

Baron Soll's Discoveries.

Baron Soll's expedition in 1893 to Arctic Siberia and the New Siberian Islands has proved to be one of the most successful explorations of recent years. The results of the expedition include over 3,000 miles of survey based upon thirty-eight positions astronomically determined, some nine months of meteorological observations in the tundras, in a series of important measurements of elevation above the sea along the whole route, many interesting photographs and rich collections of botanical, zoological and ethnological specimens. In the New Siberian Islands Baron Soll found under the permanent ice a sedimentary deposit containing pieces of bones of mammoths and other post-tertiary mammals, and complete trees fifteen feet long, with leaves and cones.

This is conclusive proof that when the mammoth wandered over Europe and Asia, trees and vegetation reached to the seventy-fourth degree of latitude, thus making its northern limit at least 200 miles north of its present boundary line. The discoveries include much of interest to geologists concerning the position of Siberian glaciers and the many varieties of fossils to be found beneath them.

The achievements of this expedition prove that the most desolate regions of ice and snow are fertile fields of study to the intelligent investigator.

Consumption in Dairy Herds.

The agricultural experiment station connected with the University of Vermont publishes a valuable report on the eradication of "consumption" in dairy herds. The experiment station in which these tests were made is supported in part by the State and is in charge of the university professor of agricultural chemistry. The report shows that during the past year the tuberculin test has been applied more than 1,000 times and that the presence of the disease was indicated in 222 of these animals. After these had been killed it was found that 220 of the 222 were unmistakable cases of tuberculosis. Tests applied to the cattle throughout the State of Vermont showed that only 39 "consumptives" existed in 81 herds, which contained in all 662 animals. This is less than 6 per cent and is considered a very good showing. It was found that in 24 per cent of the infected cows that were killed the disease had become

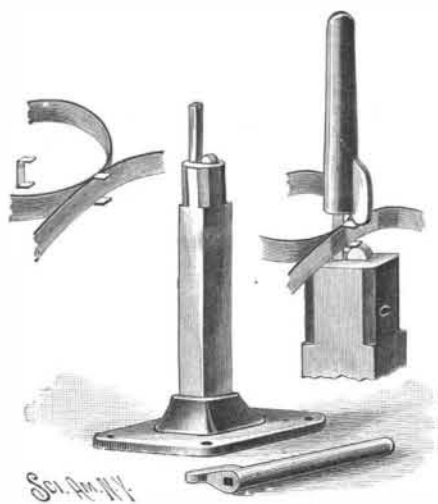


Fig. 2.—TOOL FOR APPLYING FASTENING CLIPS.

developed in the udder. In accordance with the recent decision of the cattle commission, an inspection was made in Massachusetts which showed that a considerable number of the animals brought to the cattle markets in Brighton and Watertown were tuberculous. Out of 241 animals tested 25 were found to be diseased. The percentage of nearly 10 per cent in this case is dangerously large when it is considered that these cattle are sold for wholesome beef. In the future all cattle received at these stations will be carefully examined.

Report of the New York State Fish Commissioners.

The annual report of the State Commissioners of Fisheries for the past year states that the output of fish exceeded by eighty per cent the output of the preceding year. This is especially gratifying, since the work was accomplished without expending more money than in previous years, or in employing more workmen. A large part of the fish hatched were food fishes. The following figures will give some idea of the magnitude of the work. The total number of fish fry distributed during the year was 136,000,000. Of these, 2,982,500 were brook trout, 565,000 California trout, 5,415,000 lake trout, 18,112,000 whitefish, 12,012,000 ciscoes, 2,976,000 muskallonge, 22,603,000 smelts, and large quantities of salmon, lobster, black bass, yellow perch, carp, tom cods, and other less important varieties. The commissioners in closing their report state that at present there are as many hatcheries as can be worked to an advantage and that the legislature should refuse to grant any money to establish new ones.

VENETIAN OR BENT IRON WORK.

This beautiful work, now so popular, has been admired by all visiting the sunny shores of the Adriatic. As a rule they have returned laden with costly specimens of the art.

These objects, which at first sight appear so intricate and difficult, can easily be made by any one possessing the requisite tools.

On examining the work it will be found to consist of strips of iron bent into spirals and fastened together with binders which clasp the pieces at their points of contact. The spirals in nearly all cases have the form of an S, a C, or some modification thereof, and these being fastened in different combinations produce the desired pattern.

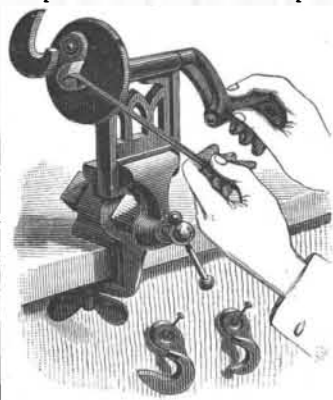


Fig. 1.—TOOL USED FOR BENDING THE SPIRALS.

The strip is first cut the required length, after which the ends are coiled by the simple apparatus shown in Fig. 1, the form being adjusted to produce a spiral of the required size. It is the custom with the modern Venetian workman, as with his forefathers, to coil these strips with a pair of pliers. This method requires an expert with that tool to produce a spiral that is at all symmetrical. After the spirals are formed a binder is bent and clasped around the piece, but this fails to bind them tightly, the pliers being the only tool they use for the purpose.

