

(No Model.)

F. MINK.
WATCHCASE SPRING.

No. 560,812.

Patented May 26, 1896.

FIG. 1.

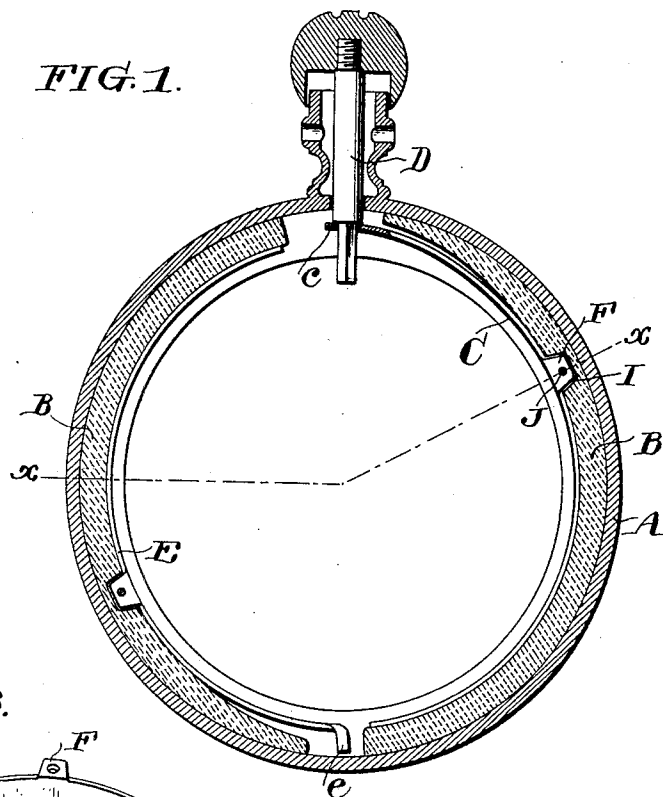


FIG. 3.

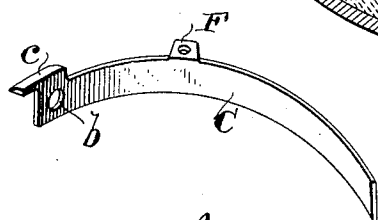
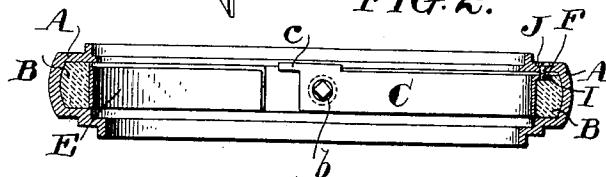


FIG. 2.



Witnesses.

Henry Denny
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Inventor.

Fritz Mink

By [Signature]

Attorney.

UNITED STATES PATENT OFFICE.

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

WATCHCASE-SPRING.

SPECIFICATION forming part of Letters Patent No. 560,812, dated May 26, 1896.

Application filed October 29, 1895. Serial No. 567,228. (No model.)

To all whom it may concern:

Be it known that I, FRITZ MINK, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Watchcase-Springs, of which the following is a specification.

My invention relates to watchcase-springs and to the combination thereof with watchcases; and it consists of certain improvements which are fully set forth in the following specification and are shown in the accompanying drawings.

Heretofore watchcase-springs for operating or controlling the lid or cover have been used in combination with spring-supporting pieces of heavy metal, to which the spring has been suitably connected. When so connected, the heavy supporting-piece and the spring constituted a single article, and while the spring might be detached and removed from the heavy body it has been necessary to remove both the body and spring from the case. This has been objectionable, as it rendered the removal of the spring more difficult and was liable to cause injury.

It is the object of my invention to provide a simple and convenient construction whereby the watchcase-springs may be used in connection with a heavy body or supporting-piece, but in such a way that the spring may be readily detached and removed without removing the body from the center. The springs may thus be easily removed for repairs, &c., and the spring while being supported and maintained in place by the heavy body portion is not permanently connected therewith, but remains at all times readily separable therefrom.

