

enough to retain the blanks. The hot-plate consists of a flat sheet iron pan about 6 feet long, 4 feet wide, and with sides 6 inches high. It is supported on four iron legs, and stands about 3 feet 6 inches from the ground. Beneath the pan, and in close contact with it, is a steam coil, by means of which the sawdust is dried, and may be used over again.

Coining.—The coining presses, of which there are three, are of the type in which the pressure is given to the coins through levers and toggle-joints. The hard steel knuckles of the toggle-joints are of exceptionally large dimensions, so that coins can be struck at the rate of 100 per minute without any danger of them becoming overheated. Each press is driven by its own motor, and arranged so that the drive can be made either through a belt or gearing. The number of blows struck per minute can be varied from 30 to 100 by means of a 5-step controller.

The top and bottom dies move up and down, the collar plate remaining stationary. The blanks are placed in the feed tube by the operator, in piles of about 30. They are fed to the dies, automatically, by steel feeding fingers, which take one blank at a time from the feed tube, and drop it into the collar, at the same time pushing the previously struck piece into the delivery tube.

Hitherto, when coining, it has frequently been the case that, for some reason or other, a blank has not been placed between the dies at the proper moment. This may occur through the feed tube being empty, or through a bent blank sticking in the tube. In every case the dies have come together ("clashed"), and have been rendered useless. It has been known in a large mint for as many as 12 dies to be "clashed" in one day; representing a cost of not less than \$22.00, over and above the time taken in changing the dies. As a general rule a pair should be capable of striking about 80,000 pieces before becoming unfit for further use. In order to prevent the possibility of "clashed" dies, a device has been adopted in these presses, by means of which the dies do not come together unless a blank has been placed between them. This device consists of a special clutch between the fly-wheel and the main shaft, which is actuated by an arrangement of levers connected with the feeding fingers. In the event of a blank not being fed to the dies, the clutch is released, and the column holding the top die is stopped instantly, at its highest point: the fly-wheel continuing to run idle on the main shaft. This attachment takes up no extra floor space, and is exceedingly neat and effective. By its means also, single strokes can be made by the press; a very convenient arrangement when setting a new pair of dies.

After the coins have been struck, they are pushed into the delivery tube and delivered to a bowl placed in the front of the press.



Fig.