P. F. NILSON.

Watch Case Spring.

No. 201,623. Patented March 26, 1878.

Fig. 1.

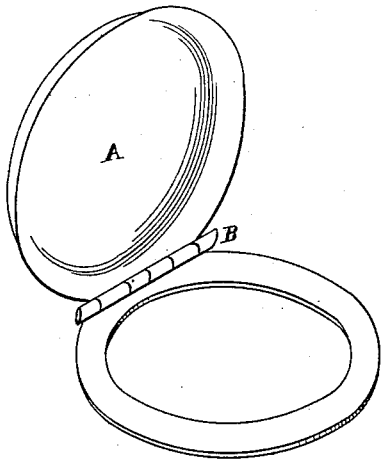
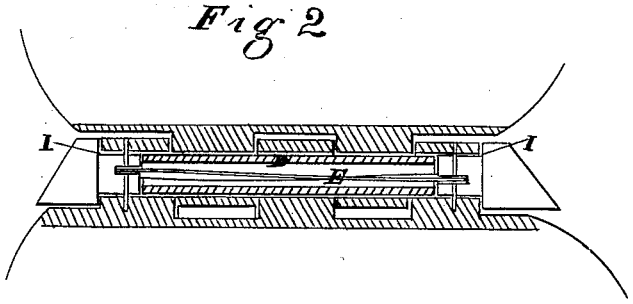


Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

PETER F. NILSON, OF SANTA ROSA, CALIFORNIA.

IMPROVEMENT IN WATCH-CASE SPRINGS.

Specification forming part of Letters Patent No. **201,623**, dated March 26, 1878; application filed February 5, 1878.

To all whom it may concern:

Be it known that I, PETER F. NILSON, of Santa Rosa, county of Sonoma, and State of California, have invented an Improved Watch-Case Spring; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to a novel construction for springs which are intended to open the case of watches, known as "watch-case springs;" and it consists in the formation of the hinge and a hollow pin, so that a torsional spring may be introduced into the hinge, and serve to actuate the case without any outside connection.

In the accompanying drawings, Figure 1 is a view of my case and hinge. Fig. 2 is a sectional view of the hinge and pin, showing the spring.

A is the case of a watch, and B is the hinge by which it is attached to the watch itself. The outer part of my hinge may be composed of as many lengths or joints as may be suitable, alternately secured to the watch and to the case, and these are united by a pin passing through them, in the manner usual for springs. The pin D, I make hollow, as shown, and within this pin the spring E is placed. This spring may consist of a round or flat piece of steel, and one end is secured to a joint which is secured to the watch, while the other end is in a like manner secured to a joint which is secured to the case. It will thus be seen that when the case is closed a torsional strain will be brought upon the spring by the movement of these two joints about the pin D, so that when released the case will fly open.

My method of securing the spring is to turn the end joints down with a shoulder, I, as shown, so that they project into the tubular pin a short distance. The ends of the spring are then secured in slots cut into the ends of these pieces, and as one is secured to the watch, while the other is secured to the case, the movement of the latter about the pin is caused by the action of the spring.

The device is easily fitted to the watch, easily renewed, if necessary, and but little apt to break. By this device I am enabled to entirely do away with the cumbrous case-springs now in use, and the opening necessary in the use of such springs to connect the spring with the case is also done away with, thus preventing dirt or dust from entering at this point.

I am aware that door-butts and other large hinges having two leaves have been made hollow, and so united together as to receive a spiral spring; but it will be evident that no such construction could be adapted to the hinge of a watch-case.

Having thus described my invention, I do not claim, broadly, a spring-hinge; but

I do claim and desire to secure by Letters Patent—

1. The improvement in watch-case springs consisting of a flat torsional spring, E, extending through the interior of the hinge, and secured to its opposite ends, substantially as herein described.

2. The hinge B, having the hollow pin D and the end pieces turned to enter the pin, as shown at I, said pieces being slotted to receive the ends of the spring E, substantially as herein described.

In witness whereof I have hereunto set my hand and seal.

PETER FREDERICK NILSON. [L. S.]

Witnesses:

JUNIUS B. WESTGATE,

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