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The Secrets of the Trades.

At the present day there are some secrets in different trades, but the cases are exceptional, and by no means compared with the custom prevailing in the eighteenth and former centuries, when almost everything a man discovered or invented in the arts was, as a rule, carefully concealed. Thus the workmen were put upon oath never to reveal the process used by their employers. Doors were kept closed, artisans going out were searched, visitors were rigorously excluded from admittance, and false operations blinded the workmen themselves. The mysteries of every craft were kept in the strictest secrecy.

The manufacturer and builder. [August,

were badged by their secret societies of empirical pretenses and judicial affirmation. The royal manufacturer of porcelains, for example, were carried on in Europe with a spirit of jealous exclusiveness. The King of Saxony was especially circumspect; not content with the oath of secrecy imposed upon his workpeople, he would also make his kingly suspicion of favor of a brother monarch—neither king nor king's delegate might enter the tabooed walls of Meissen.

The so-called Dresden porcelains—that exquisite pottery of which the world has never seen the like—was produced for two hundred years by a process so secret that neither the lettre of princes nor the generality of the operatives ever revealed it. Afterward other discoveries were less successfully guarded, fortunately for the world. The manufacturers of those who in England originated in a stolen secret; this tinsel is simply tin from plated with tin by being dipped into the molten metal. In theory, it is an easy matter to clean the surface of iron, dip it into a bath of boiling tin, and remove it enveloped with the tin. As cooling. In practice, however, the process is one of the most difficult in the arts. It was invented in Holland, and guarded from publicity with the utmost vigilance for nearly half a century. England tried to vail to discover the secret, until James Sherman, a Cornish miner, crossed the channel, impressed himself with the system of the secret, and brought it home. The secret of manufacturing was still only understood, and is now within the reach of all artisans.

A Travelling Harbor of Quiet Water.

A correspondent of an English journal, discussing the subject of the preservation of men's health, suggests a novel plan of his own devising. We quote as follows:

"I am astonished that amongst all the schemes for the prevention of sea sickness that have been published, none has been attempted that is comparable to the one which I now propose. By means of a light vessel, which is to be of the utmost durability, and in the end would probably be the cheapest. Fig. 1 gives a general view of a boat, which is intended to be 16 feet long and 8 feet wide. Two boards 16 feet long and 16 inches wide will be required for the sides; three boards of the same length and 1 foot wide will be needed for the bottom, besides material for the stern and other parts. The boards for the sides have two blocks, each 2 feet long, placed between them, and are bound tightly by means of rope, as shown in Fig. 2. Insert a strong rod between the ropes at J, and twist it gradually ropes may be attached for the purpose of working it. It has two iron hooks D D to enable it to be hung to a strip A, Fig. 3, which is placed exactly in the middle of the stern, and is furnished with two iron eyes or screw rings to receive the hooks. Rowlocks and oars are to be provided as in Fig. 1. The boat is now to be caulked, which is done by stuffing tow or canvas into every seam or crevice, and afterwards pouring melted pitch over them. If all has been thoroughly done, the boat will be watertight, and may then be painted inside and outside of such color as may suit the taste.

California Oysters.

The first business trains which crossed the Pacific Railroad contained oysters freighted with oysters. As it was known that Californians did not possess any edible quality of this bivalve, Mr. A. Booth, of Chicago, undertook the transportation and planting of many thousand bivalves on the Pacific coast. Similar changes which oysters undergo when transplanted along the Atlantic coast have already been proved to take place on the Pacific coast with the oysters coming from the Eastern regions.

In going south, the round shape of the shell is elongated until off the coasts of Georgia and Florida they assume a razor-shaped shell. In California our transplanted oyster loses its oval or round shape and lengthens out. The Northern oysters planted in San Francisco Bay are put out to five to six feet of water, and duration and most rapidly in from six to twelve months. In New York Bay this takes from two to four years. Every year some 200 bivalves of small oysters are transported across the continent, to be brought up in the Pacific.

There are some peculiarities as to the character or origin of the oyster to be transplanted. They always come from Egg Harbor, Barstain Bay, Newrak Bay, and Long Island Sound. The more southern seed invariably dies. There appears to be a limit to the growth of any kind of Eastern oyster in the Pacific waters; after a certain period, a year and a half at the utmost, for some reason as yet not well understood—perhaps the most becoming too large for the shell planters—the oysters die. A great deal of precaution is necessary in guarding these planted oysters. A fence of pickets six inches apart is placed around the California Oyster Park. The enemies of the oyster are the staghorn and star-fish, at low tide the oyster shepherd goes in and kills such marine wolves as may be devouring his flock. There is a small clam, a native of the California coast, which is quite edible; farther north, on Puget Sound, there are clams twelve inches

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the possibility of taking a small harbor to sea seems to have been totally overlooked. This can easily be done by constructing a large well in the ship; around the center of gravity is evidently the best position. It is essential that this well should have no bottom or horizontal obstruction whatever, and the water in this opening will be seen and keep on the same level, or rather a close approximation to it. This water will, on inspection, appear to be rising and falling in the well, but in reality the well will be sliding up and down the sides of the enclosed body of water. An internal ship or punt with a slight draught of

Fig. 3.—Shaping the Ribs.

while the native oyster from Oregon is very small in size, and has the coppery flavor of the worst European bivalves.

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SODIUM.—Sodium is as white as flux, 5.—Rubber, silver, but this is only seen as a fresh cut, as it quickly tarnishes in the air, and even in the naphtha under which it is preserved. In order to make it bright when tarnished, the coating of brass is by which it is covered must be removed by strong alcohol, which dissolves it without injuring the sodium; (of course water cannot be used) it is left in the alcohol until quite clean and bright, then it is placed in chemically pure naphtha ether, and finally in a concentrated solution of salicylic acid in naphtha ether. In the latter solution the sodium may be kept in an unaltered condition.  

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