I have found that a spool case is a very convenient thing to keep them in while your collection is small; the case can be bought at any large notion store very cheap; I paid one dollar for one with four drawers in it made of walnut.

But the best way to keep them is in a cabinet with shelves and a glass front, where any chance visitor can see and admire it. Dust is one of the worst things we have to deal with. Fill all cracks with putty or paste over with paper if there are any cracks in the back of the case because, when the dust gets in it, you will have to wash your specimens very often and this ruins some of them; others will stand. All the washing and scrubbing one can give them.

You should have them labeled with name and locality, with collector and date if you wish. I always numbered mine also for the benefit of any one who might want to examine them when I was not at home. I had a little blank book and wrote down a little history of all my specimens, telling their uses etc.; by looking at the number on the specimen and then the corresponding one in the book it proved interesting to visitors.

ORNITHOLOGICAL.

THE GOLDEN-CRESTED KINGLET.

American Rural Home.

THIS little pigmy, is one of the many birds whose southward range in the breeding period is limited by the Canadian fauna. The reader doubtless has noted him a hundred times, and wondered where the active little body, with his crest of flame, hails from, whither he is bound, and what can induce him to brave the rigors of our winters, as he frequently does.

He is a migrant, a traveler from place to place, a rover, a wanderer. As such, he is in central New York one of the most abundant. He comes to us about the middle of April, and bids us farewell,—as a rule,—about the first of November; although, as already intimated, he does not flee entirely before the frigid blasts of winter, but lingers occasionally to cheer the prevailing desolation with his sprightly ways and nervous searches for food in the interstices of the bark of the trees.

He loves company, and where one is found it may be surmised with reason that he has only been left a little in the rear of a straggling band of which he is but one of the rear guard.

In the fall and winter months he is especially at home in the shrubbery, the thickets and coppices, in

sweet but busy companionship with the titmice and yellow-rumped warblers, although each particular individual of the vigilant but conglomerate troop minds its own affairs and seems wholly absorbed in its own particular business.

So intent is he with his concern at such times as to evince little any fear or heed at the approach of man. He skips nimbly about upon the smaller branches, regardless of his altitude or of gravitation's law, peering inquisitively into the crevices of the bark for minute insect diet, or the half dormant larvae food and eggs which have been snuggled and housed from the approaching cold.

Much has been said and written regarding the interesting subject of the breeding of the Golden-Crested Kinglet. According to Stearns the credit of actually discovering its nest in New England belongs to Mr. H. D. Minot, who took one on the 16th of July, 1876, in the White Mountains of New Hampshire, in a forest of evergreens and birches. "Having several times observed the birds there, he writes, "I at last detected them in the act of carrying food to their young, and soon tracked them to their nest. This hung four feet above the ground, from a spreading hemlock bough, to the twigs of which it was firmly fastened. It was globular, with an entrance at the upper part, and was composed of hanging moss, ornamented with bits of dead leaves and lined chiefly with feathers. It contained six young birds.

F. R. B.

(TO BE CONTINUED.)

GEOLOGY.

THE TRILOBITES OF NEW YORK.

BY ULYSSES R. FERRINE.

THE trilobite was a crustacean inhabiting the ancient seas before this world was perfected or really fit for the abode of man and it is one of the most conspicuous fossils of our New York rocks. It disappeared with the Carboniferous Age, therefore but a few specimens of this odd little animal are found south of this state, but westward many species are found, and in Indiana, especially, beautiful specimens can be obtained, some rolled up like a ball. In Great Britain, specimens are found in the Dudley Limestone.

The body is divided into three lobes; the head lobe is called the buckler, and the tail lobe the pygidium. As many as 7,536 lenses have been found in the single eye of a certain species.

Of the 400 species already discovered in various parts of the world about fifty kinds are found in a single formation in New York state, the Carboniferous Limestone, against only three other inhabitants of the same period.

In the Oriskany sandstone formation is found one of the largest of the trilobites, the *Homalototus* major from Ulster county, with three other relatives. In the Schoharie grit, the rich crustacean fauna is ex-

clusively trilobitic, and consists of eighteen species from the localized development in eastern New York.

The Marcellus shale, of which loose blocks may be seen on the shore of Lake Erie at Hamburg, contains five species, while in the Hamilton shales thirteen different kinds have been found in this state and eleven outside of it. The Genesee shales contain not a single trilobite and but one solitary fossil, the *Ceraticaris longicauda*, while the Tully limestone contains nothing but trilobites of six different kinds.

The Portage group has not a trilobite; in the Chemung the trilobites are represented by two species, *Phacops nupera*, and *Cyphaspis laevis*, while the Catskill group has not a single specimen of this large order of crustaceans.

Trilobites are the remains of a remarkable extinct family of crustaceans of which the king crab is the nearest modern relation.



The skeleton of a whale was dug up in the vicinity of Niagara a few years ago, a sure indication that that region formed at one time the bed of an ocean.

The largest land animal yet discovered, is according to Professor Marsh, the *Atlantosaurus monstrosus* from Colorado. It is fifty or sixty feet in length, and when erect, at least thirty feet high.

ARCHAEOLOGY.

AN AMORITE CITY UNEARTHED.

London Christian World.

AFTER ten years of persevering application, the Palestine Exploration Fund last spring obtained permission of the Turkish Government to excavate in the plain in the south of Palestine, through which the road passes from Hebron to Gaza. Mr. Flinders Petrie superintended the work, which began in the end of April, and the results already surpass the most sanguine expectations. Professor Sayce, in *The Contemporary Review*, is full of delighted enthusiasm. "We know something, he says, "of the art and building of the Israelites in the period of the Kings, and of even that older Amorite population whom the Israelites conquered. It has become possible to speak of Palestinian archaeology, and to determine the age of the pottery and hewn stones which are met with in the country. Where all before was chaos, order at last has begun to reign." He further ventures on an epigrammatic prophecy. "We have dug up Homer and Herodotus; we shall yet dig up the Bible."

The chief exploring work has taken place at the mound called Tel-el-Hesi. Mr. Petrie's discoveries render it probable that the mound covers the ancient city of Lachish. He has dug down 60 feet and found, as Dr Schliemann found at Troy, the re-

mains of successive cities. The lowest was the most important. Its wall, still found standing to the height of 21 feet, was 28 feet eight inches thick, formed of clay bricks baked in the sun. Thin black Phœnician pottery was found above it, of a date certainly not later than B. C. 1100. This city, then, was probably one of those Amorite cities which we are told in Deut. 1:28 were "walled up to heaven." It is the first authentic memorial of the ancient Canaanitish population of Palestine which has been found. Large quantities of potsherds discovered fix the precise characteristics of Amorite pottery, and will be a test of the age of any site on which similar remains may be found. This lower city was taken and destroyed. Rude herdsmen squatted on the ruins, and have left traces of their wretched mud "shanties." Then came a rebuilding of the city; a wall of crude brick, 13 feet thick, remains which has been repaired three or four times. This revival, it is conjectured, took place at the time of the Israelitish monarchy, when Jerusalem and other cities were enlarged and fortified. A still later wall, 25 feet thick, is built above a glacis formed of large blocks of stone, and probably of the time of Manasseh. A building, 85 feet in length, composed of rude brick walls more than four feet in thickness, stands on the ruins of another large building, which, after being burnt, was rudely put together again out of the old materials. The original edifice was

of brick, with doors of fine white limestone. On some discovered slabs of the latter is "a curious form of decoration by a shallow pilaster, with very sloping side, resting on a low cushion base, and with a volute at the top." Mr. Petrie thinks "we are here face to face at last with the work of the early Jewish kings, probably executed by the same school of masons who built and adorned the Temple of Solomon."

One of the slabs is a graffito representing a lion or dog walking, which must have been scratched upon the stone by one of the subjects of Solomon or his immediate successors. From the fact that the stones of the glacis show no trace of the claw tool a characteristic Greek work, while the stones of the Haram wall at Jerusalem are all dressed with the claw-tool from the foundation upwards, the most important and somewhat disappointing conclusion is drawn that the Haram wall is entirely of Herodian workmanship, instead of dating partly from the days of David and Solomon. The location of the site of Lachish enables the adjoining site of Tel-el-Nejileh to be fixed as that of Eglon. Professor Sayce looks forward to a most fruitful harvest of discoveries, and suggests that the archive room of the ancient Egyptian governors, who had their official residences not far from this place at Lachish may yet be found, and, as at Tel-el-Armana, may yield invaluable historical documents.

HINTS TO YOUNG COLLECTORS.

CONTINUED FROM PAGE 97.

I always use a tag in labeling minerals, tied on with a long string; it is much better than pasting them on as it gives you a better chance to examine the specimen; it is also easy to untie when one wants to wash the specimen. When you use paste your label is lost and you must make a new one.

In closing, for space forbids me to write more, I would say that the knowledge you would acquire by collecting will surprise you when you look back and see what you have learned.

R. S. Boyd

PREPARING and LABELING SHELLS.

After cleaning the shells of the animal and washing them of all mud etc., you should tie the valves together until dry, for if they are left without it the ligament at the hinge will become dry and hence the shell could not be shut without breaking. The univalves may be cleaned of the animal by boiling and then taking a pin or small hook and drawing out the animal. A good way to arrange the specimens in the cabinet is to have paste-board boxes of as near uniform size as possible, in the bottom of which can be placed the label, and the specimen on top. [A.R.]

—THE—
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Ulysses R. Perrine. - - Editor.

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Vol. I. October, 1880. No. X.

Entered at the P. O. at Water Valley, as second class matter.

ONE YEAR OLD!

WITH this issue we close Vol. I. of the EMPIRE STATE EXCHANGE. Commencing with the new volume some new features will be inaugurated. With the skipping of one number and a double number which we could not avoid, Vol. I. is two numbers short but our subscribers will receive what they paid for, 12 numbers; we will send no's of Vol. II. to fill the deficiency. Our financial condition can not be excelled by any paper of our age and the fact that persons are negotiating for continual ad's goes to show that the E. S. E. is a good advertising medium. Our subscription list is steadily increasing. The future issues

will excel the past, editorially and typographically, and will probably be illustrated. Thanking all who have gave us their support in the past and soliciting future favors, we are faithfully yours,

Perrine Brothers.

The Autumn is nearly gone and with it the collector's last rambles for this year; soon he must lay aside his collecting utensils until Spring again will call him forth from his study to search for Nature's treasures.

What has been his trials or pleasures? We know this that if he is a true collector he must have found some specimen that he had not discovered before. What pleasant recollections are stored away of the past summer time! How many happy days it has brought us and how gaily it has led us over mountain and hill, through field and forest, or by the side of the "sounding sea" in search of material for winter study. And now the winter is really at hand. The "long dreary winter" some say but to others it is a welcome season; the howling blast, the frost etched panes, the white mantled earth, these are the reminders that Jack Frost gave us when

"Gaily over hill and vale,
 He left his frosty trail."

Winter is the season for the collector's study; procure good books and good papers on the subjects that most interest you, then bring

out your specimens and observe the differences of each and do not let go of a specimen 'till you have learnt all there is to learn about it, and when winters o'er and the sun comes from his southern sojourn and parts the rosy curtain of the east earlier and earlier every morning or closes his western blinds later and later every night, you will be more mentally enriched by the winter evening studies and ready to go forth and gather anew from the fields of Nature.

We respectfully call the attention of our readers to the large advertisement of the Catons National Business College, which appears on the fourth page of cover. This College is one of the very best to be found in the country. The fact that it has worked its way into the hearts of the people in one year to such an extent, as to have at the present time a large portion of the business college patronage of the City of Buffalo, as well as good attendance from abroad, ought to be and is conclusive evidence that it stands pre-eminently above its rivals.

All who are interested in business education should send for their 80-page catalogue or the College Journal, either of which is mailed free.

Mr W. LaVerne Babcock in his article on "Salvador and Its Stamps" will discuss on the "free print" of the Hamilton Bank Note Company in our next number.

The P. S. of A. seems likely to supplant the A. P. A. in national importance, and well it may.

The exchange column was crowded out of this number but will appear in the next number. Send in your exchanges. They are published free.

Our premium list is rather large and many persons will be pleased with what they receive, but all should remember to enclose the the required postage for the premium wanted.

The Times is one of our most interesting exchanges. The Iris Magazine is very fine; cause, - a trio of lady editors. The Yankee Philatelist has a proposal in its October number, to form a new Amateur Editor's Association. The American Youth is a neat specimen of printing and an interesting magazine. A large, interesting and illustrated paper is Young America from Cobleskill, N. Y. The American Osprey is always up with its standard of excellence. The Oologist had several fine engravings in its last issue.

NEW ONES.—The Wisconsin Naturalist, Madison, Wis. American Fish and Game Warden, Kalamazoo, Mich. From Chicago, Ill., comes the Cameo with four pages and cover. An interesting monthly magazine is promised to appear soon from the publishing house of H. C. Buchanan & Co., under the name of the Monthly Review.

A CORRECTION.

Messrs Perrine Bro's,
Gentlemen,

In your last issue someone writing on the salamander will convey, I think, rather a wrong impression on the minds of your young readers. In the first place he speaks as if there were only one species, while there are about ten given in Jordan's Manual, alone, which only includes part of the United States. Farther on he calls it the spotted salamander and says it inhabits the southern part of Europe and northern part of Africa. Now, just what salamander does he refer to. The way he speaks leads one to believe they inhabit only the countries named, while what is known to naturalists, and is given in Jordan's Manual as the spotted salamander* is found from Nova Scotia to Nebraska and southward.

Now may be you will think I am meddling with what is none of my business but I certainly do not intend it that way. I take an interest in your paper for it has many things in it that must not only interest but also be of use to collectors. I have been a steady collector for the last twelve years and still find things in your paper of use to me, and I wish it success.

Yours Truly,
Chas. S. Chevrier.

The article on the salamander, in our last issue came from the pen of an Englishman and the scientific name was, unfortunately, omitted. The spotted salamander, referred to, is the *Salamandra maculosa* which

* *Amblystoma punctatum*.

inhabits many parts of Europe.

If any of our readers find any errors in the columns of the EMPIRE STATE EXCHANGE, they should, as Mr. Chevrier has done, call our attention to the fact. Mistakes often occur in the best conducted paper.—Ed.

NICKEL.

Mr. Wiman, of Canada, must have impressed a wrong idea on the mind of the members of the British Iron and Steel Institute, in his recent speech to them at Clifton recently.

Here are a few facts that Mr. Wiman, seemingly, ought to know, about nickel.— Mine La Motte afforded \$12,500 worth in '82, and works at Camden, Pa., over £375,000 worth of cobalt. Nickel sulphide, a valuable ore of nickel, is found in the Sterling Mine Antwerp, N. Y. Gap Mine, Pa., St. Louis, Mo., Nevada, etc. Smaltite is found in Colorado and Colorado. Niccolite in Connecticut and abundantly in Nevada. Nickel telluride in California; Aboelite, abundant in Missouri, and also in South Carolina; erythrite in Nevada and California; annabergite in Nevada; emerald nickel in Pa.

Many more instances might be cited of the occurrence of nickel in the U.S. but space forbids but one more, the Gap Mine in Pa. produced in 64,550 lbs. of this useful metal.

SKELETON LEAVES.

Take a tablespoonful of chloride lime in liquid state, mix with a quart pure spring water. The leaves must be soaked in this mixture for four hours (more or less according to the delicacy or coarseness of the leaf structure); then taken out and well washed in a basin filled with water; after which it should be left to dry, with free exposure to light and air.

PHILATELY.**SALVADOR AND ITS STAMPS.**

SALVADOR, a republic of Central America, in area, the smallest, in power the most conspicuous of the Central American republics.

The area in square miles is about one-seventh of the area of New York State and the population is but a trifle over half a million. Yet they nominate and elect their national officers, have two houses of congress and separate state governments, on the same basis as we do. In fact the constitution is modeled after that of the United States.

Salvador is more prosperous than most of the rebellious republics of Central America, and, with the exception of Costa Rica is the most densely populated, having 83 persons to the square mile, while Costa Rica has 10 more. Gen. Francisco Menendez was elected president on June 19, 1885 and has held the office for five years, until quite recently.

He died last June, and a revolution seemed apparent, owing to the fact that the general of the army took the reins of government, he being very unpopular. In July the Guatemala army under Gen. Barillas invaded Salvador but were repulsed and compelled to retreat. Previous to this on Nov. 19, 1889, the National Palace, one of the most magnificent structures of Central America, burned to the ground and nothing

was saved. The post office department and other departments were located in this building and all the papers of state, stamps, postal cards and envelopes were destroyed with the exception of a few 1, 2, 3, 5 and 10 cent stamps.

The government, hearing that some damaged stamps were found in the ruins, and fearing that some good ones might also be found, ordered the authorities to surcharge the few remaining stamps with the date 1889. The surcharge is in violet ink and measures $8 \times 3\frac{1}{2}$ in.

Soon after the fire the stamps made by the Hamilton Bank Note Co., arrived. These last mentioned stamps are the ones that have stirred up collectors so much of late. They will be discussed in the latter part of this article. The first issue of stamps appeared in 1867 and consisted of a set of four very pretty stamps. Perforated 15.

First issue 1867,—

$\frac{1}{2}$	Real, blue,	11	white stars.
1	„	vermillion,	9 „ „
2	„	green,	11 „ „
4	„	brown,	9 „ „

Numeral value in corners. "Correos Del," above and "Salvador," below. Literal value on each side. In the centre is a smoking volcano in an oval surmounted by a half circle of white stars, nine or eleven in number, on horizontal-lined ground work. The ground work outside of the circle is composed of minute squares.

[CONCLUDED IN OUR NEXT NUMBER.]

THE PHILATELIC SOCIETY OF
AMERICA.

BY H. A. P.

SINCE the New York convention circumstances have brought this comparatively little known society before the philatelic masses.

While by the one of the acts of the recent convention the A. P. A. has no longer an exchange department, the P. S. of A. has an excellent one and it is under the personal supervision of one of the most prominent of western philatelists,—Mr. S. B. Bradt.

The mere mention of Mr. Bradt's name is a sufficient guarantee of the manner in which the exchange department is run.

Since the N. Y. convention such men as Stanton of the Philatelic Tribune, Watson of the Post Card, Kurzwey of Chicago, Baas of Batesville, Jewett of Portland, McDonald of St. Paul, and Wolsieffer of Chicago have joined.

Such material as this coming in can not but tend to promote the growth of the organization.

The dues also are much lighter than those of the A. P. A. and we would advise all collectors to join.

Any one wishing full particulars should address the secretary, H. C. Bardsley of St. Joseph, Mo.

—◆◆◆◆◆—
"What Are You Giving Us" by E. P. Newcomer in the October Philatelic News is a good "hit" on stamp collectors and dealers.

BRIC-A-BRAC.

SEA CURIOSITIES.

PART I. THE STAR FISH AND
SEA URCHIN.

THERE has been a general mania or fever of late years for collecting. Collecting of almost everything,—wood, soils, papers, stamps, postmarks, coins, Indian relics, shells and, in fact, anything "collectionable," sea curiosities among the rest.

By using the words "sea curiosities" I mean those curio's that are found on the seashore;— not only products of the "bright blue sea" but of the sandy shore also.

The most common of all sea curiosities of the Atlantic coast is the star fish of which many varieties are known inhabiting many seas. It has no teeth and the digestion is performed by the animal turning its stomach out of its mouth and wrapping it over the crustaceans, etc., on which it feeds. The back is a sieve-like formation through which water passes to the locomotive suckers.

In some species the five arms are subdivided into many thousand branches.

The sea urchin is a common visitor of the Atlantic coast and can be found in plenty after every storm. It is sometimes called Aristotle's lantern. Its body is covered with spines which are generally missing in the dried cabinet specimens.—[R. Magnu

PREMIUMS.

For renewers or new subscribers.

It is nearly a year ago since we published a Premium List. This list is usually large and complete. Remember that anyone who sends twenty five cents for one year's subscription to this paper may select any one of the following premiums. No premium will be forwarded until postage is sent. Order by number.

- Star Fish, 5 inches across, N. J. p 3c.
 Two 2½x2 inch Minerals, N.Y. p 4c.
 Six Curiosities from this state. p 4c.
 Six fine Fossils from Lake Erie. p 3c.
 One large Horse-shoe Crab, L.I. p 3c.
 One dozen 3in. Horse shoe crabs. p 3c.
 Four different Bird's Eggs, A1. p 3c.
 200 Data Blanks, for oologists, free.
 200 Labels or specimen blanks, p free.
 1. 10 packets of Vegetable Seeds. p 2c.
 2. 5 packets of Flower Seeds. p 2c.
 3. 15 packets of wild seeds. p 4c.
 4. Four fine Spring Bloom Bulbs. p 2c.
 5. Three Perennial Plants. p 4c.
 6. 100 Foreign Stamps. p 2c.
 7. Five 1x1 inch Minerals. p 4c.
 8. Ten different Shells. p 3c.
 9. Nut and Burr Collection. p 4c.
 10. Three Relics. p 4c.
 11. 10 different wood Specimens. p c.

The above list is identical with the one published in no. 1 of this magazine.

OUR SPECIAL PREMIUM LIST.

No. 21. FOR THE PLANT COLLECTOR. p. 5cts.

One specimen of each of the following plants, etc., nicely pressed and labeled.

- Wild Columbine, *Aquilegia Canadensis*.
 Wild Geranium, *Geranium maculatum*.
 Jewel Weed, *Impatiens fulva*.
 Musk Mallow, *Malva moschata*.
 Sweet Cicely, *Osmorhiza longistylis*.
 Round-leaved P., *Pyrola rotundiflora*.
 One-sided Pyrola, *Pyrola secunda*.
 Pipsissewa, *Chimaphila umbellata*.
 Spiderwell, *Veronica officinalis*.
 Swamp Milkweed, *Asclepias incarnata*.
 White Trillium, *Trillium grandiflorum*.

2. Collectors Receipt Book. p 5c.

3. Fifty chips from the site of an ancient arrow makers shop, Eden, N.Y. p 5c.

4. 1 dozen stamp papers. p 1c.

5. One dozen fine written cards. p 1c.

No. 26. For the eotomologist. p 4c.

1 fine butterfly, 1 fine moth, and 50 glass setters. A great bargain.

27. For PHILATELISTS. p 2c.
 6 stamp papers, and 25 approval b's.



No. 28. OOLOGISTS, p. 4c.

100 data blanks, and two different birds eggs.

29. For the GEOLOGIST. p 4c

One specimen of each of the following: Trilobite's tail, Horn Coral, 3 shells and a good specimen of Canadian honey-comb coral.

30. For the MINERALOGIST. p 6c

One specimen each of yellow calcite, bronzed slate, natural alum, and felspar. Size over 1x1 inches.

31. For the CONCHOLOGIST. p.3c.
 1 dozen assorted shells. Very good,

32. For the advertiser. 500 gummed labels to stick to anything. p. 2c.

33. Five different forest TREES by express not prepaid. Tulip tree, cucumber tree, fringe tree, red oak, blue beech, or any other of the native trees of this region.

34. Four different LILIES. p. 4c.

35. One piece of rock from the ruins of old Fort Erie, Canada. p. 2c.

36. For A. A. chapters, etc. a finely embellished charter by a professional pen artist, postage only two cts.

LAST BUT NOT LEAST!

NO. 37 The Star Collection.

Containing the following curios &c; Wonder pod, 3 winter cherries, cockle shell, horse-shoe crab, earth star, one dried specimen of beech drops, ray's egg and petrified shell; p 7cts.

