

Correspondence.

Preserving Wood Ties.

To the Editor of the Scientific American:

Get good heart timber and season well, then dip in a vat of hot linseed oil and charcoal dust, mixed to the consistency of paint. This will fill all the cracks, etc., and preserve the tie for from 25 to 100 years. I have known posts treated in this way to last 20 years, and they are good yet.

F. M. SHIELDS.

Coopwood, Miss., Jan. 22, 1886.

Indelible Marking Ink.

To the Editor of the Scientific American:

I am reminded by a recipe for marking or indelible ink in the SCIENTIFIC AMERICAN for Dec. 26 to call your attention to, for such purpose, the common Chinese or India ink, such as comes in flat sticks, usually gilded, and largely used by draughtsmen.

The Chinese laundrymen mark clothes with this, and my Chinese servant assures me that it is indelible. In consequence of this assurance, I marked some handkerchiefs with Chinese ink (which I bought in Canton, in 1851), about three months ago. Thus far, after repeated washings, the marks continue to be black and, apparently, indelible.

GEO. S. J. OLIVER.

Santa Barbara, Cal., Jan. 21, 1886.

From One of Our Oldest Subscribers.

To the Editor of the Scientific American:

Forty years have come and gone since I first became acquainted with the SCIENTIFIC AMERICAN, and during the whole of that time we have had a weekly chat together, except from 1849 to 1851, while I was in California, and during the years of our domestic troubles—1861 to 1865.

During this time I have not neglected the church, going to hear and learn from our newest and best preachers, and with many of them have very friendly and social intercourse; but I must say that I have derived more information, more insight to nature, more elevating thoughts, a better familiarity with God through his works, a higher standard of morality, and more pleasure from the SCIENTIFIC AMERICAN than from all other sources together. No visitor is more welcome, and none more missed.

Ten years more, and we will have the "golden wedding." Won't that be a glorious day? Ten years more! Will we both be in existence then? With all our scientific knowledge, and SUPPLEMENT to boot, who can tell? I am on the verge of my allotted time, three score and ten; perhaps your are as near; if so, the chances for a golden wedding are against us. But while the lamp holds out to burn, I will try and be a reader. So I inclose my \$3.20 for another year.

J. R. MAYBEN.

Lynchburg, Va., Jan. 1, 1886.

The Atlantic Right Whale.

To the Editor of the Scientific American:

In your issue of October 17, 1885, W. O. A. reviews the article on "The Atlantic Right Whale," published in SCIENTIFIC AMERICAN, August 8, 1885. His statements would not readily have met with question twenty years since, but in the light of present knowledge he is questioning true record. I have not statistics at hand, but the more important point I wish to make is that your correspondent is in error concerning the species of right whale.

The figure in SCIENTIFIC AMERICAN of August 8 is a tolerably correct one of the Atlantic right whale (*Balæna cisarctica*, Cope), and is therefore not, as he supposes, the more familiar Arctic right whale (*Balæna mysticetus*, Linn.).

From the early settlement of America to about the time of our separation from the mother country, the "black whale," then without systematic name in America, but since known to be the "nordeaper" and "sletback" of the Icelanders, and later the Biscay whale (*Balæna biscayensis*) of European writers, was rather abundant in the North Atlantic. Our forefathers found the Indians capturing it from the shores; and the whites long pursued it in nothing more substantial than common rowboats.

During the last quarter of the eighteenth century this whale became so scarce that it was not often found on our coast; and eventually, after larger vessels were used and long cruises were made, the "fishery" was given up. The revolutionary war was also a potent element in breaking up our whaling fleet.

About this time the Arctic right whale (*B. mysticetus*), called also "bow head," etc., was discovered; or rather, the few whalers left at this time sought further north and came upon this whale, supposing it to be the same as the nordeaper, but a fatter, larger whale, with longer "whalebone," or baleen, not discerning the very marked difference. The North Atlantic right whale (*B. cisarctica*) remained extinct, as was supposed, until 1854, when a female and young were seen in the Bay of Biscay. The cub only was secured; and served for a time as the only example by which the

characters of the species could be studied from the actual specimen. Its immature age, however, rendered it of little value, beyond certain points.

