

J. LAURENT.  
Watch-Case Spring.

No. 199,835.

Patented Jan. 29, 1878.

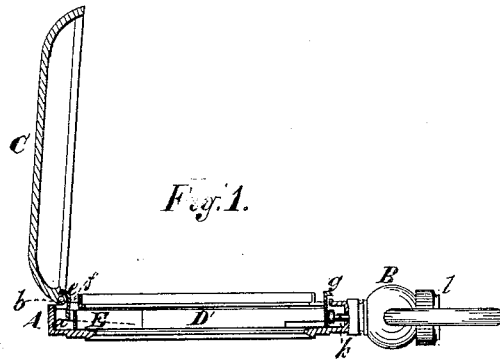


Fig. 1.

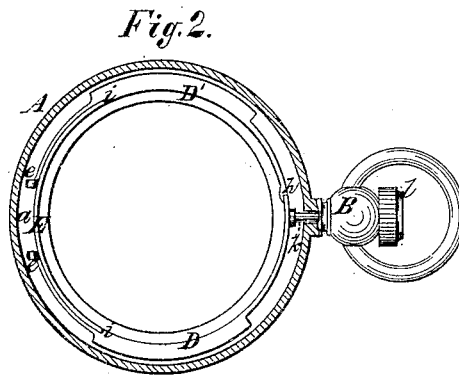


Fig. 2.

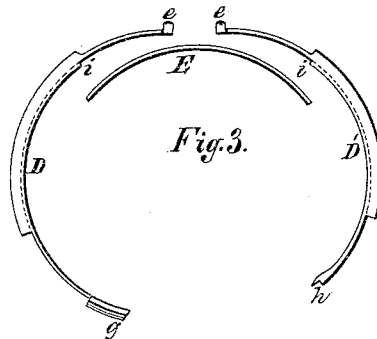


Fig. 3.

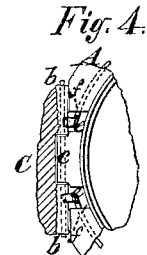


Fig. 4.

Witnesses:

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# UNITED STATES PATENT OFFICE.

JACQUES LAURENT, OF NEW YORK, N. Y.

## IMPROVEMENT IN WATCH-CASE SPRINGS.

Specification forming part of Letters Patent No. **199,835**, dated January 29, 1878; application filed January 8, 1878.

*To all whom it may concern:*

Be it known that I, JACQUES LAURENT, of the city, county, and State of New York, have invented a new and useful Improvement in Springs for Watch-Cases; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to the springs employed to throw open the cover of the watch-case and to operate the catch which secures the cover when closed.

It consists in a novel combination of two springs, both of which, arranged within the band of the case, act upon the cover to throw it open, and one of which may have attached to it and may operate the catch by which the cover is secured when closed, such combination possessing several advantages over the springs heretofore employed for the same purposes, as will be hereinafter fully explained.

Figure 1 in the drawings is a central section of the band and cover of a watch-case, illustrating the application of my invention. Fig. 2 is a section parallel with the face of the watch. Fig. 3 is a detail view of the hinge of the case, showing the application thereto of the two springs. Fig. 4 is a face view, the two springs and the piece which secures them in the case all detached.

A is what is known as the "band" of the case, having an internal circumferential cavity, *a*, for the reception of the springs, and having a stem, B, for the attachment of the pendent ring. C is the cover, hinged at *b b c* to the band A. D D' are the springs which constitute my invention, each of approximately semicircular form, corresponding with the circular form of the interior of the band A of the case. These springs may be made stout near the middle of their length, to give them a firm bearing within the case, but thinner at and near the ends, to give them the requisite elasticity. Each has at its rear end an upwardly-projecting hook or tongue, *e*, to engage with and press upon the cap just above the hinge holes being provided at *f f*,

in the face of the band A, for the passage of the said hooks.

The spring D is represented as having at its front end the latch-like catch *g*, which secures the cover in the usual way when the latter is closed.

The spring D' has at its front end a notched lip, *h*, which engages with the corresponding end of the spring D, as shown in Fig. 2, and so assists the latter spring in pressing out the catch *g*.

The two springs are confined in the case by means of the locking-piece E, consisting of a thin strip of steel, which conforms to the circular curvature of the springs, and which is placed inside of their rear portions, within the band A, and abuts against two shoulders, *i i*, provided for the purpose on the said springs, in such manner as to keep their front ends abutting together at *h*.

To provide for the most effective action of the two springs upon the cover, the hinge of the cover, which is commonly made with three knuckles, should preferably have the two outer knuckles *b b* made upon the cover, and the middle knuckle *c* made upon the band.

The push-pin *k*, passing through the stem B, and provided by a knob, *l*, outside of the latter, is operated in the usual way to push back the catch *g*, and thereby to liberate the cover C, which is then thrown open by the joint action of the springs upon it.

The two springs being thus applied and held in place, act independently of each other upon the cover near the outer ends of the hinge, and both act in combination upon the catch *g*, though either would act separately on said catch if one were broken. They can be more easily inserted into the watch-case than the springs ordinarily employed, and, moreover, if either should be broken it assists in holding in place the other which remains operative.

I claim—

1. The combination of the two springs, D D', formed with tongues *e e* at their rear ends, to act upon the hinge of the watch-case cover, and abutting together at their

front ends, and the locking piece E, substantially as and for the purpose herein described.

2. In combination with the two springs abutting together at their front ends, and held together by the locking-piece E, the catch *g* formed upon one of the abutting ends of the

said springs, substantially as herein described, whereby both springs are made to act upon said catch, as herein set forth.

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Witnesses:

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