In the above list p stands for postage.

Some cotton bolls for premiums will soon come from the South.

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OL. II. WATER VALLEY, N. Y., DECEMBER, 1890. No. 1.

CHRISTMAS TIME.

Oh, summer has the wild bee,
And the ringing, singing note
In the robin's tuneful throat,
And the leaf-talk in the trees;
But winter has the chime
Of the merry Christmas time.
Oh, summer has the lustre
Of the sunbeams warm and bright
And rains that fall at night
Where reeds and lilies cluster;
But deep in winter's snow
The fires of Christmas glow.

HOW WE LOST OUR DINNER.

WE had at last decided to take our weekly holiday in a new way; we had lately used it in long walks and drives but we now thought we needed a change. So we decided that by going in a skiff would be the proper way. We were to meet at the river next morning at 6 o'clock; two were to go about the boat and two to get a lunch. We got the boat for a dollar and a half, but old Jerry refused to get up so early an hour to give us the oars so we had to carry them home with us. We all met promptly at the time

appointed and soon loaded the skiff; the luncheon we put in the locker in the stern and then rigged up the awning which was a good device as there is nothing harder than rowing in the hot sun. We got started finally but had to get out and shove her off some rocks in the middle of the river, but for this the voyage was without mishap. As we came in sight of the landing there arose a controversy as to who would stay and watch the boat; this no one would do, so we decided to tie the boat to the little wharf boat, at which the steamer landed once a day to take off and receive freight, and which served as a general store house.

So we tied up and went ashore with everything all right; but when we came back we found our skiff filled to the gunwale with water; we were at a loss to know how it occurred when Jack noticed that the water in the boat was very clear while the river was muddy; we went inside and found that the watchman had been pumping the wharfboat out in our absence and all the water ran into our skiff which was directly below the pump but he being inside the boat was unconscious of the mischief he was doing; he was very sorry and insisted on us going up to his house for dinner, which we did, and enjoyed our bread, honey and milk as much as if it was the best in the land.

R. S. Boyd.



TURTLES.

BY ULYSSES R. PERRINE.

WHERE is there a person, young or old, that dislikes that cute and common animal,—the turtle? And the ancients seem to have liked him equally as well, for the very first coin that is said to have been struck (700 B. C.) has a representation in bold relief, of a tortoise crawling across its face.

I remember well a May day many years ago when my father was watering down some hotbeds; the water was drawn up in barrels from a spring on the farm. He called me to see what he had caught, and I, supposing it to be only a frog or crab, was surprised, on looking in, to see for the first time a large mud turtle. We kept him for a while and then returned him to the spring. He had lost a claw from one of his hind feet and, I think, his shell was cracked. Well, I did not expect to ever see "Muddy" again but he has appeared annually ever since for over a dozen years.

A very large turtle was captured at this place many years ago. He was sunning himself on a railroad-track crossing when a farm boy came along. Mr. Turtle was real mad when disturbed from his sleep and caught hold on a stick which the boy had, very savagely and did not release his hold 'till the lad had

dragged him about a quarter of a mile to his home. Then this huge specimen of a mud-turtle was taken to the city, sold, and probably made an attractive dish for some table, to pass for green turtle soup!

It is queer how some animals have the instinct to know which way is home, and the turtle has it like many others. Once we put our pet turtle in our rain barrel; in the night there was a rain storm. The barrel overflowed, and lo, next morning he was gone. We were very sorry, as we thought he could never find his way to the spring again,—as it is a good distance away,—but, to our surprise, we found him some time after in his favorite haunts.

Another instance of somewhat like character is related by Mr. Charles Morris. "Mr. William Eyre, a gentleman of Chester, Penn., relates that when he was a boy of ten he caught a land tortoise and cut his initials on its under shell. Going out afterwards for a ride, he took the tortoise with him, and left it at a place ten miles away. That was the last he saw of 'Master Tortoise' until he was an old man of seventy, when, to his surprise, he found the identical creature in his own garden. There were the initials, which he recognized as undoubtedly his own handiwork. In this incident, which I have good reason to believe actually occurred, the long life of the little creature is only one of the interesting points. It is

very remarkable that it returned to the starting-point after sixty years. How far it had roamed during that long interval, what sights it had seen, and what thoughts it had thought are beyond guessing. But back it came, after an average lifetime, to see in his old age the person by whom, in his boyhood, it had been marked for life."

A wonderful feature of the turtle is its longevity of life. Its lifetime is said to span two centuries, and the turtle has inhabited this world for countless centuries. Long before the gigantic glaciers came down from the North, strewing our fair New England fields with the stones and boulders we see to day, snapping turtles inhabited the briny waters as the existing kinds do the fresh water now-a-days; the cretaceous beds of New Jersey have furnished the remains of many varieties, some of which were over six feet long. Now, over the remains of its more formidable ancestors, the snapping turtle [*Chelydra serpentina*] sports at will, and every June, cautiously emerging from the water, in less than half an hour, digs a hole in the sand, lays from 25 to 50 spherical eggs, smoothes over the sand, and leaves them to hatch by the sun's heat.

"Down South" the fierce Trionx disputes possession with other animals for its favorite waters and the gopher turtle goes "a cooning" in the sweet potato and melon patches; it will sometimes burrow seven feet

in the ground. Everywhere from Maine to Florida, go where you may you can find our little land tortoise* with its beautifully-mottled shell, about six inches long.

The chicken turtle though very plentiful in some marshes is very shy, hard to catch, and unfamiliar with many persons. The hawksbill turtle of our warm southern waters furnishes the valuable tortoise shell of commerce and has scales thicker, stronger, and more beautifully mot-



THE GREEN TURTLE.

ted than any other turtle.

The English Land tortoise seems to be the only species inhabiting Europe and is by no means widely spread, being confined chiefly to the southern countries.

One of the most useful of all turtles and one whose name is derived from the color of its fat is the green turtle (*Chelonia viridis*) which inhabits the American and other tropical seas. Its eggs which sailors call "sea dove eggs," are thought to be as great delicacies as its flesh, and it is while visiting the shore for to lay these that these sea-loving reptiles meet their inevitable fate.

*Carolina Carolina.

ORNITHOLOGY.

CATCHING SPARROWS BY WHOLESALE.

I WONDER how many of our readers ever tried to trap the house sparrow (*Passer domesticus*) and what success those who have tried it have had. I know that for a long time I tried it and never succeeded in coaxing a bird into my traps. I built houses for them which they would occupy as soon as I put them up, but just as soon as I would put in what I have always known as a "bob wire," with which I have caught many other birds and which is nothing more than a double wire which raises up as the bird enters, thus letting it pass into the box, but which will not open the other way, making it a prisoner, they would leave the house alone, not even going near it as far as I could see. I also tried other traps and snares of all kinds but with no better success.

The house adjoining our yard is covered with ivy and is fairly alive with the sparrows when I tried to catch them. The other evening a man came to the door and asked permission to catch the sparrows to use at a shooting match. I gave permission and went out to see how he would manage it for I thought that if he had no better luck than I had had it would not be a very lively shooting match. He knew more about the business than I did, however, and in the next half hour I

saw more sparrows captured than I had ever seen before. He had a frame about two yards square fastened on a long pole. To the frame he fastened a gill net kept out horizontally by a stick fastened to the frame. This he would put against the ivy when the sparrows would fly into it by dozens. He caught 193 while he was there and said that he made larger hauls than that. This may be a common way of catching these birds in other places but it is new here and I have never heard of it before. [Chas. S. Chevrier.

THE GOLDEN-CRESTED KINGLET.

CONTINUED FROM OUR LAST ISSUE.

STEARNS also gives the following excerpt from a published paper entitled, "Nesting of the Golden-Crowned Kinglet," by Dr. T. Brewer: "Though the evidence is not conclusive," says Stearns, "there is no reasonable doubt that the nest in mention was really that of the golden-crest. It was found in the neighborhood of Bangor, Me., where the bird is stated to be a not uncommon summer resident, and was built at an altitude of about six feet from the ground. The nest consisted of a large ball of soft moss, the whole forming a mass about $4\frac{1}{2}$ inches in diameter. The opening was at the top and was about $1\frac{3}{4}$ inches across and 2 inches deep. The nest was in one of those bunches of thick

evergreens so common to that part of the United States.

— P I N S —

A NEWSY COLLECTION.

A rich vein of silver has been found in Wyoming.

A nickle mine has been discovered near Frankenstein, Prussia.

The vitality of snails is remarkable. One that had been glued to a card in the British museum, for four years, came to life on being put in warm water.

The large and small postal cards just issued by our postal authorities remind us of the man who cut a large and a small hole in his kitchen door, one to admit the kittens and the other for the large cats. The department will soon find there is no market for the small postals. We all want in the room, and as a thing of beauty or of style a postal card is neither fashionable or tony, but simply a thing of utility, and therefore the larger the better---P.C. Record.

A strange battle is reported to have taken place in Tokio. A stream runs through the compound of Tobokuji Temple at Sugamo, and a few days ago some hundreds of bullfrogs gathered on either bank. Then a terrific battle ensued lasting from 9 A. M. to 4 P. M., and it is stated that when the combat was finished the brook was blocked with the bodies of the slain to such an extent that the course of the water was almost totally impeded. Large numbers of people have visited the spot to witness the strange specta-

---The only perfect holy shekel in the world is owned by H Gotschalk of New York. It is about 3,400 years old, and was used in King Solomon's Temple. There is but one other similar coin in existence, and that is in the British Museum. It is also a holy shekel, but it is not so well preserved, and a portion of it has been cut away.

A COLLECTION OF DON'TS

Don't collect bogus arrow heads.
Don't collect counterfeit stamps.
Don't collect such trash as tobacco tags, cigarette pictures, etc.

Don't collect in the woods before you know about poisonous plants.

Don't let good opportunities to exchange ever pass by unheeded.

Don't lay aside a specimen 'till you learn all there's to learn about it.

Don't collect broken or mutilated specimens of the common kinds.

Don't cut up wood specimens before they are well dried.

Don't mount insects with common pins.

Don't glue your birds' eggs to card-board, etc.

Don't let your eggs, insects, etc., be continually open to the light.

Don't polish up your old coins.

Don't forget that now is the time to hunt for cocoons.

Don't you see by the testimonials on page 8 that this paper is a good advertising medium?

Don't let the old year pass without subscribing for the EMPIRE STATE EXCHANGE.

—THE—
EMPIRE STATE EXCHANGE.

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - Editor.

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Six Months, 15c. | One Year, 25c.

ADVERTISING RATES:

1/2 inch.....	30c.	1/2 column.....	\$1.75
1 inch.....	50c.	1 column.....	3.00
2 inches.....	90c.	1 page.....	5.00

Manuscript always in demand. Articles, notes, and news on any of the subjects treated in THIS PAPER solicited from all. A BIG 11-INCH STAR FICH for the Best ARTICLE sent to B. FORE, January 10, 1881.

PUBLISHED BY

PERRINE BROTHERS,

WATER VALLEY, ERIE CO., N. Y.

Vol. II. December, 1890. No. 1.

YE EDITOR'S PENCILINGS.

Merry Christmas to all!

Now is the best time to secure subscribers for the E. S. E.

The breaking of one of the irons of our press delayed the printing of this number for over a week.

Mrs. Robinette offers a good bargain in her ad. which see. Catons' College has just contracted with us to have a page ad. in the EMPIRE STATE EXCHANGE one year.

Some of our readers may wonder why our printing is not up to the standard since we procured new type and press in September. We bought the press from a dealer in Buffalo, N. Y., and there being no rollers with it he promised to get them at once but he seems to be a "take-it-easy"-kind of man as they

haven't arrived yet. We had to use the roller of our old press but if we had known that it would take the dealer till now to procure them, we would have got the rollers ourselves.

By the arrival of each of our 200 (or over) exchanges, none give me more pleasure than that of the Oologist, published by Mr. F. H. Latta of Albion, N. Y. It is devoted exclusively to collecting and studying birds, and their nests and eggs. It is one of the few of our exchanges that are wholly original in every detail. The articles published come from the pens of live and enthusiastic collectors in all parts of the United States. In the last number "The Rusty Blackbird" was a cleverly written article, and "Not a Sp. All" is one of the best collector's poems we have ever read. This interesting magazine has just closed its seventh volume and the fact that it has over 2000 subscribers shows that it is well liked by the ornithological and oological world.

One of the worst swindles we have heard of, of late was played on the editor of the Moral and Scientific Companion of Florence, Arizona. Mr. Browne, in answer to an alluring proposition mailed to him offering second-hand printing material in FIRST CLASS condition at a rare bargain, received from the rogue who lives in Bainbridge, Indiana, a lot of pied type, etc., worth only about half of the value billed.

PROCLAMATELY.

SALVADOR AND ITS STAMPS.

BY W. LA VERNE BABCOCK.

(CONTINUED FROM OUR LAST ISSUE.)

THE ground work of each value differs more or less. The second issue is the same in general design as the first and is surcharged "Contra Sello and arms." Issued in 1874. With the third issue, 1879, we have a new design, which to me, is not one half as pretty as the preceding set. This time the values were changed to "Centavos." All were perforated, 12.

1 CENTAVO.	GREEN.
2 CENTAVOS.	RED.
5	BLUE.
10	BLACK.
20	VIOLET.

Numeral and literal value in each opposite upper and lower corner, in circle, surrounded by scroll work, "Union Postal Universal." in upper bond circle and "Republica Del Salvador" in circle below centre, in white letters. In the centre is a representation of the sun rising behind a volcano, surmounted by thirteen white stars. The above description is of the one cent green stamp. The balance of the set differs more or less, the two cent having the word "Centavos" at the bottom and the five cent has the arms of Salvador in the centre instead of the volcano, also a different outer design. There is also a slight difference in the designs of the ten and twenty cent stamps.

The next issue, 1887-8 consisted of three values of a new and artistic design. Engraved by the American Bank Note Company of N. Y. City.

3 CENTAVOS.	BROWN, PERFORATED.
10	ORANGE.
5	STEELBLUE, ROULETTED.

The 3cent measured 23 x 30 mm. Figure of a goddess of liberty standing with flag in hand with "U.P.U." above and literal value below; numeral value at sides and four globes inscribed, "Morozan-Paric-Celinas-Jerez. At the top is "Servicio Postal Del Salvador." The 10 cent orange, measured 23x30mm; it has the usual volcano and sun in centre and above is the same inscription that adorns the 3cent, also in addition, "America Central." Below is the numerical and literal value. The 5 cent, blue, is the same in general design as the 10 cent orange.

The next issue appeared in 1889 and consisted of but two stamps prepared by the American B. N. Co.

1 Centavo,	green.
2 Centavos,	red.

The 1 cent, green, and 2 cent red were ordered of the same type as the 3 cent, brown, of 1889, that is, with "Servicio Postal Del," at the top, but the words, "Union Postal Del" were engraved by mistake and it is to remedy this error that the words are obliterated by a heavy black line.

The contract with the American Bank Note Co. having expired, an agreement was made with the Han-

iton Bank Note Co. of N. Y. City by which Salvador gets its stamps on the free gratis for nothing plan' as Mr. Wyle expressed it, in speaking of the contract. Issued Dec. '89.

1 CENTAVO.....	GREEN.
2 CENTAVOS.....	BROWN
3	YELLOW.
5	BLUE.
10	PURPLE.
20	ORANGE.
25	ROSE.
50	MAUVE.
1 PESO.....	SALMON.

The new stamps are of the same general design as the late 2c. brown. The four globes are omitted, the word Salvador is more prominent the value at the bottom is in a scroll and the date, 1890, is below same.

It would but be proper, at the close of this article, to say a few words about the late contract. First so as to more thoroughly understand it, I will give brief extracts from the contract.

1.— N. E. Seebeck in representation of the above named company, binds himself to supply, free of any cost to the mail service of Salvador, such quantities of stamps, as they may need from time to time, for the period of ten years from the date of the present agreement.

6— In compensation of the disbursements made by the company in engraving and furnishing the government of Salvador the postal issues in question, the Supreme government agrees to deliver to said company, the stock remaining at the close of each year and the Supreme government further agrees to allow said company to retain the plates with the privilege of reprinting from same, for the purpose of sale to collectors.

No doubt Mr. Seebeck is the originator of this plan, and, from what has been said on the subject, I would infer that he has few supporters among collectors.

In fact but one collector, to my knowledge, has had the audacity to speak in support of such a plan and he a dealer, the secretary of the Scott Stamp and Coin Co, Mr. Henry L. Calman.

Doubtless he has made arrangements with Mr Seebeck to dispose of the remainders and reprints, promiscuously to philatelists at high figures. Collectors in general, are willing to purchase the unsold remainders and it is only the reprinting of the entire series of issues that causes the collector to object most strenuously. The reprinting of stamps has heretofore been successfully kept outside of American countries to some extent. Let all hope that the negotiations now pending for a like contract with other South and Central American countries will fall through, for the untold benefit of philatelists and the purity of their collections.

THE E. S. E. IS A GOOD ADVERTISING MEDIUM.
 Editor EMPIRE STATE EXCHANGE.

Dear Sir,

I am often asked by the younger dealers as to the best paying advertising mediums, and I will say with pleasure that one that comes into my mind as soon as any is— your own journal.

I have found it a rival with journals wholly devoted to stamps and superior to any not so designated. I have received answers the very next day after the journal appeared which is very unusual indeed. I am with best wishes,

Very Sincerely,

William B. Hale.

“My advertisement brought good returns.” Mrs Margret Robinette.

ARCHAEOLOGY.**RELIC COLLECTORS.**

BY ABE. L. BECKHARDT.

SPEAKING of the relic collectors and how they get their specimens is an interesting topic, the afore kind reader read this carefully; you may some day wish to become a collector and for those this article is especially written.

Have you ever been in the country looking for Indian arrow heads or other curiosities? Well that is how many collectors get theirs; it is a very pleasant occupation, and especially so when young ladies accompany you.

Of course the aristocratic collectors, as a rule, buy their curiosities from the large stamp, coin and curiosity dealers, and you may be surprised when I inform you that some of them have paid out fortunes and yet there are numbers of people that I know who have very valuable collections and yet they did not cost much. I will name a few of these farther on.

I know of a young man who went camping out last July with a party of young fellows. His greatest delight was to search for Indian relics. He would take a spade and pick and dig for them in many places; many a night he came home, or rather to the camp, with as many as 25 arrow heads; of course all were not perfect: some were "chips,"—the bro-

ken pieces of arrow heads. It is strange how some will dig for hours and not find anything while others in a very short time will find a good many. It is like fishing, you must have patience, and you must have good eyesight if you wish to hunt for relics; if you lack either one or the other you may lose a great many of these curiosities that might be valuable or rare. A gentleman residing near New York City possesses a collection which he values at about \$5,000, and it did not cost him very much either as the specimens were presented to him by his numerous friends and also by hard work, as on every holiday he would go to some place a few miles from where he lived and search for these relics. He told me recently that he enjoyed nothing better than to go "relic hunting," as he called it; there are lots of places where relics and curiosities can be found, and some need not be very old either to be valuable or rare.

One of the finest collections that I have seen is the one owned by Prof. Albert W. Gimbi, of East Mauch Chunk, Pa. Professor Gimbi, as he is commonly called, owing to his great intelligence as to curiosities, is a gentleman of 33 summers, tall and handsome, and a great favorite with all who know him; his collection contains over 15,000 relics and is valued at \$9,000.00 or a little less than that figure, but at any rate I do not think it could be bought at that as it is priceless to him.

In his collection he has a curious Inlim club which came from one of the chiefs of the Sioux tribe who gave it to a gentleman as a token of friendship. This gentleman afterwards presented it to Mr. Thos. Barron, Centria, Pa. He gave it to a Mr. Rute who in turn presented it to the Professor. I may also say here that Mr. Rute is one of the best collectors I know of, that is he can get and has got more rare specimens than any one I know. Mr. Rute generally gives them to Prof. Gimbi; this club is priceless. He has also in his cabinet an Indian pot which was found under strange circumstances. A Mr. Kibbler was out fox hunting with a party of friends; having lost the trail they were about to start for home when the dogs struck a coon's track; after following it a few miles they found that the coons had entered a hole in some rocks. Mr. Kibbler proposed to dig them out and take them back alive; staking of their coats and rolling their sleeves up they began to dig; when down about six feet they uncovered the Indian pot which in size is $9\frac{1}{4}$ by $10\frac{1}{4}$ inches. It was upside down. It is shaped like a ball, the top being open and a rim with curious engravings completes this rare relic. The men kept on digging and another pot was found about two feet from the first; it is of nearly the same size but has two points on the rim while the other has five; the ornamentations are nearly the same. He also has a number of other curiosities,

the rarest of all being a genuine Fiji Island arrow. It is three feet and nine inches long; the centre is half an inch in thickness; the top is 18 inches long and is made from a curious wood; the centre is of bamboo while the lower end is of the same wood as the top. The point is believed to be poisoned; the poison is said to be procured from a plant which grows on the Islands; it looks like an ivy.

Professor Gimbi has also about 8,000 Indian arrow heads, scrapers, spear heads, and axes besides lots of relics from engines that have been demolished in accidents where there was loss of life. I could keep on describing a great many other curiosities which he has but for lack of space I will leave it 'till another time.

Before I close will say that if you ever visit East March Chunk kindly call on the Professor (presenting him the compliments of the EMPIRE STATE EXCHANGE) and your visit I am sure, will be very pleasant.

HOW TO BECOME A COLLECTOR

If any of our readers wish to become collectors I will tell them three different methods of becoming one, namely.—

1. By buying from dealers or other collectors
2. By searching for them in the fields, etc., of the country.
3. By exchanging [by the aid of the exchange column of this paper] books, etc. for them.

A. L. B.

BRID-A-BRAD.**NOTES ON COLLECTING.**

The London Globe tells the following story of a strange craze which seized a wealthy citizen of that city. This gentleman evinced an absorbing passion for pocket handkerchiefs. Starting as a wealthy man to set up his museum, he paid whatever price was asked by ladies of his acquaintance for whatever pocket handkerchiefs they might be carrying. Collecting stamps, coins, books, etc. is now a recognized standing, but collecting handkerchiefs struck a new vein of eccentricity. Sometimes he had to pay enormous sums, but this never deterred him. By this channel his money vanished, and as he could buy no more handkerchiefs for his museum, the obvious course was to steal them, which he did. He has now been caught for the second time, his confidence in his own dexterity leading him to attempt two handkerchiefs at once, after a fairly successful career as an amateur article forger, extending several years.

Some writers can see no sense in philately. We heartily pity them. Our occupation and hobby has wiled away many a pleasant hour. We venture to assert that it is pre-eminently educational in its influence, as well as forming a handsome addition to one's store of treasures and mementos, many of which may

come to us from a far distant land where a loved and dear one dwells. To all collectors we would say go right ahead, soon you will find a priceless treasure in your collection.

Whatever speciality you have in collecting, observe method, practice neatness, carefulness, and above all things order. Get the best specimens. Don't deface your albums with torn and disfigured stamps. Keep these in an envelope at the end of the book. Avoid overcrowding but add new leaves at once and endeavor to know as much as possible the history, social and physical manners and features of the different countries.

Use our exchange column as occasion may require, as you will by this means be able to dispose of many specimens that would otherwise remain a burden on your hands.

H. C. Buchanan, New York.

MORE GOLD IN SOUTH DAKOTA.

