

## COINING.

We publish on our previous page a series of engravings illustrating the various processes employed in the manufacture of money, a business which, being mostly in the hands of governments, is not in the category of ordinary manufacturing operations, but which is, nevertheless, a very extensive and important trade. The amount of money annually minted is prodigious; and the necessity for perfect accuracy in weight and fineness of every coin gives the business the peculiar interest attaching to all minute and delicate operations conducted on a very large scale.

The first step is the mixing of the alloy, which in this country consists of 9 parts pure metal to 1 part alloy. The alloy for silver coin is copper; for gold, a mixture of silver and copper, the proportion of silver in the mixture being not more than one half. In practice, but a small portion of the alloy for gold is silver. The silver is readily prepared for coining; but the gold frequently is found to be brittle when cast into ingots, owing to the presence of impurities. Many of these foreign matters are diminished by treating the molten metal with a stream of chlorine gas. When the standard of purity is accurately adjusted, the metal is cast into ingots, long enough in proportion to their thickness to be rolled into strips of the required thickness (see Fig. 1). The ingots are then heated (Fig. 2) and rolled into long strips (Fig. 3). In our Fig. 4 is shown the operation of punching out circular disks from these strips; and this process is one of great nicety, as the disks require to be so nearly correct in weight that the final adjustment can be readily made. In Fig. 5, is shown the weighing room, where any trifling overweight on each disk is removed with the file, care having been previously taken to make the pieces over rather than under the correct weight. Fig. 6 shows the coining presses, in each of which are a die and a countersink, engraved with the devices for the obverse and reverse sides of the coin respectively. This operation completes the coin, except as to its edge, which is finished by the machine shown in Fig. 7, which raises the circumferential rim which protects the embossed face of the coin from abrasion by friction in use. This machine rims from 800 to 900 coins per minute; and words or devices can be embossed on the rim, when required, by a straight steel die, against which the coins are pressed with great force, and rotated. Milled edges are made by this machine, the die being properly cut for the purpose.

The coin is now finished, being perfect in value, weight, and form; and all that now remains to be done is to cleanse it from the dirt of the manufacturing processes, and give it the beautiful appearance which characterizes new money. This done by scouring and washing, as shown in Fig. 8; and the money is then put up in packages for storage, as shown in Fig. 9. The waste strips are readily beaten into ingots, as shown in the same engraving; and all filings and dust of the precious metals are carefully saved.

The series of illustrations gives a clear and accurate idea of the system generally in use; but of course the processes are varied in different establishments.

## THE BUDDHA CRAB.

Rev. C. W. Everard writes to *Land and Water* that he was, two years ago, in the northeast of China, and was then told that the natives there not unfrequently caught some small crabs which have a most ridiculous face on one side. "They call them the Buddha crabs. I was very anxious to see some; and before I left, the two that I now have the pleasure of sending you, and which I beg you will accept, were brought me. One has, unfortunately, suffered in its long journeys, but the other is nearly perfect. The face is very distinct, and looks like a very jovial old fellow much given to wine."

In reply, the editor, Mr. Frank Buckland, says: "I now give a portrait of this remarkable crab; it is just the size of the top of the thumb; the claws are very small. The nearest approach to it is the masked crab (*Corystes Cassioelanus*), sometimes found in the British seas. One of these was exhibited alive in the aquarium of the Zoological Gardens, in 1860. I think it would puzzle even Mr. Darwin to account for this extraordinary resemblance to the human face on the back of a crab. This crab comes from China, and, strange to say, the markings on his back exactly resembled the face of an ugly old Chinaman. The eyes are closed, but they are oblique to the face, and are surmounted by heavy eyebrows. The nose is rounded and flattened; at each corner there is a warty projection. The moustache is curled exactly like the moustache we see on a Chinaman. The mouth seems ready to open and swallow any quantity of food."

