

(No Model.)

3 Sheets—Sheet 1.

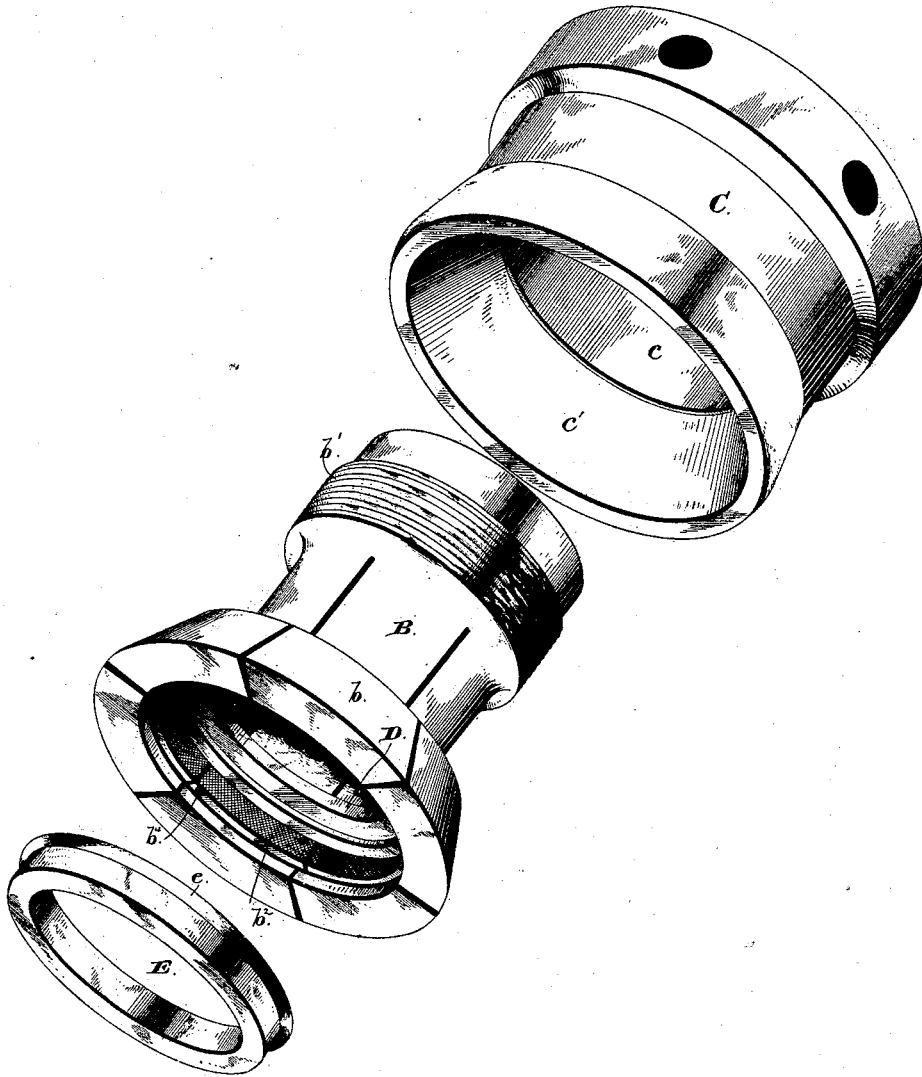
W. H. FITZ GERALD.

MECHANISM FOR THE MANUFACTURE OF WATCH CASE CENTERS.

No. 420,380.

Patented Jan. 28, 1890.

Fig. 1.



Witnesses:

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Fig. 2.

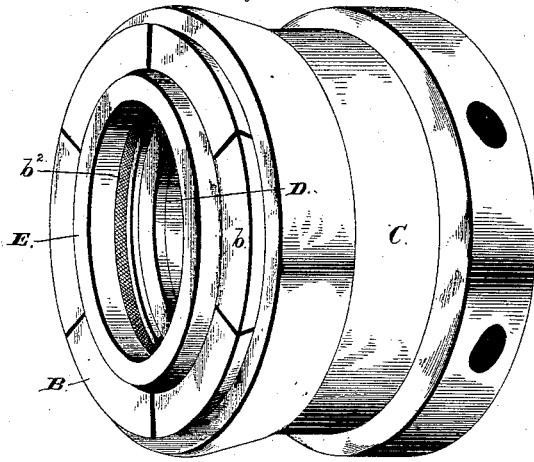


Fig. 4.