Pierre, S. D., Nov. 29.—Rich placer deposits have been discovered in Jackson County, contiguous to the Black Hills. Within the last few days large quantities of gold have been discovered along Sage Creek.

Amongst the many articles left over are the following.—“The Oven Bird.” “Stamps of New Brunswick” by W. B. Hale. “A Mineral Palace.” “A Collectors' Enemy.” “Ante-dating Modern Inventions.” “What are Banks?” “About Indian Relics.”

EXCHANGES.

THIS COLUMN IS FREE TO ALL BUT SUBSCRIBERS ARE GIVEN THE PREFERENCE. SEND IN BY POSTAL OR LETTER.

Wanted! Indian relics, bird's eggs, etc. Will give three of the following minerals for every perfect arrow head sent me:-- gold and silver ore, apatite, hematite, catlinite, talc, actinolite, asbestos, pyrites, jet, wood, satin spar, pearl spar, wavellite, limonite, flour spar, magnetic iron, electric stone, calcite, etc. Fred D. Snyder, Barre Centre, N. Y.

100 assorted U. S. copper cents and other coins, also 25 varieties of Confederate bills to exchange for good stamps, U. S. or foreign. Common or newly cancelled stamps not wanted. Arthur C. Paddock, Nantucket, Mass.

Three fossil shells [Sprifer mucronatus] for every arrowhead sent me. U. B. Perrine, Water Valley, N. Y.

I will give 35 cts. worth of novels, stamp or curiosity papers for every copy of Harpers, Scribners. or Century in fine condition sent me. G. L. Howe, Granger, Iowa.

Died.

Fred S. Gollsbury, the efficient editor of the Yankee Philatelist of Barre, Vt. died on the 8th of October after a five weeks illness of typhoid fever. Although only 18 years old he edited one of the most successful philatelic magazines extant. By the demise of our brother editor the Golden Hour Corresponding Club has lost its able secretary, and Philately a steadfast friend.

QUESTION BOX.

Open to one and all; ans. solicited

A young man in Iowa wishes to know if it would pay him to take up the study of natural history.

E. G. M., Eureka, Nevada,-- "Can you inform me of any heavy minerals suitable to place on card board for filling back ground of mineral collection in upright cases, 70 in high?"

To G. W. R. and others, we do not exchange advertising space for anything besides cash.

A. C. P., we cannot allow any commission with premiums.

OUR RECEIPT CORNER.

Collectors Receipts Solicited from All

To Remove Anything Brittle from the Ground,--Take a strong piece of muslin cloth larger than the object; make a thick paste of flour and water and spread on the muslin having previously uncovered whole top of object lay the muslin paste side down on it; at a good distance beneath and around dig all the rock or soil away; do not try to get too near while taking soil from beneath; turn over--leaving muslin on--when enough has been removed to permit and then remove as much soil as is necessary and remove to a place of safety; then pour warm water on the muslin it will soon be soft and can be removed without injury; there has been many valuable specimens spoiled by not knowing just how to remove them.--Mrs. T. E. Norman, Custer County, S. D.

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TEN CENTS.** charges pre-paid by us. Remember, that this offer is open, and
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VOL. II

JANUARY, 1891

No. II.

STATE



THE Empire

Exchange.

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MINERALOGY, GEOLOGY, ARCHÆOLCGY,
ORNITHOLOGY.

And the Other Branches of Natural History.

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EMPIRE STATE EXCHANGE.

A MONTHLY DEVOTED TO THE COLLECTING MILLIONS.

Vol. II. WATER VALLEY, N. Y., JANUARY, 1891. No. II.

When the dark and the daylight
meet

High up in the vault of heaven
Is heard a song more sweet

Than any to mortals given!

What is it? What is it?

What news does it bring?

'Tis the song of the skylark,

The voice of the spring.

THE OVEN BIRD.

A FAMILIAR bird this little feathered bit of ingenuity is, and many of our young people may know him. His summer home is New England, coming up from the South in April or May. Its back is olive green with a fringe of yellow; its crown has two narrow streaks of black running from the bill, and these inclose a broader one of brownish orange; the breast and sides are streaked with black. It is six inches long.

These birds do not select their mates until they arrive at the North, and then there is often much jealousy and quarreling among the males in making their choice.

Their nests are built on the ground in the woods, usually in some dry

situation, but in the neighborhood of a swamp. Both male and female work industriously in building the home in which to go to housekeeping, each bringing the dry leaves and grasses which they arrange compactly around the sides and over the top, until it looks like a little old-fashioned oven with the entrance on one side. They hollow out a place on the ground, which they line with soft grasses and here the pretty little four or five eggs are laid. These eggs are a delicate creamy white, spotted irregularly with different shades of reddish brown or sometimes with a sort of lilac color. If any one approaches the nest, the male bird is very anxious and endeavors to draw him away, scolding violently all the time. If the female is driven off her nest she flutters to the ground, trailing herself along, and pretending lameness so naturally one would really believe she was.

Their song resembles the oft-repeated utterance of quicha, quicha, quich, quicha, continually increasing in volume; and often in the night, while the mother bird is sitting on her eggs, the father will fly out of his nest and sing his song as if he thinks he must do something to amuse his mate.



PHILATELY.

FROM MY NOTE-BOOK.

HAVING been interested in all branches of collecting for several years I take pleasure in studying about all the mysterious things in nature, and likewise in investigating the "queer doings" of man. Connected in a degree with the postal branch of the government, I have noted many amusing things in connection with our postal facilities. I always make a note of such and from my note book I may glean a few items of interest to my brother collectors.

Not long since I was looking over a bundle of letters together with a brother collector employed in the city post office. The letters were the "general delivery" portion of the eastern mail, and, preparator to placing them in their respective cases, we came across a letter bearing a 2c brown stamp (head of Jackson) 1872 issue. It is needless to say we were surprised and greatly amused to see a stamp 18 years old mingling with stamps of modern date, in other words to see a relic of 1872 hand in hand, as it were, with the relics of 1890. We noted the post mark which, by the way, was written by the postmaster in the absence of the dating stamp. Having secured the address of the post-office we wrote to the post-master, enclosing

stamp, asking him if he had a sheet, or sheets, of the stamps in question, "if so to save them" until he heard from us again, but I am sorry to say the letter remains unanswered and our dreams of a purchase, a sale, and a handsome profit vanished.

Another day while looking over and sorting for the general-delivery boxes a bundle of letters, we came across one which at first sight seemed a common-place, every-day, stamped envelope, but upon careful scrutinizing it was plainly visible that a stamp from a stamped envelope had been cut out, [closely following the edge of the stamp] and in turn pasted on another envelope. So near was the deception that the cancelling clerk had passed over it, and after traveling several hundred miles was delivered with the request that the owner should save the envelope, which he did, and a collecting friend, a lieutenant in the U. S. army now has it in his collection of postal oddities. This same officer has a fine set of periodical stamps,—not quite the set,—which he obtained from a poor, ignorant post-master" as he says, "who didn't know any better." He asked if he had any stamps on hand, and the post-master said he had, and on being asked if he would sell them said "I reckon that's what their here fur." "How much are they?" queried the officer: "Why just what thustamps wuth" he answered. The lieutenant "jumped at the offer" and thus filled his many blank spaces.

ROY F. GREENE.

PHILATELY.**STAMPS OF NEW BRUNSWICK.**

BY WILLIAM B. HALE.

ONE of the great rarities in the stamps of the globe is the one shilling stamp of New Brunswick. This stamp has sold for from fifteen to fifty dollars, and though that is rather steep yet a really good specimen is worth a large sum.

New Brunswick has but eleven specimens none of which are common. The five and ten cent values of 1860 are the cheapest, value about 10 cents each.

The issue of 1851 has three varieties all in shape of a diamond valuing respectively three and six pence and one shilling of the issue of 1860. One, two, five, ten, twelve and one half and seventeen cents being the denominations. Later during the year a variety in color of the one cent and in design of the five cent.

The first five cent stamp was the "Connell." It contained the portrait of Post Master General Connell of New Brunswick, and on its arrival was hardly put on sale, when it was ordered to be withdrawn by the local Government who were "surprised that he should dare have his effigy on a postage stamp" such a hum and cry was made that Connell resigned at once. The issue was withdrawn and a new engraving ordered

from New York to contain the portrait of the Queen. One or two specimens only have been found canceled and the proofs struck from the die are valued at three dollars each: by some dealers higher.

An attempt was made to counterfeit these in this way.- A dealer ordered his printer to have an engraving of it. It must be very nice. He was going to use it for his advertising cards. Well it was perfectly engraved an exact duplicate. Well he must have it printed. He was very particular about the tint of ink and there must be wide margins. The printer was excited and notified the officials. Result,- engraving was destroyed, dealer skipped, and the world saved of one of its most dangerous counterfeits.

**CLIPPED**

From the Stamp Journal of Ohio.

As per the recent contract the U. "baronial" envelopes will hereafter be $4\frac{1}{4} \times 5\frac{1}{4}$ inches—an increase in size.

The so-called Zanzibar stamps are frauds.

It is said that in case of the death of the King of Holland, Luxemburg will pass to the Duke of Nassau, and cease issuing stamps.

P. M. Wolsieffer, the Chicago collector, is said to have found a Floyd Local stamp on a part of the original envelope.

NUMISMATICS.

MOUNTING COINS.

A GOOD way to mount coins is as follows:-

Go to a paint store or glazier and get two pieces of glass cut to match. Then get a piece of cardboard about the thickness of the coins to be mounted, and cut round holes in it so that the coins fit tightly.

After doing this make a frame out of any old piece of board. It may be fixed so that one piece of the glass is movable. A little gilding on the frame adds much to its appearance. Place each coin in the hole which you have made for it, placing the second piece of glass on when your coins are all in place. Fasten it in place and your coins are mounted so that both sides may be easily examined by simply turning over the frame. This makes a very nice ornament for the wall if neatly made.

GEOLOGY.

THE SILURIAN AGE.

THE Silurian Age is one of the geologic ages, the age of mollusks and other invertebrates. The name is derived from that of the ancient Silures who inhabited that portion of England and Wales where these rocks abound. The formation lies upon the Cambrian of Sedgwick, ac-

ording to some classifications, and immediately below the Devonian.

In North America the transition of the rocks and life from the upper to the lower Silurian is abrupt.

Dana has divided the subdivision into periods and epochs derived from the succession of rocks in the state of New York where the strata are well displayed, and have been carefully studied. In this arrangement the Lower Silurian, beginning from below, includes the primordial or Cambrian, the Trenton and Candian periods; the Upper Silurian include in the same ascending order, the Niagara, Salina, Lower Helderberg and Oriskany periods.

The Lower Silurian animal fossils are sponges, radiates, mollusks and articulates. In Newfoundland the Quebec formation reaches a thickness of 6,600 feet; the upper half being sandstone and shale, and the lower half mostly limestone. The Trenton period includes the galena limestone of Wisconsin and other states. The Niagara formation in North America covers a large part of the interior of the continent. At Niagara falls 85 feet of limestone rest on 80 feet of shale, and near the falls the shale is covered with 105 feet of limestone.

The most common animal fossils are bivalve mollusks. In Maryland there are five species of crinoids, but in New York they are rare. The rocks of both the upper and lower Silurian are widely distributed over

the globe, although the lower are the most extensive. The upper Silurian in Europe, besides invertebrate fossils, contains the vestiges of the earliest fishes, some of which are of the shark tribe; so that although the Devonian is the age of fishes, they originated in the Silurian. It was formerly thought that the Silurian formation contained the earliest vestiges of organic life, but organic remains have recently been found in older formations.

EDWARD PAYSON NEWCOMER.

TO A YOUNG MAN.

I WAS surprised to read in the Christmas E. S. E. Question Box a query from a young man in Iowa, who wished to know if it would pay him to take up the study of natural history. Surprised for it seemed to me that no one could be so blind as not to see the benefits of the study which to me seem to manifest themselves at first sight.

The foremost one appears to me the one which characterizes all pursuits of knowledge, namely: the satisfaction and sense of possessing an education with its attendant benefits which being so evident and widely known, need not be mentioned here. The second reason which occurs to me is that Natural History, of all branches of science, is the best paying one. The works of Nature are ever about us and demand explanation, interpretation and understand-

ing. The Earth offers him her wide fields in which to pursue his experiments and investigations. No expensive apparatus burdens him, and the skill of his hands is as applicable in one branch as another.

To a young man who has but little time for study at his command, the various branches of Natural History must commend themselves as the cheapest and most satisfactory method of securing a practical knowledge of our sphere, its history, components and inhabitants.

There are, however, about 35 per cent of the people engaged in collecting who are prompted solely by curiosity or a desire to have what their friends have not. An ambition true enough, but hardly as creditable as that of the conscientious collector whose desire for knowledge prompts his every action in Natural History's field.

Yes, young man in Iowa, if you are ambitious to secure a knowledge of the things in and on this earth of ours you will find that no field will offer more advantages than that of Natural History.

ROBERT E. WARD.

RECIPE CORNER.

TO CLEAN BONES, SHELLS, ETC.—
Soak in luke warm water until the dirt becomes soft; do not be afraid of use of water or heat. Then dry and apply hot sand and rub thoroughly; all large places polish with emery paper, then with emery flour and lard, wiping and shining with dry tissue paper, and mount.—[Mrs. Tillie Norman, Custer Co., So. Dak.]

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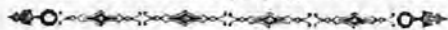
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Those who do not receive their premiums should drop us a postal; mistakes may occur at times.



Your subscription expires with this No. if this is marked. A prompt renewal solicited.



The A A Bulletin is a well-edited paper and deserves a fair share of the collectors patronage.



The only premium we can offer to subscribers this month is the Universal Collectors Receipt Book which we will send FREE.



One of the best curiosity lists received since our last issue, is from Fletcher M. Noe, whose ad. appears on the third page of cover.

Those who have not as yet seized the opportunity to procure 26 samples for 10c., from Grant, "The Printer," Buffalo, N. Y., should do so at once.



The Bainbridge, Ind, type dealer defrauded E. A. Browne of Florence, Ariz, out of all but one-eighth of the value billed, instead of one-half, noted in our last issue.



Duncan & Fabrian will have their ad. in the EMPIRE STATE EXCHANGE one year.—C. S. Chevrier & Br have some good fossils for sale.—D.H. Todd has many new and choice mineral specimens. (See ad's.)



All may see by the appearance of this number that our new proof rollers have arrived. We thought we would wait until they came before we printed this number though it made us late in issuing again, but next number will be out before the 1st of March if possible.



We have just received the prospectus of the "Standard Directory" to be published in April by the Bulletin Publishing Co., Gilman, Ill. It will satisfy a long-felt want of many collectors, as it will contain the name and address of every important collector of ornithological and oological specimens in N. A. and Great Britain, a natural history press directory, exchange and want notices of the principal dealers.

ZOOLOGY.

IMMENSE SPIDERS.

FAR up the mountains of Ceylon and India there is a spider which spins a web like bright yellowish silk the central net which is five feet in diameter, while the supporting lines, or guys, as they are called measure sometimes ten or twelve feet. and, riding quickly in the morning, you may dash right into it, the stout threads twining around your face like a lace veil, and as the creature which has woven it takes up his position in the middle, he generally catches you right on the nose, and though he seldom bites or stings, the contact of his large body and long legs is any thing but pleasant. If you forget yourself, and try to catch him, bite he will, and, though not venomous, his jaws are as powerful as a bird beak, and you are not likely to forget the encounter. The bodies of these spiders are very handsomely decorated being bright gold or scarlet underneath, while the upper part is covered with with the most delicate slate-covered fur. So strong are the webs therein that even the small but powerful scaly lizard falls a victim.

A writer in "Rare Bits" says that he has often sat and watched the yellow monster—measuring, when waiting for his prey with legs stretched out, fully six inches—striding across the middle of the net, and no-

ted the rapid manner in which he winds his stout threads around the unfortunate. He usually throws the coils about the head till the wretched victim is first blinded and then choked. In many unfrequented, dark nooks of the jungle you come across most perfect skeletons of small birds caught in these terrible snares, the strong folds of which prevent the delicate bones from falling to the ground after the wind and weather have dispersed the flesh and feathers.—Scientific American.

AGRICULTURAL STATION REPORTS.

Among other recently issued Agricultural Station Reports, we mention the following, thinking they would be of interest to our readers.

Colorado station at Ft. Collins B. 12, Some Colorado Grasses. Storrs school experiment station at Storrs, Conn., B. 6, Grasses and Legumes. Kansas Station at Manhattan, B. 10, Notes on Conifers. Kentucky station at Lexington, B. 30, A new wheat insect. Louisiana Experiment Station at Baton Rouge, B. 2, Texas Screw Worm. Mississippi Station at Agricultural College, B. 12, Cotton Leaf Worm. U. S. Department of Agriculture, (Vol 3) Nos. 1, 2 and 3, on Insect Life. B. 3, wild Grapes of N. America. B. 1, Vol. 6, Journal of Mycology.

ARCHAEOLOGY.

WHAT ARE BLANKS?

AFTER the Indian had procured his supply of flint from the far-off quarries, or from the gravel beds of the rivers, etc., and before resuming his journey homeward, he took his rude tools in hand and proceeded to fashion the blocks into arrowheads as well as his own hands could do. And, as he had to go sometimes a hundred miles or more to the quarries, it was to his advantage to have no extra weight to carry home; these rough and imperfect points are called blanks.

The warrior probably took the blanks to the chief arrow maker of the tribe who probably received "toll" for finishing them.

In many places piles or caches of blanks are found buried in the soil and some writers say that they were placed there to soften the stone so that it would chip off more readily, while others think they were buried to conceal them from their enemies, or as a magazine to draw from in time of need. Sometimes a peck of these crude points are unearthed at a time. Professor I. P. Bishop of Buffalo found in the autumn of 1884 a cache of blanks, near Silver Lake, N. Y. which contained 298 specimens.

Some time ago a man at Eden, N. Y. knocked open an old stump and found therein a quart or more of arrow-heads.—[RANDOLPH MAGNO.]

ENTOMOLOGY.

THE PROMETHEA MOTH.

ATTACUS PROMETHEÆ.

THERE is none of the larger moths more easy to procure than these, and the way to do it is to take a box and go out collecting the cocoons at any time during the winter. The cocoon is rolled inside of a leaf and is suspended from the branch by a stout silken cord. Place the cocoons in a glass-covered box, and towards the last of June look out for the moths to come from them.

Sometimes two or three dozen cocoons may be found on one bush. They seem to prefer the spice-bush, but are also found on the ash, lilac, popl. r, cherry, sassafras, etc.

The wings of this moth measure 3.60 to 4.40, are sooty black, in the female brownish-red, bordered behind with drab grey in which is a wavy black line, having forward of it on the hind wings a row of round black spots, in the female deep red, the inner ones more or less united.

It is thought by some that the silk from the cocoons of this moth is equal in durability and strength to that of the East India silk worm.

The worm of this moth is cylindrical, when at rest tapering, of a pale greenish-yellow color, coated with a white bloom, with six rows of black dots or prickles, which when touched sting like nettles.

ULYSSES R. PERRINE

ORNITHOLOGY.**BLACKBIRD'S SAGACITY.**

LAST spring as I sat by my window I saw two blackbirds alight in a large maple tree on the lawn where they rested quite a while. They then started separately, circling round and apparently examining various trees; on some they would rest for a minute or so. Then they would return to the trees on which they first alighted. After cawing a good deal, evidently in consultation, they would take another trip 'round among the trees. Occasionally they met and after a little cawing they would go together to another, apparently one to which one of them had some doubts. From it they invariably went back to the first tree they alighted on, and had a little consultation before any further examination.

On the second day they flew away. Three days later a party of six blackbirds arrived. I suppose my old friends were some of the number, and that they had given a satisfactory report at headquarters, for the whole party alighted on the tree originally selected by the two; then they circled around evidently examining the place. The next day a large flock arrived and were greeted with loud cawing by those who were already there. They all met on the old tree which seemed to be a depot

where they chattered for a while then all arose and flew round several times, then each pair chose a tree in which to build their nest and alighted; next day they commenced to build. One pair settled on a tree near the garden gate, but they evidently did not like the situation so they shifted, with a twig or two, to another tree. In a moment the whole "colony" of birds arose from every tree around, and, making a terrible cawing noise, drove them back to the tree they had first chose. Several times they attempted to move to the tree which they apparently fancied, but each time they were drove back by the other birds. Their reasons for not letting the pair build in this particular tree was probably because they had offended some of the other pairs, or it may have been reserved for a pair not yet arrived. The pair after finding they could not get the tree, at once began to build in their first tree and were progressing nicely when one evening I chanced to be passing by and noticed two other birds destroying it. Late that evening I went to where the nest had been and saw one of its owners sitting bunched up on the limb where the nest had been, looking the very picture of misery and despair. They began again in a few days and built another nest in the same place and reared three birds.

GEO. MC. CARTHY, IRVING, ILL.



BRIG-A-BRAG.

WILL IT PAY?

IN the Dec. issue of your excellent monthly "a young man in Iowa wishes to know if it would pay him to take up the study of natural history."

This altogether depends. If he is seeking financial gain, we fear it will not pay. The field is already filled with students and collectors, and we fail to note any monetary enterprise. But if our young friend is desirous of taking up the study with a view to mental improvement and pleasure, then it will pay him dividends not representable in dollars, francs or pounds.

1. IT PAYS PHYSICALLY. Too much student life is spent under roof, poring over technical books and intricate instruments. We need more of the fresh, bracing air of heaven, more of direct contact with mother nature. Natural history studies compel us to get out of doors, and after a day's ramble over hill and dale, through forest and brake, if it does not give him an appetite for his next meal he is a hopeless dyspeptic indeed.

2. IT PAYS INTELLECTUALLY. The inductive method is the natural one. It is the method of the nineteenth century. And this is simply the method of keen observation united with sound thought. The metaphy-

sician may deduce grand principles and broad generalizations in his study, but the naturalist induces the facts and applications of nature's laws for this work-a-day life of ours. Both are needful in their own sphere but the philosopher is largely in the minority. And just here lies the charm of natural history studies. They sharpen the faculty of observation; they compel patient investigation; they demand nothing short of the highest intellectual requirements rewarding those alone who are willing to think as well as toil.

3. IT PAYS MORALLY. This indeed is one of the chiefest values of the study of nature, however indirect it may appear. Her temple of knowledge can be entered only on the knees. There is too much of God, too much of the mysteries, too much of beneficent law in her operations to reward an unchaste or impure heart. And a deeper study of her secrets would solve for many a young man the moral status of his after life. If our youth were encouraged to apply themselves more to natural studies, they would never lack for good company and inspiring thoughts. Cultivate in your boy a taste for such studies and he will not be spending his holidays with the vicious, or his evenings with the riotous. The former will be devoted to collecting rich treasures of the natural world, and the hours of the latter spent in classifying and arranging his specimens in the coveted cabinet.

But a word of caution I ere. Let all new collectors beware of the impossible. In the first blast of enthusiasm they seek to gather together all things in heaven and earth. Sooner or later (chiefly sooner) they will come to learn that one life is too short for this. So choose only one line of collecting, and stick to it. Let it be Palæontology, or Archæology, or Botany, or Entomology, or Oology, or Philately, or any other preference under the sun; but let it be one thing alone, and the passing years will soon teach you that life will be all too short to exhaust even that. The writer began with mineralogy, then he added a few fossils, next came some archaeological specimens, the fascination of numismatics followed these, and lastly he became enamored of postage stamps. Now he collects only fossils, and these from the Palæozoic era alone. He has learned that it is wise to make a specialty of a specialty. Rev. J. Davis, Hannibal, Mo.