In the accompanying drawings, Figure 1 is a sectional plan view of a watchcase having my improved springs applied. Fig. 2 is a transverse sectional view on the line *xx* of Fig. 1, and Fig. 3 is a perspective view of the detached snap-spring.

A is the watchcase-center.

B is the spring-supporting piece, which may be composed of a separate piece of base metal of a segmental shape adapted to be fitted within the rim of the center. Two of these supporting-pieces may be used, arranged one

on each side and adapted to the snap and lifting springs, respectively.

C is the usual snap-spring having the snap projection *c*, adapted to engage the cover, and having the opening *d* for the push-pin D, by which the spring is operated.

E is the lifting-spring having the usual lifting projection *e*, acting on the cover adjacent to the hinge to throw the cover open when it is released by the snap-spring.

The springs C and E are composed each of a flat piece of tempered steel of a more or less segmental shape, having a flat face adapted to rest against the flat face of the corresponding supporting-piece B.

F is a lug or projection carried by the spring at a suitable distance from the ends thereof and projecting inwardly. This projection is of such shape that its extremity is not wider than its body, and the supporting-piece B may be notched, as at I, so that this lug may fit into it.

In applying the spring to the case the supporting-piece is first inserted in the center and the spring is then pushed into place with its flat face resting against the flat face of the supporting-piece and the lug F extending under the upper rim or flange H of the center and into the notch I. A pin or screw J is inserted through the rim or flange H and extends into or through the lug F, but preferably without engaging the piece B. It thus secures the spring to the center and holds it in place while the supporting-piece B acts to brace and support it. The lug F and notch I are so formed that they shall not constitute any permanent connection or fastening of the spring and piece B together, but will permit the spring to be detached and removed from the case without removing the supporting-piece. This may be accomplished by removing the pin or screw J, when the spring becomes released and may be taken out, the projection F passing freely out of the notch I. To permit of this ready disconnection of the spring from the piece B, I prefer to form the lug F tapering toward its extremity or end, as shown, and to construct the notch I of a complementary shape or flaring outward. This connection, while holding the springs

firmly in place and preventing any displacement, affords all of the advantages due to the use of a spring-supporting piece B, while obviating the difficulty and annoyance arising from forming a permanent connection between the spring and supporting-piece, or a connection of such kind that it is necessary to remove the supporting-piece from the center for the purpose of detaching the spring.

10 It has been proposed heretofore to connect the spring with a supporting-piece by means of a lug or projection, but in all such cases, so far as I am aware, the connection was essentially of such character that the spring became definitely connected with the piece.

15 It has been necessary in these constructions first to apply the spring to the supporting-piece and then to insert them both together into the center, and to detach the spring it was necessary to remove the two together and then effect their separation. This has been objectionable because it is much more difficult to remove and insert the supporting-pieces than to take out the springs alone.

20 The removal of the supporting-piece was liable to injure and bend it, so that it would not fit as well when it was again applied.

With my construction the supporting piece

or pieces may be left permanently in the case, and the springs may be separately and easily removed for purposes of repairs, &c.

The minor details of construction shown may be varied without departing from the invention.

What I claim as new, and desire to secure by Letters Patent, is—

In a watchcase, the combination with the watchcase-center, of a segmental spring-supporting piece B inserted therein and provided with an outwardly-flaring notch I, a segmental case-spring resting against the face of the piece B and having a lug F projecting outwardly and tapering toward its end fitting into the notch B under the flange of the case-center, and a pin or screw extending through the flange of the center and engaging the lug of the spring, whereby the spring may be detachably secured to the center and may be removed therefrom, without removing the segmental supporting-piece B.

In testimony of which invention I have hereunto set my hand.

FRITZ MINK.

Witnesses:

FREDERIC W. HUNTER,
ERNEST HOWARD HUNTER.