(No Model.)

J. H. FLEMING.

WATCHCASE SPRING.

No. 522,320. Patented July 3, 1894.

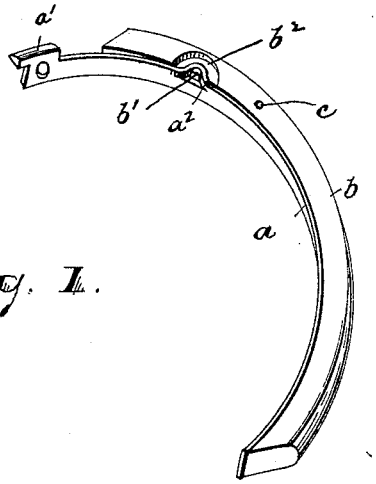

Fig. 1.

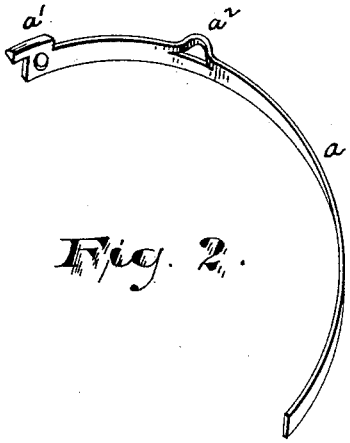

Fig. 2.

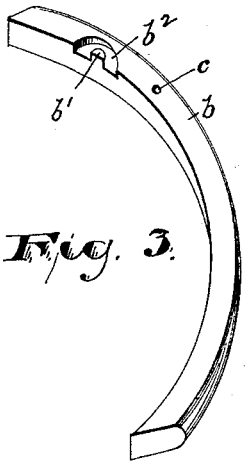

Fig. 3.

WITNESSES:

Robert Sollberger
Louisa Brooke

INVENTOR:

James H. Fleming,

BY Drake & Co. ATTY'S.

UNITED STATES PATENT OFFICE.

JAMES H. FLEMING, OF NEWARK, NEW JERSEY.

WATCHCASE-SPRING.

SPECIFICATION forming part of Letters Patent No. 522,320, dated July 3, 1894.

Application filed February 24, 1894. Serial No. 501,347. (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 Watchcase-Springs and Backings Therefor; 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.

The object of this invention is, to provide a backing, adapted to fit into the annular grooves formed within watch case centers, more particularly for that class of springs shown in my prior patent, No. 503,314, dated August 15, 1893, to support said spring when said backings are desirable, and to secure other advantages and results some of which will be referred to in connection with the description of the working parts.

The invention consists in the improved watch case spring backing, in the combination thereof with the spring, and in 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 views, Figure 1 is a perspective view showing the spring and backing in their relative positions. Fig. 2 is a perspective view of the spring and Fig. 3 is a similar view of the backing separately.

In said drawings, *a*, indicates the spring, and *b*, the backing. The said spring consists preferably of a curved piece of flat spring metal, having at one end, a bearing, *a'*, to engage the watch lid, to either lock the same or to cause it to fly open in the ordinary manner. Toward the center of the said spring, the body material is forced outwardly, as indicated, to form the loop, a^2, to receive the pin of the watch case center or of the backing, the said loop being preferably formed by means of dies. It may be soldered upon the convex face of the spring.

The backing, in which the invention principally inheres, is also of a curved piece of metal of a shape and size adapted to fit within the annular groove of the watch case center. Toward one end, in its upper part, said backing is reamed or milled out, as at b^2, by a hollow milling tool so as to form a semi-annular recess into which the loop may enter and, close upon the inner or concave edge of the backing, an integral pin, *b'*, adapted to enter the loop a^2, of the spring, and hold said spring in proper relation to the backing.

It may be observed that the pin *b'*, is semi-cylindrical, and that it is situated upon the extreme inner or concave edge of the backing, and thus is adapted to enter the loop and fit closely therein even though the latter has but little outward projection from the convex side of the spring. By forming the pin, *b'*, integral with the backing, I am enabled to bring it closer to the edge than though it were a separate, inserted piece, and the said pin is given greater strength and security upon the backing.

The backing is held within the watch case center by a suitable pin or in any other manner desirable, a perforation, *c*, being provided when a pin is used.

The parts being formed as described, it is simply necessary to slip the spring into position on the backing to hold the same together, all as will be evident.

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

1. The combination with the watch case spring, *a*, a backing *b*, adapted to be entered into the groove of the watch case center, said backing being reamed out as at b^2, and having an integral pin *b'*, formed at its concave edge, substantially as and for the purposes set forth.

2. The combination with a spring having a pressed-out loop a^2, of a backing having the semi-cylindrical pin at its extreme inner concave edge, substantially as set forth.

3. The watch case spring backing consisting of a curved piece of metal, having an integral pin formed at its extreme inner or concave edge, and around the same in the upper part of said backing a semi-annular recess to receive the loop of the spring, substantially as set forth.

4. The watch case spring backing herein described, consisting of a curved piece of metal

adapted to receive the body of the watch case spring on the concave face thereof and having an integral pin formed of its upper portion to receive the loop of said spring, substantially as set forth.

5. The combination with a watch spring backing consisting of a curved piece of metal adapted to lie in the watch case center and having at the upper part a recess adapted to receive the loop or lug of the watch case spring, of said spring having, on its convex face or side, said loop or lug, and a pin lying in said recess and extending through said loop or lug, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of February, 1894.

JAMES H. FLEMING.

Witnesses:
CHARLES H. PELL,
LOUISA BROWNE.