

(No Model.)

J. H. FLEMING.
WATCH CASE SPRING.

No. 411,800.

Patented Oct. 1, 1889.

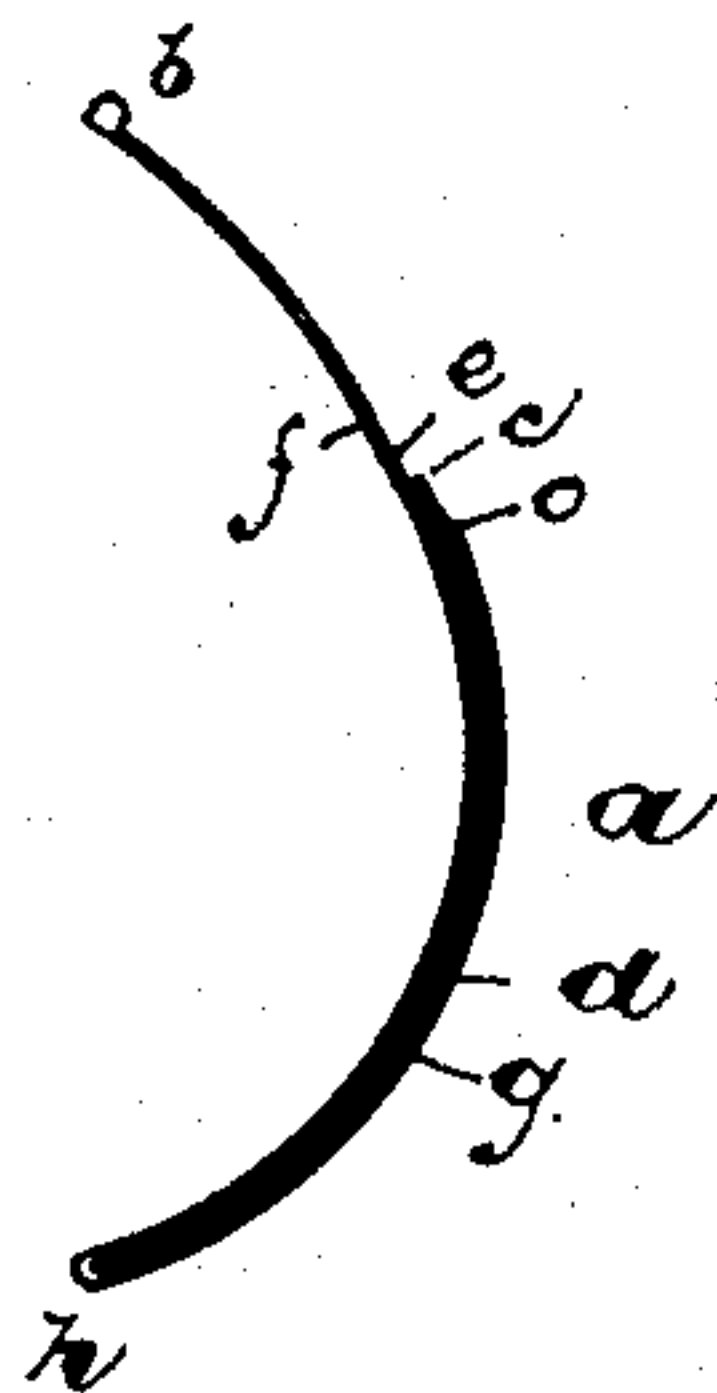


Fig. 1.

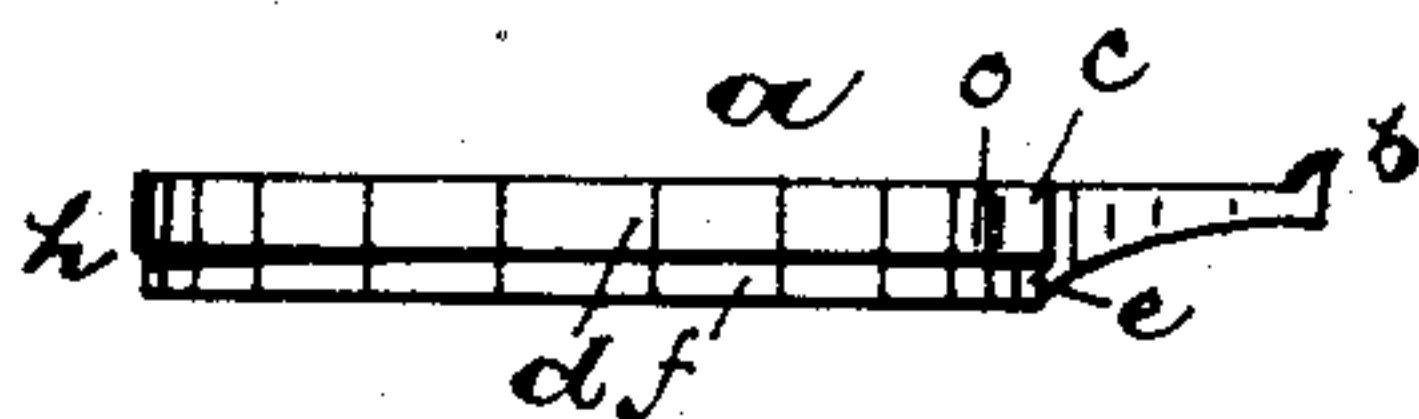


Fig. 2.

