(No Model.)

J. W. CAMERON.

MACHINE FOR ORNAMENTING JEWELERS' STOCK.

No. 262,369. Patented Aug. 8, 1882.

Fig. 1.

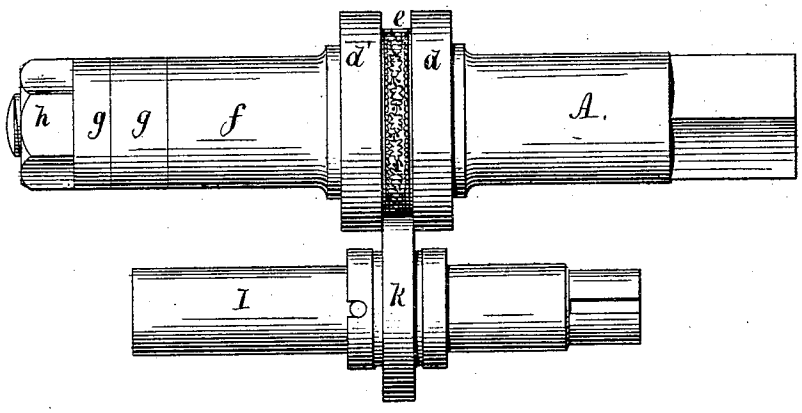
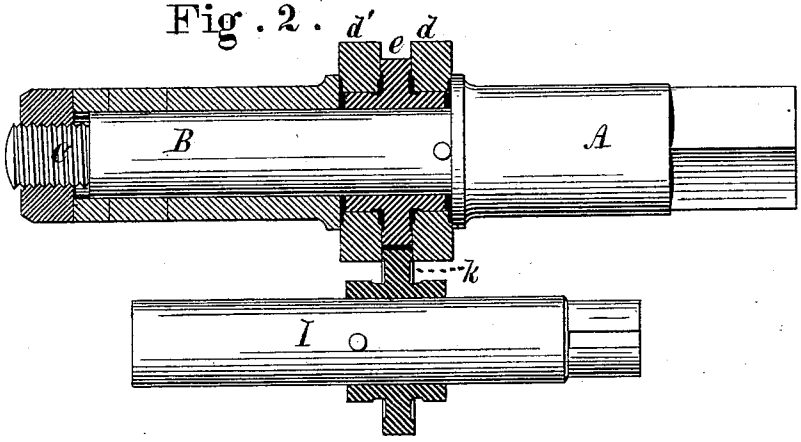


Fig. 2.



WITNESSES:

Henry J. Miller

Wm. L. Coles.

INVENTOR:

James W. Cameron.

by Joseph A. Miller & Co

Attorneys

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES W. CAMERON, OF PROVIDENCE, RHODE ISLAND.

MACHINE FOR ORNAMENTING JEWELERS' STOCK.

SPECIFICATION forming part of Letters Patent No. 262,369, dated August 8, 1882.

Application filed November 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. CAMERON, of the city and county of Providence, State of Rhode Island, have invented a new and useful Improvement in Machines for Ornamenting Jewelers' Stock; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the construction of the roller-dies of machines for ornamenting jewelry-stock; and it consists in certain novel features which will be hereinafter particularly described, and pointed out in the claims.

When metal is rolled to reduce its thickness or rolled to ornament the same by dies the metal is displaced laterally as well as longitudinally, and the edges become rugged. The object of this invention is to preserve the edges true and square both in reducing the thickness and in embossing the metal.

Figure 1 is a view of two arbors of a machine for rolling jewelers' stock, the arbors being provided with roller-dies. The means for driving the arbors are not shown, as they form no part of this invention, and are the ordinary means now employed for this purpose. Fig. 2 is a sectional view of the parts secured to the arbors, the arbors being shown in elevation.

In the drawings, A is the part of the arbor provided with a collar or shoulder.

B is the part of the arbor on which the rollers are secured, and C the screw-threaded end of the arbor.

d and *d'* are two collars, and *e* is a roller-die having a hollow cylindrical hub projecting from each end or side. The ends of the roller are slightly recessed from the hubs nearly to its periphery, leaving marginal seats for the collars *d* and *d'* to rest against. These seats, being narrow, perfectly close the joints between the edges of the die-face or periphery of the roller and the collars, which are much more certainly and easily secured than if the seats extended to the hubs, as the rectitude of extended flat seats is much more liable to be impaired by various causes, such as warping under changes of temperature, settling of dust near the hubs, oxidation, and abrasion during the adjustment of the collars. The accuracy of these seats is very important, as any slight protuberance—such even as might be caused by a very small particle of dust—will cause the impinging collar at some point to stand off from the die-face, and the metal being rolled will then be forced between the collar and roller, giving an imperfect edge to the stock produced. The two collars *d* and *d'* are fitted accurately upon the hubs, and project beyond the outer ends of the same. The hubs form axial seats for the collars, which are thus more easily kept truly seated than if seated directly upon the arbor, which is liable to be bent and to have its surface abraded by the sliding of dies, collars, and sleeves thereupon.

f is a sleeve bearing against the collar *d'*, and *g g* are sleeves of varying lengths, placed between the sleeve *f* and the nut *h*, by which the whole is firmly secured against the shoulder of the end A.

One of the hubs of the roller-die *e* is secured to the mandrel, so as to rotate with the same, by a pin or any other locking device.

I is the second arbor, provided with the roller *k*. The roller *k* enters between the collars *d* and *d'*, so that these collars form shoulders, between which the metal is rolled out. The flow of the metal being thus restricted to the length of the strip, a square well-formed edge is produced when the metal is rolled out to the required thickness and when it is to be embossed or ornamented. Either the roller *e* or *k* may be embossed or engraved with a suitable design upon its periphery, or both may have an engraved surface, if such is required in the work. As all the rolling and embossing are done between the collars *d* and *d'*, the edges will be preserved square and true, and all facing of the same is avoided.

By using collars or sleeves *g g* of different lengths disks of varying width can be readily secured and a large variety of work rolled with square and true edges.

I am aware that in a horseshoe-nail machine a roller-die having flat end faces extending unbrokenly from its periphery to its arbor-aper-

ture has been clamped between the flat faces of two collars which impinge upon the entire area of the flat end faces of said roller-die, and I do not claim such construction or arrangement.

What I claim is—

1. In a machine for rolling jewelers' stock, the roller-die having in its opposite sides the annular recesses extending toward its axis such a distance from a line near its periphery that the clamping-collars will impinge only against narrow marginal surfaces of said roller-die, as shown and described, and for the purpose set forth.

2. The roller-die having hollow cylindrical hubs projecting from the ends or sides thereof, in combination with the collars seated upon said hubs, substantially as described.

3. A roller-die having hollow hubs upon which are fitted clamping-collars, the hubs and die being bored for mounting upon a supporting-arbor.

JAMES W. CAMERON.

Witnesses:
HENRY J. MILLER,
J. A. MILLER, Jr.