## Ducks and Terrapins.

Everybody, says the *Baltimore Sun*, has heard of Chesapeake canvas-backed ducks and diamond-backed terrapins, and a great many people know something of how they taste when served up for the table, but not a great many are acquainted with the manner in which they are handled by the dealers in those and other famed gastronomic luxuries. There is an establishment in Baltimore which has been fitted up especially for this trade, where canvas backs and all kinds of game are kept by the thousands in apartments where the temperature remains at 18° above zero, and where terrapins in multitudes live and grow fat on nothing. There are five large closets on the premises, built in the walls, similar to bank vaults, and these, by a scientific process, are arranged to keep their interiors at a very low temperature, by the use of ice, but in a different manner from the freezing process of a refrigerator. In one of these the canvas backs and other wild game are kept perfectly fresh; in another

there are all varieties of fish, including shad from Savannah, white fish from the lakes, rock and perch from the Chesapeake tributaries, and blue fish, haddock, and codfish from the North. In another closet the smaller and more common fish are kept, and all of the closets are filled with some of the special products dealt in. For a month past shipments of canvas backs by the barrel have been made to London, Liverpool, and Paris by steamships from New York and Baltimore. The fowls are taken from the cold closets, and, when on board the steamers, are put in ice, and reach their destinations in excellent condition. Oysters in barrels are also sent to Europe, the oysters being packed with seaweed and corn meal. But the most novel feature of the house is the terrapin department. This room is kept warm, and the terrapins luxuriate in airtight chests, each from five to ten bushels capacity. These are packed full of terrapins, which number many hundreds in the aggregate. The most of them are of the Chesapeake diamond back variety, and all are at least seven inches across the under shell, that being the measurement which the terrapin must reach before, in the opinion of the epicure, it is fitted for the table. There are also kept, in some of the chests, hundreds of slider or red fender terrapins, a fresh water variety, chiefly from the James river. The habits of the terrapin have been made a study by the dealer. He keeps them in his airtight chests, without food, and says they not only exist deprived of air, but grow fat, and if kept in the chests for six months will each weigh four or six ounces more than when put in. If the terrapins are allowed to have liberty or free air, even in the most limited space, they become very poor, as they seem to draw sustenance from themselves, but do not take food. All the terrapins in the chests are enjoying vigorous existence, as proved by their movements when the lids were raised. The terrapins are principally sold to hotel keepers, and to be served up at extra junketings, and bring about \$24 a dozen. During the terrapin season of 1874, one house in Baltimore sold a thousand dozen.

## Contagion in our Schools.

The prevalence and spread of scarlet fever and diphtheria among the children of this city are facts which should awaken an anxious concern of the profession. It is unnecessary to say that the occurrence of these cases is explained by the fact of direct contagion. No matter what particular views may be advanced in regard to the *modus operandi* of the poison, we hardly believe there are any, at all acquainted with the diseases in question, who would be willing to say that they are not communicable, and hence not amenable to ordinary preventive measures. But, notwithstanding this belief, a belief shared in by the most intelligent portions of the lay community, we have these diseases cropping out in the schools day by day, under the very eyes of the teachers, and without any apparent effort on their part to arrest the spread. When a child carries a contagious disease from his school to his home, there is always trouble and anxiety in the train, and not unfrequently death, besides the danger of the propagation to other members of the family and among the neighboring children. In the absence of sanitary inspection in our schools, it may seem hardly fair that we urge upon any extra duty to supply the deficiency; but we are convinced that, with very little trouble on their part, a great deal of



THE BUDDHA CRAB.

good can be accomplished. And after all, in this particular the teacher is the fittest person to act, being always in direct communication with every scholar, and being the first to be informed of any illness. It would seem to be a very simple task to send the ailing child home, and at the same time to assume, especially during epidemics, that the sickness may be of a contagious character. Neglect of such precautions causes the sacrifice of many valuable lives yearly; and so long as teachers consider that they have no moral obligations in the matter, we can hardly hope for any change.

Even in the most contagious diseases the danger of infection during the initiatory symptoms is comparatively slight. This certainly is the strongest possible argument in favor of the prompt quarantining of a suspicious case. But while we allow that, with the right disposition on the part of those who have charge of the children, much disease may be prevented, there is another element in the question, and one which it is more difficult to meet, because in a measure beyond the control of the teacher: and that is the premature appearance at school of those who have been the subjects of these infantile diseases. It is well known that the power of propagation lingers in many of these disorders long after convalescence has commenced; and as such a fact is one of the difficult things for ignorant parents to appreciate, there is no wonder that, many times, the most dangerous poisons are sown broadcast.—*Medical Record*.

TO CLEAN colored leather, use 1 oz. oxalic acid dissolved in 1 pint distilled water.

