J. FORTENBACH.

Attachment to Stem-Winder Watch-Cases.

No. 211,144. Patented Jan. 7, 1879.

Fig: 1.

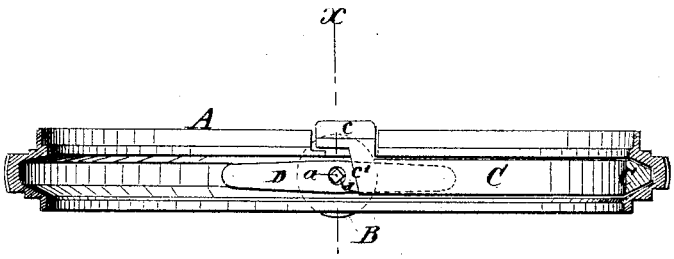


Fig: 2

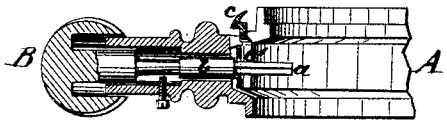


Fig: 3.

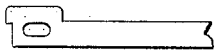
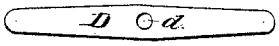


Fig: 4.



WITNESSES:

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JOSEPH FORTENBACH, OF CARLSTADT, NEW JERSEY.

IMPROVEMENT IN ATTACHMENTS TO STEM-WINDER-WATCH CASES.

Specification forming part of Letters Patent No. **211,144**, dated January 7, 1879; application filed August 15, 1878.

To all whom it may concern:

Be it known that I, JOSEPH FORTENBACH, of Carlstadt, in the county of Bergen and State of New Jersey, have invented a new and Improved Lock-Spring Attachment to Stem-Winder-Watch Cases, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a diametrical cross-section of a watch-case center provided with my improvement. Fig. 2 is a similar section at right angles to that of Fig. 1, or taken through the line *x x*. Fig. 3 is a detail, showing the old construction of the lock-spring. Fig. 4 is a detail face view of the metallic pressure-plate.

Similar letters of reference indicate corresponding parts.

In ordinary stem-winders the stem of the pendant goes through a hole or slot (shown in Fig. 3) in the end of the lock-spring, which latter is pressed upon directly by the shoulder of the stem in order to open the watch-case. The necessary sliding movement of the spring relative to the stem creates a tendency of the former to wear and bend the latter. The object of my invention is to overcome this difficulty.

The invention consists in a perforated metallic plate fitted upon the winding-stem and interposed between the lock-spring and the center ring of the watch-case, to operate the said spring at one side of and out of contact with the said stem.

A is the center ring of the watch-case, or, as it is generally called, the "watch-case center." B is the pendant by which the watch-spring is wound, and by pressing upon which the case is opened. C is the ordinary lock-spring, with the exception that it has no hole for the stem to go through; but its end is cut away at *c'* below the catch *c* sufficiently to leave a distance between the end of the spring C and the stem *a* of the pendant, to allow of the said sliding motion of the end of the spring to take effect at one side of the stem without the former ever getting in contact with the latter. To convey the pressure upon the pendant B to the spring C for opening the case, I interpose between the lock-spring C and the center ring A a metallic plate, D, having a central perforation, *d*, through which the stem *a* is inserted, and which is large enough for the stem to turn in. In pressing the pendant the shoulder *b* of the stem *a* presses upon the annular surface of the plate D which surrounds the hole *d*, and the plate D in its turn acts upon the spring C to release the catch *c*, the sliding motion before referred to taking place between the spring C and the plate D, leaving the stem intact.

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

The perforated metallic plate D, fitted upon the winding-stem *a*, and interposed between the lock-spring C and the watch-case center A, to operate the spring C at one side of and out of contact with the stem *a*, substantially as shown and described.

JOSEPH FORTENBACH.

Witnesses:

LEOPOLD WINDISCH,

MILTON DEMAREST.