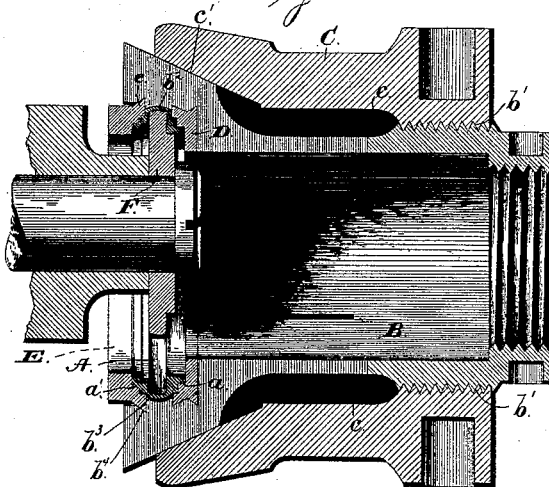
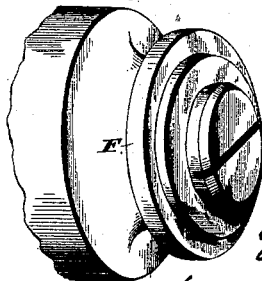


Fig. 5.



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Fig. 5.

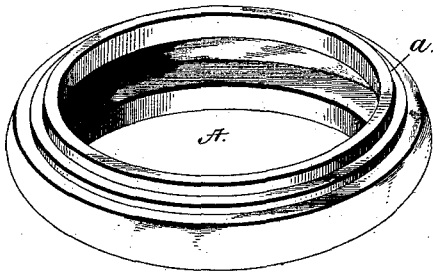


Fig. 6.

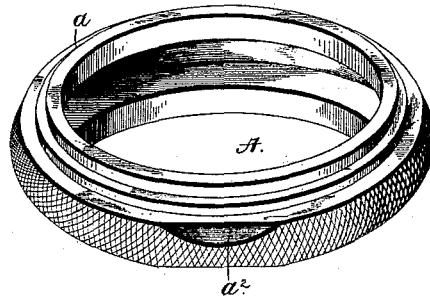


Fig. 7.

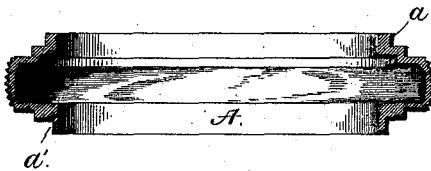
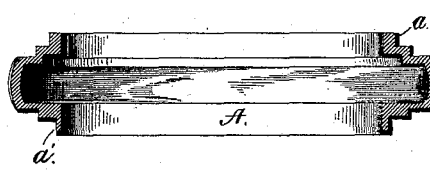


Fig. 8.



Witnesses:
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Henry C. Hazard.

Inventor:
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Crimble & Russell, his Attys

UNITED STATES PATENT OFFICE.

WALTER H. FITZ GERALD, OF BROOKLYN, NEW YORK.

MECHANISM FOR THE MANUFACTURE OF WATCH-CASE CENTERS.

SPECIFICATION forming part of Letters Patent No. 420,380, dated January 28, 1890.

Application filed July 31, 1888. Renewed December 14, 1889. Serial No. 333,718. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. FITZ GERALD, of Brooklyn, in the county of Kings, and in the State of New York, have invented certain new and useful Improvements in Mechanism for the Manufacture of Watch-Case Centers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the parts of my sectional die-chuck for embossing a case-center separated from each other. Fig. 2 is a like view of the same united. Fig. 3 is a perspective view of the roller used with said die-chuck. Fig. 4 is a central section of said tools when in operation upon a case-center. Fig. 5 is a perspective view of a blank when ready for the action of the embossing or ornamenting dies. Fig. 6 is a like view of the same after having received such action; and Figs. 7 and 8 are central cross-sections of said case-center, and show, respectively, the condition of the same before and after the action of said embossing-dies.

Letters of like name and kind refer to like parts in each of the figures.

My invention has for its object the ornamentation of a watch-case center made from sheet metal; and to such end said invention consists in the mechanism employed, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ a case-center blank A, which is preferably constructed from sheet metal by means of dies, and is provided upon each side with an outer cover-snap *a* and an inner cover or bezel snap *a'*. If desired, said blank may be cast and turned in a lathe, or may be given its shape by any other means which will adapt it for embossing.

For the embossing operation I employ a hollow split chuck B, which has one of its ends adapted to screw over or otherwise be fastened upon the end of a lathe-spindle and at its opposite end is enlarged, and such enlargement *b* given a rearwardly and inwardly inclining periphery. Fitted upon the outside of said chuck is a sleeve C, which has the rear portion of its axial opening *c* threaded to correspond to a threaded portion *b'* of the pe-

riphery of said chuck, while the front portion *c'* of said axial opening has an outward and forward inclination that adapts it to conform to the inclined or conical periphery of said enlargement, the arrangement being such as to enable the outer split end of said chuck to be compressed radially by turning said sleeve outward over the threaded part *b'* and permitting it to expand radially by moving said sleeve rearward, all in the usual way.

