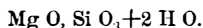


MEERSCHAUM AND AMBER.

Less than twenty years ago meerschaum was practically unknown in this country. The specimens that existed were in the hands of scientific men, or in the cabinets of travelers, who had gathered knick-knacks from every place they visited. Subsequently a sudden furor for meerschaum pipes seized upon the people, and now there is hardly a smoker who does not possess a cherished meerschaum, the changing complexion of which is an object of greater solicitude to him than the infant's first teeth to a mother.

Meerschaum—German for sea-foam—is a hydrous silicate of magnesia, the composition represented by the formula



It is of soft, porous texture, very light, but of varying specific gravity, and has a greasy feel. It is found in various parts of Southern Europe, in veins of serpentine and in tertiary deposits. It occurs also in Asia Minor. It is easily cut, and when first removed from the bed is of a cheese-like consistency. Frequently the meerschaum is too porous for manufacture into pipes, the principal use to which it is applied. It is capable of receiving a fine polish, and can be easily carved. The ornamentation of meerschaum pipes is, in Europe, a distinct branch of business, or rather a distinct department of art; for there is no substance, nor article of use and ornament, which receives more artistic finish than the meerschaum pipe. There is one now in this city, which, for its graceful form and elaborate carving, is valued at five hundred dollars.

The finished pipes are soaked, or boiled, in milk or wax, the fatty substances of which are absorbed by the meerschaum, and are acted upon by the nicotine of the tobacco, in combination with the heat of smoking, to produce the rich yellow and brown colors so much admired. Those which have been treated in milk have a rich, creamy white, while those which have absorbed wax are a delicate shade of straw.

The manufacture of the meerschaum for a cheaper quality of pipes is largely prosecuted. These artificial preparations are from the chips, or parings, of the natural mineral, which are reduced to fine powder, boiled in water, molded and dried. Sometimes, pipe clay is added to the mixture. It is said there is no certain test for distinguishing the artificial preparation from the genuine meerschaum. The first is generally heavier and of a more even texture, owing to the absence of foreign minerals frequently found in the latter. The manufactured meerschaum does not receive color so well as the natural block, and is liable to chip and scale.

Amber, so extensively employed as mouth-pieces for meerschaum pipes and cigar holders, is believed to be a fossilized vegetable gum or resin. Anciently a fabulous origin was attributed to it. As it was found on the sea shore after a storm, it was said to be the solidified tears of the sisters of Phaëton, or of sea nymphs. It is of a yellowish color, frequently streaked with milky white, the yellow color being semi-transparent. Those specimens which have a clouded-milky appearance are the most highly valued, as the clear yellow can be imitated by recent and cheaper gums. It is singularly electrical, when rubbed, developing negative electricity to such a degree that in manufacturing it into the forms in which it is sold the workmen are sometimes affected with nervous tremors, and they are obliged frequently to change the pieces they handle.

It is found on the Baltic coast of Prussia, either washed ashore after a gale, or entangled in masses of seaweed. Mines of it are also wrought in Prussia. It is found in this country at Amboy, N. J.; at Gay Head, Martha's Vineyard; and at Cape Sable, in Maryland. Leaves of fossil plants and tropical insects are sometimes found imbedded in it, a fact that has given rise to some pretty poetical conceits. In the East it is highly valued, and has been used as a form of concentrated wealth, as are diamonds and other precious stones. When heated, it exhales an agreeable odor, and for this, among other reasons, is in great request as mouth pieces for pipes.

TURKEY is about to convert its rifles into breech-loaders, and a thousand rifles have been ordered in England as experimental pieces.

The Corn Crop.

The crop of Indian corn in the United States in 1860, according to the census returns, was 838,732,740 bushels. Vast as was this yield, it bids fair to be largely exceeded the current year. From the increased breadth of the land under cultivation, and the generally favorable season, it is estimated that the crops of 1866 will reach 1,000,000,000 bushels, worth, at 60 cents per bushel, \$600,000,000. This is truly a great wealth, and it is difficult to place a limit to the production of this cereal in our broad domain. It grows in abundance from Maine to Texas, though flourishing with greatest luxuriance in the Western States, side by side with wheat, where it waves its tassels and grows golden over prairies and broad fields, reminding one forcibly of incipient forests. Broad as are our acres, and extended our agricultural territory, there are few sections where corn cannot be profitably grown, while in most parts its production is enormous. The Commissioner of Agriculture reports the corn crop of the single state of Illinois in 1865, as 177,076,867 bushels, or nearly one-third of the entire crop of the country in 1850, which was 592,071,104 bushels. The cultivation of the corn crop, too, is attended with much less difficulty than it was fifteen or twenty years ago. The skill of invention and the hand of mechanical art have contributed largely to this result. There is not now that absolute need for careful manual husbandry which was deemed essential in former years. In the leading producing States, land well plowed, planted by machine, with a man and team, at the rate of many acres per day, and worked twice with an improved cultivator, is all that is now required, beside a good season, to insure a teeming harvest. In consideration of its utility, the corn crop is scarcely second to that of any other American staple. It is valuable for food, and is not only thus largely employed at home, but is annually used more and more in Great Britain and Ireland and elsewhere abroad. It makes the best of feed for stock; it is used to an enormous extent for the distillation of spirits, and it is claimed that a process has been discovered whereby it can be converted into sugar. In addition to the uses to which the grain can be turned, the stalks make excellent winter fodder, and return to the soil as much in the shape of fertilizing material, perhaps, as they take from it.