FROM BELGIUM

We are in receipt of the *Le Courrier Timbrophilique*, published by Jeanne Moens, 44 rue de Florence, Brussels, Belgium. It is a large 8-page 24-column paper devoted to stamps.—Come again.

ORNITHOLOGY.

LEAST FLYCATCHER.

NOT long ago while roaming through the woods I saw a bird perched on a slender branch of a beech tree not far off. On approaching him he flew off, not even giving me a chance to take note of him, but on glancing round I beheld, not five yards from me, a small nest in a low shrub. The nest as nearly as I remember, was built of coarse fibres and twigs. As I pressed through the little bush, at the nest, I found to my disappointment it contained nothing. It was a freshly made nest though and I resolved to visit it soon. Not long after that I thought I would visit the nest. After roaming through a field and finding a field sparrows nest, I took a direct course for the nest, which had been the chief object of my expedition. As I approached the nest for the second time, a bird flew off into the woods, but when I looked into the nest I found it contained one pure white egg and two eggs somewhat larger and covered with dark brown spots. Quickly seizing all the eggs I started for home, when I looked the eggs up I found the pure white one to be that of the Least Flycatcher, the other two were Cowbirds' eggs.

The Least Flycatcher habits eastern North America and breeds from the northern states northward. The egg measured .65 x .50.— C Hammitt, College Hill, Ohio.

EXCHANGES.

This dept. is free to all, but subscribers will be given the preference. A limit will be made of 35 words, one cent a word will be charged for all excess.

—I collect and exchange fossils from the Palaeozoic era. Correspondence invited. Rev J Davis, Hannibal, Mo.

—I have 24 nickles without the word "cents" on them. what will you exchange for one or any amount. Albert H Snyder, Rogers Park, Ill.

—Stamps, books and many articles to exchange for minerals, fossils, relics. Large printed list for yours or for stamp. W H Hoyt, Custer City Pa.

—Stamps, coins, curiosities, collections of postmarks, tin tags and other articles to exchange for all kinds of U S stamps. W D Acker, Poughkeepsie, N Y.

—5 different dates U S copper cents in good condition, or 3 Confederate bills for every 10 used stamps lightly canceled, catalogued at not less than 10c each. Arthur C Paldoe, Natick, Mass.

—Indian relics wanted, send prices of same. Would like to exchange birds eggs for Indian relics, an indian war club or bow and quiver preferred. M W Hughes, Wauconda, Lake Co, Ill.

—Books, novels, story papers, knitting machine, large rubber printing outfit and many other articles to exchange for any desirable articles. Send your list all letters answered. B B Fredrick, Cross plains, Dane Co, Wis.

—For 500 square cut envelope stamps or 3c red 4, 5, 6, 7, 10, 15 or 30 postage, revenue, match, medicine or department stamps, I will give a new two bladed pocket knife or a eagle fountain pen or 400 small mixed sea shells. E L Smith, Windsor, Vt.

—Wanted! Indian relics, coins, curiosities of any description. Will give five curios from this state for three from any other state or locality sent me. Fine rock and mineral specimens from this locality, buffalo and alligator teeth etc, etc, exchanged for curios of any description. Write giving description of what you wish to exchange to T O Young, North Scars, New York.

—Wanted! minerals fossils indian arrow heads axes and other stone works of the early aborigines birds eggs common and rare curios coins (U S and rare) and stamps. In exchange will give a choice in value and more of the following:— five hundred different kinds of minerals German miocene fossils arrow heads spear heads and scrapers from fifteen named localities in Indiana, also coins stamps and shells, examination of all kinds of metals, ores and minerals—accepting payment in specimens. Jacob Horter, Horter Exchange Mart, 867 Park Ave. New York.

—Would "Confidians" get homes in Florida at same rate of payment as the "Americans"? Where should a person look for minerals and old curiosities, are old eye glasses, about 170 years old, valuable, when was the first postage stamp issued in the U. S.— Geo. B.

In answering ad's please mention this magazine.

OR SALE: Package containing 15 different postage stamps, 15 cents. Three packets [all different] 10 cents. Fifty different postmarks, 5c. Address, A. H. Snyder, Rogers Park, Ill.

J. S. Stamps at Reduced Rates.

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—THE—

EMPIRE STATE EXCHANGE.

A MONTHLY FOR COLLECTORS.

Vol. III.

EDEN VALLEY, N. Y., NOVEMBER, 1891.

No. 1.

"Yet one smile more departing, distant sun,
One mellow smile through the soft vapory air,
Ere, o'er the frozen earth, the loud winds run,
Or snows are sifted o'er the meadows bare."

—♦—

fore been found outside of South America. When full grown the animals were eighteen to thirty feet long and seven to nine feet high."

MASTODON REMAINS.

The skeleton of a mastodon found at Higate, Canada, is on exhibition in that town. The grave in which the monster's bones were found is 25 feet long and 21 feet wide. The bones were scattered over it, one joint fitting into the other in a bed of grey marl about six feet below the surface. The marl was covered over with a thick layer of black loamy soil. "The length of the animal, gauged by the measurements of the bones already found, and allowing for those that have not yet been discovered, is, from the point of the nostril to the root of the tail, 22 feet." This is larger than that of the celebrated Mastodon giganteus discovered in 1845, near Newburgh, N. Y., and the skeleton is larger and more complete than any that have been found in California, Kentucky, Missouri, Ohio or Oregon.

NIAGARA FALLS RAN DRY.

It seems almost incredible that at one time the great cataract of Niagara actually ran dry. But it is true that on March 29, 1890, scarcely any water passed over the precipice. The cause of this phenomenon was that the winter was exceptionally severe and the ice on Lake Erie of unusual thickness. A heavy gale of wind blew from the north bringing the ice down to the mouth of the river, making a solid dam.

Collecting Notes and News.

BY G. L. HOWE.

—The output of the Taugeman tin mines in San Bernardino county, Cal. is forty tons of ore daily, which yields about 3,500 pounds of block tin.

—About a dozen rocks in the valley of the Lunain, France, are covered with smooth furrows running in various directions. Mr. Armand Vire supposes these furrows to have been used at an early epoch for finishing off stone hatchets, though superstitious residents regard them as scratchings of the devil's claws.

REMAINS OF AN ANCIENT ANIMAL.

Workmen on the farm of Abraham Brushel, in Holmes county, Ohio, in what was once a lake but is now a marsh, have found part of the remains of a huge animal, says the Chicago News. One portion of the vertebra showed a length from point to point of ten inches, and the cavity for marrow admits an ordinary fist. One short rib measured nearly three feet, indicating that the longest rib would have been about six feet. The claws, still perfect, are six inches long. It is supposed to have been a Megatherium, nearly allied to the sloth. "The remains of such animals have never be-

Philately in Texas.

SOME people think Texas is behind in Philately but that is where they are mistaken. Last June a society was organized and called the "Alamo City Philatelic Society," and another at Galveston called the "Galveston Philatelic Association," and both have met with the greatest success. That is enough proof that Texas collectors are no mossbacks. I am one of the charter members of the last named society and therefore will mainly speak of that organization. The following are the officers:

F. Hensel, President, San Antonio, Tex.; A. Huth, Vice President, San Antonio, Tex.; Edward W. Heusinger, Secretary, San Antonio, Tex.; F. Moyes, Supt. of the Exchange Dept., Alice, Tex.; F. Bosshardt, Supt. of the Cash Dept., San Antonio, Tex.; C. H. Huberich, Treasurer, San Antonio, Tex.

We have a standing library of over 600 volumes, to which the passive have the same right to use as the active. All of the departments are in full running order. We have meetings every Friday night and many a special one between, which shows that our members are Philatelists in the true sense of the word.

Our membership is increasing rapidly, and we hope that some day they will number several hundred. We would like for all honest collectors to join our society; the application fee for active members is 25 cents, and a monthly due of 10 cents; the passive members pay no application fee, but 50 cents in advance for yearly dues. For further information and application

blanks address the secretary; he resides at 315 King William Street. The proceedings of our next regular meeting will be found in the December no of this magazine.

MAX. E. JESSE, SAN ANTONIO, TEXAS.

Philatelic Notes.

The Czar of Russia is an enthusiastic collector of birds eggs and postage stamps.

Some time ago we received a letter from Chicago, Ill. the stamp, on the envelope of which, had not been cancelled.

In engraving a stamp the work is largely done in accordance with the colors in which the stamp is to be printed.

A postage stamp museum has been opened in Vienna, where more than one hundred thousand stamps may be seen arranged in three large rooms. Among the rare specimens are the stamps used in the balloon and pigeon despatches of the Franco-German war of 1870-71.

Jeanne Moens of Brussels, Belgium, is one of the philatelic hustlers of the Old World. One of his latest works is a monograph of 564 pages on the postage-stamps of Spain. His new stamp catalogue will have about 1300 pages and 8000 engravings. The price of this greatest stamp catalogue in the world is eight dollars.

Fossils of the Lower and Upper Quarry, Texas.

NORTH of the city of San Antonio, Texas, there are high bluffs of limestone, from which stone is taken for building purposes in San Antonio. The Quarry is about three miles from the centre of the city, and the river which twines about it, makes it a pleasing view. I heard that there was an abundance of fossils in these bluffs, and I determined to secure some of them if possible, so in company with one of my friends, I started out one morning, arriving there we fell to work with our hammers. My friend first found a *Cardium* turned into iron; the only one secured. The following is a list of what we found.

Tocaste Texanus, one specimen; *Enoceramus*,—about 30 specimens, one measuring 2 ft. wide, and about 2.4 inches long. *Astrea Edulis*, several specimens. *Turibella*, about 60 specimens. *Baculites*, only one specimen, and that was imperfect, its length being three inches. *Ostrea Larva*, only one specimen, which was found by my friend. *Squallum Argericoides*, several specimens. *Trigona* Species, several specimens. Petrified fish teeth, and Crystallized Druse of Calcite were also found. Fish teeth are to be found in abundance and we got a number of the finest. It is very difficult to get them out of the hard rock, but, with great care one can get some good specimens. Flint is also to be found in abundance here. After packing all of our specimens in the wagon we started for home well pleased with our day's collecting trip.

MAX E. JESSE, San Antonio, Texas.

Geological Gems.

How often, I have argued, in the leisure hours of life do we find men idling away their time, wasting it in vain talk, or consuming it in the most trifling pursuits, when a most interesting branch of science can be learned by wandering over the green fields, the rocky dell, the mountain side, or by the walk at even-tide, and there to hold converse with the Creator's works and the records of his will.

The charm that spell-bound the human mind for ages, is not dissolved when with ruder intent, we traverse these rocky solitudes, listening to the echo of our obedient hammer, learning the secrets of the universe amidst the voices of the everlasting hills, and seeing the wonders of the material world throwing light on the wonders of the spiritual.

Geology is in its first step, and initial principles, in perfect accordance with the scripture record; and, in walking over the varied fields of creation, we shall tread all the firmer, and enjoy our recreations all the more, when we find the word and works of God illustrative of each other.

This is one of the most remarkable facts of descriptive geology, whereby we learn that a depth of nearly ten miles of solid rock can be duly examined, every particle and fossil in it, not by perforation downward to the bottom, but by the natural inclination of the beds, and their several outcrops rising to the surface like the inverted tiles on a roof.—JOHN ANDERSON.

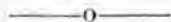
A Warrent for Christ's Crucifixion.

THIS curious document was discovered in A. D. 1280, in the city of Aquil, in the kingdom of Naples in the course of a search made for the discovery of Roman antiquities, and it remained there until it was found by the Commissioners of Art in the French army of Italy. Up to the time of the campaign in southern Italy, it was preserved in the sacristy of the Carthusians, near Naples, where it was kept in a box of ebony. Since then the relic has been kept in the Chapelo Caserta. The Carthusians obtained, by petition, an acknowledgment of the sacrifices which they made for the French army. The French translation was made literally by members of the Commission of Art. Demon had a fac-simile of the plate engraved, which was bought by Lord Howard, in the sale of his cabinet, for twenty-eight hundred and ninety francs. There seems to be no historical doubt as to the authenticity of the document, and it is obvious to remark that the reasons of the sentence correspond exactly with those recorded in the gospels. The sentence runs as follows:

"Sentence pronounced by Pontius Pilate, Intendant of Lower Galilee, that Jesus of Nazareth shal suffer death by the cross. In the seventeenth year of the reign of the Emperor Tiberius, and on the 25th of march, in the most holy city of Jerusalem, during the Pontificate of Annas and Caiaphas, Pontius Pilate, Intendant of the Prov-

ince of Lower Galilee, sitting in judgment in the presidential chair of praetor, sentences Jesus of Nazareth death on a cross, between two robbers, as the numerous testimonials of the people prove that, 1. Jesus is a leader. 2. He has excited the people to sedition. 3. He is an enemy to laws. 4. He calls himself the Son of God. 5. He calls himself falsely, King of Israel. 6. He went to Temple, followed by a multitude carrying palms in their hands."

It likewise orders the first Centurion Quirihus Cornelius, to bring him to the place of execution, and forbids all persons, rich or poor, to prevent the execution of Jesus. The witnesses who have signed the execution against Jesus, are, 1. Daniel Robani, a Pharisee; 2. John Zorobabel; 3. Raphael Roban; 4. Capet. Finally it orders that said Jesus be taken out of Jerusalem through the gate of Tournea.- [Christian Advocate.]



A Massachusetts' Indian Receptacle

NEAR Becket Mass., there is a wild track of land of nearly 100 acres, -used as a pasture now- a large rock; the rock is an Indian's cooking pot, dug out as smoothly as an iron pot. It is about the size of an ordinary dinner kettle. An old resident of the place says that the Indians did the cooking in this pot. They would fill the pot with water and then make a fire close by. Then they would heat stones very hot and throw them into the water untill it boiled, and in this way prepared their corn and meat.

The Agate Industry.

BETWEEN Oberstein and Idar we catch sight of the first of a number of lovely little buildings standing at intervals up the river in the middle of the meadow, and, as it were, in the water. They are nearly square in shape, with many windows; and the broad, silvery slate roofs slope down nearly to the ground on either side, recalling the outspread wings of a gray pigeon. Each has a huge water-wheel, turning at a tremendous rate and throwing bright drops on a very garden of wild flowers,—meadow-sweet and purple loosetrick, river forget-me-not, and lovely pink mallow, and the velvety lemon spikes of the greater mullein.

The precious stones are cut and polished in these mills; and to step out of this sunshiny, flowery world into one of them is, but for the courtesy and friendliness of the workers, a little like stepping from Paradise into Purgatorio. Three or four huge millstones, about six feet in diameter and a foot to eighteen inches thick, are turned vertically by an endless band at about the rate of three revolutions in a second. Before the revolving edge of each lie two men, extending downward on a long, wooden block, or horse, their feet set against stretchers, to give them the necessary purchase on the millstone.

The stones make a hoarse roar, which mingles with the stamping of the water-wheel and the rush of the

water outside. The men, with their pale, dusty faces downcast, hold bits of onyx or amethyst or tiger-eye pressed with all the weight of their body and the strength of their muscles against the remorselessly descending surface. The agate hisses and cracks under its tribulation, and becomes red and glowing; and often a large piece becomes most beautifully transparent and luminous, and, as it were, incandescent all through. Mountain islands in the west country appear to glow like that between the beholder and the setting sun sometimes.

Sawing the rough blocks and the crystals and the final polishing are done at other machines in the same room. The stream falls about five hundred feet in seven miles, and the water power seems to be about one horse power to the foot of fall. It is regulated by sluices and turbines, and the stream is broken up into bright miniature mill races or gathered into little lakes. All along the valley the water flashes in and out of the meadow, and there are nearly seventy of the mills, sometimes ten or more in a mile, with their broad, silvery roofs and whitewashed walls and merry water-wheels.—[Blackwood's Magazine.

—o—

“That the earth is constructed with such a degree of uniformity, that a tract of no very large extent may afford instances, in all the leading facts, that we can ever observe in the mineral kingdom.” Playfair.

— THE —
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Ulysses R. Perrine, - - - Editor.

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— O —

PUBLISHED BY

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Vol. III, November, 1891. No. 1.

HERE we are again after a few months suspension of the publishing of the **EMPIRE STATE EXCHANGE**—better typographical appearance at least than we were when we left you, in the reading matter we think we are up with our ~~past~~ standard of excellence, and in both these points we will aim to be always par-excellence in the future. With new type, new press, and new contributors with new ideas on the different subjects to which the **E. S. E.** is devoted, we see no reason why we cannot in the future equal, if not excell

all our worthy contemporaries.

It is a fact which we wish to impress on our readers minds that there is no paper published, to our knowledge, that is devoted to such a wide field of collecting as is our own **EMPIRE STATE EXCHANGE**. There are some papers, ofcourse, which claim to be devoted to every branch, but as far as they are devoted to some subjects is a mere mention of the name on the title page.

With an expense, only realized by our brother printers, we have brought forth the **EMPIRE STATE EXCHANGE** in a new dress and we trust that the collecting world will appreciate our efforts to publish a magazine in which every branch of collecting is treated in a fair and square manner, where Philatelia can speak of her charms, Geology tell of the earth's formation, Ornithology eulogise the feathered kingdom, Numismatics, Mineralogy, Archaeology, Oology, Entomology, Botany, and the other natural sciences each treat of their varied subjects together, or as it were, under one roof. And we trust, also, that those who do appreciate the merits of the **EMPIRE STATE EXCHANGE** would subscribe for it without delay, for by so doing we will know that our efforts are not in vain.

We still let the subscription price remain the same as when we issued the first number three years ago, although we have enlarged and improved very much since then.

☞ Notice our change of address.

—How do you like the appearance of our magazine.

—We will discontinue offering any premiums to subscribers, but to those who remit 30 cts. before December 1, we will send all back numbers and the EMPIRE STATE EXCHANGE one year free.

—We wish to call the attention of our readers to the advertisement of A. B. Floyd on third page of cover. We have seen the type and press and know they are as represented. It would be especially desirable for new beginners in the printing business.

—During our suspension of publication there were a few of our exchanges whose editors did not mark our name off their exchange list, but sent on their magazines as if they were receiving ours regularly in return, and to those we wish to express our thanks for the sending of the same.

Among others who sent regularly were the following: The Oologist, Albion, N. Y., West American Scientist, Sandiago, Cal., Le Courier Timopillique, 44 rue de Florence, Brussels, Belgium. The Echo, Stratford, Ontario Can.

—How do you like our change in the general typographical style of the EMPIRE STATE EXCHANGE. Our front plate was designed by one who "fills the bill" every time, and whose advertisement appears on the third page of cover. We wish to have a standard color for our cover in the future but have not decided what it will be. Will our friends please suggest what color they think would be most suitable.

—ERRATA; on page 1, second column, eighth line from bottom, March 29, 1890, should read, March 29 1848.

—We would like some person well informed in numismatics, to take charge of a department in this magazine.

☞ See third page cover, grand club offer! A Silverene Watch GIVEN AWAY, remember to the first one sending in a club of 25 yearly subscribers.

—Look at the address label; if you find that your subscription expires with this number, please renew at once. The E. S. E. of the future will far excel the E. S. E. of the past, and yet the price is only 25 cts. for one year, [12 numbers guaranteed.]

—We wish to make the Christmas number out-shine all past issues of the E. S. E., and in order to make it so we need the co-operation of all our readers. Send in your exchanges, queries for the question box, and an article or two on your trips, new finds, etc of the past summer; original mss. will be very acceptable at all times.

—Are you preparing to make an exhibit of your collection at the World's Fair? If not, you should begin at once. If the Columbian Exposition will but give collecting such an impetus as did the Centennial, there will soon be a million more collectors in the field. But, by the way we do not agree with the Editor of the Moral and Scientific Companion in sanctioning the opening of the gates on Sunday. Let Foreigners see that we have an American Sabbath.

New Species of Mammals.

Found in Idaho by Dr. C. Hart Merriam during a biological reconnoissance in 1890.

SOREX IDAHOENSIS. Idaho Shrew.

This tiny shrew, is common in the Salmon River Mountains of Idaho, and was found in the Saw Tooth Mountains, also. It differs widely from all known species inhabiting western United States. Color, upper parts dull sepia brown, darkest over the rump; under parts drab gray, tinged with buff.

SOREX DOBSONI. sp. nov. Dobson's Shrew.

This interesting shrew was captured near Saw Tooth or Alturas Lake, at the eastern base of the Saw Toot Mts. in central Idaho, Oct. 3, 1890, at which time the ground was covered with several inches of newly fallen snow. Color; Upper parts uniform dull sepia brown. Under parts drab-grey slightly tinged with brown.

SOREX VAGRANS SIMILIS. Shrew.

The commonest shrew inhabiting the marshes and borders of streams of the Salmon River Mts., and was found in the Pahsimeroi Mts. also. Color; upper parts uniform dull sepia brown, slightly tinged with very pale rufous. Under parts drab-gray slightly tinged with buff.

ONYCHOMYS LENOOGASTER BREVICANDUS subsp. nov. Idaho Grasshopper Mouse.

A new subspecies of Grasshopper Mouse common in most parts of the Upper Sonoran zone of Idaho. Color.—upper parts drab-gray, washed with pale cinnamon, under parts and fore legs pure white.

HEPEROMYS CRINITUS. Canon Mouse.

This new species is abundant inhabitant of the lava canons of Snake

River; and belongs to the silky-haired group of the Sonoran Province, the range of which is thus carried 500 miles north of its previously known limit. Color.—Upper parts pale olive brown. Under parts pure white.

ARVICOLA MACROPUS sp. nov.

Big-footed Arvicola.

This is the largest species thus far known from North America except *Arvicola alleni* from Florida. Inhabits wet meadows of northern and central Idaho. Color.—Upper parts grayish bister. Under parts pale ash gray. Total length, 220.

ARVICOLA MORDAX, sp. nov. Cantankerous Arvicola. This new species is common in the marshes bordering the inlet of Saw Tooth Lake. Its nearest relative is *A. longicaudus* of Dakota.

ARVICOLA NANUS, sp. nov. Dwarf Arvicola. Total length 151. Color.—Upper parts pale grizzled bister, conspicuously mixed with black tipped hairs. Under parts grayish white.

PHENACOMYS OROPHILUS, Mountain Lemming Mouse. Inhabits the higher parts of the mountains of central Idaho. Color.—Upper parts gray, with tinges of buff. Under parts whitish.

EVOTOMYS IDAHOENSIS. Idaho Red-backed Mouse. Common in the coniferous forests of the Boreal zone of Idaho.

THOMOMYS CLUSIUS FUSCUS, subsp. nov. Mountain Pocket Gopher. The Pocket Gophers inhabiting the mountains of Idaho differ from those of the plains in being larger and wholly different in color.

LEPUS IDAHOENSIS. Idaho Pigmy Rabbit. Has very short legs and in running keeps close to the ground.

Trip after Green Heron's Eggs.

ON Saturday, May 10, 1890, my friend and I decided to visit a place called "Dechert's Commons" for the purpose of securing a set of Green Heron's eggs, as we had found a couple of nests there the year before, but the eggs were too badly incubated to follow.

