

MEERSCHAUM AND ITS MANUFACTURE INTO PIPES.

Despite our familiarity with meerschaum, as used in pipes, it is safe to say that few of us have more than a vague idea of the peculiar properties of this substance, or the condition in which it occurs in nature. Nor may its chemical designation as a hydrous silicate of magnesia of the formula $Mg_2Si_2O_6 + 2H_2O$ prove

mines are on the plains of Eskişehir, 250 miles southeast of Constantinople. One of these mines is said to be a thousand years old, and consists of about two thousand pits within an area of six miles, all but about 150 of which have been exhausted. The mineral occurs in nodules or lumps of various and irregular sizes, buried in the alluvial deposit of the plain. Another

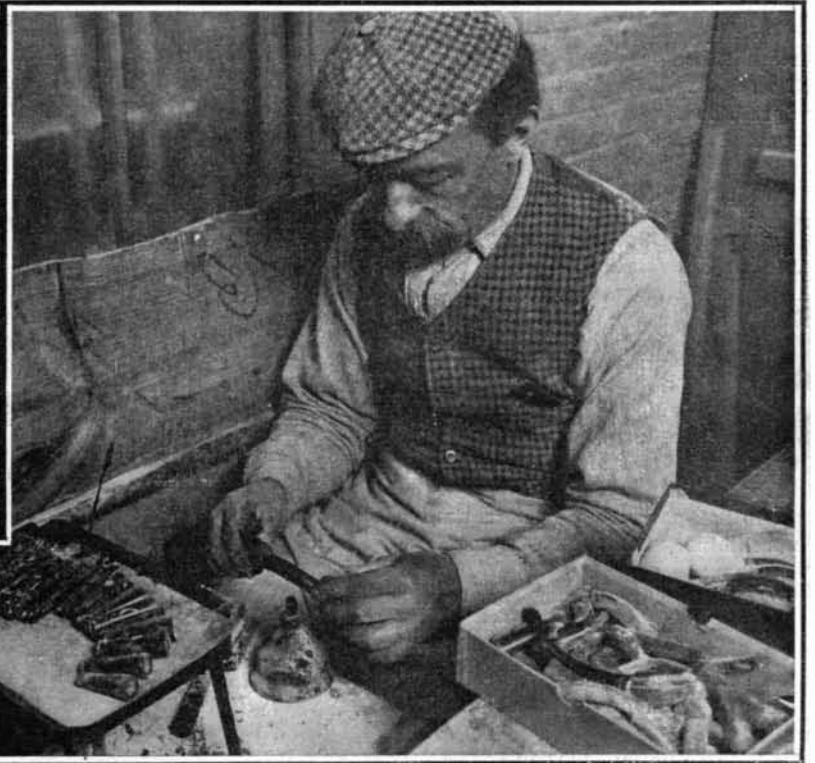
mine comprises three thousand pits, only one hundred of which are being worked. The material is mined by the inhabitants of the surrounding villages and transported in the rough to Eskişehir. The meerschaum is soft when mined, but soon hardens when exposed to the air. For this reason the lumps are roughly scraped off at first and then laid aside to dry. When dry they



Carving an Elaborate Design.

very enlightening. The ancients believed the substance to be petrified sea-foam, hence the German name *Meerschaum*, meaning sea-foam; and a very apt name it is, for the mineral is very white and so light that it will float when dry. Pieces of meerschaum have been found floating in the Black Sea which were evidently washed out of their matrix by the waves. This may also have had its influence on the sea-foam theory of its formation.

Meerschaum is found in best quality and most abundant quantity in Asia Minor, though it also occurs in Greece, Spain, Moravia, and Morocco, and even in this country in South Carolina. The richest