## Seal Flesh.

Dr. A. Horner, surgeon to the Pandora, speaking of the Greenland Esquimaux, says: "From the length of time these people have inhabited this cold country, one naturally expects them to have found some particular food, well adapted by its nutritious and heat-giving properties, to supply all the wants of such a rigorous climate; and such is found to be case, for there is no food more delicious to the taste of the Esquimaux than the flesh of the seal, and especially that of the common seal (*phoca vitulina*). But it is not only the human inhabitants who find it has such excellent qualities, but all the larger carnivora that are able to prey on seals. Seal's meat is so unlike the flesh to which we Europeans are accustomed that it is not surprising that we should have some difficulty at first in making up our minds to taste it; but when once that difficulty is overcome, everyone praises its flavor, tenderness, digestibility, juiciness, and its decidedly warming after effects. Its color is almost black, from the large amount of venous blood it contains, except in very young seals, and is, therefore, very singular-looking, and not inviting, while its flavor is unlike anything else, and cannot be described except by saying "delicious!" To suit European palates, there are certain precautions to be taken before it is cooked. It has to be cut in thin slices, carefully removing any fat or blubber, and then soaked in salt water for from 12 to 24 hours to remove the blood, which gives it a slightly fishy flavor. The blubber has such a strong taste that it requires an arctic winter's appetite to find out how good it is. That of the bearded seal (*phoca barbata*) is most relished by epicures. The daintiest morsel of a seal is the liver, which requires no soaking, but may be eaten as soon as the animal is killed. The heart is good eating, while the sweetbread and kidneys are not to be despised.

The usual mode of cooking seals' meat is to stew it with a few pieces of fat bacon, when an excellent rich gravy is formed, or it may be fried with a few pieces of pork.

The Esquimaux make use of every part of the seal, and, it is said, make an excellent soup by putting its blood and any odd scraps of meat inside the stomach, heating the contents, and then devouring tripe, blood, and all with the greatest relish. For my own part I would sooner eat seal's meat than mutton or beef, and I am not singular in my liking for it, as several of the officers on board the Pandora shared the same opinion as myself. I can confidently recommend it as a dish to be tried on a cold winter's day to those who are tired of the everlasting beef and mutton, and are desirous of a change of diet.

## Bath Bricks.

The annual importation of Bath bricks into the United States is estimated at 10,000 boxes, there being 24 bricks in each box. These bricks are manufactured from the deposits of the river Parrett, Bridgwater, England, where millions are made annually. Nowhere else are these deposits found, so that Bridgwater supplies the world, and Bath brick are as well known in America, China, and India as in England.

## Artists' Brushes.

In a detailed description of the business of a large manufactory of artists' materials, in this city, a *Tribune* reporter gives the following interesting information in regard to the various sorts of hair used in brushes. The principal kinds employed are: Hog's bristles, which, being coarse and stiff, make good varnishing brushes; bear's fur, which is also stiff and hard, and used mainly for varnishing brushes; badger hair, which is long, soft, and elastic, and of which are made graining and gilding brushes; sable tail hair, which is very long and very elastic, and is made up into the finest and costliest of artists' brushes; camel's hair, also long and elastic, and second only to sable in fineness; and ox hair, which is pulled from the inside of cow's ears, and, being exceedingly long and elastic, makes good striping and lettering brushes. The skins of the animals mentioned are imported in bales, and boys with shears cut off the hair in handfuls, which are afterwards arranged by the brush makers. The denuded hides are then sold to glue makers. The value of some of the most costly kinds of hair exceeds that of equal weights of gold, so that each particular hair may be said to have its price, and great care is taken to prevent its loss. A double handful of sable tail hair, for instance, is worth \$100, and camel's hair is only a little less valuable. The variety of brushes made is almost infinite, and artists sometimes order them made after some particular pattern or device of their own. More than a hundred different sizes and shapes are kept in stock, the finest consisting of a few long, delicate hairs, capable of making a mark as fine as the scratch of a needle point.

## The Centennial Exposition.

A correspondent writes to point out that many persons will decline to exhibit at the Centennial because the Commissioners have made no arrangement to receive exhibits by railway and to place them in the proper situations in the department to which they belong. For an exhibitor to go there to put his goods on show, and again, 4 or 5 months afterwards, when the judges are making their awards, will be expensive if he live some distance from Philadelphia. He suggests that the Commissioners should appoint properly qualified men to undertake the removal of exhibits from the railroad depots to the buildings, and to put them in place for exhibition; and he states that exhibitors living at a distance from Philadelphia would gladly pay the expense of such an arrangement.