J. R. HOPKINS.

Barrel-Arbor for Watches.

No. 165,831. Patented July 20, 1875.

Fig. 1.

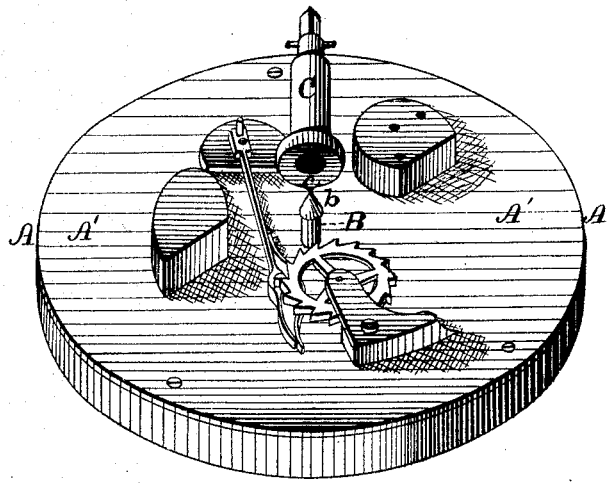
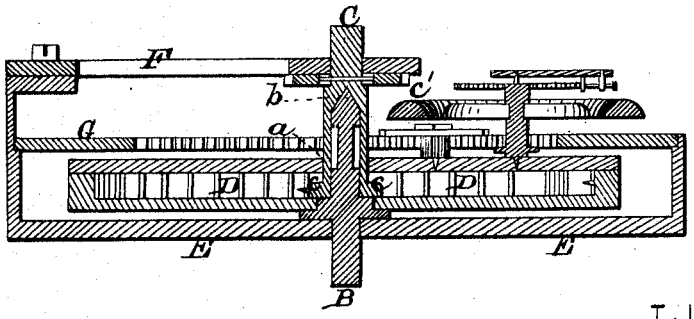


Fig. 2.



WITNESSES:

Jas. R. Hutchinson

John R. Young

INVENTOR.

Jason R. Hopkins by

Prindle and Co. his Attys.

UNITED STATES PATENT OFFICE.

JASON R. HOPKINS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WM. D. COLT, OF SAME PLACE.

IMPROVEMENT IN BARREL-ARBORS FOR WATCHES.

Specification forming part of Letters Patent No. **165,831**, dated July 20, 1875; application filed June 9, 1875.

To all whom it may concern:

Be it known that I, JASON R. HOPKINS, of Washington, in the county of Washington and in the District of Columbia, have invented certain new and useful Improvements in Watches; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of my winding-barrel and hollow winding-arbor detached from the movement and separated from each other, and Fig. 2 is a vertical central section of said parts, combined with each other and with the movement.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to increase the efficiency and durability of a watch-movement; and it consists in a going-barrel attached to or upon a staff which works in a hollow winding-arbor and has its principal bearing in the same, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A represents the going-barrel of my watch, constructed in the usual manner, and provided with a central staff or arbor, B, that is rigidly secured to or within the same. A cover or head, A′, is fitted to and secured within the open side of said barrel, but at its center does not come into contact with said arbor, its central opening *a* being considerably larger than the same. As seen in Fig. 2, one end of the arbor B is squared, (for reasons hereinafter given,) while its opposite end terminates in a point, *b*, and over said end is fitted a hollow arbor, C, that at its lower end is provided with a collet, *c*, for the attachment of the inner end of a watch-spring, D. The opening within said arbor has a depth slightly less than the length of the portion of said staff which fits therein, and at its end is made concave to correspond to the convexity of the end of the latter. The barrel described is pivoted within the front watch-plate E by means of that portion of its staff B opposite to the arbor C, while the latter is journaled near its outer end within a bridge, F, that is attached to and extends inward from the back plate G. A ratchet-wheel, *c′*, is attached to said arbor just beneath said bridge, and is engaged by a spring-pawl which prevents motion in one direction, while permitting said arbor to rotate freely in an opposite direction.

As thus arranged, it will be seen that by rotating the arbor C in the direction permitted by the ratchet and pawl the spring D will be wound up and the barrel caused to rotate in the same direction, but that said barrel, instead of revolving upon the winding-arbor, as is usually the case, revolves with the staff B, which, being journaled within the plate E and said arbor C, has such length of bearings as to give great durability, while, in consequence of the distance between said bearings, said staff possesses a degree of steadiness that could not be had with a staff of ordinary length.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

A going-barrel attached to or upon a staff which works in a hollow winding-arbor, and has its principal bearing in the same, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of June, 1875.

JASON R. HOPKINS.

Witnesses:

GEO. S. PRINDLE,

WILLIAM FITCH.