Thus year after year, the area of this great wealth enlarges, and it is difficult to say what untold millions are yet destined to be fed with this cereal from the lap of American agriculture. Let him who dreams of a "ruined country" look to its wonderful resources, and believe, if he can, that a land so infinitely endowed in natural wealth, and a people with such indomitable enterprise, can fail to make rapid strides in everything which pertains to material progress.—*Shipping and Commercial List.*

Hardening Long Planing Knives.

In No. 10, current volume, we replied to a question by W. J. C. of Louisiana, in regard to hardening and tempering long planing knives. Ede gives another process which may be better, but having never tried it we cannot fully indorse it. He says:

Lead is an excellent thing in which to heat any long plate of steel that requires hardening only on one edge; for it need not be heated any further than where it is wanted hard, and it will then keep straight in hardening. But if it is heated all over in a furnace and put in the water all over, it will be warped all shapes and cause a deal of trouble in setting straight, especially to those who are unacquainted with the setting of hardened steel. If it is heated all over, and one edge only dipped in the water, the edge that goes in the water will be rounding, and the edge that does not go in the water will be hollow; this is owing to the steel expanding in hardening, for the steel expanding in hardening causes the edge that goes into the water to get longer, and the other edge being kept out of the water, and still hot, the hardened edge expanding longer pushes the other part of the steel round, causing the edge that is out of water to be hollow. But if it is heated in red hot lead, and the edge only that is required hard put in the lead, the other part will be quite cold; and when it is put in the water all over, the hot part will not have sufficient strength

in it to alter the cold part, consequently the cold part keeps the hardened part true.

MISCELLANEOUS SUMMARY.

THE delicacy of some of the ornamental cast-iron work, known as Berlin iron, is such that it requires of some pieces ten thousand to weigh one pound.

THE engines of the large ocean steamers make about 200,000 turns in crossing the Atlantic between Liverpool and New York.

IN 1814 the Barrowdale black-lead mine was assessed as worth £2,000 a year. It had been valued at 15s. 4d. two hundred years previously.

WITH four weights of respectively one pound, three pounds, nine pounds, and twenty-seven pounds, any number of pounds from one to forty may be weighed.

THE brilliant prismatic colors of the pearl are attributed to the decomposition and reflection of the light by the numerous minute grooves on its surface.

SWEDEN and Norway are slowly rising out of the sea at the rate of from one-tenth to one-half of an inch per annum. The west coast of Greenland is gradually sinking.

A SUCCESSFUL effort, it is said, has been made to raise vanilla in France. The experiment was made in the public gardens of the St. Bruno, and the quality is affirmed to be equal to the best imported from the West Indies.

OF the durability of timber in a wet state, the piles of the bridge built by the Emperor Trajan over the Danube afford a striking example. One of these piles was taken up and found to be petrified to the depth of three-quarters of an inch, but the rest of the wood was perfect.

TREATMENT OF ITCH.—The Prussian military authorities cure itch by smearing the parts with a mixture of two parts of liquid storax with one part of sweet oil. The cure is said to be complete in twenty-four hours.

BLAST furnaces are about to be erected in Oregon by the Oregon Iron Company. The works are to be located on the Willamet River, eight miles above Portland. Iron, timber, and water-power are plenty there. They will be the first blast furnaces in operation on the Pacific coast.

ONE of the largest bells in the United States has been cast for the city of Pittsburgh, Pa. The amount of metal contained in the rough casting is 7,200 pounds. It measures sixty-six inches across the mouth, and sixty-two inches in height to the top of the crown.

DR. COQUEREL, a French naval surgeon, has published a curious article on the fatal results experienced, both in Mexico and in Guiana, from a species of fly, which deposits its eggs inside the human nostrils. Several soldiers have died of the consequences.

A LARGE CHEESE.—The Ingersoll cheese factory, in Canada, has manufactured a cheese which measures six feet eight inches in breadth, and three feet in thickness, and weighs three and a half tons. It required thirty-five tons of milk, the product of eight hundred cows.

VARNISHES.—Messrs. Wilson & Wood, of Philadelphia, Pa., have sent us some samples of photographic varnishes by Wenderoth, of that city. One sample is for covering and protecting photographs, drawings, and water-color pictures. Another sample is a mixed varnish for water colors, which greatly facilitates their use upon photographs, tracings, and surfaces which refuse to take colors readily.

AN employé of the Bavarian Mint has patented an improved process for silvering by means of a solution of silver in cyanide of potassium; the difference from the usual method consists in the use of zinc filings, with which the objects are coated; when the silvering solution is applied, an immediate deposition of a much more durable character taking place. The filings are easily removed by rinsing in water, and may be used repeatedly for the same purpose. Metallic iron may be coated with copper in the same manner, by substituting for the silver a solution of copper in cyanide; and over this copper deposit, a coating of silver may be applied.