Messrs. A. F. Weed & Co., 106-108 Liberty Street, New York City, have popularized this work and place it within the reach of every one by the introduction of their special patented tools, designs and material, which enable the amateur to produce these beautiful pieces in the shape of candlesticks, candelabra, photo frames, grilles, brackets, lamps, hanging lanterns, etc., which excel in symmetry and strength the work produced by the Venetian artisan.

A perfect spiral is produced by the Weed apparatus by inserting the strip as shown, and turning the handle forward one and one-half revolutions. Three different size spirals can be made by using the different attachments.

The Weed binding tool for applying the fastening clips, and the manner of using it, are illustrated in Fig. 2. The parts, including the fastening clip, are placed on the binding tool and a few light taps on the plunger fasten the parts securely together.

The iron for making the spirals is drawn with slightly rounded edges to prevent injury to the fingers, and to impart a desirable finish.

A specimen of one of the many forms of work that may be made by the Weed tools is shown in one of the engravings.

Irish Moss.

A little town, known as Jericho, in Massachusetts, seems to be the center of this industry. We gather these notes from a paper which was printed lately in the Boston Herald.

Boys, men and women all engage in the work, which consists spreading it upon the beach prepared by raking all the dirt, stones and driftwood away, and leaving a fine bed of white sand; when the weed is first brought in by the boats, each of which gets about a barrel and a half, it is taken upon creels, a sort of barrow, and spread out upon the beach; it is turned over daily as in hay making, for the space of two weeks; each morning it is washed in clean sea water (fresh water ruins it); it is then gradually bleached, as when first gathered it is of a light green color, and in the course of a few weeks becomes successively red, pink, and finally nearly white.

Stormy weather is a great drawback to the mosser's work. Some of the moss that the storms tear loose and scatter upon the rocks is gathered and classed as hand picked, bringing generally a quarter or one-half cent per pound more than that gathered in the usual way for commerce.

Should a spell of rainy weather come on during the season of gathering, heavy unbleached muslin covers are used to protect the moss, which is packed up in heaps.

Two crops are obtained each year, the first one being the better; the late crop is liable to be injured by a little black vegetable growth called glut, caused, it is said, by the warmer water of August days.

Another Mastodon.

The bones of a mastodon have been found recently on the Rupel farm, near North Liberty, Ind., in clay soil, 8½ feet below the surface. Above was sand and gravel. The tusks were 8½ feet long, and the teeth weighed from 5½ to 6 pounds apiece. About one-fourth of the bones of the animal were dug out, and are on exhibition in North Liberty.

Reform Printing Bill.

The reform printing bill, which provides for the public printing, binding and distribution of public documents in a new and much more efficient manner than heretofore, was passed in the House of Representatives recently, and its passage in the Senate is expected in the near future. The new law will considerably lessen the cost of the public printing and binding. Its most important work, however, will be in bringing about a more intelligent distribution of government publications. Copies of these will be placed in depositories throughout the country, where they may be readily obtained and consulted by every one. The bill further provides for the distribution among public libraries of all the old United States documents which have been accumulating for years and at present take up much valuable space at Washington. These number upward of 1,000,000 volumes, and in the future they will not be allowed to accumulate. The bill includes a further provision for the publication of a monthly catalogue of current publications, giving the price of each and the place where it can be obtained, and also for an index of the publications ordered at each session of Congress. It is estimated that the enactment of this law will result in an annual saving of several hundred thousand dollars.

To Prevent Dampness in Walls.

The following method of preventing dampness in walls is said to give very favorable results. Two preparations are made by dissolving castile soap in water in the proportion of three-quarters of a pound of soap to one gallon of water, and by making a solution of alum in the proportion of one-half a pound to four gallons of water. Both solids should be thoroughly dissolved before using. The walls to be coated should be perfectly dry and clean, and at the time of applying the preparation the temperature should not exceed fifty degrees F. The first or soap wash should be laid on when boiling hot with a flat brush. Care should be taken to form a froth on the brickwork. This wash should be allowed to remain twenty-four hours to become thoroughly dry and hard before the second coat is applied. The alum wash should be applied in the same way, except that the temperature of the solution need not be more than sixty or seventy degrees F. Another twenty-four hours should elapse before the second coat of soap should be put on. After this the two preparations should be applied alternately until the walls are rendered impervious to water. The combination of alum and soap forms an insoluble compound that fills the pores of the surface and effectually excludes all moisture.



Fig. 3.—BENT IRON CANDELABRA.

A Dangerous Experiment.

An explosion occurred in a drug store in Philadelphia recently, resulting in an injury which came near to the destruction of the eyesight of the person injured. The American Journal of Pharmacy says: A druggist was experimenting on the action of ammonia water with oxide of silver, and had left the mixture in a porcelain capsule covered with water and a glass stirring rod in the capsule.

A salesman coming into the store thoughtlessly took up the rod and without agitation was replacing it in the capsule when a violent explosion occurred, shattering the capsule, pieces of which struck him in the face, causing damage which it was feared would result in the loss of one or of both eyes. Prompt treatment, however, warded off the threatening mischief.

The product obtained by the action of ammonia on silver oxide, known as "Berthollet's fulminating silver," is a dangerous article. When dry, it explodes violently on the slightest percussion, or even when touched with a feather. The black crystals, having a metallic luster, decompose violently with detonation when the liquid containing them is shaken.

The exact composition of the compound has not yet been ascertained.