In 1865, Prof. Cope brought the subject into shape after examining a specimen that came ashore in Delaware Bay. It was not, however, full grown, and certain features, particularly the external ones, were not observed.

It was in the spring of 1882 that the first opportunity occurred to examine the full grown (a female) Atlantic right whale, the species having been nearly extinct during the period commencing about the year 1770. The next was a male, taken in Charleston, S. C., Harbor in 1880, the skeleton of which is in the Museum of the Charleston Medical College.

Since then, during the winter of 1884, several examples have appeared. Six were seen off Amagansett, Long Island, and four were secured.

The American Museum of Natural History has long had a skeleton of this species—an adult male, about 40 feet in length. Its history is obscure, excepting that it came ashore more than sixteen years since on Long Island.

Two or three more of this species have been captured this year off Amagansett, Long Island. Singularly enough, Captain Josh. Edwards has in all these instances of recent capture been the operator. From a long period of supposed extinction, this whale is now evidently becoming more numerous. With one exception, all that have been seen were off Long Island shores.

For further items of interest concerning this whale, the reader is referred to Bulletin No. 4, American Museum of Natural History, Central Park.

J. B. HOLDER.

Regular Ice Formation.

To the Editor of the Scientific American:

About ten years ago I saw a peculiar ice formation in the little creek called "Camp Run," in Stark Co., Ill.; and not having seen or heard of anything like it elsewhere, I deem it worthy of being put on record. It consisted of a perfect circle of ice, whirling on an eddy formed by a bend in the stream and held in position by the shore ice, which nearly incircled it. All the ice was formed on the preceding night, and was about three-eighths of an inch thick. The circle was nearly four feet in diameter, and both it and the incircling ice, as far as it went, were so perfect and fitted so close that a lead pencil could not be inserted between them anywhere without forcing. The circle was making a revolution in about twenty seconds, and the grinding had produced two moraines of ice about half an inch high; one on the shore ice, which extended as far around the circle as the ice did, and the other on the circle, around which it formed a continuous margin. The phenomenon was in constant operation till the middle of the afternoon, when an incautious visitor stepped so near the shore that he loosened the ice, and the whole affair floated away and broke up.

If a similar instance is known elsewhere, I should be glad to hear it, and also an explanation of its formation. My first supposition was that a piece of floating ice had been caught by the eddy, and the whirling motion had ground off the projections of both it and the forming shore ice, while allowing the interstices to fill up; but such a formation would have been indicated by the appearance of the circle and by the variation in size of the moraines on the parts that were formerly projections and hollows. There was no such indication, however, so I think some other explanation necessary.

CHAS. E. DURYEA.

Peoria, Ill.

A Practical Remedy for Anchor Ice.

To the Editor of the Scientific American:

Your editorial in SCIENTIFIC AMERICAN for this week, concerning the "Stoppage of the Cleveland Water Tunnel by Ice Spicules," leads me to send you the present communication, as a means of pointing out a simple and efficient remedy for all such difficulties. If any credit is due for discovering this sure avoidance of trouble from anchor ice, that will be ample compensation for the time it requires to make it public in the present communication; and all those suffering from its annoyances are welcome to the remedy. There is no patent to prevent their using it. These works—the Fall River Bleachery—have a present capacity, now being run to its utmost, for bleaching over 18 tons of cloth a day. In the various processes an enormous water supply is needed, and this is furnished by two pipes, one of 16 inches diameter, the other 10 inches, both under 8 feet head. That the water may be absolutely pure, there was built over the inlet of each pipe, in the pond, a brick filter, through which all water has to pass. From the commencement of our business, 13 years ago, until we found a remedy, we were troubled every winter by anchor ice, which, many a day, made it impossible for us to get any water till nearly noon. I noticed, how-

ever, that after a good coating of ice formed on the pond, we never were troubled by anchor ice. It seemed as if the ice field prevented the zero temperature from drawing down through the water coming into the filter, freezing it into the ice spicules, which choke everything.

