

(No Model.)

N. J. FELIX.
WATCH CASE SPRING.

No. 386,308.

Patented July 17, 1888.

Fig. 1.

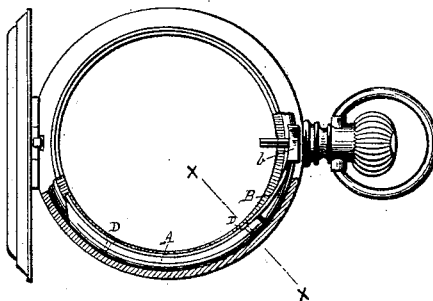
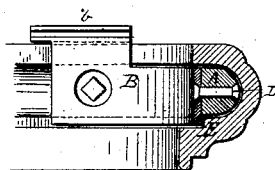


Fig. 2.



Fig. 3.



WITNESSES:

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WATCH-CASE SPRING.

SPECIFICATION forming part of Letters Patent No. 386,308, dated July 17, 1888.

Application filed February 25, 1888. Serial No. 265,264. (No model.)

To all whom it may concern:

Be it known that I, NUMA J. FELIX, of the city, county, and State of New York, have invented certain new and useful Improvements in Watch-Case Springs, of which the following is a specification.

This invention relates to an improved watch-case spring of that class in which the spring is supported by an arc-shaped piece of metal which is fitted into the center of the watch-case; and the invention consists of a watch-case spring composed of an arc-shaped supporting-piece, a steel spring having a lip or catch at one end and a shank of greater height than the supporting-piece, said shank extending along the entire length of the same, and screws or rivets by which the spring is attached to said supporting-piece.

In the accompanying drawings, Figure 1 represents a top view of my improved watch-case spring, shown as applied to a watch-case, the center of which is partly in section. Fig. 2 is a perspective view of the watch-case spring; and Fig. 3, a vertical transverse section through the watch-case on line *x x*, Fig. 1, drawn on a larger scale.

Similar letters of reference indicate corresponding parts.

My improved watch-case spring is made of two parts—of an arc-shaped supporting-piece, A, of brass or other suitable metal, which corresponds to the curvature of the watch-case center, and of a spring, B, of spring-steel, which is provided with a lip or catch, *b*, at its outer end. The shank of the spring B is attached to the supporting-piece A by means of screws, rivets, or other fastening devices, D D, it being extended over the entire length of the supporting-piece, and being of greater height than the same, so that the supporting-piece fits snugly into the interior annular recess of the center, while the projecting part of the shank of the spring fits against the interior

shoulder, E, in the center, as shown clearly in Fig. 3. This spring is specially adapted for centers of small height, in which there would not be room for a supporting-piece of the height of the spring. The watch-case spring is fitted to the center of the watch-case and secured thereto in the usual manner. It can be made at considerably less expense than the springs heretofore in use, in which the supporting-piece was made in one piece with the spring and fitted by hand into the center of the case, or in which the spring was retained in recesses of the supporting-piece.

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

1. A watch-case spring consisting of an arc-shaped supporting-piece, a steel spring having a lip or catch at one end and a shank of greater height than the supporting-piece, said shank being extended over the entire length of the supporting-piece and attached thereto by suitable fastening devices, substantially as set forth.

2. The combination, with a watch-case center having an interior recess and an interior shoulder adjacent to said recess, of a spring formed of an arc-shaped supporting-piece fitting into said recess and a steel spring attached to said supporting-piece and being made of greater height and length than the same, the projecting edge of the spring resting against the above-mentioned shoulder, and said spring being provided at that end extending beyond the supporting-piece with a lip or catch, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

NUMA J. FELIX.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.