After a walk of about one mile we arrived at our destination and were pleased to find two nests containing eggs. Both nests, composed exclusively of sticks, which varied in size from one-eighth to one-fourth of an inch in thickness, were situated in white horn trees, fifteen feet from the ground.

The first words my friend uttered when he had caught sight of the trees were: "Holy Moses that's a job," and so proved to be as the trees were thickly larded with thorns, two to two and one-half inches in length, and these we had to cut off, from the ground to the nests, with a pocket knife, because we had forgotten to bring a hatchet with us. After a hard struggle of about half an hour my friend succeeded in reaching the nest and announced five fresh eggs, which were quickly transferred to our collecting box. After taking the dimensions of the nest, etc., he descended and said he was going to leave the honor of taking the other set to me.

Nest no. 2 was situated about twenty yards distant from nest no. 1, and the eggs were much more difficult to obtain, as the nest was built on the overlying branches of three different horn trees, and neither of the branch-

es would have measured over two inches in diameter. After a precarious job of about three-quarters of an hour he reached the nest and secured a very fine set of four eggs. After he had descended, he examined himself and found that he had torn his clothes in several places and had received not less than a dozen scratches from the thorns.

We then started for home, and on the way succeeded in obtaining a fine set of four eggs of the Brown Thrasher, also situated in a thorn tree, and a set of five eggs of the Song Sparrow which were slightly incubated.

The eggs of the Green Heron are a little larger than those of our common pigeon and of a pale-blue color.

We expect to obtain one or more from the same place this season.

R. M. MILLER, New Chester, Pa.



Nesting of the Sparrow Hawk.

SOME time ago my uncle told me that he wished we would shoot a sparrow hawk, which had built its nest in an old maple tree, on his lawn. The hawk was continually stealing his chickens. So my brother and I with two other companions set out with a shot gun which we had borrowed. In a short time we reached the place, and one of our number went up to the nest. It was in an old Yellow Shafted Flicker's nest about 60 feet from the ground. When he arrived at the nest the hawk began to fly around the tree, now and then making dashes near him. We dared not shoot at him for fear some of the shot might strike our

friend. Taking out the egg box from his pocket, he thrust his hand into the hole and drew out three eggs which he lowered down to us, then climbing down from the tree we lay in wait for the hawks, which kept soaring around but hardly ever alighting, and when they did it was only for a second. One of the boys took the gun and walked down in the creek bed, and he had not been gone long when we heard the report of a gun, and the hawk came tumbling to the ground. It was not dead and it fully convinced us of the fact by the way it hopped around on the ground. We took the bird home, I do not remember what became of it but we have the eggs in our cabinet.

CHALFANT HAMMIT, College Hill, O.

The Baltimore Oriole.

IF, there's the great if!" Suddenly, early in May, before the apple trees have displayed their blooms, or even developed their leaves, down from the highest branches comes the cheerful sound,—“If, there's the great if!”—the notes of the Baltimore Oriole.

The advent of this golden robed harbinger of May is hailed with pleasure by every ruralist as a sign that April's showers are over and gone and Flora's season is at hand.

A week or more slips by, after his arrival, when he and his mate selects a branch of some elm, maple, or apple tree on which to suspend its pouch-like domicile, which he displays great ingenuity in fabricating, availing himself of divers materials for weaving it, such as shreds of milkweed stems,

strippings of fine bark, delicate grass stems, twine, horse hair, etc.


It is lined with down, fine grasses, moss, and hairs, upon which is usually placed from four to six whitish eggs fantastically scrawled and blotched with curious shapes, irregular spots and markings of heavy shades of brown.

In this snug and gourd-like retreat, securely fastened to the swaying branch by strong guys of twine, Mrs. Oriole sits patiently waiting, through rain and shine for the precious treasures to incubate, while all around is life and beauty,—blooming flowers, humming bees, singing birds, eclipsed now and then by the silver, bugle notes of her mate, as starting in on the “If” then pausing to examine a suspicious looking bud or to catch a worm for his meritorious dame, then starting again “If, theres the great if!”

Useful Birds.

Watch the birds with an intelligent eye, not merely glance at them, and see how almost incessantly they work. The crow—an outcast among men—follows the plow and destroys thousands of grubs and worms that left to themselves would eat every vestige of the crop. The oriole, moving quietly about on the trees, puts an end every day to hundreds, perhaps thousands, of the enemies of our foliage, and is reviled for killing an occasional bee. The vireo, hopping from branch to branch with its constant warble, snaps up an injurious insect at every step.

POISON SUMACH.



HERE is, at this season of the year, scarcely another shrub or tree arrayed in more beautiful attire than is the poison sumac, nor is there a more dangerous botanical foe in the woods of the northern states.

Before another collecting season arrives, a warning might be of benefit to some of our readers.

W. H. Gibson, in one of Harper's publications says: "There is one page of botany which every dweller in the country should learn. The short chapter on the *Rhus*, or sumach is easily committed to memory, and a few moments' study will equip any boy to get the dangerous tribe on their own ground and give them a welcome or a side berth, as they may deserve.

There are species of sumac more or less common in the eastern United States. Of these but two are poisonous—the *Rhus venenata* and the *Rhus toxicodendron*. The first of these is a truly venomous plant, frequenting swamps and wet thickets, where its foliage blends with the alders and willows. It bears the popular names of poison-sumach, poi on-dogwood, and poison-elder, and is a shrub varying from six to twenty-five feet in height, with foliage consisting of about five pairs of opposite leaves and a terminal leaflet. To the ordinary observer it appears somewhat like the other sumachs, though on examination it will be seen to have a distinct, pert, mischievous, "all on end" look about it,

caused by a peculiar upward inclination of the leaflets.

Its swampy haunts should also serve in a measure to identify it; and though in the summer it might be easily encountered unawares, in the autumn it need never so waylay us, for, as Thoreau says, "it blazes its sins as scarlet" in its haunts, and has a distinctly evil look. The other poisonous species of *Rhus toxicodendron* would scarcely be considered a sumach at all by the ordinary observer, its popular name of "poison-ivy," being quite expressive of its peculiar habit of growth. The other common name of "poison-oak" applied to the same plant would seem to be rather inconsistent with the first, but the two are scarcely as inconsistent as they appear, for the *Rhus toxicodendron* masquerades in a variety of disguises both as to foliage and manner of growth, the two extremes being so widely at variance as almost to entitle the forms to be considered as distinct species. Here, for instance, is a thick shrub with some oak-like leaflets growing in the open meadow. Here a bramble-like screen creeping over the rocks. Here in the woods an ivy-like vine its foliage concealing the trunk of the tree upon which it climbs, and with its brown, hairy, snake-like stem circling about the limbs to which it clings like a parasite. This singular hairy trunk has often been mentioned as a feature by which to identify the plant, but it is of little reliance. You will not find it in the meadow, nor in the slender sprays among the rocks, for there it often takes the form of a root, and is found under ground.

All botanical and other collectors should beware of these two shrubs.

Experiment Station Reports.

THE agricultural experiment stations in the various states publish at frequent intervals, bulletins describing the work of the station, etc., which often are of much value to collectors, and scientists as well as farmers, and may be had by sending your address on a postal to the address of each.

Since our last report of the bulletins the following, with others less interesting to our readers, have been published:

Alabama at Auburn, Bulletin 21, a new root disease of cotton. Mass. at Storrs, B. 6, grasses and legumes. Illinois sta. at Champaign, B. 15, the fruit bark beetle; Indiana sta. at Lafayette, B. 33, entomological notes. Michigan sta. at Agricultural College, B. 73, six worst weeds. Cornell University, Ithica, N. Y., B. 23, insects injurious to fruits. N. C. sta. at Raleigh, B. 73, grasses. S. Dak. sta. at Brookings, B. 20, forestry. N. C. sta. B. 78, some injurious insects. S. Dak. sta. at Brookings, B. 22, injurious insects.

U. S. Dept. of Agriculture at Washington, D. C., Nos. 4 to 10, [vol. 3] of *Insect Life*; B. 3, [vol. 6] of the *Journal of Mycology*; No. 1, [vol. 2] of the division of botany, contributions from the National herbarium; Division of Entomology, B. 25, destructive locusts; Forestry division, B. 5 on forestry.

The Earth Star.

STROLLING through the woods early Autumn one may see near old decayed logs the curious earth stars. These are closely related to the puff-ball, but much smaller have a double covering, one like a puff-ball, which is surrounded by a thin covering. When the earth star is mature, this outer covering bursts and separates in many pointed divisions spreading out on the ground in a fan which suggested the name Earth Star in the centre of which is the little puff-ball. This ball has a single opening in the top from which spores escape. The puff-ball portion sits directly upon that which forms the star. The scientific name of the earth star is *Gemula* which is derived from two names meaning Earth and Star. Spores have a rupture so forcibly that the whole affair is thrown a distance several feet; in one species the divisions are thrown so far back that the star rests upon the points. We have usually found them most abundant in dry, open woods. S. C.

Sundry Notes

OF INTEREST TO COLLECTORS.

- Mineral-paint rock of the best kind has been found at Rauldolph, N. Y.
- Prof. Lintner, an authority on entomology, says there are two million or more species of insects in the world.
- An army of locusts, ten miles wide recently swept over the Punjab in India. It occupied five days in passing.
- The gigantic skeleton of a man who measured 8 1-2 feet in height was recently dug up near Salt Lake City.

*This page will hereafter be devoted to exchanges. Free to all though subscribers will be given the preference at all times. A limit of thirty-five words will be made; over that 1 cent-a-word.

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1891
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DEC., 1891. PRICE 5 Cts

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AND THE OTHER NATURAL SCIENCES.

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AND EXCHANGES

Bro's, Publishers, Eden Valley, Erie County, N.Y.

Empire State Exchange

A MONTHLY FOR COLLECTORS.

CHRISTMAS NUMBER.

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EDEN VALLEY, N. Y.

EMPIRE STATE EXCHANGE.

A MONTHLY FOR COLLECTORS.

III. EDEN VALLEY, N. Y., DECEMBER, 1891.

No. 2.

Oh! 'tis love that leads our voices
 To the singing of fresh songs,
 Though they only tell old sweetness
 That to Christmas-tide belongs--
 Though they but repeat old carols,
 Full of gratefulness and praise,
 For the crowning of the seasons
 With the joy of Christmas days.

—O—

OLD FORT ERIE.

HOW many pleasant reminiscences
 are stored away in the minds of

my collectors,
 trips to distant
 parts of interest
 Journeys made
 to various places
 in search of new
 specimens for
 my cabinets.
 How often, as
 I look over or
 arrange their
 more crowded
 shelves and cabi-
 nets, do certain
 specimens bring
 to mind the pe-
 culiar delight

in which they were found and
 my happy recollection of many a suc-
 cessful collecting tour.

and it was so with me, that, in look-
 ing over the contents of a large case
 of minerals and fossils, a beautiful
 piece of honey-comb coral brought to
 mind the incidents of a pleasure trip,
 six years ago, to the "Coney Is-

land of Buffalo,"—old Fort Erie in
 Canada.

It was in August--- that month
 when everyone would like to hie away
 to lake beach or sea shore—that, one
 fine, sunny morning, a cousin and
 myself, with several others, stood
 at the foot of Main Street, Buffalo, N.
 Y., ready to embark on the Niagara
 for a steamboat trip across that com-



"A BEAUTIFUL OUTGOING STEAMSHIP"

paratively nar-
 row expanse of
 water—the con-
 fluence of Lake
 Erie and the Ni-
 agara River—
 which separates
 the hustling, bus-
 tling Queen City
 of the Lakes from
 the quiet, Sun-
 day-like shores of
 the "Old Domin-
 ion."

But, halt! A
 custom-house of-
 ficer was inquisi-

tive as to what we had in a large bas-
 ket we were carrying; after finding it
 was only an adequate supply to sus-
 tain "the inner man" till we would
 return, we were allowed to go a-board,
 and soon the whistle sounded and the
 Niagara steamed away from the dock.
 The boat did not take a direct course
 but went outward into the lake in or-

der to rightly cross the "sea trough," and so we were soon on "Lake Erie's broad expanse."

The main object of our trip was to visit the ruins of Fort Erie—a stronghold in the war of 1812—and, after a safe voyage over Lake Erie's treacherous, white-capped waves, we landed and directed our steps at once to that historical relic of the past. On the way from the pier to the site of the old fort, we passed a row of small houses, and everyone displayed a sign bearing this farm-like legend: "FRESH BUTTERMILK FOR SALE HERE." But, as we hailed from a farm we had no desire to sample Canada's buttermilk!

Only a small section of the old wall is standing—with its grey, old stones and narrow loop-holes—a silent, un-inscribed monument, to the memory of over 2,000 gallant soldiers who fought and died within sight of its war-stormed walls. Fort Erie was an important point of defense in the campaign of 1814 on the Niagara frontier, and it was in July of that year that General Brown, with 3,000 men, took possession, and on the 5th of that month was fought at Chippewa, a few miles distant, an obstinate battle, in which the Americans were victorious. On August 4, 1814, the fort was invested by General Drummond and 5,000 soldiers together with Gen. Ripley and his forces. Then for forty-nine days the British besieged the works, during which a sortie was made by the besieged in which they lost 500 men, and killed, wounded or brought back to the fort one thousand of the enemy. On Sept. 17, 1814, the British determined to get possession of the fort, and did so far as to drive the Americans from the main battery and turn the guns upon them, but, as the Americans were retreating from the fort, the magazine which was under the battery exploded with great destruction to the enemy. This caused a reaction; the survivors of the

enemy's army retreated, most of them were captured, and the Americans regained possession of the fort which they held 'till the close of the war.

Recalling to mind the deeply historical associations of Fort Erie, it was with a decisively reverential feeling that we trod over the works or chipped off fragments of rock from the old wall which is composed of a sort of cherty-limestone. After securing a few of these mementos we wended our way to the beach of the lake.

Then we commenced to collect for our geological cabinet. How delightfully strange it is to collect old ocean shells and corals on the shores of Lake Erie! With what avidity did we chip out the *atrypas*, *orthophycus* and *zaphrentis*; or, with what eagerness did we attack a large boulder of granite in which were imbedded large crystals of hornblende,—a relic of the glacial period—a wanderer from the azoic formation. We broke open numbers of suspicious-looking stones, in our efforts to find geodes—which have been found at that place—but our search was fruitless. We found large and beautiful specimens of *Favosites gothiandica* (honey-comb coral) and *Zaphrentis prolifera*, (horn coral) and also specimens of *Eridophyllum* and *Auropora cornuta*.

After we had eaten our lunch and rested awhile in the shade of a poplar grove, we filled the basket brim-full of specimens. We noticed a boy coming from the pier with a fine string of yellow perch, and, to follow his example, we obtained some bamboo rods and waited nearly an hour for a bite.

Then the Niagara came to the pier and we boarded it for the return trip. We reached Buffalo without an occurrence worthy of note, excepting that we saw several laughing gulls on the lake and we met a beautiful outgoing steamship as we entered the harbor. So ended a delightful collecting trip which I shall long hold in remembrance.—

ULYSSES R. PERRINE

NUMISMATICS.

THE study of coins has an important bearing on history. It has been the means of ascertaining the names of forgotten countries and cities, their position, their chronology, the succession of their kings, their usages, civil, military and religious, and the style of their art.

The metals used by the Ancients were about the same kinds as are used to-day, gold, silver, copper and bronze; although most of the ancient coins found in collections of to-day are made of the latter.

The side of a coin which bears the most important device or inscription is called the obverse, the other side the reverse. The words or letters on a coin are called its inscription; an inscription surrounding the border is called the legend.

The use of coined money cannot be traced further back than the 9th century B. C. Early metallic money was in the form of bars, spikes and rings; the ring money could be opened, closed and linked in a chain for convenience of carriage.

The people who first used coined money were the inhabitants of Asia Minor (a country noted for its gold mines and fruitful soil) about 720 years before the christian era. Their example being followed by the different states of Greece.

The first metal money was coined by placing a lump of metal on a die, on which was engraved the religious or national symbol to be impressed.

A wedge or punch placed at the back of the metal was held steadily with one hand and struck by a hammer with the other, until the metal was sufficiently fixed in the die to receive a good impression. The impression was a guarantee of the weight of the piece. From the nature of the process, the earliest coins had a lumpish appearance. The original coins of Asia Minor were of gold; those of Greece of silver. The earliest coins bear emblems of a sacred character, often embodying some legend regarding the foundation of the state.

Silver was first coined at Rome about 281 B. C., the standard being the Greek drachma. The earliest of Roman coins has on the obverse side the head of Roma.

The earliest gold coins seem to have been issued about 90 B. C. These pieces bear the head of Mars on the obverse, and on the reverse side an eagle standing on a thunderbolt.

The high prices given for ancient coins have led to numerous forgeries from the 15th century downward. Against such imitations collectors require to be always on their guard.

It is not only coins of the ancients that are valuable in collections but there are many coins of recent dates which, when sold, bring many times their face value. For instance, take our own coins of the United States, and there are many pieces worth at least one hundred times as much as coins 1500 years old.

So it is with the copper cent of 1793 and 1799 and the silver dollar of 1804, which is one of the coins least found, even in large collections.

THOS. O. YOUNG, North Scriba, N. Y.

Lake Medad.

ABOUT ten miles from the city of Hamilton, Ont. is situated a small lake, of some eight acres in extent, which is called Lake Medad.

As this lake had never been searched for fresh-water shells, a friend of mine and myself determined that we would visit it sometime during the summer. Accordingly, one day last August, we started about seven o'clock in the morning on our long tramp to the lake. Arriving at our destination about ten o'clock, we at once set to work. We hired the only boat on the lake, and after rowing completely around it without discovering anything, we returned to the shore, and commenced searching along the banks. We had very small success, however, only finding a few specimens of the shell, *Planorbis deflatus*.

We now began to feel rather hungry, so we sat down beside a noble spring of clear, cold, water, which gushed up a few yards from the east shore, and there ate our dinner.

On the shores of this lake there was formerly situated a village of the Iroquois Indians. As we had no success at hunting for shells, we determined to visit the site of this village, and see if we would find any relics.

The spring where we ate our dinner is situated just beneath an abrupt, rocky bank. A steep pathway, cut deeply into the rock by wild animals and Indians, leads from the spring to the top of the bank, where the Indian village was formerly situated. Arriving at the site of the village, we

searched around for a time, and were rewarded by finding several arrow heads, pieces of wampum, glass beads, and numerous fragments of pottery.

It was at this village that, that great explorer, La Salle stopped in 1669, when he discovered Hamilton Bay.

About fourteen years ago an ossuary or bone-pit was discovered at this point, through the burrowing of a wood-chuck. A gentleman from this city had the curiosity to visit the place and found it to be most interesting. He discovered three ossuaries, one of which measured 40 ft. long, by 17 ft. wide, and 5 ft. in depth. In these pits were found the decayed bones of persons of all ages, together with many curious articles, such as copper and brass kettles, a bronze spoon, and eight or ten tropical shells, probably used in the manufacture of wampum. Many pieces of wampum of all shapes were found, and also pipes of stone and clay, many of them bearing extraordinary devices, such as figures of animals, human heads, etc.

Since that time many persons have visited the place and searched for relics, so that at the present time very few can be found.— J. A. LEWIS

Relics for the Worlds' Fair

The first exhibit from a foreign country has arrived—a stone hatchet, iron spear, moss book, wooden bowl, and other curious articles bought from the Antigonish Mountain Indians, Nova Scotia. A typical old man's house will be built at the English headquarters, and they talk of building an exact reproduction of Shakespeare's house at Stratford-on-Avon.

Philately in Texas.

IN my last report there was an error which I hereby correct: "Mr. Moyes of Alice, Tex.," should be "Mr. Noyes" of that city.

Since my last report we have had two regular meetings; I will only speak of the last. The meeting was called to order at 8.30 o'clock sharp. The following active members were present;— Messers F. Hensel, A. Huth, Edw. W. Heusinger, Frank Bosshardt, W. Rummel, Chas. H. Huberich, C. J. Rossy, Max. E. Jesse, and several guests. Some very important business was transacted, but occupying too much space I have dropped it. Mr. Adolph Lohmeyer of Baltimore, Md. made a present to the society of several rare postal cards mounted on black card-board. Mr. Albert Huth made a present of about ninety books. Mr. Edward W. Heusinger made a present of about one thousand stamps and fifty books. Mr. Max. E. Jesse made a present of sixty books. Mr. Frederic Noyes of Alice, Texas made a present of a few hundred philatelic books and papers. Mr. V. H. Huberich of St. Elmo, Texas presented the society with about 500 varieties of continentals. A vote of thanks was given to each of the donaters. This is the only meeting that the society ever had when so many articles were presented, and we hope that the next will be the same. Messers Phil. H. Dilg of Chicago, Ill. and A. J. Gillett, of Ind. were proposed as passive members. Mr. F. Noyes says he has just started the "Exchange Circuit" and hopes it will be a success, like Circuit No. 21. We will soon have an official organ and it is

rumored to be Scotts' Monthly. The list of applications this month shows a large increase over last month's but we expect a still larger list for next month, as requests for application blanks are pretty numerous of late.

All honest collectors are cordially invited to join the "Alamo City Philatelic Society." For information and application blanks address the secretary, E. W. Heusinger, 315 King William Street. Proceedings of our next regular meeting will appear in the January number of this magazine.

MAX. E. JESSE, San Antonio, Texas.

Collecting Stamps.

Collecting stamps is not such foolishness as some suppose. When you see an unfamiliar stamp you naturally wonder whom the picture represents. Who was he? What was his character and what were his achievements? If he was a monarch, what sort of a country did he reign over? In order to find out these things you study biography, history and geography in a very interesting way. Besides, your collection of stamps forms a beautiful book which you are proud to show to your friends.— A. Blackwell in Farm and Home.

Look Out for Them.

Collectors, look out for the 1870 issue of U. S. There is a dealer who sells them at 50% below the standard price. The stamp itself is genuine but the grill is forged. You can easily distinguish the forged specimens from the genuine, as the grill in the forged is much larger and more unequal than in the genuine.

MAX. E. JESSE.

—♦—THE♦—

— Empire State Exchange. —

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - - Editor.

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Vol. III, December, 1891, No. 2.

Merry Christmas and a Happy New Year to one and all!

Why not try our exchange column? It will cost you nothing, and may be the means of enlarging your collection.

Every collector should send for F. M. Noc's Natural History and Curiosity Catalogue; he is a large and reliable dealer. See ad. elsewhere.

Although this issue sallies forth under the title of the "Christmas Number" it is two weeks yet before Christmas

arrives. We all await this holiday with pleasant anticipations, and we trust it will bring joy and happiness in abundance to our large and increasing family of readers. And while we think of it permit us to suggest that it would be well for every collector to make themselves, (or friends) a Christmas present of an years subscription to the **EMPIRE STATE EXCHANGE**. As is announced elsewhere, to all who subscribe before Jan. 1, we will send it one year for 25 cents.

Every collector should go to work at once to procure subscribers for the **EMPIRE STATE EXCHANGE**. As a special inducement, to all who send \$1.00 for four subscriptions, we will give an years subscription to the **EMPIRE STATE EXCHANGE**, a large 7 inch starfish, and a pack of business or name cards **FREE!**

As we look from our window southward, a tall, new oil derrick strikes the eye. And why are they going to the cost of derricks and machinery to bore for oil in Erie Co., N. Y? The reason is this, that one of the heaviest veins of gas ever located, was found directly north of us near Fort Erie, in Canada. Now, as all geologists are aware, the strata of this region dips in an oblique direction from the surface southward, and there is always said to be oil in the same strata where gas is found. In order to strike the lower beds of this oil-bearing strata, borings are being made in all sections of this county, and the outcome of these investigations are watched by all with more than a passing interest.

