

W. FENIMORE.

Improvement in Watch-Case Springs.

No. 115,455.

Patented May 30, 1871.

Fig. 1.

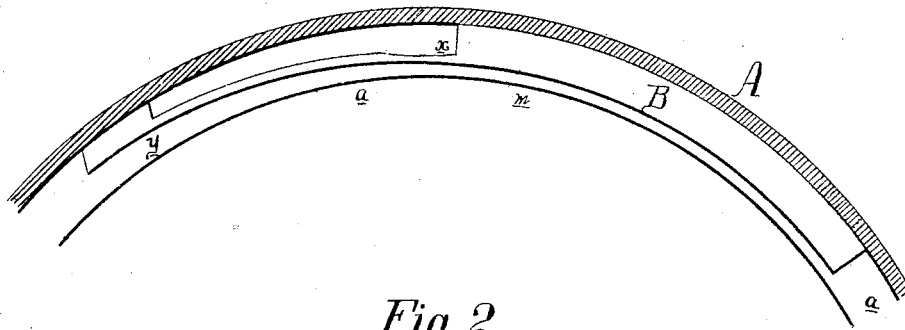


Fig. 2.

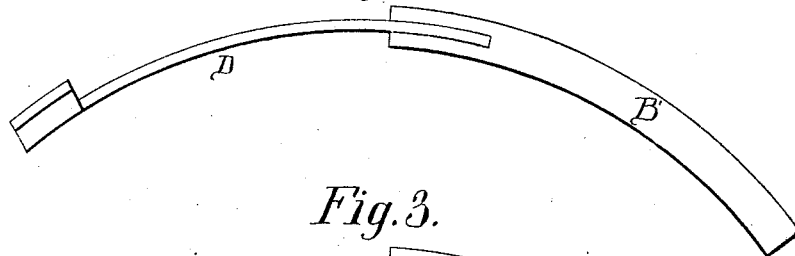


Fig. 3.

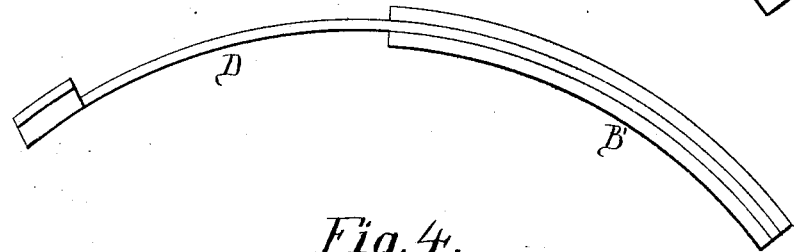
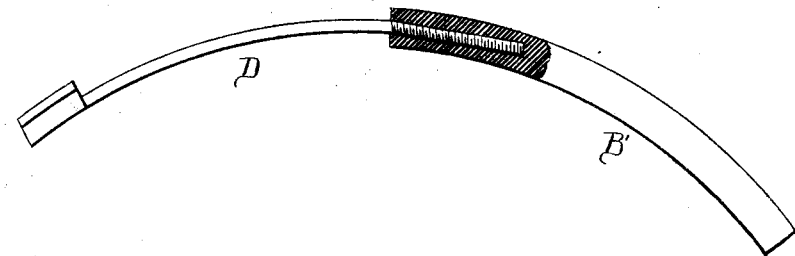


Fig. 4.



Witnesses,
Wm. A. Steel.
Jno. B. Harding.

Wesley Fenimore
by his Att^y
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UNITED STATES PATENT OFFICE.

WESLEY FENIMORE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WATCH-CASE SPRINGS.

Specification forming part of Letters Patent No. 115,455, dated May 30, 1871.

I, WESLEY FENIMORE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Watch-Case Spring, of which the following is a specification:

Nature and Object of the Invention.

My invention consists of a watch-case spring, constructed in the peculiar manner too fully explained hereafter to need preliminary explanation, with the view of preventing fracture, which frequently occurs in watch-case springs constructed in the usual manner.

Description of the Accompanying Drawing.

Figure 1 is a sectional plan of part of a watch-case with an ordinary spring; and Figs. 2, 3, and 4 illustrate different modes of constructing my improved spring.

General Description.

In Fig. 1, which illustrates the ordinary watch-case spring, A represents a sectional plan of part of the central ring of the case, this ring being recessed or chambered on the inside, as usual. The ordinary spring B consists of a segmental block of steel, bent to suit the annular chamber *a*, and reduced in thickness from *x* to *y*, which is the only portion possessing elasticity, the remaining portion being solid and rigid, and fitting snugly in the chamber *a*, where it is secured by a small screw, *m*.

In making the usual spring it is the practice to first procure a segmental piece of steel of uniform thickness adapted to the chamber *a*, and then to reduce so much of the piece in thickness as may be required to possess elasticity and assume the character of a spring. This reduction must, of course, be made while the steel is soft, and the part reduced must be made elastic by hardening and tempering. It is a difficult matter to impart to these springs an even temper throughout; hence they are apt to break, especially at the point *x*.

I overcome this objection by making the elastic portion and the rigid portion, which has to fit in the annular chamber, separate. Thus, in Fig. 2, B' is a rigid segmental block, shaped to fit snugly in the chamber *a*; and D is a strip of steel, fitted into a slot in one end of the block and secured thereto. The spring D is part of a strip of spring-steel, having the proper temper imparted to it, so that it has the desired elastic property before it is secured to the block; and hence the spring possesses the well-known superior quality due to an undisturbed skin, which, by the old plan, is removed in reducing the block.

Instead of securing the spring to a solid block, as described, the rigid portion adapted to the chamber may be composed of two plates, secured one to each side of the spring, as shown in Fig. 3; or the spring may be screwed into a solid segmental block, as shown in Fig. 4, the same object being attained in all cases—namely, a tough, properly-tempered spring, with undisturbed skin, attached to a rigid block.

It will be understood that the outer end of the spring is bent and shaped in the usual manner, so as to form a clasp for the back or front of the watch-case.

Claim.

A watch-case spring, consisting of a block adapted to but detachable from the case of a watch, and a strip of steel having an uncut "skin" formed in drawing or rolling the said strip and secured to said block, as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WESLEY FENIMORE.

Witnesses:

WM. A. STEEL,
FRANK. B. RICHARDS.