

J. A. SHAWVER.
WATCH-BARRELS.

No. 183,980.

Patented Oct. 31, 1876.

Fig. 1.

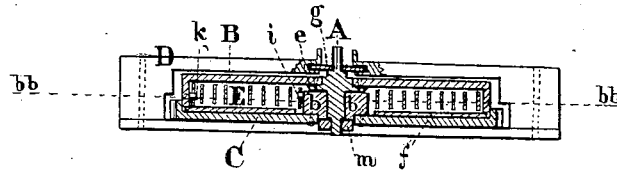


Fig. 2.

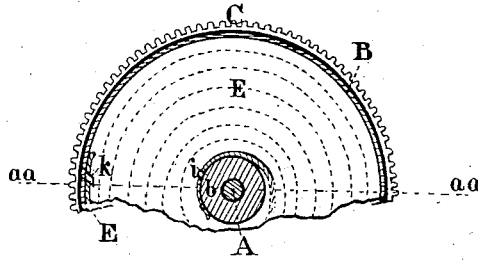
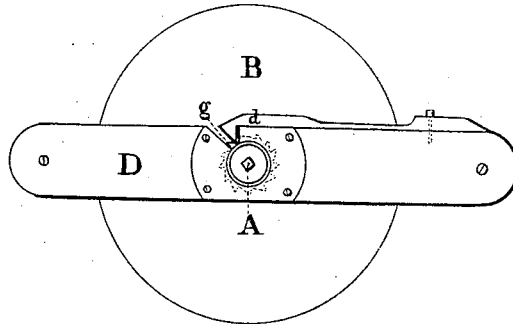


Fig. 3.



Witnesses
John Marion
Philip Kumpfen

John A. Shawver,
by E. Thurston his Atty.
in Fact

UNITED STATES PATENT OFFICE.

JOHN A. SHAWVER, OF KNOXVILLE, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO SAMUEL L. CHARLES, OF SAME PLACE.

IMPROVEMENT IN WATCH-BARRELS.

Specification forming part of Letters Patent No. 183,980, dated October 31, 1876; application filed July 3, 1876.

To all whom it may concern :

Be it known that I, JOHN A. SHAWVER, of Knoxville, in the county of Knox, in the State of Illinois, have invented an Improvement in Watch-Barrels or Winding Devices for Watches or Time-Pieces; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a central vertical section on line *a a*, Fig. 2; Fig. 2, a horizontal section on line *b b*, Fig. 1; Fig. 3, a superficial view of barrel, &c.

The objects of this invention are as follows: First, to prevent all damage to watch-train on the breaking of the mainspring and to the barrel or main wheel themselves; second, to prevent or obviate any backward motion upon the escapement; third, to secure a true and even rotation of the main wheel by making it an integral part of the winding-post; fourth, to lessen the chances of breaking the mainspring by winding it from its outer end; fifth, to prevent the reversing of the barrel on the breaking of the mainspring, and to cause the barrel, on such contingency, to revolve forward in the same direction as that of the main wheel.

I accomplish these objects in the following manner: The barrel is attached to and made part of the winding (center) post, so causing the conjoined center or main wheel to revolve perfectly true. The spring is attached at its inner end to a sleeve or arbor of the main wheel, which sleeve passes into the middle of the barrel, the other end of the spring being, of course, fastened or hooked to the inner surface of the cylindrical part of said barrel. The main wheel is independent of the barrel and post, but rests and rotates truly and evenly upon its own sleeve around the center-post, and this with less friction, as the spring does not touch the wheel, and in no case can be thrown out of position by the breaking of the mainspring, which is also the case with the barrel.

In the drawings, which represent the best form in which I construct the above, A repre-

sents the winding post, which is provided with the necessary ratchet *g* and detent *d* on the bridge D. Said post A passes through the sleeve *b* of the main wheel C, and is fixed securely to the center of the barrel B by a flange, *e*, and screws, or other device. The barrel is covered in by a cap, *f*, fitting into a recess in the edge of the same, over which and the barrel fits a shoulder next to the spurs of the main wheel. The main wheel is provided with a sleeve, *b*, (before mentioned,) which extends round the post A into the center of said barrel, so as to form a broad bearing for the same upon said post, and secure the true rotation of said main wheel. To this sleeve *b* the smaller post or eye of the mainspring E is hooked or fastened at *i*, the outer end of the same being hooked or attached to the hook or detent *k* on the interior of the cylindrical part of said barrel B. The collar or washer *m* serves to hold the main wheel to its place, and is inclosed in a recess in the sleeve *b* of the said wheel C.

The operation of this invention is as follows: All backward action (on the breaking of the mainspring) upon the escapement is obviated by separating the barrel B from the main wheel C, which, consequently, on breakage of the spring, becomes a forward-acting barrel and train protector. The chances of the breaking of the mainspring are lessened by causing the same to be hooked to the sleeve *b* of the main wheel C, so as to be wound from the outer extremity, the tension reaching the center of the helix last. The main wheel C is caused to run more evenly, because the mainspring E is prevented by the cap *f* from touching or scraping it, and the sleeve *b* is auxiliary to this effect. The barrel, when the spring breaks, revolves in the same direction as that of the main wheel—*i. e.*, its proper running motion—and in the same direction in which the barrel is turned in winding the time-piece.

What I claim as my invention is—

1. The barrel B, in combination with, and rigidly secured to, the winding-arbor A, substantially as and for the purposes described.
2. The barrel B, having hook *k* and rigid winding-arbor A, in combination with the

hook *i* on sleeve *b* of main wheel C, substantially as and for the purposes described.

3. The main wheel C, having sleeve *b*, with hook *i*, said sleeve being loose on winding-arbor A, substantially as and for the purposes described.

4. The collar or washer *m* recessed in the exterior part of the center of the main wheel, and in combination therewith and with the winding-post A, substantially as and for the purposes described.

5. The barrel B and its post A, provided with the usual ratchet or detent, in combination with the sleeve *b* of the wheel C, the main wheel C, and mainspring E, substantially as and for the purposes described.

6. The combination of the main wheel C, moving independently of and on the winding-

post A of the barrel B, by means of its sleeve *b*, with the spring E and barrel B, substantially as and for the purposes described.

7. The combination of the barrel B with its cap *f*, and rigid winding-arbor A, substantially as and for the purposes described.

8. The main wheel C, with sleeve *b*, collar *m*, winding-arbor A of barrel B, barrel B, and mainspring E, substantially as arranged and constructed.

In testimony that I claim the foregoing watch-barrel and main-wheel devices I have hereunto set my hand this 20th day of June, A. D. 1876.

JOHN A. SHAWVER.

Witnesses:

M. H. COLLINS,
GEORGE THOMPSON.