J. A. DAWSON.

Main-Spring for Watches.

No. 163,161. Patented May 11, 1875.

Fig. 1.

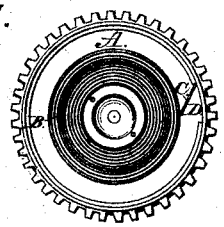


Fig. 2.

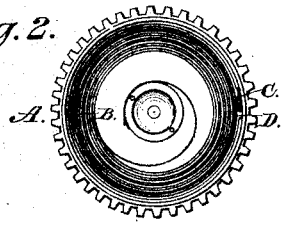


Fig. 4.

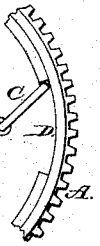


Fig. 5.

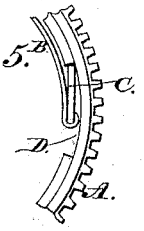
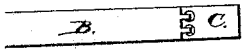


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN A. DAWSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO FLORENTINE A. JONES, OF SCHAFFHAUSEN, SWITZERLAND.

IMPROVEMENT IN MAINSPRINGS FOR WATCHES.

Specification forming part of Letters Patent No. **163,161**, dated May 11, 1875; application filed December 15, 1874.

To all whom it may concern:

Be it known that I, JOHN A. DAWSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Watches, of which the following is a specification:

Figure 1 is a top view of the spring and barrel, with the spring wound. Fig. 2 is a similar view, showing the spring expanded. Figs. 3, 4, and 5 are parts in detail of the above, all at an enlarged scale.

This invention has for its object to provide a cheap and simple means for connecting the mainspring of a watch to its barrel, in such manner as, first, to cause the spring to stop sharply and positively when entirely wound, thereby dispensing with stop mechanism; and, secondly, to enable the spring to maintain a substantially concentric position at all times with relation to the barrel and winding-post, thereby allowing the spring to develop or expand freely in all directions.

To these ends my invention consists in an intermediate piece attached to the outer end of the mainspring in such a manner as to allow it to swing freely, the free end of said piece engaging with the usual hook on the inner periphery of the barrel, or, as I prefer, with a shoulder formed by a recess in the barrel, as in the drawing, thus constituting a swinging point of suspension for the spring—one end being pivoted or otherwise suitably connected to the barrel, while the other end is hinged to the end of the spring, so that the point of suspension moves inwardly as the spring is wound up, and outwardly when the spring expands or develops, thereby stopping the spring suddenly when entirely wound, and keeping the spring substantially concentric with the barrel, as I will now proceed to describe.

In the drawings, A represents the barrel, and B the spring of a watch, both being of the ordinary construction. C is an intermediate piece, composed of a thin strip of metal, of suitable length and width, and is hinged to the outer end of the mainspring, as shown, and connected to the inner side of the barrel-rim by any suitable means which will allow it to swing.

I prefer to cut a recess in the barrel, as shown at D, so as to form a shoulder for the outer end of the piece C to abut against. It may, however, be pivoted to the barrel by ears formed on its outer end, and entering sockets in the barrel, or may bear against the ordinary hook inserted in the rim of the barrel, instead of the recess shown.

The hinged end of the piece C constitutes the point of suspension for the spring B, the expanding force of the spring being exerted on the said piece from its inner to its outer end, thereby holding the piece C firmly against its abutment.

It will be seen that the piece C, being hinged to the mainspring, swings inward freely without being bent or twisted during the winding operation, and when the spring is entirely wound the point of suspension abuts against the periphery of the coil and stops it sharply, thus taking the place of the ordinary stop mechanism.

As the spring develops or expands, the point of suspension swings gradually in an outward direction, keeping the spring substantially concentric with the barrel, and permitting it to expand equally on all sides.

The spring may be engaged with the swinging end of the piece C by bending its end into a hook, fitting over the end of said piece, instead of being hinged, as shown, the hinge, however, having the advantage of keeping the piece C from falling out or being lost.

Having thus described my improvement, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

In combination with the spring B and barrel A, the intermediate swinging piece C, hinged to the outer end of the spring at one end, and bearing against an abutment on the barrel at the other end, substantially as described, for the purpose specified.

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

JNO. A. DAWSON.

Witnesses:

C. F. BROWN,

SAML. M. BARTON.