F. X. CICOTT.

Machine for Reducing Coin-Blanks.

No. 216,308. Patented June 10, 1879.

Fig. 1.

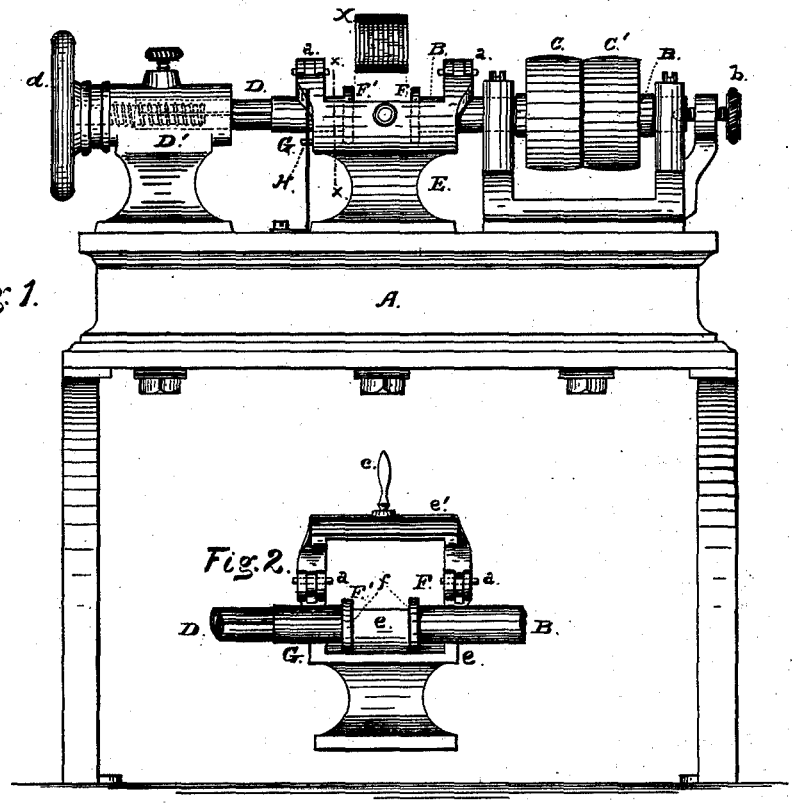
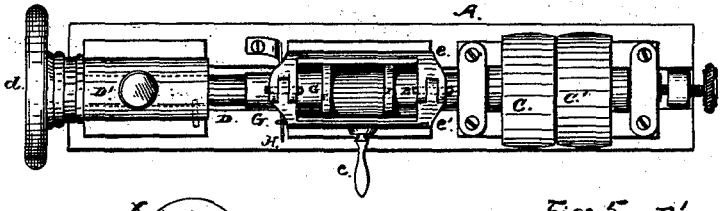


Fig. 2.

Fig. 3.



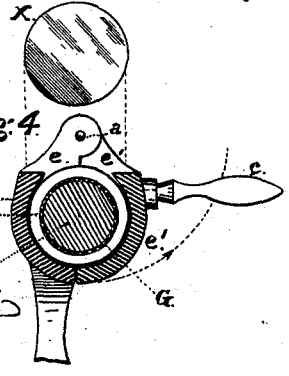


Fig. 4.

Fig. 5.

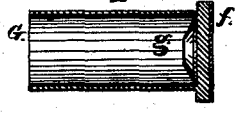


Fig. 6.

Witnesses:

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Wm. Smith his Atty.

UNITED STATES PATENT OFFICE.

FRANK X. CICOTT, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN MACHINES FOR REDUCING COIN-BLANKS.

Specification forming part of Letters Patent No. **216,308**, dated June 10, 1879; application filed February 26, 1879.

To all whom it may concern:

Be it known that I, FRANK X. CICOTT, of the city and county of San Francisco, in the State of California, have invented a certain new and useful Machine for Reducing Planchets or Coin-Blanks, which invention is fully set forth and described in the following specification, and in the accompanying drawings therein referred to by figures and letters.

My invention relates to that particular branch in the production of gold and silver coins known as "adjusting," wherein the planchets or coin-blanks that exceed the limit of weight prescribed by law are reduced by filing before they are submitted to the milling and coining processes, in order to bring them within the standard weight.

To such end it consists in a means for mechanically rotating the planchets or blanks a number at a time, and for holding and presenting them, while being rotated, in such position that the operator can apply the file or reducing instrument to the entire number of planchets at one operation as they revolve.

In the drawings herein referred to, Figure 1 is a front elevation of my machine for reducing planchets. Fig. 2 is a front view, in detail, of the holder and the rotating mandrels. Fig. 3 is a top view of Fig. 1. Fig. 4 is an enlarged view, in cross-section, taken through the line *x x*, Fig. 1. Fig. 5 is an enlarged longitudinal section of one of the rotating mandrels; and Fig. 6 is an enlarged view of the end of the spindle that supports the mandrel, Fig. 5.