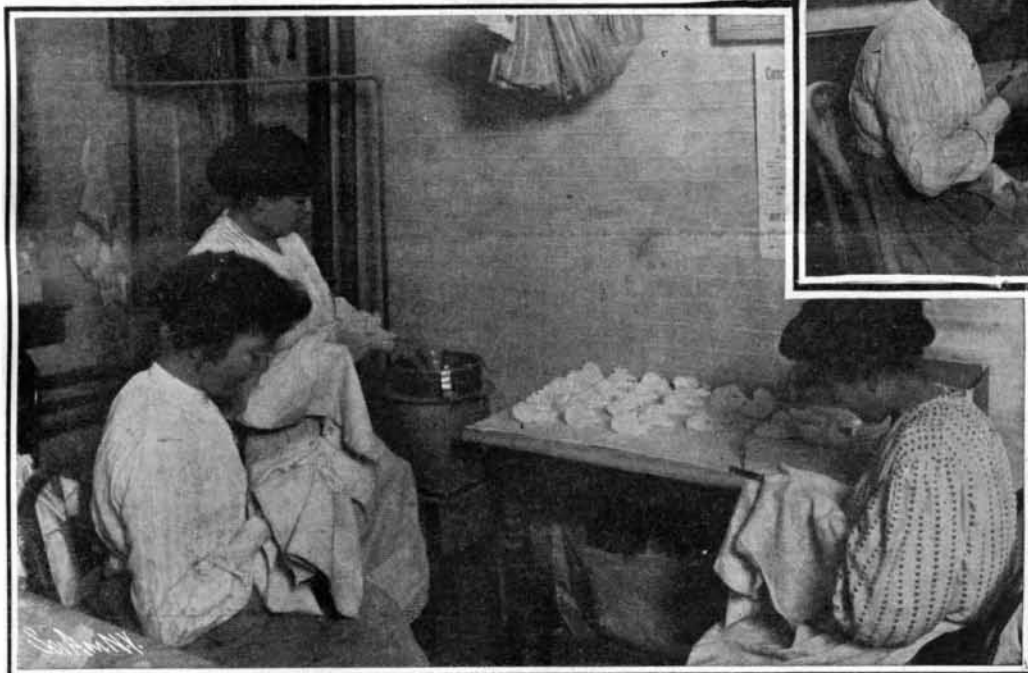
Softening and Bending the Amber Stems.



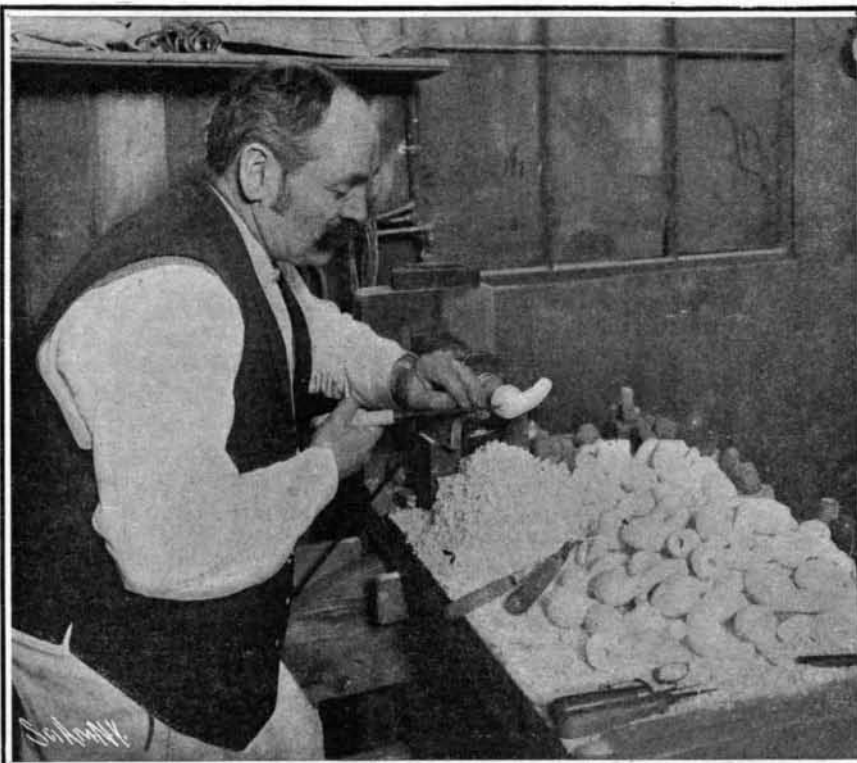
Smoothing Off the Pipes with Shave-Grass.

are subjected to a thorough scraping and cleaning, and are finally waxed and polished. The lumps are now sorted according to size in four classes and packed in boxes labeled L., G. B., K. B., and K. P. for the German words *Lager*, *gross Baumwolle*, *klein Baumwolle*, and *Kasten polirt*, *Lager* being the largest size. In this condition the meerschaum is shipped to the pipe manufacturers.

