

C. W. HARMAN.
PROCESS OF MAKING SWISS WATCH BOWS.
APPLICATION FILED JAN. 26, 1911.

1,019,636.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

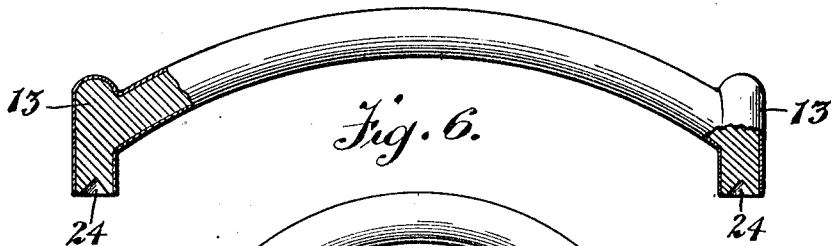
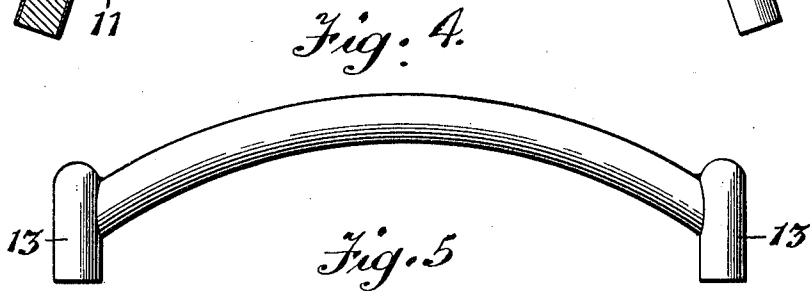
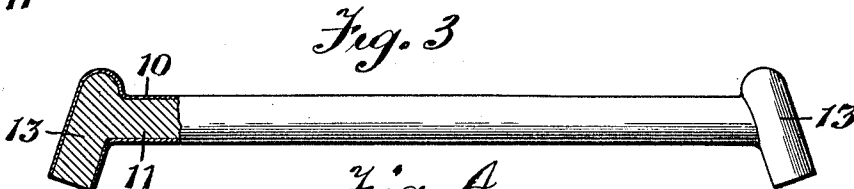
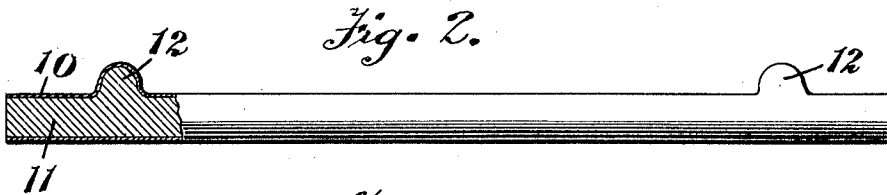
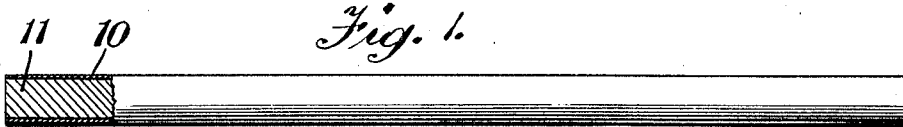
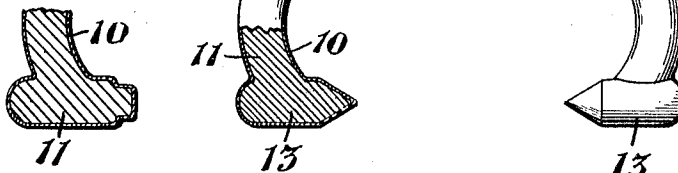


Fig. 7.



