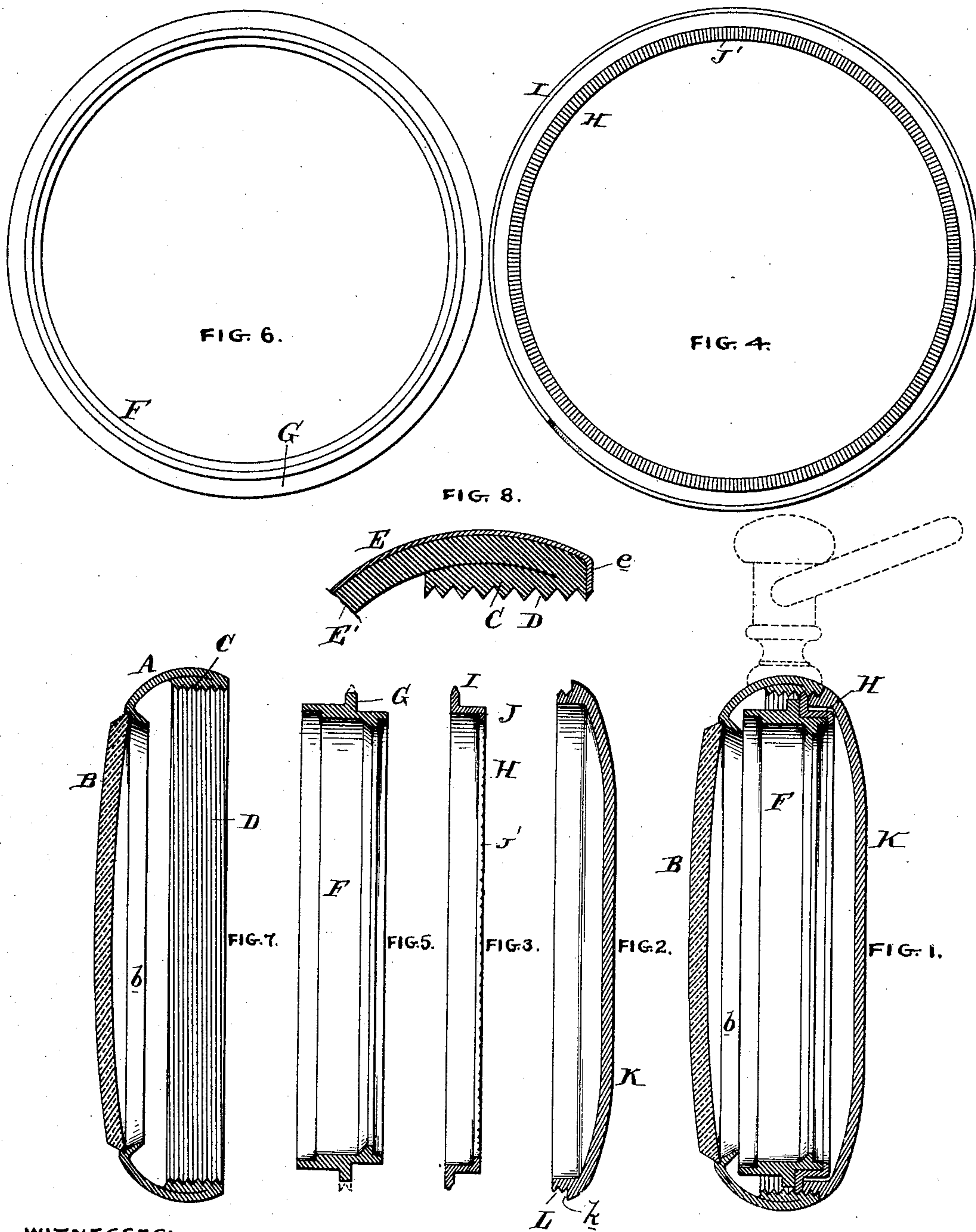


(No Model.)

