

(No Model.)

J. H. FLEMING.
WATCH CASE SPRING.

No. 420,048.

Patented Jan. 28, 1890.

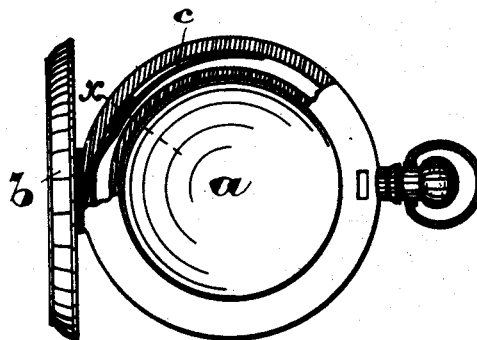


Fig. 1.



Fig. 6.

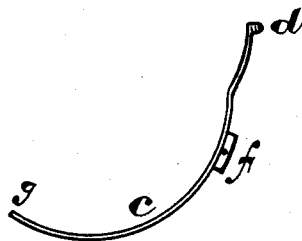


Fig. 2.

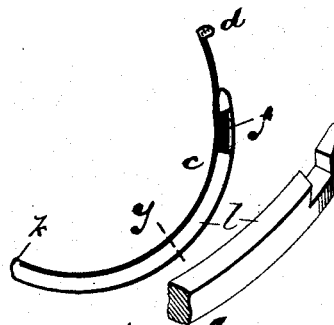


Fig. 5.



Fig. 3.



Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

JAMES H. FLEMING, OF NEWARK, NEW JERSEY.

WATCH-CASE SPRING.

SPECIFICATION forming part of Letters Patent No. 420,048, dated January 28, 1890.

Application filed October 20, 1888. Serial No. 288,651. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. FLEMING, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Watch-Case Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has reference to an improved watch-case spring which is adapted for insertion in a watch-case center, either with or without a center supporting-piece.

The object of the invention is to provide a watch-case spring which will be of increased durability, of reduced cost of construction, and more easy of accurate adjustment into its operative position in a watch-case and capable of producing a more perfect operation of the hinged face-plate of the watch-case.

The invention consists in the improved watch-case spring and in the combinations and arrangements of parts, substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a view of a watch-case partly broken away to show the relative position of the spring. Fig. 2 is a plan of the spring. Fig. 3 is an elevation of the same, and Fig. 4 is a section taken on line X. Fig. 5 is a plan and a detail perspective showing a preferred construction in which two parts are united by means of a dovetailed joint, the perspective showing the notch to receive a certain lug more clearly; and Fig. 6 is a section of the same, taken on line y, showing also the watch-case center.

In said drawings, *a* indicates a watch-case having a hinged cap or face-plate *b*, and *c* indicates a spring having the ordinary lip or projection *d*, which extends into engagement with the said face-plate at the hinge thereof, as indicated in Fig. 1. On the back or con-

vex face of said spring is soldered a pin-lug *f*, which engages the case and serves as a block, which may be perforated to receive the pin *h*, by means of which the spring is held in place. Being on the convex side of the spring, it is adapted to engage the outer bearing on the case of the watch or to engage a notched backing, as herein provided for. The said spring on the side of the lug having the lip *d* is free to act upon and be acted upon by the cap in the ordinary manner, and on the opposite side of said lug said spring bears or lies close between the flanges *i i* of the case-center, as indicated in Figs. 4 and 6.

Heretofore the piece through which the pin *h* passed, when made of an independent piece from the spring, as it is often, because of the economy of such construction, has been riveted to the spring. The rivet passing through said spring at a point where the power exerted in opening the case is brought to bear is brought to bear with great force. As a result, it was a common matter for the spring to break at the rivet perforation, and thus necessitate repair or replacing.

In the improved construction the lug *f* is brazed or soldered to the spring, and is preferably of a material which will remain soft in the tempering process, so that it can be perforated by a drill and otherwise dressed or fitted for the watch-case after the tempering. The solder employed is also such as will not be affected by the heat of the tempering operation and allow of detachment.

When I wish to secure the spring to a center supporting-piece *l*, such as is shown in Figs. 5 and 6, I give the lug the form of a dovetail or other angular form and fit the same in a corresponding notch in the said support, so that the two are united firmly, and yet are detachable or removable from one another when out of the watch-case. The spring is held at its extremity *g* to the center support *l* by providing the latter with a toe *k*, against which the said spring abuts, or in any other equivalent manner. By this construction the spring may move laterally with respect to the center support, and when placed in the case is allowed an automatic adjustment with respect to the flanges *i i*.

It will be understood that my improvement

is applicable and is intended for both the fly-spring and catch or locking-spring of a watch-case without further description or illustration.

5 Having thus described the invention, what I claim as new is—

1. The improved watch-case spring herein described, combining an imperforate spring *c*, a lug *f*, soldered or brazed on the back of
10 said spring, and a center support having a notch to receive said lug, substantially as and for the purposes set forth.

2. The improved watch-case spring combining a spring *c*, having at the end thereof a

lip *d*, adapted to engage the cap of the watch- 15 case and having an angular lug soldered or brazed to the back of said spring, and a center support having a toe and a dovetailed notch, said parts being arranged and combined substantially as and for the purposes 20 set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of October, 1888.

JAS. H. FLEMING.

Witnesses:

OLIVER DRAKE,
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