Upon a frame or bed-plate similar in form to an ordinary turning-lathe I mount, in proper bearings, two horizontal spindles in line with each other. One of these spindles has a continuous rotary motion given to it, and its head is provided with a disk of somewhat larger diameter, having a frictional surface of cloth, leather, or other suitable material fixed to it. The other spindle has a feeding movement back and forth in its bearing toward and away from the rotating spindle, but has no rotary motion. The end of this non-rotating spindle carries a cap or a hollow mandrel with a head composed of a disk covered with a frictional surface of the same construction as the head on the opposite spindle, and this cap, while it moves horizontally forward and back with its spindle, also rotates independently of it. Between the two heads or disks of these spindles the planchets, in any convenient number, are placed, and are clamped by feeding up the traveling spindle, and are revolved by the rotary motion given to the rotating spindle.

For the purpose of conveniently placing and properly centering the planchets between the rotating heads, I provide a receiver, formed of two cylindrical halves, hinged together and placed upon the machine-bed between the two spindle-stocks, and in such position that it surrounds the ends of the two spindles. These two halves, when closed together, form a cylindrical chamber beneath and partly surrounding the spindles and their heads, the size of which chamber is governed by the diameter of the disks that form the heads of the spindles.

It is desirable to have the axis of this cylindrical chamber coincide as nearly as possible with the axis of the spindles it surrounds, and yet the contact of the edges of the disks and the surface of the chamber should not be close enough to create undue friction. The edges of the opening in the top of this cylindrical receiver constitute a tool-rest for the file or reducing instrument that is applied by the operator to the perimeter of the planchets as they are revolved. One part of this cylindrical receiver is fixed to or forms part of a rest or stock that is secured to the machine-bed, and the other part is hinged to it for convenience in inserting and removing the planchets.

In the accompanying drawings, A is the bed of the machine. B is the rotating or live spindle, with the fast and loose pulleys C C′. The thrust of this spindle is received upon the end of a set-screw, *b*.

D is the traveling or dead spindle, which is fed or moved forward and back by a hand-wheel, *d*, having a screw-shaft working in the stock D′ and in the end of the spindle. E is the cylindrical receiver, formed of the stationary part *e* and the movable parts *e′*. *a a* are the hinges that join them together, and *c* is a handle on the movable part for lifting it. F is the head or disk on the rotating spindle, and F′ is the similar one carried by the hollow mandrel G. The face of each disk is provided

with a surface, *f*, of cloth, leather, or rubber, to create sufficient resistance or friction between the heads and the planchets and cause them to rotate properly.

The mandrel G turns freely upon the end of the spindle D, and the two surfaces that come in contact when the two heads are brought together to clamp the planchets are made tapering or of conical shape, as shown at *g h*, Figs. 5 and 6, so that the mandrel shall revolve upon the dead spindle with the least possible friction. For convenience in renewing these surfaces when they become worn, I make the surface *g* of a tapering button, which is easily placed within and removed from the mandrel, and the like surface *h*, on the end of the spindle D, can be readily renewed by grinding or filing when the mandrel is removed.

H is a catch or fastening to hold together the parts *e e'* of the cylindrical receiver. X represents the planchets or coin-blanks.

In the operation of the machine the planchets to be reduced are previously weighed and assorted, those of like excess of weight being placed together in piles of any convenient number to be treated at one time in the machine. The clamping-spindle is moved back by the hand-wheel, and the cylindrical receiver being opened a sufficient distance to admit the planchets, the pile or roll of them is dropped in at the top opening, between the two heads F F' of the spindles. The hinged part is then closed and locked in place, and the planchets now in the receiver are supported upon its bottom surface in such position that when the spindle D is fed up the centers of all the planchets will coincide as nearly as is practicable with the centers of the revolving heads. Therefore, when the reducing-tool is applied to the perimeter of the revolving roll of planchets, it will act uniformly upon the entire circumference of each one.

The application of the file or reducing instrument is governed by the excess of weight of the planchets above the legal standard, and is best determined by the skill and experience of the operator. The number of revolutions made by the planchets while the file is held in contact with them will indicate to a person sufficiently practiced the amount of metal removed.

From the extreme delicacy of the operation of reducing, it is considered desirable to place the reducing instrument entirely under the control of the operator.

By this means the work of adjusting can be performed more rapidly, with a great saving in time and labor, and the work is more accurately performed than can be done by hand, where each piece or blank is turned in the hand and filed separately.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A machine for reducing planchets or coin-blanks, consisting in the combination of a cylindrical receiving tube or chamber, a live spindle with a flattened head or disk on its end rotated within said chamber, a head or disk on the end of a dead spindle also located in said chamber, and capable of rotating therein, and a means for moving the said dead spindle and its rotating head toward and away from the other head, substantially as described, the axis of the said cylindrical chamber and the centers of the said spindles being made, as far as practicable, coincident with one another, substantially as and for the purpose set forth.

2. The stationary receiver for holding the coin-blanks, in combination with revolving heads in such receiver for rotating the blanks therein, substantially as and for the purpose set forth.

3. In a machine for reducing planchets or coin-blanks, the live spindle B, with its head or disk F, having a frictional surface, *f*, and the rotating mandrel G on the dead spindle D, with its head or disk F', having also a frictional surface, *f*, substantially as described, for the purpose set forth.

4. In a machine for reducing planchets, the combination, with the rotating spindle B, having head F, of the non-rotating spindle D, having conical end *h*, and the loose sleeve G, provided with internal conical bearing *g* and with head F', said spindle D being adapted for longitudinal adjustment, to clamp the planchets between the heads F F', substantially as described and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of February, 1879.

FRANK X. CICOTT.

Witnesses:
C. W. M. SMITH,
EDWIN E. OSBORN.