Within the outer split end of the chuck B is provided a recess *b²*, which is slightly larger in diameter than the outside diameter of the center blank A, and has a depth equal to about twice the thickness of the latter from front to rear. Within the rear end of said recess is loosely fitted a washer D, that has its front or outer face conformed to the shape of one side of said blank, while within the outer end of said recess is a second washer E, that has its inner face also adapted to fit over one of the sides of said blank. The washer E is provided with a Λ -shaped peripheral flange *e*, that engages with a correspondingly-shaped groove *b⁴* within the chuck-recess *b²*, and operates to insure the position of said washer with relation to the rear end of said recess, the arrangement being such as to cause the blank A to be closely held between the faces of said washer E and the washer D when the jaws of the chuck B are closed together.

Between the washers D and E the periphery of the chuck-recess *b²* is given a transverse and circumferential shape that is the reverse of the like features of the finished case-center A, and is adapted to give to the periphery of the latter any desired ornamentation. The case-center blank being placed within the embossing-chuck, as described, a roller F, which has its periphery conformed to the size and shape transversely of the interior of the finished center blank, is placed within the latter. Said chuck is caused to revolve and said roller moved, so as to press outward against the inner periphery of said blank, when by the action of the former the latter will have its periphery pressed into and caused to conform to the inner periphery of said chuck, so as to present a reverse of the configuration of the same. While the roller described is prefer-

ably employed, the same result upon the case-center may be secured by the use of a burnisher for pressing the metal into contact with the embossing-surface. When centers are being made for filled cases, an inclined face a^2 at each hinge-joint may be formed by means of correspondingly-opposite elevations b^3 , provided within the chuck-recess b^2 . The case-center is now completed by giving to its 10 snaps the necessary under-cut, which operation is preferably performed by means of a burnisher in the usual way. If desired, however, such under-cut may be given by the chuck-die, in which event the separable 15 washers would be omitted and said chuck caused to embrace the sides as well as the periphery of the blank. To render such operation practicable, the jaws of said chuck would be given a much larger radial move- 20 ment than would otherwise be necessary.

When a case-center has been embossed, the sleeve C is screwed back, permitting the expansible and contractible chuck B to expand to release the washers D and E and the embossed center, which is thus rendered readily removable from the chuck when the embossing operation is completed, while being securely held in place during the embossing operation by the jaws of the chuck when the 30 latter are contracted by screwing up the said sleeve, the said washers having peripheral grooves or flanges to prevent their displacement when the jaws of the chuck are contracted.

The method hereinbefore described is not 35 claimed herein, being covered by a separate application for patent filed upon the 5th day of April, 1888, Serial No. 269,723.

Having thus described my invention, what 40 I claim is—

1. In a machine for embossing watch-case centers, the combination, with an expansible and contractible chuck-die provided with a 45 circumferentially ornamented or figured die-recess, of a roller to enter and travel within the interior of a watch-case center held in the recessed chuck-die and to press the same outward against the ornamented face of the said die-recess, substantially as and for the 50 purpose specified.

2. In a machine for embossing watch-case centers, the combination, with an expansible and contractible chuck-die provided with a circumferentially ornamented or figured die-

recess, of removable rings or washers fitting 55 within said chuck and the inner faces of which coincide to the outer faces of a watch-case center, and a roller to enter and travel within the interior of a watch-case center held in the said chuck-die between said rings 60 or washers and to press the periphery of the center outward against the ornamented face of the said die-recess, substantially as and for the purpose shown.

3. In a machine for embossing watch-case 65 centers, the combination, with an expansible and contractible chuck-die provided with an ornamented or figured die-recess and an internal annular recess or groove, of a ring or washer adapted to furnish a bearing for the 70 outer face of a case-center, and which is provided with a peripheral flange to enter the said annular recess or groove within the jaws of the chuck to prevent the displacement of the said ring or washer when the jaws of the 75 chuck are contracted, substantially as and for the purpose set forth.

4. In a machine for embossing watch-case centers, the combination, with a die composed of a chuck which is split so as to form 80 a number of elastic jaws that are provided internally with an annular ornamented recess which is adapted for the reception of a watch-case center, of means for causing the periphery of said center to conform to the 85 configuration of the ornamented recess, substantially as and for the purpose shown.

5. In a machine for embossing watch-case centers, the combination, with a die that is composed of a chuck which is split so as to 90 form a number of elastic jaws that are provided internally with an annular partially-ornamented recess which is adapted for the reception of a watch-case center, and of confining-rings adapted to engage with the cen- 95 ter so as to maintain it in position to have its periphery conformed to the ornamentation in the annular recess, of a roller engaging with the center so as to effect the said conformation of its periphery, substantially as and 100 for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of July, 1888.

WALTER H. FITZ GERALD.

Witnesses:

GEO. S. PRINDLE,

JOHN E. SMITH.