This operation proved a complete solution of the entire difficulty. For several years I have had a raft made of ordinary spruce boards, floated over my filters in the fall, anchored at its four corners, and there it remains, freezing in, until released by the warm weather the next spring.

Now, if the Cleveland Water Board, or any one else troubled with anchor ice, will float a raft of sufficient area over the inlet of the water supply, their experience will verify my statement. They will never again suffer from anchor ice.

SPENCER BORDEN.

Fall River Bleachery, Fall River, Mass., Feb. 5, 1886.

Will Steam Pipes Set Wood on Fire?

To the Editor of the Scientific American:

I have read the recent articles in your valuable paper on "The Firing of Wood by Contact with Steam Pipes," and am greatly interested in the subject, having the charge of a large institution, filled with helpless people, where all the heating is done by steam. The question whether wood can be ignited by the heat from steam pipes does not seem as yet to have been settled by your correspondents.

It has been my experience to observe, for a period of twenty-five years, wood in contact with steam pipes, carrying a pressure of from one to fifty pounds, and I have never observed the least charring from such contact. For a year past we have had some steam coils in contact with Southern or hard pine; the pitch or resin has run on the heated pipes and dropped to the ground, where it has been gathered up by the handful, and still no appearance of charring. I am therefore led to conclude wood cannot be set on fire by the heat of steam pipes at ordinary pressure, or say at a pressure not exceeding fifty pounds.

In regard to the firing of hemp mentioned by one of your correspondents, on being exposed to the air, may not the oil this packing was saturated with, to a greater or less extent, play some part in this combustion? Besides, to fall back on my experience again, free steam will char and perhaps fire wood under favorable conditions.

Some years ago we had a four-inch steam pipe and a two and a half inch hot water pipe and a two and a half inch condense steam pipe, running through a passage from the main building to our boiler house, a distance of two hundred and sixty feet. To prevent the loss of radiation from this steam pipe, we made a box from ten to twelve inches square, and nailed cleats on the edges of two of the boards of this box and secured them by wood clamps on the outside, so, in case of leakage, we could readily take the box apart by simply removing these clamps.

In the course of a year or two this steam pipe leaked, and the box was taken apart to repair it. To our surprise, in the immediate vicinity of this leak this box was extensively charred. I send you with this a piece of wood taken from this box and a part of one of the cleats before mentioned.

Now, as the box was ten or twelve inches square, and contained only one four-inch steam pipe, it could not have been in contact with this piece of wood in one corner of the box, and probably was several inches from it. So I say free steam in a confined space will fire wood, and present the inclosed as a proof of this assertion.

H. F. CARRIEL, M.D., Supt.

The Illinois Central Hospital for the Insane, Jacksonville, Ill., Feb. 2, 1886.

[We have received the specimen, which is a thoroughly charred piece of pine. Looks as if it had been on fire.—EDS.]

Fire from Steam Pipes.

The Pittsburgh Leader, Feb. 4, says: "This morning the Petroleum Exchange was found to be on fire. This is the second time the elegant structure has been threatened with destruction from fire within the past two months. The wainscoting, mantel, and marble slabs, carpet, etc., introduced to beautify the interior, were destroyed, and the loss will probably exceed \$500, and which is fully covered by insurance. The fire on this as well as the former occasion is attributed to defective plumbing, the steam pipes having been so introduced as to allow the flooring to rest directly on them. In places the boards are completely charred by the heat of the pipes."

The Fastest Steam Craft in the World.

A new torpedo boat recently built at London, by Yarrow & Co., has attained the remarkable speed of 24.027 knots, or 27.66 miles, per hour. This is believed to be the fastest time ever reached by any steam vessel.