Relics by the Wagon Load.

UNDER the direction of Professor Putnam, Chief of the Department of Ethnology, of the World's Columbian Exposition, a party of men have been making extensive excavations of the prehistoric mounds in Ohio and Indiana, and according to reports, received from time to time, most gratifying success has been met with. Many skulls, skeletons, copper hatchets, pipes, ornaments, alters of burnt clay weighing 300 to 400 pounds, flint spear heads, etc., have been secured.

In one mound, situated near Anderson Station, Indiana, 7,232 flint spear heads and knives were discovered. The bulk was so great that it took four horses and a large corn wagon to haul the flints to camp. The total weight was a trifle over 4,700 pounds. The implements were found in a layer one foot in thickness, extending over a space twenty by thirty feet. Many of them were over eight or ten inches in length; some of them even larger, while the majority ranged from seven to eight inches. They are made of gray flint, found only in Indiana, and show that there were from sixty to seventy flakes detached from each one in order to fashion it.

The largest find of flint implements made in one place heretofore in America did not exceed 1,800 specimens. In one of the caverns occupied by primitive man in the valley of the Seine, below Paris, 2,300 implements were found in one deposit. As it is reasonable to conclude that nearly one day's work was expended on each implement, and as each one exhibits al-

most absolute perfection as far as flint chipping is concerned, the find will be of special value to ethnological research.— [Oologist.

Notes.

—East Randolph, N. Y: Gas has been found at 900 feet.

—Valuable beds of marl have been discovered in different localities in Niagara Co., N. Y.

—A company has been formed for the investigation of what is supposed to be a great mine of lead and tin near Meadville, N. Y.

—The oil well, at Dansville N. Y., at a depth of 2,100 feet, developed a bed of rock salt sixty feet in thickness, and of the best quality.

—Next Month we'll have a brief history of the silver dollar of the U. S. and something on the U. S. copper cents, by T. O. Young.

—The U. S. are soon to have a change in their silver coins except the dollar; the 10 cent piece, the quarter dollar and the half dollar are to be coined similar to the dollar of the present date.

—There will be some fine specimens of America's mammoth trees. The section of the big redwood tree for exhibition at the World's Fair is from the largest and most perfect "Big Tree" in California, cut for the purpose from the mammoth forest in Tulare county. It measured ninety-nine feet in circumference at the base. The height of this monster specimen was 312 feet, and it is supposed to be nearly 3000 years old. Hugh Price, one of the Wisconsin commissioners, has made arrangements for securing for the Fair a mammoth cork pine, a tree which is growing rare in this State. It is twenty-four feet in length, and will scale 2,500 feet. One plank is sixteen feet long, three inches thick and forty-four inches wide, without a knot or blemish.

A Big Collection.

DR. Stephen A. Forbes, of the Illinois Industrial University, has been engaged since 1876 in collecting the stomachs of various birds to aid him in studying carefully the food of our common birds. The stomachs of ten thousand birds, preserved in alcohol, await opportunity for study in his laboratory. And who is Dr. Forbes? He was the founder of the Illinois State Laboratory of Natural History and became its first director, which position he still holds. A microscopic research upon the food of certain families of beetles led to an interest in economic entomology, and as State Entomologist, Dr. Forbes has worked continuously in that field for the past eight years. He instituted the natural history survey of Illinois. He has written many works of practical value to crop growers, and since 1884 has been professor of zoology and entomology in the Illinois Industrial University.

A Journalistic Fib.

As a sample of how some journals make statements that have absolutely no foundation on fact, we quote the following which was clipped from that religious journal, the Christian Union:

"A person in Arizona captured a butterfly which he sent to the Smithsonian. In a few days he received a cheque for \$1,500 with the request for him to make a careful search for other moths of the same kind. It was an individual of a fossil species supposed to be extinct, and great was the excitement of the scien-

tists at the discovery that one of the race had recently been alive. * * * * * It seems to have been a Rip Van Winkle among its kind, sleeping its long sleep unobserved at the root of a century old tree."

What a pure fabrication to appear in such a journal of the character of the Christian Union, yet how truthfully does it record the fact that they could not find another!

New Species of Mammals.

MICRODIPLODIPS MEGACEPHALUS.

Dwarf Kangaroo Rat.

Of the many new and interesting mammals that have been discovered in America during the last few years, this is one of the most remarkable. In external appearance it looks like a heavy, thick-set pocket mouse, with a hydrocephalic head and abnormally large, furry hind feet. Total length, about 150. The fur of the back and sides is long, soft and silky, as in *Hesperomys eremicus*. Color.—Upper parts, yellowish brown or clay color, finely mixed with black-tipped hairs and slightly tinged with olive; under parts white. Locality, Halleck and Reese River, Nevada.

EVOTOMYS GAPPERI BREVICAUDUS.

Dakota Red-backed Mouse.

Total length, 125. Similar to *E. gapperi*, but with larger ears and shorter tail. Color.—Dorsal area dull hazel, lined with black-tipped hairs; rest of upper parts pale bistre; under parts white. From the Black Hills of South Dakota.

The Cowbird.

THIS parasitical representative of the genus *Molothorus* is a common resident of this locality; indeed it is astonishing as to the number of eggs that can be found in a days collecting, and the comparatively small number of Cowbirds that can be seen.

The Cowbird is nearly eight inches long; the wings are four and one half inches in length. In color, the upper parts are of a lustrous, shining black; the head, neck, and under parts are light brown in the male. The female does not rival her mate in plumage, it being of a rusty-brown throughout.

Although this bird is exceedingly common, to some collectors it is a rare sight to see one. I collected over 100 of their eggs, and destroyed them, before I had seen my first Cowbird, yet I watched unceasingly for them.

I have found hundreds of their eggs and have never neglected a chance to destroy them, and all collectors should do the same towards exterminating this species of a bird parasite.

I have found their eggs in most all kinds of birds' nests, but most frequently in nests of the Cardinal Towhee, whose eggs are nearly the same as their own.

I have noted the Towhee sitting on nine eggs,—four of the parasite and five of its own,—and when their young hatched the Cowbirds were two days old and devoured all the food brought to the nest, leaving the young Towhees to starve to death.

So you see the Cowbirds rove about

stealthily, laying their eggs in the nests of innocent birds, during their absence from home, thus getting their eggs hatched and securing food and shelter for their young without any labor on their part, they having a continual holiday at the expense of other members of the feathered kingdom: Their eggs sometimes so closely resemble those in the nest which they occupy, that it is extremely difficult to distinguish between them, and often impossible, excepting by the minutest characteristic; and so slyly are the eggs deposited that I have yet to see my first sight of a Cowbird sitting on a nest.

I have found nests containing a single egg of the Cowbird; upon returning in a few days there would be complete sets of their eggs, while a few broken shells scattered around the nest told the sad tale; but the unsuspecting owners of the nests brooded the eggs of the Cowbirds, as though they thought they were their own. But I know of instances where the obnoxious eggs of the parasite have been thrown out of the nests by the parent birds, and have known this to happen when the Cowbirds intruded in the domicile of a Yellow-breasted Chat.

I have found eggs of the Cowbird in nests of the Cardinal, Towhee, Catbird, Wren, Blue-bird, Indigo Bunting, Prairie Horned Lark, Thrushes, etc., etc. The ground color of the Cowbird's eggs is a white or dirty white; the markings vary from brownish to yellowish; sometimes they are so thick as to almost hide the ground color. The eggs measure, on an average, .85x.62.

JAMES HILL.

Flowers of Western New York.

FARM AND HOME.

TO botanists and lovers of nature, New York state, in the profusion, variety and beauty of its native wild flowers, is a veritable Eden. Its many glens and moist, cool ravines afford shelter and nourishment to many plants whose native home is far northward; its sunny slopes and protecting copses hold in their embrace tender plants indigenous to a warmer soil. About the "sister lakes" in particular are many uncommon blossoms found. On the thickly wooded slopes southwest of Seneca lake, we have the fringed polygala,—commonly called Indian pink—the creamy solomon's seal, the graceful, yellowish bellwort, the adder's tongue with its curiously spotted leaves, that marvelously beautiful little bloom, the bishop's cap, and its no less fair sister, the false miterwort. Here and there a shrub of dogwood with showy white bloom attracts attention, and yonder on that sunny sand-bank we see a carpet of wild-phlox, varying from pink-purple to rose with a dark eye, and sometimes to nearly white.

In moist shade we find the mandrake, toothwort, and earlier, the delicate blooms of Claytonia or spring beauty. Among the earliest bloomers here we find saxifrage, arbutus, hepatica and the arrow-leaved violet; also marsh marigolds, wrongly called cowslips, the early meadow rue, the anemone and the rue-anemone, so often confounded.

Violets, myriads of them! There are the pale, cool, mauve blossoms of the long-spurred violet, there is the common blue violet deepening to the "blue, blue, as if the sky let fall a flower from its cerulean wall." The white violet with its cool, faint fragrance is found here, and two species of yellow violets—the downy yellow and the halberd-leaved with gold-colored bloom. Then there is the partridge berry, its dainty little bloom striving to excel the arbutus in beauty. Just now we have the beautiful blue lupine in full bloom, and its companion in contrast, the rhododendron, formerly called in Gray's manual, the azalea. Its shrubby stems, covered with scented rose-colored bloom, may be seen from afar. By the way, why not have this for our national flower? It grows in some variety all over our country and surely is beautiful and sweet enough for anyone. Why vote for the rose? Does it not already belong to England?

Last at present, but not by any means least, is the *Cypripedium pubescens*, also styled the lady's slipper, the moccasin flower, but more lovely still, our lady's shoe. Its golden yellow blossoms are found in these woods. Its sister, the red lady's slipper, is found in the swamp, but of the swamp I will tell you in another paper.—[Gabrielle M. Morris.

—o—

We wish to secure a botanical contributor from all sections of the country. We will give 20 labeled wild flower specimens for the best article received before December, 20, 1891.

Curious Things About Ants.

DOWN in the bottom of my garden last summer was a colony of ants which I carefully watched with the aid of a microscope, and it was surprising to observe the varieties of their pursuits. I have not only seen for myself all that I have read about them, but much more. The workers or neuter not only have their tasks of house-keeping, nursing the children, serving up dainty meals for their queens, going on expeditions for food, fighting fearful battles and returning with numbers of prisoners which they turn into slaves, but they have their times and places of amusements. I believe it is admitted by all entomologists that ants have power of speech, or means of communicating their ideas to one another, and if they can talk, why cannot they make music as well, not loud enough to reach the human ear, but perfectly distinguishable among themselves? There are about as many races of ants as of human beings and differing like them in color--the white, black, red, brown and yellow. The white ants or termites inhabit very warm countries, but differ somewhat in structure from our ants. They are so similar in habits, however, as to have acquired the name. Their hills, or houses are conical in shape, extending some distance above the ground and are hard as stone. The stone is manufactured by the termites from earth so thoroughly mixed with secretions from their own bodies as to be readily hardened by the sun. An

interesting and very beautiful ant in our country is the cow-killer ant, so called because of its formidable sting, which was once supposed to be long enough and poisonous enough to sting cattle to death. These ants are nearly as large as wasps. They wear garments of satiny black, striped horizontally with bars of brightest scarlet. Though I have often captured solitary ones, I have never run into one of their communities. A lady told me, however, that she had seen their hills or houses almost as large as bushel baskets. You can find them in almost any woods, but look out for their stings.-- MRS. A. E. MASKELL in the American Agriculturist.

INSECT NOTES

AND OTHER INTERESTING ITEMS.

—One hop raiser in Oregon estimates his loss from hop lice last season as not less than \$5,000.

—A lake of ink, a mountain of sulphur and two streams of lime water--milky white--have been discovered, all by one man, in lower California.

—"Insect Life" relates a curious instance of caterpillars and spiders migrating in winter, those insects being found traveling, as with a common purpose, upon the ice in January.

—The U. S. department of agriculture confirms the opinion that the locust which caused so much alarm in Colorado a few months ago, was not the destructive Rocky Mountain grasshopper, but a rare species not likely to become troublesome hereafter.

Our Question Box.

Open for all our readers. Questions and answers, pertaining to the subjects to which this magazine is devoted, solicited from all.

Hereafter all questions will be answered in the same number. In order to create an interest in this department, we make the following

GRAND OFFER!

To the first one who sends in a correct list of answers to all the following questions we will send FREE of cost one fine 7 inch star fish, one skates egg, one chinese coin, 100 foreign stamps, five fossils and ten shells. To the second, a pack of visiting or business cards.

All who compete, must be actual cash subscribers. If you are not a subscriber send 25 cents with your list of answers, for one years subscription to the EMPIRE STATE EXCHANGE.

1. Will any of your readers please state in your next issue what a "grilled" stamp or "grille" is? T. O. Y.
2. Are fern impressions found in rocks older than the Carboniferous age?
3. What is a cache?
4. What sort of case is best to keep coins and medals in?
5. Is oolitic marble a crystalized mineral?
6. What is the main difference in the germination of the seeds of the Indian corn and pea?
7. How many kinds of spiders are there in N. A. north of Mexico? R. M.
8. Which is the best field for collectors of shells:—California or Florida?

EXCHANGES.

This column is free to all, but subscribers will be given the preference. A limit of 25 words will be made, over that amount one cent a word will be charged.

Fossils and curiosities, for Indian relics. U. R. Perrine, Eden Valley, N. Y.

Stamps, birds eggs and curiosities, for U. S. stamps not in my collection Samuel H. Robbe, Belville, Wayne Co, Mich.

30 cent brown 1888, or 30 or 50 ct. postage due 1879, for each 40 varieties U.S. postage tamps not heavily cancelled Arthur C. Paddock, Nantucket, Mass.

Minerals, Petrifications, Fossils, Shells, Coins or Curios. for stamps. Also one fine cabinet for best offer in stamps. Max E. Jesse, 567 S. Presa St., Santonio, Tex.

Rare 1861 Confederate bills and perfect original newspapers—1734, 1738, 1746,—to exchange for 30 and 90 cent U. S. stamps.—1890 issue. J. G. Bingham, Mc Grawville, N. Y.

I make \$15.00 a day by giving exhibitions with the fifty tricks I will exchange for a second-hand printing press in good order with type. Press not smaller than 8X12 inches. Henry F. Heinrich, Dorchester, Illinois.

A Dukes Stamp Album, with stamps and a large number of Golden Hours, to exchange for best offer. Wanted, numbers of Exchangers Monthly and Great Divide, that I have not got. H. J. Wenzelberger, 2344 Bridge St., Frankford, Phila., Pa.

I will give one enormous buffalo tooth or two fine alligator teeth or 5 curiosities for any perfect arrowhead, 5 cent piece before 1839 or U. S. cent before 1834. Indian relics and rare U. S. stamps wanted. T. O. Young, North Scriba, Oswego Co., N. Y.



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A Monthly for COLLECTORS.

JAN., 1892. PRICE 5 C-s

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 AND THE OTHER NATURAL SCIENCES.
 To
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 AND EXCHANGES

Marine Bros., Publishers, Eden Valley, Erie County, N.Y.

— THE —

Empire State Exchange.

A MONTHLY FOR COLLECTORS.

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STAR FISH SEVEN Inches across for only Twenty-five cents. each.
 PERRINE BROTHERS, EDEN VALLEY, N. Y.

—THE—
EMPIRE STATE EXCHANGE.

A MONTHLY FOR COLLECTORS.

Vol. III.

EDEN VALLEY, N. Y., January, 1892.

No. 3.

New Year, with joy we welcome you,
Although you come with breath so cold;
We greet you with the warmest wishes,
And meet you as we did the old.

**Texas Fossils and Indian
Relics.**

DEAR readers, I will speak of fossils and Indian relics from Fredericksburg, Gillespie county, Texas. This is a county noted for those productions, and, while spending my summer vacation in Fredericksburg, I sought it my only opportunity to procure some very rare and desirable specimens, so a friend and myself started out one fine morning with this object in view.

We took an ambulance and the necessary articles for our day's collecting trip. When we reached Crose Hill we noticed that several farmers were laughing, and my friend said that it might be possible to find a few relics here, and, to our astonishment, we found about fifty arrows.

We went farther down 'till we reached a small creek, called "Sibeto" and here is where we found the most specimens. We could see that the entire bottom of the creek was covered with small arrows. We collected about three hundred little arrows at this place.

We then continued on our journey

'till we came to "Pablo Alto" where we gathered about five or six hundred small petrifications. Being well satisfied with our day's collecting trip, we took the homeward road, and, after a few hours of hard riding, we arrived at our destination.

MAX. E. JESSE.

Complete sets of our fractional currency were a short time ago worth twice their face value. If collectors will keep these sets, without doubt they will realize quite a little profit on them as we are assured that their values are steadily rising.

A writer in the "Quaker City Philatelist" says: "There is a vast difference between a 'Philatelist' and a 'stamp collector' as generally known. One is a scientist who gives research among stamps, the other is simply a gatherer of bits of paper.'"

Prof. Dyche, of the Kansas University, one of the finest taxidermists in America, is preparing a notable exhibit for the World's Fair, consisting of about 150 of the largest mammals in the United States, including buffalo, elk, moose, antelope, deer, mountain sheep and goats, wild cats, wolves, bear, etc., etc. The different species of each are represented, and almost all of the animals have already been secured.

Col. Lectors' Letter.

IN looking over an old copy of "Geology of Colorado Oil Deposits" which I obtained in the summer of '89, I found many interesting maps in it; interesting not only in themselves but applicable, to a great extent, to other parts of geology. This led me to wonder why so few things of this kind appear in the libraries of collectors only moderately advanced. To be sure there are to be found no end of these things in the library of the geological scholar but I have often noticed that the student loses a great deal of valuable knowledge simply by the lack of this kind of material.

From the report of a recent meeting of the Academy of Science in Philadelphia, it appears that Professor George A. Koenig has detected in an aerolite, which fell in Arizona, particles of diamonds. Although the commercial value of them is declared to be but trifling, yet the scientific value remains great, as Professor Koenig claims to be the first one to discover this fact. He exhibited specimens at this meeting that thoroughly convinced those present of the truth of the statement.

Have you ever thought how innumerable were the wonders of geology? We have hundreds upon hundreds of what I call curious wonders. Among these I class the balancing rock in Colorado. Under the edge of this rock, some time ago, I sat down and enjoyed the pleasant sensation of im-

agining it was even then falling over, but, as this had no effect on its bearings, after having enjoyed myself as long as I cared to, I got up and carried away with me a few red stones to remember the place by. I hurried away, leaving the scene for many other travelers, some of which are probably at this writing doing the same thing that I did.

When one takes up the study of geology and the other sciences in this way, and not in that cold calculating manner that so many do—when one takes up the study, not only to learn and experiment, but to enjoy and reflect, then, and only then, can he get that satisfaction out of it that some call the "love of the subject," that others call the "craze" but that which none can define.

One of the simplest receipts for polishing any kind of hard stone, such as agate, is this: Take one ounce of oxalic acid in the liquid form and soak two different pads of soft chamois skin with it. Let one of the pads dry and, after this is done, rub the stone as hard as you please, first on the wet one and then on the dry one. The polish will very soon appear.

More earthquakes have occurred during the last year than in any corresponding length of time in modern history.

"Minerals," a new geological magazine—published by the Goldthwaites, New York City,—has just appeared. Its contents are good and to many it is well worth the price—\$1 per year.

How to Mount Coins.

I DON'T doubt, but that many young coin collectors have often asked themselves the question, "How shall I mount my coins so that they will look neat and be displayed to good advantage." I will endeavor to tell, in this paper, several plans by which, with a small amount of money, ingenuity and patience, coins may be mounted in a very attractive manner. If you have a collection of from twenty-five to one hundred coins, they would look very nice in a revolving frame which is constructed in the following manner;—

Arrange your coins on a table or on a large piece of paper, in the manner in which you wish them to be mounted; then draw a line on the outside, leaving a margin of one inch all around. Secure some strips of dressed pine or red oak, two inches wide, and an inch thick, and make a stout frame which will fit outside of the line and leave a margin of one and one-fourth inches all around. Then make another frame of 1-inch strips, equally as stout, that will fit inside of the first frame, leaving a space of one-fourth inch between the two frames. At the top and bottom of the small frame, exactly in the center, bore a hole half way through, from the outside. This hole should be of the size of a ten-penny nail. At both ends of the large frame, in the center, bore two holes of the same size as the other, clear through. Cut two 10-penny nails in two so they will be exactly $2\frac{3}{4}$ inches long; put one of these through the

outside frame so it will extend into the hole in the inside frame. If you will now stand the frames up you can make the inside frame revolve.

We now have the frames, let us see about the coins. If you will nail four thin blocks, 2 inches long and about 3-10 of an inch wide, on the inside corners of the inside frame, the edges flush with the edge of the frame, you will have something for the glass to rest on. Secure two panes of glass that will just fit in the inside frame, and put one of them on the blocks; then cut a piece of cardboard, same size as glass, and put in the frame on the glass. Place the coins on the card board the same way as you had them on the table; with a sharp lead pencil, mark close around the edge of the coins; then take a very sharp pen-knife and cut very carefully holes for the coins. If you are careful, the coin will exactly fit in the holes; this done, place the coins in their respective places and put the second glass over them. The second glass should be fastened down very tight with blocks, as on the other side. If you put all the thick coins at the bottom, they will stay in place.

To make the frames stand upright nail brackets to the bottom of the outside frame; also tack a little piece of tin over the end of the lower nail so that the weight of the inside frame will not push it through. Paint or oil the frames and you have an ornament suitable for any room. Both sides of the coins can be examined by turning the inside frame. I will describe another method of mounting coins in the next number of this magazine.—[WM. M. RANDALL, Belleville, Michigan.

Hints for Stamp Collectors.

MANY of the terms used in philatelic papers are unknown to the majority of young stamp collectors. I will endeavor to explain some of them, and also give a few hints, which I trust, will be of benefit to them.

UNPERFORATED STAMPS.—In the first United States issues, the stamps were printed in sheets and cut apart with scissors; thus we find these stamps in various shapes.

PERFORATIONS.—There are a number of different kinds of perforations; the most common are like the perforation of our two-cent stamp; then there is the pin perforation which consists of very fine holes, and these usually do not tear straight; there is also the perforation consisting of little dashes cut in the paper.

SURCHARGED.—In some of the foreign countries if a stamp of a certain value is exhausted, as, for instance, a 2-cent, they take some other value, as a 3-cent, or one of which they have plenty, and print across it in bold letters, the words, 2 cents; then they use them 'till they receive a fresh lot of the exhausted stamps.

WATERMARKS.—If you will hold a sheet of good note paper up to the light, you will notice some name or trademark, or perhaps it will be a number of straight lines: this is the water-mark. All U. S. envelopes are plainly watermarked, but it takes quite an experienced eye to discern the water-mark in a postage stamp.

WOVE AND LAID PAPER.—If you

will ask your stationer for a sheet of wove and a sheet of laid paper and then hold them up to the light, you will see the difference between them.

GRILLED OR EMBOSSED.—Many of the U. S. stamps,—notably the issues of 1868, '9, '70, and '71,—have, usually in the center, a raised square or rectangle which looks somewhat like this diagram,— : : : It is done by a press, and : : : is not in a solid mass but in points.