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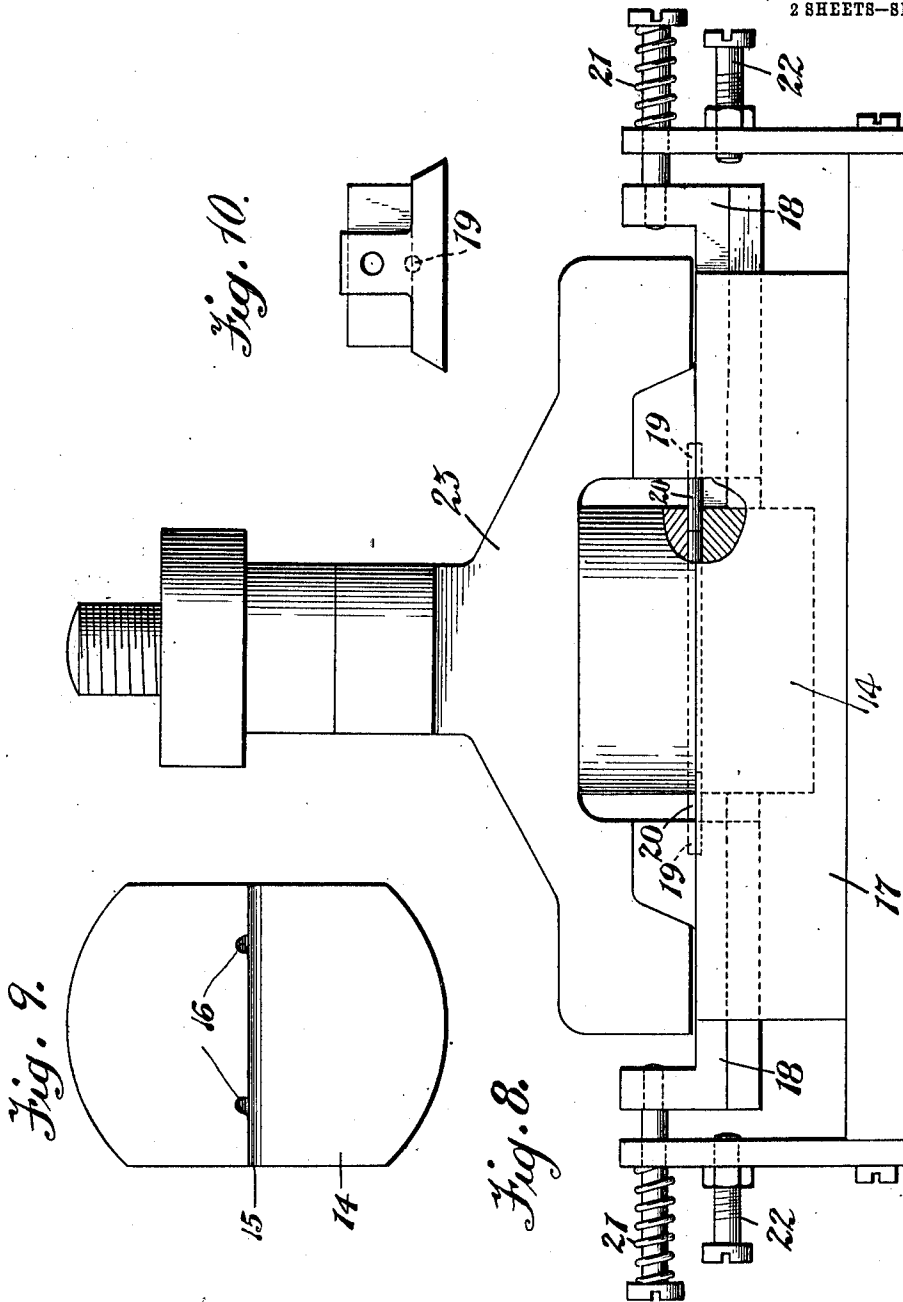
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2 SHEETS—SHEET 2.



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES W. HARMAN, OF NEW ROCHELLE, NEW YORK, ASSIGNOR TO JOSEPH FAHYS & CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

PROCESS OF MAKING SWISS WATCH-BOWS.

1,019,636.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES W. HARMAN, a citizen of the United States, and a resident of New Rochelle, county of Westchester, New York State, have invented certain new and useful Improvements in Processes of Making Swiss Watch-Bows, of which the following is a full and clear specification.

My invention relates to an improved process of making Swiss or French watch bows.

Numerous attempts have been made to produce from filled stock a Swiss or French watch case bow, that is to say one having a bow proper with transverse bars at its ends forming axles or points of attachment to the pendant, but due to the difficulty of preventing the appearance of the inner or base metal at the exposed surface, the attempts have met with little or no success, so that at the present time gold filled watch cases are commonly supplied with solid gold Swiss or French bows. If any portion of the inner or base metal is exposed or accessible to moisture, perspiration or other oxidizing or discoloring influence, the tarnishing or discoloration spreads over the precious metal so that the importance of having the base metal entirely inclosed even at the inner ends of the bars which are set into the pendant is at once apparent.

The objects of my invention are to provide a process which is adapted to the production of Swiss or French bows of filled stock, and further, to provide an improved Swiss or French bow of filled stock.