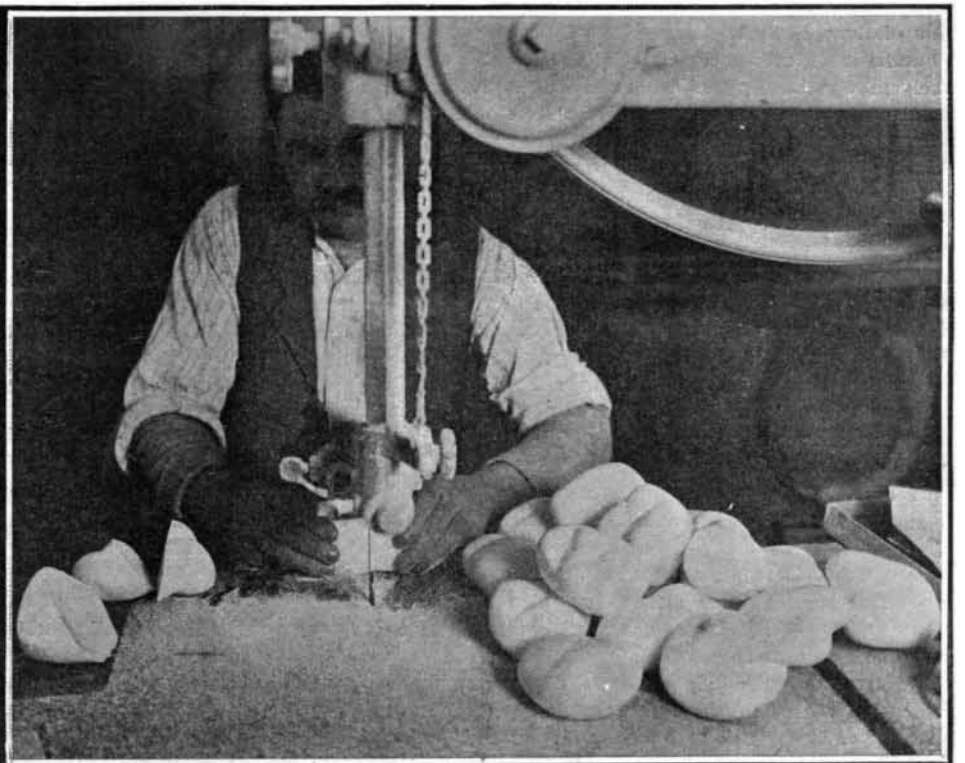
The accompanying photographs, taken in a meerschaum pipe factory of this city, illustrate the process of forming the material into pipes. The larger pieces are cut with a band saw to a convenient size, after which the meerschaum is soaked in water until it becomes quite soft. Meerschaum when wet becomes very soapy, and will produce quite a lather if rubbed. In fact, the material serves as a very good substitute for soap, and is thus used in Morocco. Meerschaum dust makes an



Waxing and Polishing the Pipes with Chalking.



Turning Up the Bowls and Stem Shanks.

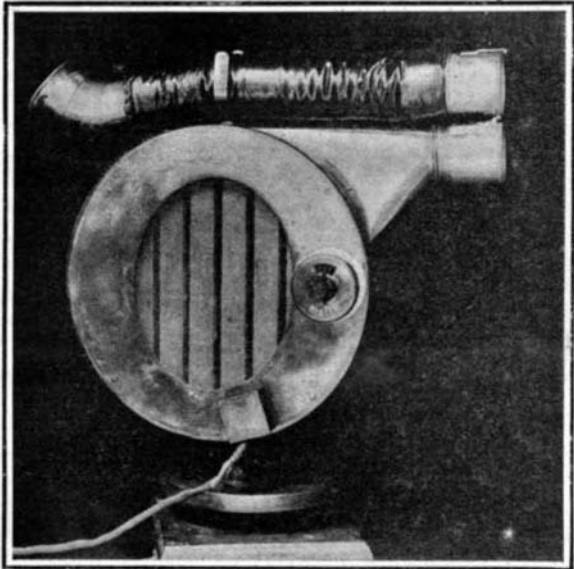


Sawing Meerschaum to Pieces of Convenient Size.