To remove dirt, paper, etc., from stamps soak in luke warm water 'till everything is removed. Then place them between pieces of blotting paper with a weight on top; this will dry and press them. Never soak grilled stamps as it takes the "grill" all off of them. Some stamps are printed with poor ink—the Prussian for instance—hence the ink will run when soaked.

In mounting stamps always use hinges; never "stick em" in with mucilage. Never use thick hinges, for if you do, your album will bulge out before it is half filled. I would not take much stock in surcharged stamps until I thoroughly understood stamps as they are easily counterfeited.

It is true that a collection of foreign stamps is the most easily procured, but a complete collection will cost a sum that is not easily obtained by the average collector. I would rather spend my time and money on some special country, as there is some chance of getting a complete collection. Many collect only U. S. stamps this is a very good plan because you are not as likely to be imposed upon and U. S. stamps advance in price more rapidly than any. Many col-

lectors wish to get a collection without any cost; this cannot be done unless you steal them. And, above all things, I would never take a stamp from an approval sheet without paying for it; young collectors are inclined to do this. I happen to belong to a collecting bureau which makes a speciality of philatelic debts and I was surprised at the number of youthful collectors that we were compelled to advertise as frauds.—WM. M. RANDALL, Belleville, Mich.

Philately in Texas.

OUR twentieth meeting was held on Dec. 4, 1891. Besides the members, the following guests were present;—Maj. C. E. Dutton, Dr. J. B. Breeding, J. N. Fitzpatrick, J. F. Burns, H. H. Hart and C. E. Smith. Messers H. L. Ilgenfritz, Lake Charles, La., Phil. H. Dilg, Chicago, Ill., and A. J. Gillett, Indianapolis, Ind., were unanimously elected (the first named active, the last two passive) members. Messers Jesse and Rossy read articles on stamp collecting, and Mr. E. W. Heusinger lectured on postal and letter cards which he illustrated with his card collection of 900 varieties. Mr. Max. E. Jesse showed the members his collection of postage stamps; among the 4000 varieties are several uncatalogued errors. Maj. C. E. Dutton lectured on his 36 years experience in stamp collecting, and his first collection of 10,000 varieties which he sold in 1878 to a London dealer for £1,840,—nearly \$10,000.00. A lot of

philatelic books and journals were donated. After business of minor importance was transacted, the meeting adjourned at 11:30, P. M. Proceedings of next meeting in next number. MAX. E. JESSE, San Antonio, Texas.

New Issues of Stamps.

AUSTRIA.—29kr., olive, and 24kr., light blue, current type. BERMUDA.—The ½d. is now dark green. BORNEO.—10c current has been surcharged "6 cent" in black, in two lines. HAWAII.—A new 2c stamp has just been issued—effigy of Queen Liliuokalani; color purple. INDIA.—Design of 6 annas is to be changed. JHIND.—Entire set is surcharged JHIND, most likely an error. MADAGASCAR.—The 1fr. is black on yellow, the 5frs. violet on white; both have a red network. MAURITUS.—The 38c has been surcharged "Two Cents" in capital letters across the lower part of the stamp. PUERTO RICO.—The 5 cent has a new shade of green. PORTUGAL.—A new series is being prepared—effigy of King Carlos. SURINAM.—A 10 cent unpaid letter stamp of current type; bright lilac.

"All About Stamps" is a two column article which lately appeared in the Buffalo, N. Y., "Sunday News." 5c.

It is rumored that a philatelic and numismatic journal will soon be issued from San Antonio, Texas, by Dr. J. B. Breeding; also another by Charles J. Rossy, Jr. We wish them success.

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Ulysses R. Perrine, - - - Editor.

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— O —
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Vol. III, January, 1892, No. 3.

Entered at the P. O., Eden Valley, N. Y., as second class mail matter.

—In the article entitled "The Cowbird Again," in this number, Mr. Letson Balliet "hits the nail on the head" in good style. With due respect for Mr. Hills' views on the subject, we must say that we think Mr. Balliet is right. It would be no less pitiable for the English to destroy their cuckoo as for the Americans to exterminate the cowbird; both have the same nesting habits, and, if either, the English cuckoo is the more harmful as it lays the largest egg.

Our many thanks are herewith extended to Mr. J. A. Swingley for a copy of the "Vicksburg Daily Citizen" of July 4, 1863, printed on wall paper; it is unique and should be found in every collection of curios. (See notice in the exchange column.)

—As we have announced in another column, we intend to issue a new edition of the "Collector's Recipe Book." We would like to have collectors send in new notes and recipes for the same and we will give them due credit.

—At the Chicago flower show the golden rod was selected as the national flower. This fully concurs with our opinions. The golden rod is no more a weed than is the rose—when wild—the kalmia, and other flowers suggested for our national floral emblem. Let us have the golden rod which well depicts the motto: "Gold to friends, the rod to foes."

—The "Oologist" of Albion, N. Y., is agitating the expediency of having a general association of oologists and ornithologists. That's right, and there should be branch or local societies and an official organ, and the members ought to agree not to take over a certain number of eggs from nests of each species of bird. Organize should be the ornithologists' watchword.

—The "Canadian Philatelist" advocates an united advance in the subscription price of philatelic magazines and that publishers of first-class philatelic magazines shall form a "Philatelic Press Association." This is a prime necessity and we hope there will soon be an association started.

--Will someone of our readers who are acquainted with the habits of the star-fish write, and mail to us, an article on that interesting animal?

--The annual graduating exercises of Caton's National Business College were held at Music Hall, Buffalo, N. Y., Monday evening, Jan., 4. An elaborate program was presented, consisting of music, elocution, addresses, etc. It was a very successful affair.

--If our readers find out that any of our advertisers do not deal squarely they should inform us of the case at once. Although we are ever on the alert for irresponsible advertisers, still they may get their notices in sometimes. It is really quite a loss, financially, to the publishers to block out pages and pages of advertising, but we are bound that the EMPIRE STATE EXCHANGE shall be a first-class, clean magazine in every respect.

--"Let improvement shine in every line" is our motto. The EMPIRE STATE EXCHANGE for '92 will be a wonderful magazine for collectors. We have just secured the following contributors: (All noted collectors in their special lines of research.) J. Henry Thomas, philatelist; Edward Fuller, ornithologist; Wm. M. Randall, and T. O. Young, numismatists; Samuel H. Wood, geologist; Letson Balliet, naturalist; Willard N. Clute, botanist. Mr. Young has "the largest collection of coins in northern New York;" his articles on the "Standard Silver Dollar" and the "Copper Cents of the U. S.," together with Mr. Clute's article on the "Cornells," and several other communications were crowded out of this number.

--We have a host of exchanges. To review them all would take several pages. To review what we think are our leading contemporaries would cause the rest to feel slighted; but we intend to add a page or two and have a general review sometime in the near future. One of the brightest of our many new exchanges is the "Spy-glass" from Kansas. The "Boys' Enterprise" is a new exchange. It hails from Ohio.

--No collector should miss the offer we made in the Christmas number, viz: As a special inducement, to all who remit \$1.00 for four subscriptions to this magazine, we will give an years subscription, a large, 7-in. star-fish and a pack of business or name cards free!

In looking over the present number of the EMPIRE STATE EXCHANGE, no one will gainsay but what our magazine is booming. The hearty reception given it by collectors together with the cordial patronage of the advertising world, puts the E. S. E. upon a solid basis and insures for its future a successful career. Every day brings flattering congratulations from all parts of America of the improved appearance of the E. S. E., and subscriptions are steadily pouring in. We do not see how any collector can afford to do without a magazine, such as is the E. S. E., by which they can exchange specimens, ideas, and keep posted on current events relating to their field of work, or through which they can secure bargain offered by the best dealers. And then, too, the subscription price is so low that any one can subscribe without fear of bankruptcy!

A Remarkable Deposit.

AT a point five five miles west of Johnson City and four miles north of Jonesboro, where a leading public road passes through the Indian Ridge, is one of the most singular mineral deposits of the State. Fine variegated marble; what appears to be good roofing slate; zinc ore, and what is estimated as magnetic iron, and probably a good mixture of silver, are found clustered together in a belt of veins not more than 200 feet wide. It is a very low or deep cut through the ridge; and from what I have noticed of the wearing away of the soil by the waters, from a shed of some forty acres, that pour through this cut, I presume that these veins were fully covered with earth fifty years ago. Now they stand out several feet above the surface. The exposures are at the southwestern base of the ridge. For 200 feet east of the deposits are intermediate vertical stratas of rotten slate and very hard limestone. A small stream of very pure water breaks out east of, and close by the mineral deposits. Let me describe them in the order of location.

The first is what looks to be the roofing slate. It sets vertical and has an exposed width of some forty feet.

The second is a vein of marble and granite, with a width of fifteen feet.

The third is a vein of heavy, strong, black rock in which is mingled bright and well defined crystals, with a width of about 100 feet.

The fourth, a vein of variegated marble, with a width of some sixty

feet, whilst the zinc ore is exposed up the ridge, overlying the iron formation.

The large vein has very much the color and weight of silver ore, but is believed here to be magnetic iron. Its weight is about that of cast iron, and has almost as much strength. The road workers, after long and tedious drilling, find their heavy blasts to shoot out as charges from a cannon. One piece of the rock was placed in the hottest part of a large lime kiln. It was rendered soft by the intense heat and twisted about as a piece of iron of similar size would have been. These veins seem to run about from northeast to southwest. I saw what I believe to be the same slate deposit cropping out at the Watauga River, five miles northeast.

The mineral above described is about four miles south of the celebrated "Boone tree," an old and noble looking beech, almost covered with moss, and bearing the legend carved in its bark, "D. Boone Child a Bar 1769."—*Chattanooga Weekly Times.*

—A large vein of meerschaum has been discovered near the alum beds of Gila river, N. M.

—Among the gems in the collection of the late Wm. H. Post, of New York, was a diamond of a purple cast.

—Dr. Genth, of Philadelphia, claims to own a quartz pseudomorph after apophyllite, which was found at Paterson, N. J.

—The sapphire yielding gravels near Helena Mont., have begun to be extensively worked; many fine stones of a pale blue tint have been found.

The Cowbird Again.

I noticed in the Christmas number of the EMPIRE STATE EXCHANGE an article by Mr. James Hill entitled "The Cowbird." Now, I wish to ask him or anybody, one question, and, assuming that he gives a satisfactory answer, I wish to follow it with minor questions to be answered by those who can.

Why exterminate "The Cowbird?" Simply because it is a parasite? No! But because it is too common? Does it derive its nourishment to the detriment of its hosts? If the parasite deposits its eggs in the nest of another bird, does it hurt the nest? Does it make the bird more work, except in providing food? "No" will surely be the answer to the last two questions; the nest is large enough and the bird has to sit there anyway. Now Mr. H. makes one point when he says that "the cowbirds are two days old and eat up all the food brought to the nest." Cannot and does not the parent bird provide enough for all? Therefore that argument must be thrown out.

Now then, do the cowbirds ever remove the eggs of the host to make room for their own? I say they do some times, but not often, and to my observation only from the nests of very common birds. A few eggs of the blue bird thus destroyed does not matter half as much as the enormous amount that are annually collected by "egg cranks." Because the bird is common is no reason for their extermination. Are not the robins, blue

jays, etc., common too?

How often have you seen the following quotation,— "Does not the world owe every man a living? And you may put down the author as a shiftless, worthless fellow. Beggars are believers of that rule, and are not they generally worthless? Now, if you should go 'round to their living room and kill all their children, how quick you would be hung or electrocuted, even though you knew the second commandment,— * * * The iniquities of the father shall be visited unto the third and fourth generations. * * *

Legally, that commandment wouldn't be an excuse for "the slaughter of the innocents."

The cowbird evidently thinks that the world owes it a living, Set it down also, as you did with man, is not the wholesale "slaughter of the innocents" cruel.

However, brother Hill, if you insist on exterminating the cow bird, you had better not destroy the eggs for the time will come after you have exterminated it, when their eggs will be worth \$200.00 instead of two cents apiece. If you had saved all you have broken, and all you can collect until you kill all of them, you could retire from the natural history business.

We don't want our native birds to be exterminated. The war now being waged against the English sparrow is of a different import. Remember this, that if you kill off the English sparrow in the United States and Canada, all the specimens you want can be obtained from Europe, and should it be desirable, America could be re-stocked on short notice, but kill off the cowbird and it is gone forever.

LETSON BALLEET, Des Moines, Iowa.

A Scientific Supposition.

THE following "crumb of science," which was found in a back number of the "Cornhill Magazine" does not coincide with our ideas on the subject: "About the beginning of the tertiary period, just after the chalk was all deposited, and just before the comparatively modern clays and sandstones of the London basin began to be laid down, an arm of the sea broke up the connection which once subsisted between Australia and the rest of the world, probably by a land bridge, via Java, Sumatra, the Malay Peninsula, and Asia generally. 'But how do you know,' asks the candid enquirer, 'that such a connection ever existed at all?' Simply thus, because there are large land mammals in Australia. Now, large land mammals do not swim across a broad ocean. There are none in New Zealand, none in the Azores, none in Teneriffe—none, in short, in any oceanic island which never at any time formed part of a great continent. How could there be, indeed? The mammals must necessarily have got there from somewhere, and whenever we find islands like Britain, or Japan, or Newfoundland, or Sicily, possessing large and abundant indigenous quadrupeds of the same general type as adjacent continents, we see at once that the island must formerly have been a mere peninsula, like Italy, or Nova Scotia at the present day. The very fact that Australia encloses a large group of biggish quadrupeds, whose congeners once inhabited Europe and America,

suffices in itself to prove beyond question that uninterrupted land communication must once have existed between Australia and those distant continents."

The scientific proof, demonstrated above, that Australia was once connected with "the rest of the world" is somewhat overthrown by the following questions: Are not the animals of Australia, for the most part, entirely different from those inhabiting other parts of the world, or of fossil species? Might not the Creator have deemed it proper to have in Australia a distinct fauna?

—o—

The Cornell Collection.

ONE of the finest collections of zoological specimens in the Empire State, is the one in Cornell University. Among others may be found the following: 3,700 examples of about 2,500 species of entire animals in alcohol, nearly half of the specimens being fishes collected in Brazil by the late professor C. F. Hartt; the remainder include series of named fishes from the Smithsonian Institution and the Museum of Comparative Zoology. Also, about 2,800 anatomical preparations, including mounted skeletons of man, gorilla, lion, panther, camel, manatee, sloth, kangaroo, apteryx, amia and draco; over one thousand preparations of the brain; large series of dissections of the lamprey, necturus and cat; embryos of many animals; about 1,000 microscopical specimens and more than 1,100 mounted skins.

Notes and News.

NYACK, N. Y., Dec. 7.—A strange sight was witnessed along the lower Hudson river valley yesterday afternoon. Thousands of birds were seen flying in a northerly direction. The strange phenomenon cannot be accounted for, as birds fly to the south at this season of the year. It is thought the birds were robins but never before have they been known to come North at this season.

PHILA., Pa., Dec. 15.—While excavating for the Harlem canal some laborers found a mastodon tusk. The specimen was sent to the Museum of Natural History. The curator of the geological department paid a visit to the site where it was found in order to study its geological formation.


NEW YORK CITY, Dec. 24, 1891—An immense tusk of a mammoth has been taken out of the peat at King's bridge by one of the officers in charge of the ship canal in process of construction at that place. The tusk was discovered at a depth of twenty feet below the level of the sea. It was at once removed to the Natural History Museum and boiled in a preservative solution in order to arrest the progress of decay. This find is of importance, and coming so soon after the discovery of Indian relics at Inwood, it makes it seem as if the island of Manhattan was not so bad a hunting ground for the scientist after all.

The Tuscarora Indian reservation, N. Y., is being overrun with garter snakes and thousands of the reptiles have been killed.

The party which, under the direction of Chief Putnam of the department of Ethnology of the Columbian Exposition has been making excavations of the mounds in Ohio for three months or more, met with rare success near Chillicothe, in making one of the richest finds of the century in the way of prehistoric remains. While at work on a mound 500 feet long, 200 feet wide and 28 feet high, the excavators found near the center of the mound, at a depth of 14 feet, the massive skeleton of a man encased in copper armor. The head was covered by an oval-shaped copper cap; the jaws had copper moldings; the arms were dressed in copper, while copper plates covered the chest and stomach, and on each side of the head, on protruding sticks, were wooden antlers ornamented with copper. The mouth was stuffed with genuine pearls of immense size, but much decayed. Around the neck was a necklace of bears' teeth, set with pearls. At the side of this skeleton was a female skeleton, the two being supposed to be those of man and wife. It is estimated that the bodies were buried fully 600 years ago. The excavators believe they have at last found the king of the mound builders.

Our first gold eagle was coined in 1795 and weighed 270 grains and 22 carats. Around the edge of it are fifteen six-pointed stars.

EXCHANGES.

 This column is free to subscribers. To others 25c per 30 words; over that amount 1c per word. No notices inserted soliciting cash purchasers.

Would like to exchange a good book book strap [with hand e.] for 100 mixed foreign stamps. G. E. Snyder, Rogers, Park, Ill.

Have some good eggs in sets, with full data to exchange for same, or any thing I can use. E. B. Peck, Clifton Springs, N. Y.

6 curiosities for every perfect arrow-head, 5 Naturalist papers for every nice marine curio sent me. R.R. Vogt, 35 Granger St., Cleveland, Ohio.

1 mounted White Throated Sparrow and one Chicago Air rifle for old coins Confederate bills, etc. Address with stamp, S. O. Bush, Milton, Vt.

I will give 15 cents worth from my sheets for any 90, 30, 15, 12 or 50 cent unpaid sent me. Samples of stamp papers wanted. T. O. Young, North Scriba, N. Y.

I will exchange sewing silk and thread, at wholesale prices for coins, Indian or other relics. Correspondence solicited. Horace Eaton, Chaplin, Conn.

To exchange, - Album of "Heroes of the Civil War," and "First Steps in Scientific Knowledge" for Oologists instruments, singles with data, etc. Herbert T. Green, 100 Valley Road, Montclair, N. J.

Hedge Hog Hide bristling with hundreds of quills, in fine condition, well cured, for Flobert rifle or anything in the curio line. Also Confederate paper printed on wall paper for curio's. J. A. Swingley, Aberdeen, Md.

Cretaceous and Eocene fossils of Eastern Montana, minerals, agates, shells and curiosities for job printing, fur over coat or robe or Kodak camera. Century magazine for past three years pair heavy woolen blankets. Homer Snyer, Mingsville, Mont.

Cabinets made to order for first class specimens until the collecting season of 1892 opens. Botany specimens of this locality for others collecting to order in 1892 especially. Letson Balliet, Des Moines, Iowa.

Our Question Box.

Open for all our readers. Questions and answers solicited from all.

Answers to questions asked in December number are as follows. -

1. A grill is a number of minute indentations on the back of stamps made by a steel die divided into very fine points; for example see the stamps of Peru and U. S. 1869 issue.

2. Fern impressions are found in rocks older than the Carboniferous Age.

3. A cache was a hole made in the ground by the Aborigines of N. A. in which they deposited supplies of food, arrowheads, etc. and covered them up to be dug up in case of war.

4. The best case to keep coins and medals in is the one described on p. 27.

5. Goolite marble is a crystallized mineral.

6. The main difference in the germination of the seeds of the Indian corn and pea is that in the corn the seed remains in the ground, and the plumule rises alone while in the pea the seed arises with the plumule.

7. There are about 1,000 species of spiders in N. A. north of Mexico.

8. Florida is claimed to be the best field for shell collectors.

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SPECIAL OFFER! To all who send us 20 unused 2c. stamps, before **Feb. 1st**, we will send the **E. S. E.** one year, all back numbers, and their choice of any premium on our list, post free.

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O I C U R behind the times, because you have not got your office stationary printed. Consult the following list and see if there is'nt something you need.

We will print and mail free of charge any of the following for \$5.00 per 2,000, \$3.00 per 1,000, \$1.75 per 500, 95 cts. per 250, 50 cts. per 100.

Note Heads, Packet Note Heads, Letter Heads.

Statements, Envelopes, 1-4 Bill Heads, 1-12 Bill Heads, Business Cards, Circulars 6x9, Etc.

YOUR NAME neatly printed on 1 doz. gilt edge, hidden name, or plain cards for only 25 cents.

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Geological Specimen Blanks like the above 25c per 100 post-paid; they are printed on good quality of paper and are well worth the price.

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In order to advertise our house throughout the country we have decided to send a certain quantity of musical goods to our friends at **GREATLY REDUCED PRICES.**

Hoping to secure all your future orders in this line.

We guarantee each and every article sent to be exactly as represented or we will refund your money.

On orders over \$5.00 we will send any goods C. O. D., provided 50% or $\frac{1}{2}$ cash accompanies the letter. We refer to R. G. Dunn & Co., or any responsible house in this City.

\$4.50 will buy a complete Violin outfit as follows. Violin Stradivarius model, reddish brown color, highly finished, with Brazilwood bow, ebony frog, pearl inlaid, two sets of fine strings, rosin, violin case and instruction book. Usually sold for \$10.00.

\$4.95 will buy a complete Guitar outfit.

\$4.60 will buy a complete Banjo outfit.

\$1.75 will buy a 6 keyed Piccolo and outfit.

\$6.00 will buy an elegant Mandolin outfit.

\$4.00 will buy an elegant Accordeon outfit.

\$10.00 will buy a fine B6 Cornet and outfit.

\$12.00 will buy a fine Clarinet & key & outfit.

\$7.00 will buy a prussian model, snare drum, with knee rest, music rack, sling, sticks, and case.

\$8.00 will buy a fine Brass drum with all the trimmings complete.

50c. for a U S. army fife any key.

50c. for $\frac{1}{2}$ doze. Richter Harmonicas.

\$5.00 for a fine music box, three tunes.

\$4.00 for a fine Concertina.

When we say outfit we mean everything that goes with the instrument. Can anything be fairer?

A book of 48 pieces arranged for 1st violin, 75c. each. Also published for 2nd violin, Base Clarinet, 1st Cornet, 2nd Cornet, Flute, Viola, Trombone & clef. and bass clef. Also piano accompaniment which is \$1.50.

Acme band book of 24 pieces, 20c. each or \$2.50 per set of 20 instruments.

Call book of quadrills and fancy dances, 25 cts.

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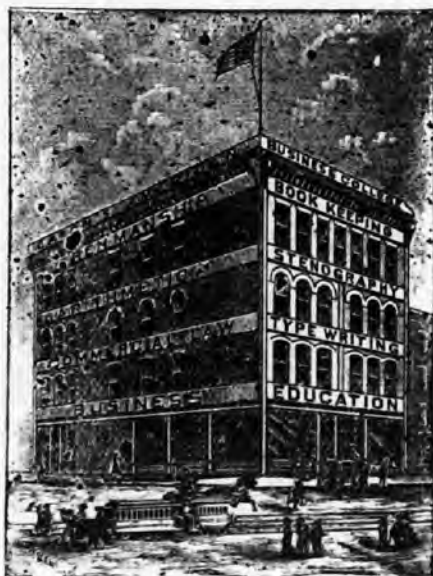
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FEB., 1892. PRICE 5 Cts

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To
PHILATELY

AND EXCHANGES

Errine Bro's, Publishers, Eden Valley, Erie County, N.Y.

THE

Empire State Exchange.

A MONTHLY FOR COLLECTORS.