F. MINK.
WATCH CASE.

No. 415,678.

Patented Nov. 19, 1889.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRITZ MINK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE KEY
STONE WATCH CASE COMPANY, OF SAME PLACE.

WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 415,678, dated November 19, 1889.

Application filed August 19, 1889. Serial No. 321,259. (No model.)

To all whom it may concern:

Be it known that I, FRITZ MINK, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improve-
5 ment in Watch-Cases, of which the following is a specification.

My invention has reference to watch-cases; and it consists of certain improvements, which are fully set forth in the following specifica-
10 tion and shown in the accompanying drawings, which form a part thereof.

In carrying out my invention I form the combined watch-case center and bezel of sheet metal bent into the requisite shape for ap-
15 pearance, strength, and utility. Furthermore, I prefer to form it of filled metal, which is a base metal covered on one or both sides with gold or silver, and strengthen the body part, or where the back is screwed on, by doubling
20 the edge upon itself inwardly and screw-threading or otherwise forming it to receive the back. In this manner the excess of gold is cut off and can be reclaimed. The move-
25 ment-ring is formed with a flange which fits into the annular screw-threaded portion of the center, and preferably of such a fit as to prevent all side play. This movement-ring is secured within the center by an annular clamping-ring, preferably having an outward
30 screw-threaded flange for screwing into the center and an inward flange to hold the movement-ring in place. The back is formed with a screw-threaded portion which screws within the center to make a tight or dust-proof joint
35 between the back and center. By this construction the diameter of the watch-case is kept to a minimum with the employment of a given-sized movement or works.

In the drawings, Figure 1 is a cross-section
40 through a watch-case embodying my invention. Fig. 2 is a cross-section of the back or cover removed. Fig. 3 is a cross-section of the clamping-ring removed. Fig. 4 is a front elevation of the said clamping-ring. Fig. 5
45 is a cross-section of the movement-ring removed. Fig. 6 is a front elevation of same. Fig. 7 is a cross-section of the center and glass; and Fig. 8 is an enlarged cross-section through a portion of the center, show-
50 ing a part of my invention as applied to filled cases.

A is the center, and is formed of sheet metal rolled, spun, or stamped into an annular form and having the rear edge thereof bent over internally upon itself, forming the re-enforce-
55 ing or strengthening annular band C, which is located substantially at the middle portion of the case and forms a solid bearing for supporting the movement-ring, the clamping-ring, and back. The inner surface of this
60 annular band C is screw-threaded, as at D.

B is the glass or crystal of the watch, and is secured to the bezel in the usual manner.

b is the annular reflector, against which the dial-plate of the watch fits.
65

F is the movement-ring, and is provided with an annular flange G, which fits within the screw-threaded re-enforcing band C of the center A, so as to be held against lateral
70 movement. If desired, this movement-ring might be provided with screw-threads, as indicated in dotted lines, Fig. 5, and be thus adapted to screw into the center A.

H is the clamping-ring, and is formed with a flange I, having a screw-thread and adapted
75 to screw into the threads D on the interior of the center A, and so as to fit down over the flange G of the movement-ring, and thereby hold it in place. In addition to this the clamping-ring H may also be provided with
80 an inwardly-projecting flange J, which may project over the rear portion of the movement-ring, and also assist in holding the said movement-ring, in place. This flange J may
85 be notched or roughened, as at J', to enable it to be screwed in or out.

K is the back or cover, and is provided with the screw-thread L, which screws into the threads D on the interior of the center A, and so as to make a tight or dust-proof joint.
90 The said cover is provided with a shoulder k, which fits upon the rear surface of the center and forms a tight joint with respect to said center. By this construction the back may be removed without displacing the
95 movement or movement-holding clamp-ring; and the clamp-ring may be adjusted within the center, so as to properly locate and hold the movement-ring to the center without the use of independent screws, which are com-
100 monly employed, and thereby I am enabled to secure a given-sized movement-ring in a

center of much smaller diameter than would be required if such independent screws were employed.

