

J. J. THORNTON.

SAFETY DEVICE FOR MAIN-SPRINGS.

No. 174,031.

Patented Feb. 22, 1876.

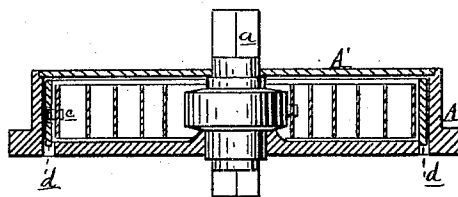
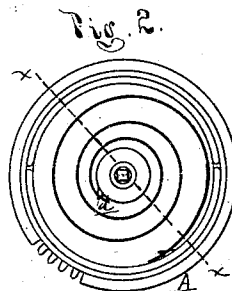
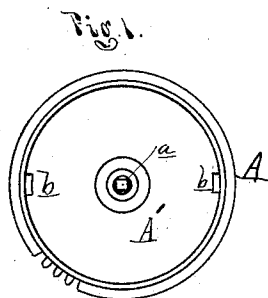


Fig. 3.

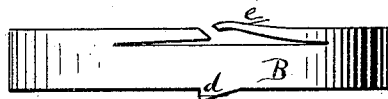


Fig. 4.

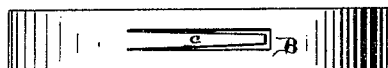


Fig. 5.

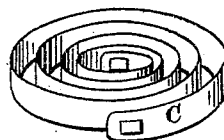


Fig. 6.

ATTEST:
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UNITED STATES PATENT OFFICE.

JOHN J. THORNTON, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF HIS
RIGHT TO DANIEL H. RIDGWAY, OF SAME PLACE.

IMPROVEMENT IN SAFETY DEVICE FOR MAINSPRINGS.

Specification forming part of Letters Patent No. **174,031**, dated February 22, 1876; application filed
February 16, 1874.

To all whom it may concern:

Be it known that I, JOHN J. THORNTON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented an Improvement in Barrel-Protectors and Mainspring Hooks for Watches, of which the following is a specification:

The object of this invention is an improvement upon the watch-barrels having an internal hoop, to which one end of the mainspring is attached, adapted to move in one direction independently of the barrel and in the other direction with such barrel; and it consists in the peculiar construction of the hoop, and, further in the combination of such hoop and the peculiar watch-barrel, as more fully hereinafter explained.

Figure 1 is a plan view of the mainspring-barrel, the cover and the spring being removed. Fig. 2 is a similar view with the spring and hoop in place. Fig. 3 is a cross-section at *x x* in Fig. 2, with the cover and winding-post in place. Fig. 4 is an enlarged side elevation of the hoop, showing the bottom sloping point and the top spring of one side. Fig. 5 is a similar view of the hoop, showing the hook from the outside. Fig. 6 is a perspective view of the mainspring.

In the drawing, A represents the mainspring-barrel, provided with the usual cover, A', through which is inserted and secured the winding-post, *a*. The lower periphery is toothed in the usual manner, and on opposite side two slots, *b b*, are cut through the bottom. The cup is confined in place by springing it into a shallow bezel in the internal walls of the barrel. B is a metal hoop, loosely fitted into the barrel, and in its side a tongue, *c*, is punched to project inwardly and form the hook for the outer end of the mainspring C, which has a slot cut in it to slip over the hook.

The inner end is slotted to slip over a stud on the winding-post, in the usual manner. At opposite sides two sloping points, *d d*, are formed on the lower periphery of the hoop, which drop into the slots *b b* of the barrel when the hoop is inserted therein, engaging with the barrel and carrying it forward so long as the tension is in the spring; but, if the spring breaks and recoils, these points rise out of the slots when the hoop revolves in the barrel, which not only is motionless, but is not subjected to the impact of the spring, which is taken by the hoop. *e e* are two springs split up from the upper periphery of the hoop, against which the cover lightly rests, to keep the hoop in place in the bottom of the barrel.

The principal advantages of my device lie in its simplicity, the several parts being all in one piece, and not liable to get out of order, and its efficiency in operation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The hoop B, adapted for the purposes set forth, provided with the downwardly-projecting points *d d*, the tongue *c*, and the springs *e e*, all constructed and arranged substantially as described and shown.

2. In combination, the spring-barrel A, having the slots *b b* cut through its bottom, and the hoop B, having the downwardly-projecting points *d d*, adapted to enter the said slots, the springs *e e*, adapted to press against the cover of the spring-barrel, and the tongue *c* for the reception of the end of the mainspring, all constructed, arranged, and operating substantially as described and shown.

JNO. JIBB THORNTON.

Witnesses:

T. GHEES,
J. LAWRENCE.