(No Model.)

C. CHABOT.

METHOD OF FORMING RIMS ON WATCH CASES.

No. 321,687. Patented July 7, 1885.

FIG. 1.

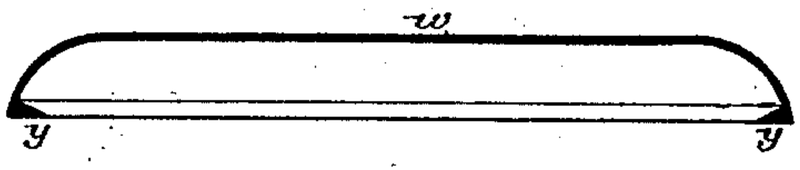


FIG. 2.

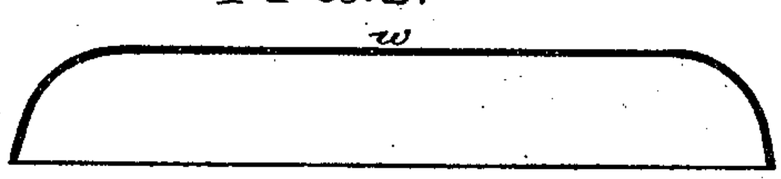


FIG. 3.

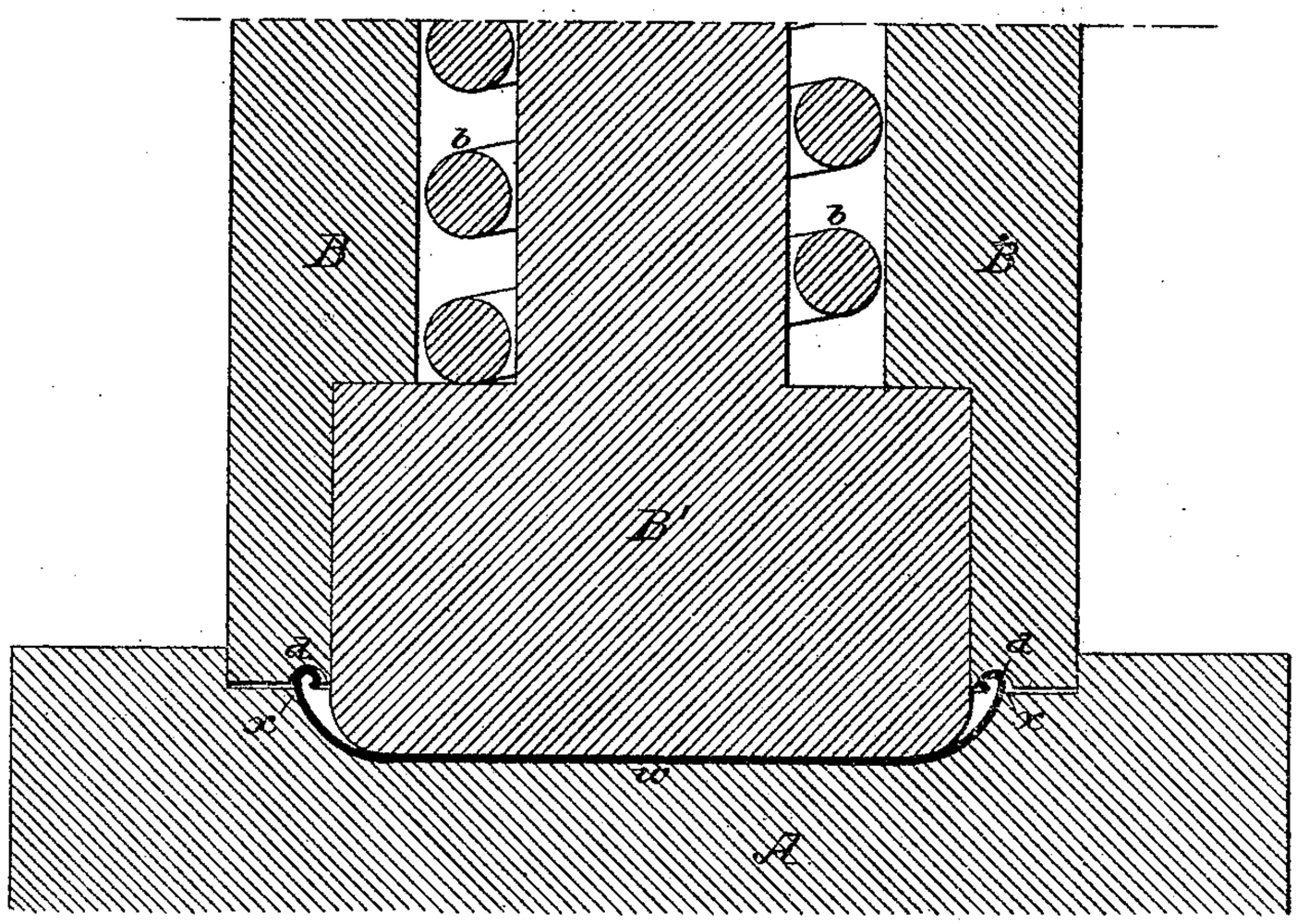


FIG. 4.

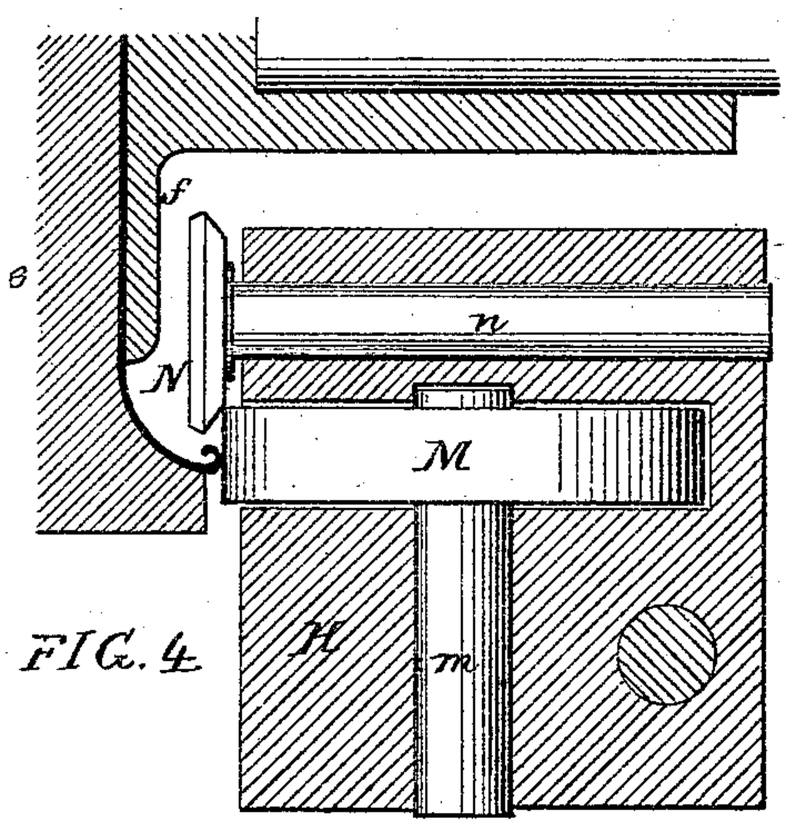
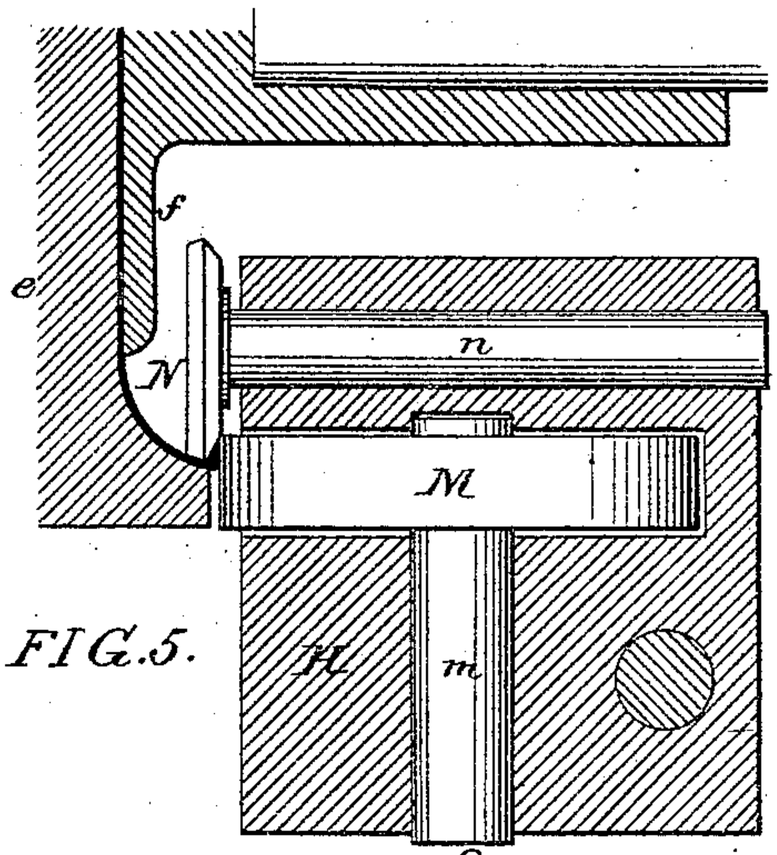


