

F. L. CHAMPD.

ANCHOR ESCAPEMENT FOR WATCHES.

No. 179,769.

Patented July 11, 1876.

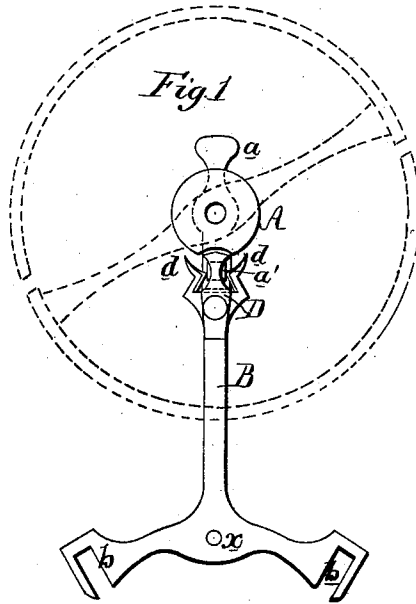


Fig. 3.

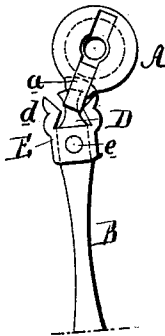


Fig. 4.

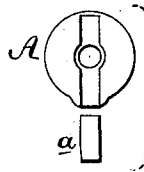


Fig. 2.

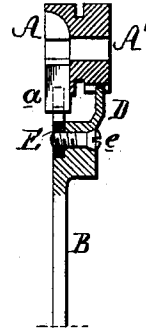


Fig. 6.

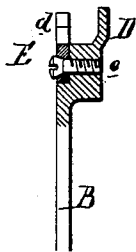


Fig. 5.

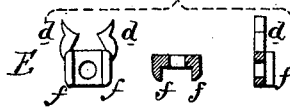
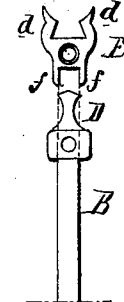


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANÇOIS L. CHAMPOD, OF GENEVA, SWITZERLAND, ASSIGNOR TO JEAN JACQUES BADOLLET, OF SAME PLACE.

IMPROVEMENT IN ANCHOR-ESCAPEMENTS FOR WATCHES.

Specification forming part of Letters Patent No. **179,769**, dated July 11, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, FRANÇOIS LOUIS CHAMPOD, of Geneva, Republic of Switzerland, have invented certain Improvements in Anchor-Escapements for Watches, of which the following is a specification:

The main object of my invention is to so construct an anchor-escapement for watches as to diminish the friction; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is an enlarged plan view of the anchor-escapement on which my improvements are based; Fig. 2, an enlarged sectional view of my improvements; Fig. 3, a plan view; Figs. 4 and 5, views of parts of the device; and Figs. 6 and 7, views of modifications of my invention.

On reference to Fig. 1, which is a view of the escapement on which my improvements are based, B is the lever of the anchor-escapement, pivoted at *a*, and carrying the pallets *b b*. To the disk or "table-roller" A, which is attached to the pivot-pin of the balance-wheel of the watch, is secured a plate, *a*, carrying a rectangular ruby-pin, *a'*, on which works the recessed end of the lever B. The arms *d d*, forming this recess, are of the peculiar flaring character shown, and on the inside form two sharp corners, which abut against opposite sides of the rectangular ruby-pin *a'*, D being the usual guard-pin. This form of recessed lever, it is found, in conjunction with the straight sides of the ruby-pin, produces much less friction and works easier than the usual straight recesses and circular or oval ruby-pin; but as the arms *d d* are in one piece with the steel lever B, and as the steel and ruby-pin do not work well together without considerable lubrication, and since the slightest abrasion will throw them out of order, the interior of the recess has been lined with a layer of gold to the extent shown.

The gold does not require lubrication, and works with great regularity and ease in connection with the ruby-pin, the best results

having been produced by this device when applied to clocks; but as it has been found impossible in its application to watches to produce a steel anchor with the recess for the ruby-pin lined with gold it has been attempted to form the entire anchor of gold; but such an anchor is not sufficiently rigid and strong, and is much heavier than the steel one, hence causing more friction.

I have overcome this difficulty by combining a pair of gold arms with a steel lever, as shown in the sectional view, Fig. 2, in which A is the table-roller, and A' the disk, having a recess for the reception of the guard-pin D, which is formed in one piece with the lever B. The disks A and A' are also formed in one piece, and a horizontal slot is formed in the disk or table-roller A, for the reception of the rectangular ruby-pin *a*, Figs. 2, 3, and 4.

E is the piece of gold, having arms of the peculiar shape described, for embracing the ruby-pin, and this metal piece is adapted to a recess in the end of the steel lever B, being secured by a set-screw, *e*, which may be inserted in the manner shown in Fig. 2, or as indicated in Fig. 6. Steadying-flanges *f f*, formed on the piece E, embrace the lever B, as shown in Figs. 3 and 5; or, if desired, these flanges may be formed on the lower end of the piece, as shown in Fig. 7.

I claim as my invention—

1. The combination of the lever B with the piece E, having arms *d d* and steadying-flanges *f f*.

2. In an anchor-escapement for watches, the combination of the lever B and arms *d d* with the table-roller or disk A, having a horizontal slot, to which the rectangular ruby-pin is adapted, substantially as described.

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

FRANÇOIS LOUIS CHAMPOD.

Witnesses:

ERD. SORDET GENEVE,
CH. MINIG GENEVE.