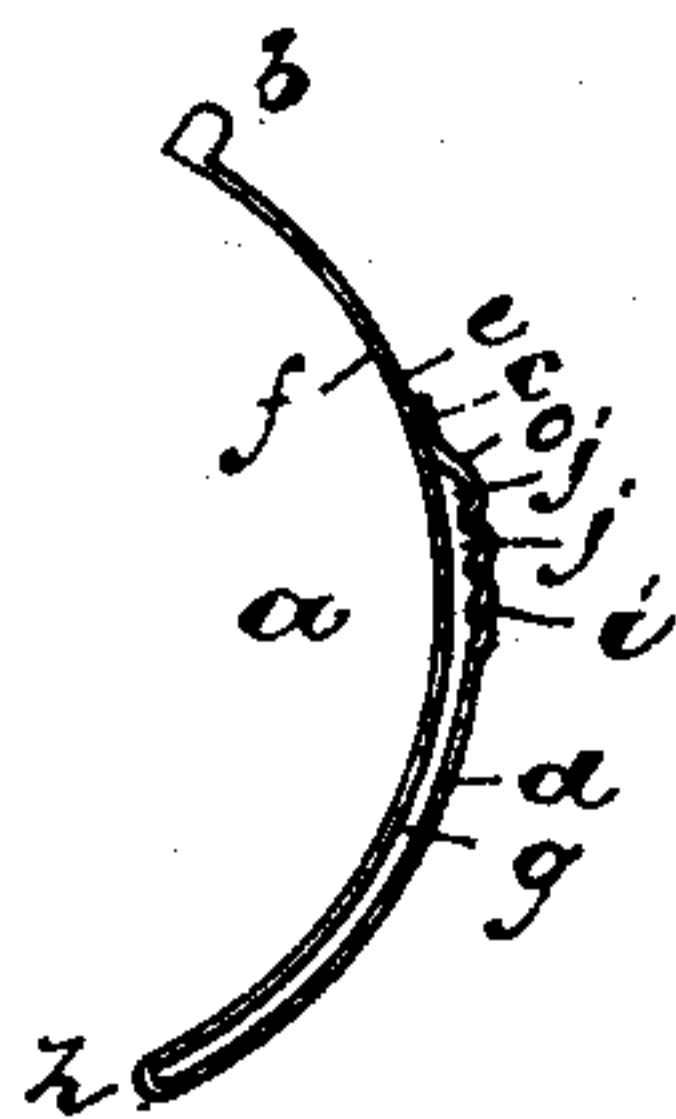


Fig. 3.

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. 411,800, dated October 1, 1889.

Application filed December 3, 1888. Serial No. 292,450. (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 relates to that class of watch-case spring shown in my former application No. 288,651, the object being to reduce the cost of constructing watch-case springs, to obtain greater durability, and secure simplicity and ease of adjustment.

The invention consists in the improved watch-case spring having the arrangements and combinations 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 plan of the improved spring. Fig. 2 is a side view of the same, and Fig. 3 is a plan showing a preferred construction.

In said drawings, *a* indicates a spring curved to conform to the case-center. Said spring consists of a sheet-metal plate, and has at one end a laterally-extending finger or spur, such as is ordinarily employed to engage the cover of the case to cause the same to fly open. Said spring or plate is bent on itself or doubled, as indicated in Figs. 1 and 3, the bend forming an end *h* to the spring opposite that of the said lateral finger or spur, and the extremity *c* of the turned plate *d* being soldered against the face *c* of the body part of said spring, the said extremity *c* being slightly bent, as at *o*, to engage said body part and hold the parts *d* and *f* away from one another to form the slot *g*, through or in which the ordinary holding pin or screw passes in

the usual way. The said end *c* being soldered to the body part, thus the use of rivets, screws, and intermediate parts is avoided.

I prefer to corrugate or scallop the metal plate, as indicated at *i* in Fig. 3, to form a series of pin-receptacles *j j*, and prevent the said pin from working longitudinally on the slot, or the spring from working longitudinally on the pin.

By the construction thus described the spring is composed of a single piece of sheet spring-steel of uniform thickness, which conduces to cheapness, and the use of rivets such as are commonly employed and are objectionable, in that they weaken the spring, is dispensed with, and the action of the spring under the influence of the pressure of the watch-case lid is distributed throughout the spring instead of upon one portion, as heretofore, so that the liability of said spring to break when in use is reduced.

The said spring can be used as a locking-lip or a fly-lip, as will be evident.

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

1. The improved watch-case spring herein described, consisting of a sheet of spring metal doubled as described, one end being soldered to the face of said spring and the other being provided with a laterally-projecting lip or spur, substantially as and for the purposes set forth.

2. The improved watch-case spring herein described, consisting of a strap of sheet metal doubled on itself and forming a longitudinal slot to receive the holding-pin, one end of said spring being provided with a lip or spur, and the opposite end being soldered to the face of said spring, substantially as and for the purposes set forth.

3. The improved watch-case spring herein described, consisting of a spring-metal strap bent on itself, one end being corrugated and soldered to the face of said strap and the other end being provided with a lip or spur, substantially as and for the purposes set forth.

4. The improved watch-case spring herein described, consisting of parts *d f*, forming a longitudinal slot, the part *d* having a series

of corrugations forming with the part *f* pin-receptacles, substantially as and for the purposes set forth.

5 5. The improved watch-case spring herein described, consisting of parts *d f*, one of which is provided with a lip *b*, and the other of which is bent, as at *o*, and soldered to the first, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of December, 1888.

JAS. H. FLEMING.

Witnesses:

OLIVER DRAKE,
E. L. SHERMAN.