

allowance is only 0.2 grain. If the coin exceed the limit by even so little as the one-hundredth part¹ of a grain it must be remelted. The gold fillets are therefore drawn between steel cylinders which regulate the small inequalities in their thickness and reduce to a minimum any variations from standard. The cylinders, $4\frac{1}{2}$ inches long and $\frac{3}{4}$ inch in diameter, are highly polished and extremely hard, and the distance between them can be adjusted to the ten-thousandth part of an inch.

The cutting machines to which the fillets are next sent cut out blanks for all sizes of coin and work at the rate of 300 blanks per minute. A marking machine, working at 600 blanks per minute, raises the edges, thus protecting the impressions made later and preventing the coin from wearing away rapidly. Cutting and marking.

After further annealing, blanching and cleaning, the blanks are ready for the coining presses. Of these there are three, each capable of delivering 100 coins per minute. The blanks are placed in the feeding tubes by the operator in piles of about 30 and are passed to the dies automatically by steel feeding fingers. An ingenious device prevents "clashing" of the dies, that is, their coming together when accidentally no blank is between them. Clashing renders the dies useless and so causes expense in renewal. Each pair of dies is capable of striking about 80,000 coins before being unfit for further use. Coining.

Testing of the finished coins is now necessary. In the case of gold coins and of 50 and 25 cent pieces, each is weighed separately upon automatic weighing machines, which are so delicately adjusted for accurate weighing that the beam when fully loaded will turn with the one-hundredth part of a grain. Each machine weighs 20 coins per minute. The coins are 'fed' into a hopper by the attendant. One coin is then pushed automatically on to a flat pan attached to one end of the beam, where it remains for three seconds, after which it is pushed off by the succeeding coin. During the time it is resting on the pan its weight determines which one of three chutes it shall drop into when it is pushed off. These chutes lead to three boxes, one for those coins that are too light, a second for those that are too heavy and a third for those that are of the correct weight. The 10 cent and 5 cent pieces are weighed in groups in a hand scale against a standard dollar weight, while the 1 cent pieces are weighed in a hand scale against an avoirdupois pound which should contain exactly 80 of them. After further examination the perfect gold coins and the 50 and 25 cent silver pieces of correct weight and colour are rung singly on an iron block to find if they have the correct ring and are not "dumb". All dumb or otherwise imperfect coins are defaced and remelted. Testing and weighing.

¹ Gold of suitable quality requires to be refined by the electrolytic process, and it is probable that a plant for this purpose will be erected in the Mint. The supply of silver bullion comes from the smelting and refining works at Trail, B.C., and is very satisfactory.