The invention is illustrated in the accompanying drawings in which,

Figure 1 is an elevation of a piece of gold filled stock, one end being broken away to illustrate the inner or base metal with the outer shell or tube of precious metal. Fig. 2 is a similar view of the same with the ears or nibs which are to form the outer ends of the bars struck up. Fig. 3 is a similar view of the same with the ends of the stock brought into alinement with the ears or nibs to give the preliminary form to the bars. Fig. 4 is an outside plan view of the same with the stock partially bowed. Fig. 5 is an elevation with parts in section at the ends illustrating the drilling of the ends for the removal of a portion of the inner or base metal. Fig. 6 is a similar view

with the stock completely bowed and the ends pointed to completely inclose the inner or base metal and leave only precious metal exposed at the inner ends of the bars. Fig. 7 is a detail view of one end of a modified form of bow in which the bar is shouldered at its inner end. Fig. 8 is an elevation with part in section of a die press at the completion of its descent for effecting the striking up or coaxing up of the ears or nibs which are to form the outer ends of the bars. Fig. 9 is a plan view of one of the die plates, and Fig. 10 is an end view of one of the slides hereinafter referred to.

Referring now more specifically to said drawings, 10 indicates a shell or tube of precious metal inclosing an inner or base metal 11.

The first operation in my improved process is to strike or coax up the ears or nibs 12 near each end of the stock to form the outer ends of the bars 13. For effecting this operation I may employ the die press illustrated in Figs. 8, 9 and 10. Referring to these figures, 14 indicates one of the die plates of which two are provided each having a groove or recess 15 from which lead side recesses 16 which latter are to form the ears or nibs 12 above referred to. The two die plates 14 are complementary to each other and their recesses 15 and 16 together form the shaping chamber for the first operation upon the stock. The die plates 14 are suitably positioned and held together in a bed 17, and in each side of the bed operates a slide member 18 which has a perforation 19 for the reception of a push pin 20 adapted to register with and operate in the recesses 15 of the die plates 14. The slides 18 are normally held outward by return springs 21 against an adjustable stop 22 in position to be engaged by a plunger member 23, the under inclined surface of which engages in its descent a correspondingly inclined surface on the upper portion of the slides 18 so as to move them inwardly toward each other, thus bringing the push pins 20 against the ends of the stock within the recess 15 and exerting such pressure upon the stock as to crowd out into the side recesses 16, the metal which is to form the ears or nibs 12. After the ears or nibs 12 have been formed the outer ends of the stock are bent downward into alinement therewith

to give the preliminary form to the bars 13. The next operation is then to slightly bow the stock into the general form shown in Fig. 4 whereupon the ends of the bars 13 are drilled at 24 to remove the inner or base metal 11 as shown in Fig. 5. Having removed a portion of the base metal at the end of the bar, the bar may then be pointed and the bow shaped as illustrated in Fig. 6. It will be noted that the pointing of the bars effects the complete inclosure of the inner or base metal so that the latter is not exposed at any point, and the entire outer surface of the bow and bars is of precious metal. The inner ends of the bars 13 may be given any desired shape as for instance that shown in Fig. 6, or, if preferable, the shouldered form shown in the modification Fig. 7, which is obtained by first producing the form shown in Fig. 6 and subsequently flattening out the conical ends into the shouldered form. The apparatus necessary for effecting these several operations is familiar to those skilled in this art and hence is not specifically shown and referred to herein. After shaping, the bow may be polished or otherwise finished to suit it to the requirements of its particular use.

It is to be noted that while I have referred to certain specific steps in my process, each step may in itself comprise repeated or successive operations, the effect of which as a whole, is to bring about the change indicated.

What I claim is:

1. The process of making Swiss or French watch case bows which comprises striking up and bowing the stock to form the bow portion and preliminary bars, and subsequently contracting the precious metal at the inner ends of the bars to completely inclose the inner or base metal.

2. The process of making Swiss or French watch case bows which comprises striking up ears or nibs of the filled stock to form the outer ends of the bars, bending down the outer ends of the stock to complete the preliminary form of bars, removing the inner or base metal from the inner ends of the bars and bowing the stock and contracting the precious metal about the inner ends of the bars to completely inclose the inner or base metal and leave only the precious metal exposed.

3. The process of making Swiss or French watch case bows which comprises forming the preliminary bow of filled stock with base metal exposed in the ends of the bars and subsequently drawing together the precious metal of the shell of the filled stock over the exposed base metal at the ends of the bars to complete the inclosure of the base metal.

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Witnesses:

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