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EMPIRE STATE EXCHANGE.

A MONTHLY FOR COLLECTORS.

Vol. III.

EDEN VALLEY, N. Y., February, 1892.

No. 1.

"Softly the dark-green hemlocks whisper, high
 Above, the spires of yellowing larches slow,
 Where the woopecker and home-loving crow
 And jay and nut-hatch winter's threat defy."

Chapter of Canadian Archaeology.

Scarboro township of the county of York, Ontario, is situated a very interesting Indian village site. Over a space of 30x50 feet the remains of the encampment are scattered around, and several collections have been enriched by what was once the goods and chattels of some long forgotten brave. Among the specimens found there, the most common are clay pots in a more or less fragmentary condition. These often show very peculiar markings; one that we shows the imprint of the thumb of some old squaw whose handiwork has long survived herself. The ancient modes used in the ornamentation of this prehistoric earthenware is an interesting branch of study. One way of marking was by twisting several strands of cord together and rolling the coil on the soft clay. By other a series of little lumps were placed on the outside, not, as we might expect, by putting them on, but by rolling them out from the inside with

a stick. One specimen I have has a very thin coat of white paint on the outside and many have a coating of black ashes within.

In excavating the kitchen heap at the village many articles were unearthed which gave increased interest as giving us an idea of savage modes of life. Among the ashes and char coal were found fish bones, snail shells, and the bones of several small animals. But especially were there the bones of deer and beavers, animals which are now extinct in this part of the country.

Taking into account the harder stone implements, the ancient dwellers of this hamlet were not very skilled workmen, as their weapons were almost always of a very rough nature, although those made of soft stone or bone were a good deal better.

A few yards in front of the camp was an ossuary which was discovered some years ago in setting up a fence. Several complete skulls were found, but unfortunately they were set upon the posts till destroyed, and a few broken bones were all that I could procure. Another interesting detail was the place from which the clay used in the fabrication of the earthenware was procured. A little path led to this from the central wigwam, but both, like their dusky owners, have passed away forever.—W. H. McNairn, Toronto, Can.

Philately in Texas.

OUR twenty-first meeting was held on Feb. 5, 1892. Present,—Major C. E. Dutton, Edw. W. Heusinger, Chas. H. Huberich, Max E. Jesse, Chas. J. Rossy, Jr., F. Bosshardt, Albert Steves, W. Rummell, Dr. J. B. Breeding, Albert Gabriel, F. Hensel, J. N. Fitzpatrick., C. C. Calsen, and J. Russell. Eight applications were read and five were elected members. Over eight will be elected in one month from date if no objections are received. Messers Jesse, Huberich, and Heusinger read articles on stamp collecting. Mr. E. W. Heusinger, and Dr. J. B. Breeding lectured on postal letter-cards, which they illustrated by their collections of about 1,300 varieties each. Mr. Chas. H. Huberich lectured on U. S. proofs and revenues which he illustrated with his collection; he has the finest U. S. collection in San Antonio. The following donaters were each given a vote of thanks: Mr. Max. E. Jesse, about 50 philatelic books; C. J. Rossy, Jr., a lot of rare postage stamps; F. Bosshardt, a lot of counterfeits; Mr. A. Lohmeyer, a lot of very rare postal cards and about 20 philatelic books. It was decided that the "Coin and Stamp" shall be the official organ of the "A. C. P. S." After business of minor importance the meeting was adjourned at 11.30 P. M.

Texas Notes.

Mr. Max. E. Jesse sold his entire collection of 4,000 varieties to Mr. Wal-

ter Rummell for \$80.00. Both are active members of the A. C. P. S.

Mr. Chas. J. Rossy, Jr., says his philatelic publication will not be out before May, 1892. Hurry up Charlie.

Mr. F. Hensel, a member of the A. C. P. S. recently purchased from a New Braunfels, Tex., collector a stamp collection for the mere sum of \$5.00, in which were the two rare Goliao, Tex., locals, catalogued at over two hundred dollars.

The correspondent who contributed that article about the progress of the "Philatelic Association" says that any one of good standing and who speaks and writes the English language is invited to join the Galveston Philatelic Association. Not so with the Alamo City Philatelic Society, for in many instances there are philatelists who are in good standing and who speak and write the English language and yet are merely boys and therefore the Alamo City Philatelic Society has adopted a new rule, viz:—all applicants must be over 18 years of age. We mean, strictly, business.

MAX. E. JESSE.

Among our many and varied philatelic exchanges but few equal in the general makeup (typographically and editorially) of the "Philatelic Era" of Portland, Me.

We would like to secure the services of some wide-awake philatelist to furnish us with a good article every month.

Col. Lectors' Letter.

The World's Fair Archæological committee have been for some time in Ohio and excavating near Chillicothe. They recently made the richest find known of in that vicinity. It was a collection of copper ornaments and utensils consisting of one hundred and twenty pieces wrought into all manner of intricate and beautiful forms.

Among them were found ear-rings, bracelets and anklets. The decoration is the Peruvian style and proves the Mound Builders to be related, more or less closely, to the Aztecs. Mr. Moorehead valued the collection at \$3,000.

Happening into a jeweler's store the other day, the jeweler asked in the conversation that ensued—"Do you know that pearls get sick?" I replied that I did not and he went on: "They do, and, like other things and people, need a change of climate or they will crumble. A case lately where a lady came into our store is very curious. She displayed a large assortment of pearls that were losing their lustre. 'These pearls are sick' I said 'and need a change of climate.' She left them and we sent them away to our western branch. In a month they were returned as bright as ever."

There are many numismatists who know not the origin of our dollar though they could tell the origin of almost any coin in some unknown south sea island. This plan is not far-sighted policy, for, on being caught up by a simple question like this, as I was, it is quite embarrassing. I looked it up and found it came from the Bohemian

"thaler" to the Danish "daler," and from there to our "dollar."

While studying minerals mainly as a class it is a change once in a while to find a mineral and a curiosity combined; such is the emerald in the cathedral at Genoa. It is a vase with a diameter of twelve and a quarter inches and five and one-half inches high. Being cut from one emerald it is presumable that the original was quite large. Aside from this fact many claim [and with good reason] that it was one of the gifts made by the Queen of Sheba to Solomon.

Speaking of many not knowing the particulars of things collected or in common use brings to mind many curious instances where well informed persons have been surprised and have surprised others with their ignorance in regard to simple things around them.

Not long ago I was spending the evening with a collector very well posted, especially on stamps. I said that I supposed since he knew the name of the bust: on these stamps [in speaking of some we were looking at,] he could of course tell me the name of the bust on the United States one cent carrier pink. After thinking for some time he said "Well! I ought to know but I dont!" and turning over to the United States' stamps he found it and even then could not tell who the picture represented. Can you?

The oologists collecting season is again at hand. If you are in need of anything to aid your collecting write to Chas. K. Reed, Worcester, Mass.

Brief History of the Standard Silver Dollar.

THE standard silver dollar of the United States was authorized to be coined by an act of Congress April 2, 1792. Its weight was 416 grains of standard silver and its fineness was 892.4 which was equivalent to $371\frac{1}{4}$ grains of fine silver with $44\frac{3}{4}$ grains alloy of pure copper.

The weight of the standard silver dollar was changed by an act of Congress, January 18, 1837, to 412 grains, and its fineness was changed to 900, preserving the same amount of pure silver, that is $371\frac{1}{4}$ grains, with one tenth alloy. By an act of Congress, February 12, 1873, the coinage of the standard dollar was discontinued.

The total amount coined during the period, from 1792 to 1873, was the vast amount of \$8,045,838. On February 28, 1878, Congress passed an act reviving the coinage of the standard silver dollar and requiring two million dollars per month to be coined and also an issue that it be received as legal-tender for all debts, public and private. The total amount coined from February 28, 1878 to November 1, 1882 was 8128,329,880.

THOMAS O. YOUNG, North Scriba, N. Y.

Copper Cents of the United States.

THE history of the copper cent of the United States begins with the year 1793, when Congress passed

an act authorizing the one-hundredth of a dollar to be coined. During that year five varieties were coined, the first being in greatest demand and commanding the high price of from five to twelve dollars according to the condition of the coin.

In 1795 the copper cent was coined with a lettered edge, similar to the half dollar of 1832. The United States continued to coin the large copper cents until 1857, having issues for each year from 1793 to 1857, except the year 1815 when none were coined, nearly every year having two or more varieties, which makes it difficult to procure a full set of all the varieties.

Not long since I called on a brother collector, who made a speciality of the U. S. copper cents. He had all the varieties ever issued by the U. S. except three, and nearly every one in his collection was a proof.

In 1856 the United States began to coin the small nickel cent with the flying eagle on one side, and continued to coin these until 1859 when the Indian head took the place of the eagle.

Another change was made in 1864 when the coin was changed to copper or bronze, which is the same as the small copper or bronze cent of the present time; no change having since been made.

The United States cent now weighs 48 grains and is composed of 95% pure copper and 5% alloy which is made up of tin and zinc.

During the Civil War it was very difficult to find cents enough to make change on account of the fractional currency being in circulation to such a great extent; therefore many of the Northern States issued small cents with emblems of the Great Rebellion on them which have since been given the name of war cents.— T. O. Y., North Scriba, N. Y.

Mounting Coins.

ANOTHER very nice way to arrange coins is to mount them on cards. I had 154 mounted in this way and in a show case at a museum once, and many were the flattering remarks made to me about them. They were mounted in the following manner:

I had some cards printed 2x3 inches, my name at the top, then a space for the coin and then the following words: "Date, Country, Denomination and Composition," with spaces after them to fill in. I fastened the coins to the card by a little sealing wax and then filled in the spaces at the bottom as they should be. Almost any job printer will print these cards for a cent apiece provided you take 25 or more.

Perhaps many collectors will get an idea from this article and make better the methods I employed. And I trust this will be of value to a few at least, and perhaps at some future time I will tell you how to mount Indian relics, etc.

WM. M. RANDALL, Belleville, Mich.

Shells from Corpus Christi, Texas.

IT was decided one day that we, the undersigned, take a trip and stay for several days at Corpus Christi, Texas, to collect all the rare species of shells to be found at that place. Signed: Mr Edw. W. Heusinger, Max. E. Jesse, Chas. H. Huberich and Chas. J. Rossy, Jr.

We started out on a Monday eve-

ning; the train for Corpus Christi leaves San Antonio, Texas, at 1.30 P. M. On Tuesday morning was the first collecting we did; some went to the beach and to our astonishment we found that the entire ground, as far as we could see, was covered with small and large shells. We immediately fell to work gathering all we could. The following is a brief list of what we found:

Archæa, sps., about 200 specimens; Pecten, sps., 100; Conus, sps., 300; Cardium, sps., 60; Protocardia, sps., 150; Tritonium, sps., a barrel full; Clausila, sps., 600; Helix, sps., 500; Cerithium, about 600; Cerithidea, sps., 400; Chitena, sps. 100; Bulla, sps., 50; Venus, sps., 100; Rissoua, sps., 500; Astrea, sps., a large lot; Turitella, 150 specimens.

We found several unknown species of shells, which we handed to Prof. Germy to identify. The next trip that we make, Prof. Germy will go along to collect some rare species for his museum. He has one of the largest museums in Texas.— MAX. E. JESSE

In the biological reconnaissance of Dr. C. Hart Merriam and others, in Idaho, during the summer of 1890, but few different kinds of shells were found. The following species only were collected:

Helix hemphilli, Lost River Mountains; Limnæa lepida, Salmon River near Challis; Limnæa palustris, and Limnæa adelinae, Salmon River near Challis; Planorbis trivolvis, Saw Tooth or Alturas Lake; Physa heterostropha, Birch Creek; Fluminicola nuttalliani, Salmon River and warm springs near Shoshone Falls.

— THE —

— Empire State Exchange. —

A MONTHLY FOR COLLECTORS.

Ulysses R. Perrine, - - - Editor.

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PUBLISHED BY

PERRINE BROTHERS,

EDEN VALLEY, N. Y.

Vol. III. February, 1892. No. 4.

Entered at the P. O., Eden Valley, N. Y., as second class mail matter.

—Be sure to read the advertisement on the third page of cover headed "A 12-inch star-fish tree!"

—The oologists' collecting season has again arrived; for there are several species of birds which nest in February. We would like to know who of our large circle of readers will be the first to secure a specimen for their cabinet this season.

—At last the P. O. Dept. has assigned a special mail-bag for our use in mailing the EMPIRE STATE EXCHANGE.

—We will give to the first one who sends in two subscribers this month, a beautiful set of four eggs and nest of the grass finch with complete data. This does not debar the starfish prem.

—Well, the natural-history collectors season of rest and study is again about closed and the season of active work is near at hand; already, we fancy, some enterprising oologist is on the watch for *Bubo Virginianus* and other early nesters; some botanist on the alert for the first blooms of *Epigea repens*!

—We regret to inform our readers of the discontinuance of the "Spy Glass," a monthly for all collectors, which was published by Roy F. Greene. It seems strange that so good a magazine should have such a brief existence. In its place Mr. Greene will publish the "Spy Glass," a strictly philatelic magazine. We wish him much success in his new enterprise.

—We have just received from A. B. Merrill, Everett, Mass., a copy of his "Alphabetical List of Advertised Philatelic Frauds." It is quite a novelty in its line; every alternate page is blank, with rulings, so that one may enter the names of any number of frauds that he may know of, and that are not published in the list. It is well worth the price.—25 cents.

—The "Country Youth" says: "One has no occasion to look around to see what he shall collect. The first impulse is to try for everything, but a mistake would be made if this were carried out. A young collector

should avoid a miscellaneous collection. A series can never be completed and in the end there will be nothing finished and but the beginning of everything. It is far better to take a certain line and collect thoroughly than to dabble in a dozen and have but a few of each class."

So say we, but would it not be well to collect specimens outside of your special field of research, whenever the opportunity offers, and exchange them for specimens you need to complete your particular collection?

—Mr Wm. M. Randall kindly informs us of an error which occurred in our January number, in his article entitled "Hints to Stamp Collectors." It is Russian stamps instead of Prussian that fade.

—The "Dealers' and Collectors' Gazette" is the name of a new weekly paper to appear from Galt, Ont., Can., with D. J. Asbury as editor. May Success reward his efforts.

—The American Philatelic Association has appointed a committee to consider the difficulties encountered in making a philatelic display at the World's Fair. The danger of loss in transportation and by fire and fraud must be remedied before any very valuable collections will be exhibited. If these obstacles are overcome there will certainly be the finest philatelic display ever produced.

—The "Western New York Naturalists Association" held a public meeting at Rochester on the 3d inst. This society, which was organized last September, should receive the support of every true ornithologist, botanist, etc. in this region.

Our Question Box.

Open to all our readers. Questions and answers solicited from all.

1. From W. H. McNairn. Do you know of any bird of the genus *Melospiza* in any other continent than North America, or is it peculiar to this part of the world?

We think it does not although we will leave this question open for discussion in our next number.

2. From T. O. Young. A short time ago one of my pupils gave me an old copper cent with a ship on one side and the inscription "Shops, Colonies and Commerce" on the other. I have seen plenty of those pieces with the inscription "Ships, Colonies and Commerce" which were coined in 1795 by the U. S., but this is the only one that I have seen with the word "Shops" on it. I would like to hear from others about those pieces and if they have ever seen any like the above.

3. From John Wilson. Is a young cured shark worthy as a cabinet specimen and about what is it worth?

Yes if well set; it is probably worth one or two dollars.

In answer to question No. 8, Dec. 1891, issue, Mr. P. Heinsburger of N. Y. City, says: "The best field is California, because a collector can find them at any place in that state bordering on the ocean, rivers or lakes. In Florida the collector of shells can not go into some parts of the interior on account of the "swamps" and forests. [I have been in both states and speak by experience.]

"I appreciate your paper more every month. You are filling it with very interesting material that cannot fail to benefit all readers. I consider it today among the best collectors' papers extant, and it is," J. G. Bingham, McGrawville, N. Y.

The Cornel.

PROBABLY every flower lover is acquainted with some species of cornel. Many, however, would not recognize them by that name, for they commonly go by the name of "dog-wood." The majority of the cornels are partial to wet woods and swamps, but there is scarcely a fence-row or bushy tract that does not contain some representative of this interesting family. Non-scientific people, having noticed only those species with conspicuous flowers, are often surprised to learn that there are no less than eight kinds to be found in the Northern United States.

The best known of the genus is doubtless the flowering dogwood, [*Cornus Florida*]. It is a common tree in rocky woods and sometimes grows to be forty feet high. In early spring it is covered with a profusion of blossoms which make the tree very conspicuous amid the tender greens of the opening leaves. On examining the so-called flowers we find them constructed as if their sole aim was show; what seemed a flower three or four inches across, proves to be several small, greenish-yellow flowers surrounded by a broad, white, four-leaved involucre. The involucre is intended for other eyes than ours; no insect looking for flowers in the vernal wood could miss these in such surroundings. The bark of the tree is rough and is sometimes used in medicine as a tonic.

The flowering dogwood is the largest of the cornels; at the other end of the list is the low cornel or bunch-berry, [*Cornus Canadensis*] much smaller than any of the rest, so small, in fact, that it seldom has more than six leaves. The flowers are exact minia-

tures of its great relations and are succeeded by a bunch of red berries.

The rest of the cornels look very much alike and often puzzle the botanist to identify them. Their small, white flowers are borne in cymes and lack the conspicuous involucre of the others. Although they possess little beauty in spring and pass almost unnoticed, they become quite prominent in autumn when covered with blue or white berries. They are then prime favorites with the birds, many seeming to prefer them to anything else.

The red osier [*C. stolonifera*] is common along streams and the borders of swamps seldom growing more than ten feet high. The branches and twigs are bright red and the fruit bluish-white. The shrub often sends out prostrate rooting branches which send up many shoots and form dense thickets.

In the same places, though usually on higher ground than the last may be found the alternate-leaved cornel [*C. alternifolia*]. The leaves are clustered at the ends of the branches and as all of the other species have opposite leaves, this one is easily identified. It often grows to a height of twenty feet with spreading flat-topped branches and greenish, warty bark. This shrub is also called green osier.

The round leaved cornel [*C. circinata*] somewhat resembles the alternate-leaved species, but is not usually so tall. It has a grayish stem and green branches. The fruit is blue. The silky cornel or kinnikinnik [*C. sericea*] grows in wet places and is named from the fact that the underside of the leaves is covered with silky down. The fruit is blue. *C. paniculata*, panicled cornel, and *C. asperifolia*, rough-leaved cornel, are not uncommon. Both are low shrubs with white berries.

All the cornels blossom in May or June, but two species seldom are in full bloom at the same time. They usually follow each other in the order that they have been treated of in this paper.—WILLARD N. CLUTE, Binghamton, N. Y.

The Star-fish.

THE species of star-fish common on our coasts have the form conventionally given to the celestial stars upon banners and in heraldic designs.

The rays, which are commonly, but erroneously taken for claws, and which really form a part of the animal's body, are generally five in number, united very symmetrically around a central disk. In some species the rays are greatly multiplied and amount to as many as thirty or more.

The upper part of the body is covered with a hard, thick skin, wrinkled and of a reddish color. The lower part is whitish, and when it is alive, you may see there, moving to-and-fro like worms, its innumerable tentacles. Its mouth is in the centre.

They are found in deep water and so near or on the shore. They feed on dead or living substances; their prey has sometimes been found whole and undigested in the stomach.

The most remarkable feature in the organism of the star-fish is its power of reproduction. One, two, or three of their rays may be broken off without endangering, not only their existence, but even the integrity of the individual. In some cases the shedding and renewing of the rays is spontaneous.

They cannot live but a very short time out of the ocean, even in captivity in an aquaria they soon sicken and die, either for want of prey, or because they miss the movement of the incessantly renewed waters. Might I suggest a banquet for a party of star-fish, it would be the contents of an oyster

barrel, without any specification of the spot where it was filled. "But how," it may be asked, "can their shells be opened?" In what way can the resistance of the abductor muscle be overcome? Where is the oyster-knife of the star-fish for the banquet you propose? And assuredly it is not, as Appian imagined, in one of its rays.

The supposition of the theory that the star-fish, like a besieging force, took up a position that would secure the best point of attack, and, seizing the moment in which the oyster unwarily opened, however slightly, the valves of his shell, thrust in a ray, gradually insinuated its whole body, and so devoured the assailed—a notion which was also entertained by Bishop Spratt—has proved to be utterly fabulous; for, having reached an oyster by means of its locomotive power, and placed itself on its prey, it pours out a paralyzing fluid, and instills it between the shells; as soon as they are open the stomach is thrust in and the captive devoured.

FLOYD E. GRANGER, New Haven, N. Y.

Wireworms.

One of the latest bulletins [No. 33.] of the Agricultural Experiment Station at Ithica is devoted to wireworms. It tells of the results of efforts to discover a practicable method of preventing the ravages of these pests, and a study of the life history of each of the thirteen common species. The wireworm is a direful enemy to corn, etc., and it was hoped that something might be found to check its ravages; but nothing has been found yet.

EXCHANGES.

This column is free to subscribers. To others 25 cts per 30 words; over that amount 1-2 cent a word. No notices inserted soliciting cash purchasers.

Minerals, shells, fossils, petrifications, curios, and one line cabinet for best offer in stamps. Max E. Jesse, 567 S. Presa St., San Antonio, Bexar Co. Tex.

Wanted! Series 2, 3 and 4 of the U. S. Letter Sheets entire and unused, also the first four issues U. S. post cards unused. E. P. Newcomer, 347 5th Ave. Cedar Rapids, Ia.

A no. 1 spinning wheel all perfect for a flint lock gun or pistol in good condition and fossils of the Cincinnati group for fossils, minerals or curios. D. A. Mc Corn, Oxford, Ohio.

An album called "The Birds of the Tropics." The album contains the pictures of 50 birds in colors, for 30 different stamps from South America. W. Harry Floyd, 120 Broad St., Utica, N. Y.

Volume I of the "Ornithologist and Botanist," minus the first two issues, for eggs of hawks, owls, or water birds. Only a few volumes left. Send stamp for title-page and index. Willard N. Clute, Binghamton, N. Y.

I will exchange alligator teeth wampum, curiosities, etc. Also have a few foreign stamps and recipe for making embalming fluid and how to embalm birds, to exchange for Indian arrows and relics and for curiosities, geological specimens, etc. B. F. Kaupp, Box 55, Odessa, Mo.

I would like to correspond with a few collectors in the south-western and

western parts of U. S. I wish information, notes, etc. on genus *Melospiza* and would like to obtain a few sets same. W. H. McNairn, 4 Harvey Ave., Toronto, Can.

Pretty shells, corals, eye-stone sting-ray stings, sponges, sea fan weeds, mosses, and oaks to exchange for dry goods, notions or stereoscopes and views. Will send shells postpaid. Mrs. A. Nephins, John's Pass, Fla.

Any one having one or more old violins in good or bad condition that they desire to sell or exchange, writing full description. Address once.—P. P. Norris, North Topeka, Kan.

Wanted to exchange: a double barreled gun, one barrel for shot and the other is a rifle; shoots common buckshot; for Indian arrow heads. See offers. M. W. Hughes, Wauconda, Ill.

I will mail 100 of your circulars to active philatelists or send 10 different stamp papers postfree for a U. S. stamp [any kind] cat. at 15c or over. E. P. Newcomer, Cedar Rapids, Iowa.

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