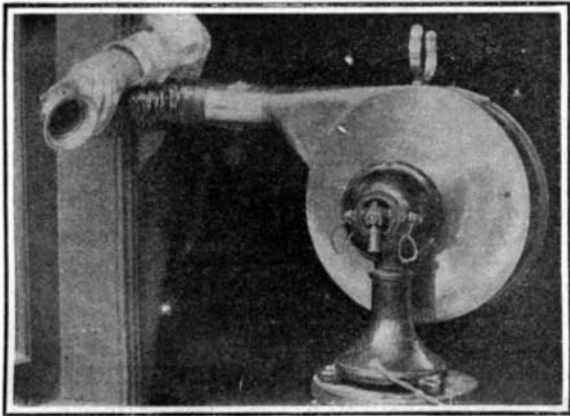
excellent cleaning powder for removing spots from fabrics. After being thoroughly soaked, the meerschaum can be cut like cheese, and it is then roughly shaped with a knife to the form of a pipe. When dry the bowl and stem shanks are drilled, and then, if the pipe is of a plain pattern, it is turned on a lathe to the desired form. If a square-stem shank is desired, it is

elaborate design. In the selection of a meerschaum pipe, one should be careful not to pick a dead white specimen. That which is of a slight creamy color will soonest take on that beautiful rich yellow-brown shade which so delights the smoker. Nor should the meerschaum be too light, as that is an indication that it is too porous to color properly, while on the other hand, a very heavy meerschaum may be almost too dense to absorb the coloring nicotine. A great many so-called meerschaum pipes are made from artificial meerschaum, a material composed of the chips and dust of meerschaum bonded with some solution and molded into blocks. The artificial product is somewhat heavier than the genuine. There are still other ways of imitating meerschaum, and a novice will find much difficulty in successfully selecting a genuine meerschaum pipe of good quality.

that it is ready for instant use at the touch of the switch, and immediately after the cooking is done, the power can be cut off. This results in a great saving of expense, doing away entirely with that wasteful consumption of energy which is necessary in coal ranges in keeping the fire going so that the range will be ready for use. The electric range also possesses an advantage over the gas stove, its closest competitor, in that no match is required to light it, and it is entirely free from odors. One of our illustrations shows a small electric broiler which will cook a medium-sized steak at a cost of but two cents.



Rear View of the Hair-Drying Machine.



The Electric Hair-Drying Machine.

shaped with a file. The shank is now shouldered and threaded to receive the amber stem-piece. These stems are cut from plates of solid amber, most of which is imported from Germany.

