

C.H. Field,

Making Watch-Backs,

No. 54,137,

Patented Apr. 24, 1866.

Fig. 1.

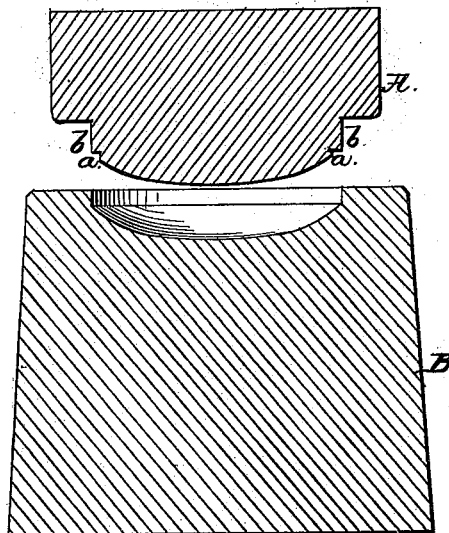


Fig. 2.

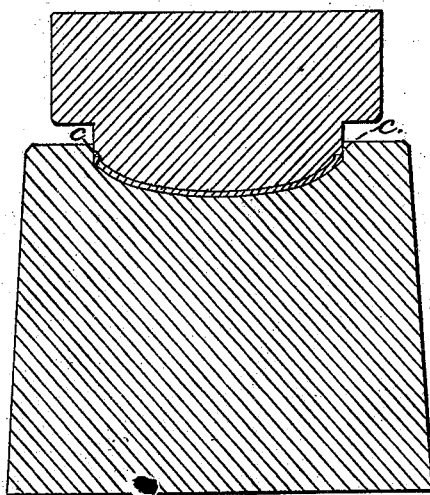
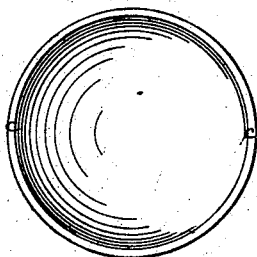


Fig. 3.



Witnesses:

R. G. Campbell
Edw. H. Hager

Inventor:

Chas. H. Field
by his Att'y,
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UNITED STATES PATENT OFFICE.

CHARLES H. FIELD, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN THE MANUFACTURE OF WATCH-BACKS.

Specification forming part of Letters Patent No. 54,137, dated April 24, 1866.

To all whom it may concern:

Be it known that I, CHARLES H. FIELD, of Providence, in the county of Providence and State of Rhode Island, have invented an Improvement in the Construction of Watch-Backs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a diametrical section through the die and counter-die for producing watch-backs. Fig. 2 is a similar view, showing the two dies brought together with a watch-back between them. Fig. 3 is a view of the article produced.

Similar letters of reference indicate corresponding parts in the several figures.

I have invented a mode of producing watch-backs whereby the necessity of stopping to anneal the blanks several times during the operation, as hitherto practiced under the drop process, is obviated, and the backs are produced from an annealed plate at one operation; as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a die-head or follower of a hydrostatic press, having a convex projection formed on its lower end, which is surrounded by a rabbet, *a*. This die is the exact counterpart of the concave surface of the watch-backs which it is desired to produce.

Beneath the die-head A is a solid block, B, having a concave depression in its upper end corresponding to the convex surface of the watch case or back which it is intended to produce. This counter-die is formed so as to

receive within it the cylindrical portion *b* of the male die, so that a lateral thrust of the die will be effectually prevented during the operation of forming the watch-backs, as shown in Fig. 2.

The method of producing watch-backs by my process is to place a circular plate which has been previously annealed within the counter-die, and then, by a gradual pressure of the die A, the metal is pressed into shape, and the edge of the plate crowded into the rabbet *a*, so as to form the outer rim or bezel, *c*, as shown in Figs. 2 and 3. Thus it will be seen that at a single operation and by a powerful but steady pressure I am enabled to produce the watch-backs complete.

The common drop-hammer has been previously used for producing the concavo-convex backs without the bezels or rims; but under this drop process it is necessary to anneal the blanks some fifteen or twenty times during the operation of drawing down the metal in consequence of the metal becoming very brittle by the blows of the hammer upon it.

By my process the metal receives a steady pressure, and is not, therefore, rendered brittle. Consequently the backs do not require to be reannealed during the operation of swaging them into the required shape.

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

The means, substantially as herein described, for producing a watch-back with the bezel on it at one operation, as set forth.

CHARLES H. FIELD.

Witnesses:

ALBERT M. HEWITT,
HENRY MARTIN.