My invention is also well adapted to filled cases, or those in which a base metal is covered upon one or both sides or surfaces with gold or silver.

In Fig. 8, which is supposed to be an enlarged view of a portion of Figs. 1 and 7, and employing filled metal, E represents the gold, and E' the base metal. When the outer edge C of the case is bent over inwardly to form the band C, the gold covers the edge at the point of bending, as indicated at e, Fig. 8. The interior of the band C is then screw-threaded or otherwise treated so as to remove the gold which would otherwise be upon the interior surface. In Fig. 8 this gold is shown as cut away by screw-threads, and may thus be reclaimed. By this construction I am enabled to produce a perfect case, one embodying great strength and yet requiring but a small amount of metal; and, furthermore, by my invention I am enabled to condense the parts to such a degree that a small case is required for given-sized works.

It is quite evident that the details may be modified without in the least departing from the spirit of my invention.

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

1. A combined watch-case center and bezel formed of sheet metal bent into an annular shape and having its rear edge doubled upon itself to form an internal annular band to re-enforce the center.

2. A filled-metal combined watch-case center and bezel formed of filled sheet metal bent into an annular shape and having its rear edge doubled upon itself to form an internal annular band to re-enforce the center, said band being screw-threaded or cut away sufficiently to remove the layer of gold.

3. A combined watch-case center and bezel having an internal annular screw-thread, in combination with a movement-ring having an annular flange and fitting within the center and an annular clamping-ring screw-threaded to screw into the center and having an inwardly-projecting portion or ledge which fits over a part of the movement-holding ring and holds the latter in place.

4. A combined watch-case center and bezel formed of sheet metal bent into an annular shape with its edge doubled upon itself to form an internal annular band to re-enforce the center, said band having an internal annular screw-thread, in combination with a movement-ring having an annular flange and fitting within the center, and an annular clamping-ring screw-threaded to screw into

the center and having an inwardly-projecting portion or ledge which fits over a part of the movement-ring and holds the latter in place.

5. A combined watch-case center and bezel having an internal screw-thread, in combination with a movement-ring fitting within said center and an annular clamping-ring for holding said movement-ring in place, having an outer screw-threaded portion for meshing with the internal screw-thread of the center.

6. A combined watch-case center and bezel having an internal screw-thread, in combination with a movement-ring fitting within said center and an annular clamping-ring for holding said movement-ring in place, having an outer screw-threaded portion for meshing with the internal screw-thread of the center, fitting down into the center, and a back having a screw-thread, also adapted to mesh with the internal screw-thread of the center and inclosing the clamping-ring.

7. A combined watch-case center and bezel formed of sheet metal with its rear edge doubled inwardly upon itself to form an internal annular band to re-enforce the center, said band having an internal screw-thread, in combination with a movement-ring fitting within said center and an annular clamping-ring for holding said movement-ring in place, having an outer screw-threaded portion for meshing with the internal screw-thread of the center.

8. A watch-case center formed of sheet metal rolled, stamped, or spun into an annular shape, rounded upon the outside, and having a double thickness by having the sheet metal bent over upon itself.

9. A combined watch-case center and bezel formed of sheet metal rolled, stamped, or spun into an annular shape, rounded upon the outside, and having a double thickness by having the sheet metal bent over upon itself, in combination with a glass or crystal secured to the bezel part, forming a smooth joint with it, and a removable back secured to the rear part of the center.

10. A combined watch-case center and bezel having an open rear portion and provided on its interior with a screw-thread, in combination with a movement-holding ring located within said center and a clamping-ring having an external screw-threaded portion for meshing with the internal threads of the center and adapted to hold the movement-holding ring within the center.

In testimony of which invention I hereunto set my hand.

FRITZ MINK.

Witnesses:

H. M. KAIN,

H. L. ROBERTS.