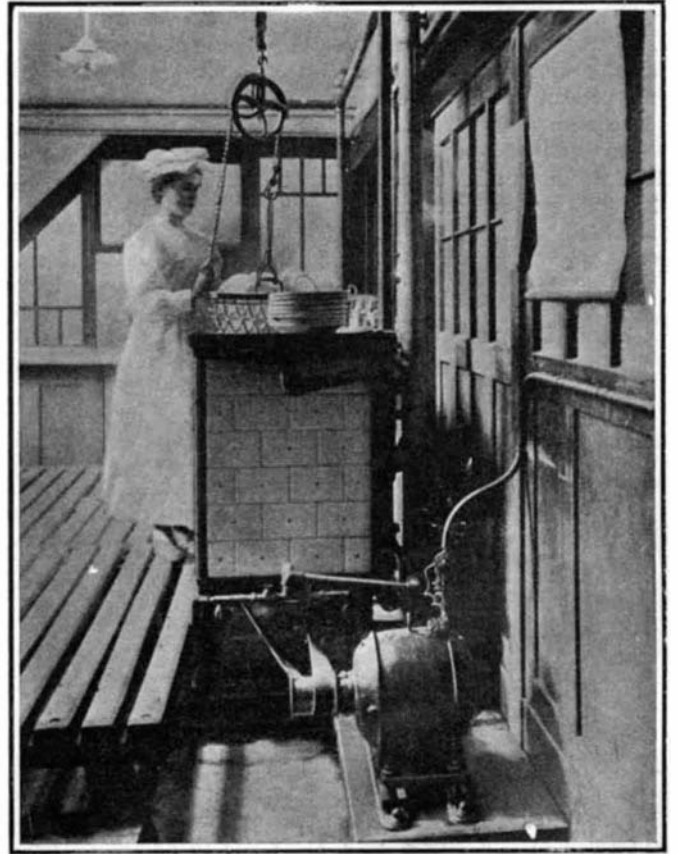
Amber occurs in many parts of Europe and America, but in largest quantity along the coast of Germany. This fossil gum is found in lumps or grains, and is melted at 550 deg. F. and refined. There are two qualities of amber, the transparent and the opaque or cloudy, the latter being much tougher and, therefore, more serviceable. The pipe stems after being tooled out are bent to the required shape. They are first immersed in oil and heated until they lose much of their brittleness. Then they are held over an alcohol flame and bent as desired. The threaded ends of the stem are protected while bending by an arbor screwed therein. The pipes are now carefully smoothed with pieces of American rush, or shave grass. The stem of the grass, owing to the natural deposit of silica, has a fine roughness which perfectly adapts it for this service. After the pipes have been properly finished with the rush, they are immersed in melted wax for a short time, depending on the density of the meerschaum, and then they are given a high polish with chalk precipitate.

Meerschaum is an excellent material for artistic carving, and some carved tobacco pipes are perfect gems of art. One of our illustrations shows a meerschaum carver working out an

SOME NOVEL USES OF ELECTRICITY.

The increased use of electricity in every branch of industry is surprising even to the most ardent advocates of this mysterious form of energy. Not only has electricity invaded the territories occupied by all other forms of energy, but it has actually created new fields of its own. This is particularly marked by the present electrical invasion of our homes, where labor-saving devices were never thought of until electricity showed its wonderful adaptability to all classes of work. Electric light had scarcely ceased to be a novelty when the electric fan was introduced and then the sewing machine motor. In the past few years more attention has been paid to electric heating devices. In the nursery and sickroom electric milk warmers and devices for heating water are becoming a necessity, while the easily-regulated electric pad threatens to entirely displace the hot-water bag. Electrically-heated curling irons, electric cigar lighters, electric chafing dishes, etc., are but a few of the many electrically-heated devices now in common use. Electric flatirons are now quite extensively used in the kitchen and sewing room. Travelers find them most useful for pressing out clothing that has been mussed or creased in packing; ladies find them useful for ironing out flimsy shirt-waists and lace-collars and cuffs which they would not dare intrust to the usually careless laundress. Outside of the household electric flatirons are commonly used in tailoring shops of all classes, and even architects and engineers have begun to employ them for smoothing out blue-prints and plans.

One of the latest electrical novelties is the hair-drying machine. This combines both electric heat and electric power. It consists of a casing which incloses coils of resistance wire and an electric fan. The fan sucks air into the casing over the resistance wires and the latter heat the air to any desired temperature under control of the operator. A flexible tube communicates with this casing and receives the current of heated air, permitting the operator to direct the current where desired. When properly handled twelve persons can be treated in one hour at a cost of but a fraction more than one cent each. The kitchen offers an excellent field for electrical apparatus. Already many electrical cooking outfits have been invented. The electric range is a convenient little piece of kitchen furniture whose chief charm lies in the fact

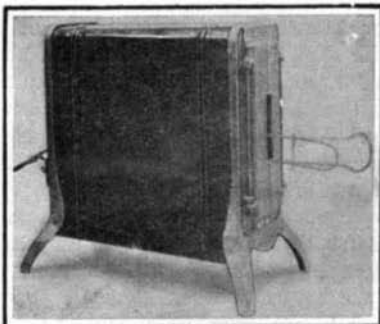


Washing Dishes in an Electrically-Operated Machine.