FIG. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

CYPRIEN CHABOT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE PHILADELPHIA MACHINERY COMPANY, OF SAME PLACE.

METHOD OF FORMING RIMS ON WATCH-CASES.

SPECIFICATION forming part of Letters Patent No. 321,687, dated July 7, 1885.

Application filed March 9, 1885. (No model.)

To all whom it may concern:

Be it known that I, CYPRIEN CHABOT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Forming Rims on Watch-Cases, &c., of which the following is a specification.

The object of my invention is to rapidly form on the edge of a watch-case or other sheet-metal plate the usual flat-faced, inwardly-projecting, and internally-beveled rim or "clip," and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view, on an enlarged scale, of the case with finished rim; Fig. 2, a view showing the first step in the process of forming said rim; Fig. 3, a sectional view showing the second step of the process, and Figs. 4 and 5 sectional views showing the finishing operation.

In carrying out my invention I first strike up the edge of the sheet-metal case *w*, as shown in Fig. 2, and then form on this struck-up edge an internal bead, *x*, as shown in Fig. 3, this bead *x* being then compressed externally and internally, in order to reduce it to the condition of the inwardly-projecting and internally-beveled rim *y*, with flat outer face, as shown in Fig. 1.

To form the inwardly-beaded edge *x*, I use a press, part of which is shown in Fig. 3, A representing a recessed lower die, and B an upper die, which is tubular, and has an internal plunger, B′, free to slide in the die to a limited extent, and acted upon by a spring, *b*, which tends to depress or force it out of the die, the latter having in its lower edge an annular recess, *d*. The watch-case, after being struck up into the dished form, Fig. 2, in a separate press, is placed in the recess of the lower die, and the upper die is forced downward, the first effect of this movement being to bring the projecting plunger B′ into contact with the case, which is thereby firmly clamped to the bed, the plunger yielding as the upper die continues to move downward, and the upturned and projecting edge of the case finally entering the grooved portion *d* of the die, whereby said edge is bent inward and downward to form the bead *x*. The machine which I prefer to use for compressing this beaded edge to form the internally-beveled rim forms the subject of a separate application for a patent filed by me on the 21st day of July, 1884, Serial No. 138,299, and hence need not be minutely described; but in Figs. 4 and 5 I have shown such parts of the machine as are necessary for a proper understanding of the final steps of the process.

The case is secured to a recessed chuck, *e*, by means of a clamping-disk, *f*, and a rotating motion is imparted to said chuck, the beaded edge of the case, as the latter rotates with the chuck, being subjected to the action of the flat-faced disk M and beveled disk N, the spindles *m* and *n* of which are adapted to bearings in a block, H. This block is capable of moving both laterally and longitudinally, so that the disk M can be caused to press upon the outer face of the beaded rim, and at the same time the beveled disk N can be brought to bear upon the inner face of said rim, so as to reduce the same to the condition shown in Fig. 5.

It should be understood, however, that the proper carrying out of my process does not of necessity demand the employment of the machine alluded to.

The use of said machine is preferred, however, as it provides for the compression of the outer and inner faces of the bead *x* by a rolling action, which has no tendency to wound or impair the surface of the bead.

I claim as my invention—

1. The mode herein described of forming the inwardly-projecting beveled rim on a watch-case or other sheet-metal plate, said mode consisting in first forming an internal bead on the edge of the case, and then flattening the outer face and compressing the inner face of said bead while the case is being rotated, as set forth.

2. The mode herein described of forming the inwardly-projecting beveled rim on a watch-case or other sheet-metal plate, said mode consisting in first forming an internal bead on the edge of the case, and then rolling the inner and outer faces of said bead, so as to flatten said outer face and press out the inner face, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CYPRIEN CHABOT.

Witnesses:

WILLIAM F. DAVIS,

HARRY SMITH.