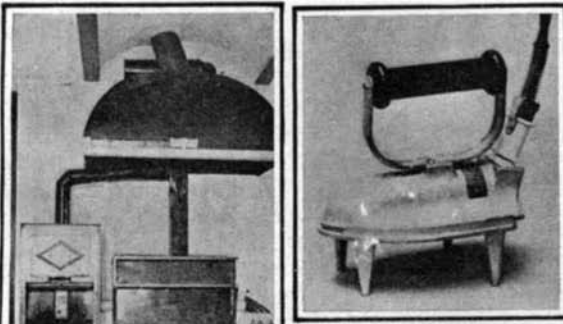
The electrical restaurant, shown in another of our illustrations, serves to exemplify the convenience and adaptability of electricity to kitchen work. It will be seen that the cooking apparatus is placed in the center of the restaurant with no attempt to screen it off from the rest of the room. Here the manager, in a business suit, does the cooking while chatting with his patrons with no fear whatever of smoke, soot, or ashes spreading out into the room, while the cooking smells are drawn up through a ventilator just above the range. A whole chicken can be roasted in a quarter of an hour and lamb chops can be broiled in three minutes. This rapid cooking results in retaining the juices of the meat.

The advantages offered by the kitchen for the development of electric power devices have not as yet been fully realized. The kitchen is the workshop of the house, and affords a splendid opportunity for labor-saving apparatus. A well-ordered kitchen should have its electric fan set in the wall to draw off the heated air and odor of cooking from the building. Small electric refrigerating plants are provided to do away with the inconvenience of hauling ice into the house. As yet electric labor saving apparatus has

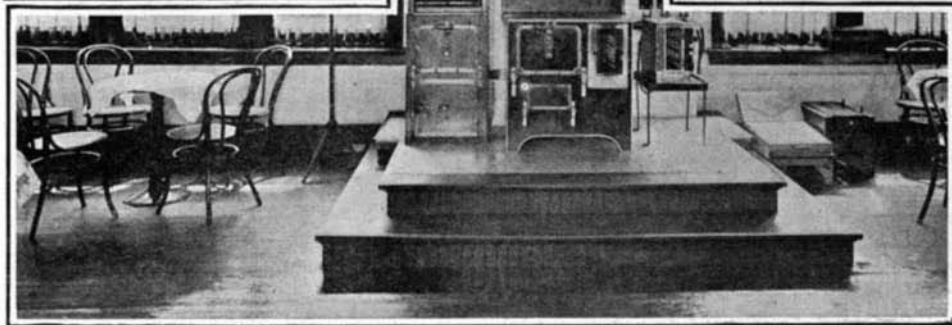
not been introduced to any large extent in private houses, but some of the accompanying illustrations, which show its uses in hotels, will be suggestive of its possibilities in the home. Here may be seen the electric dishwasher, the dishes being piled into an open wire basket and dipped into boiling water which is whirled rapidly against them by an electric motor. The same operation repeated in



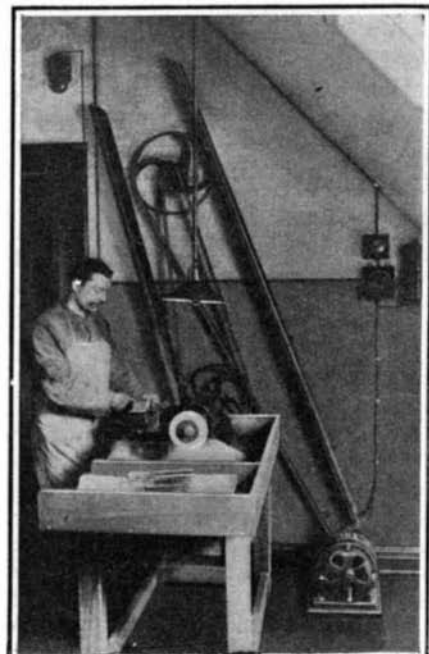
An Electric Broiler.



Electric Flatiron.



A Restaurant Equipped With an Electrical Kitchen.



The Knife-Polishing Machine.