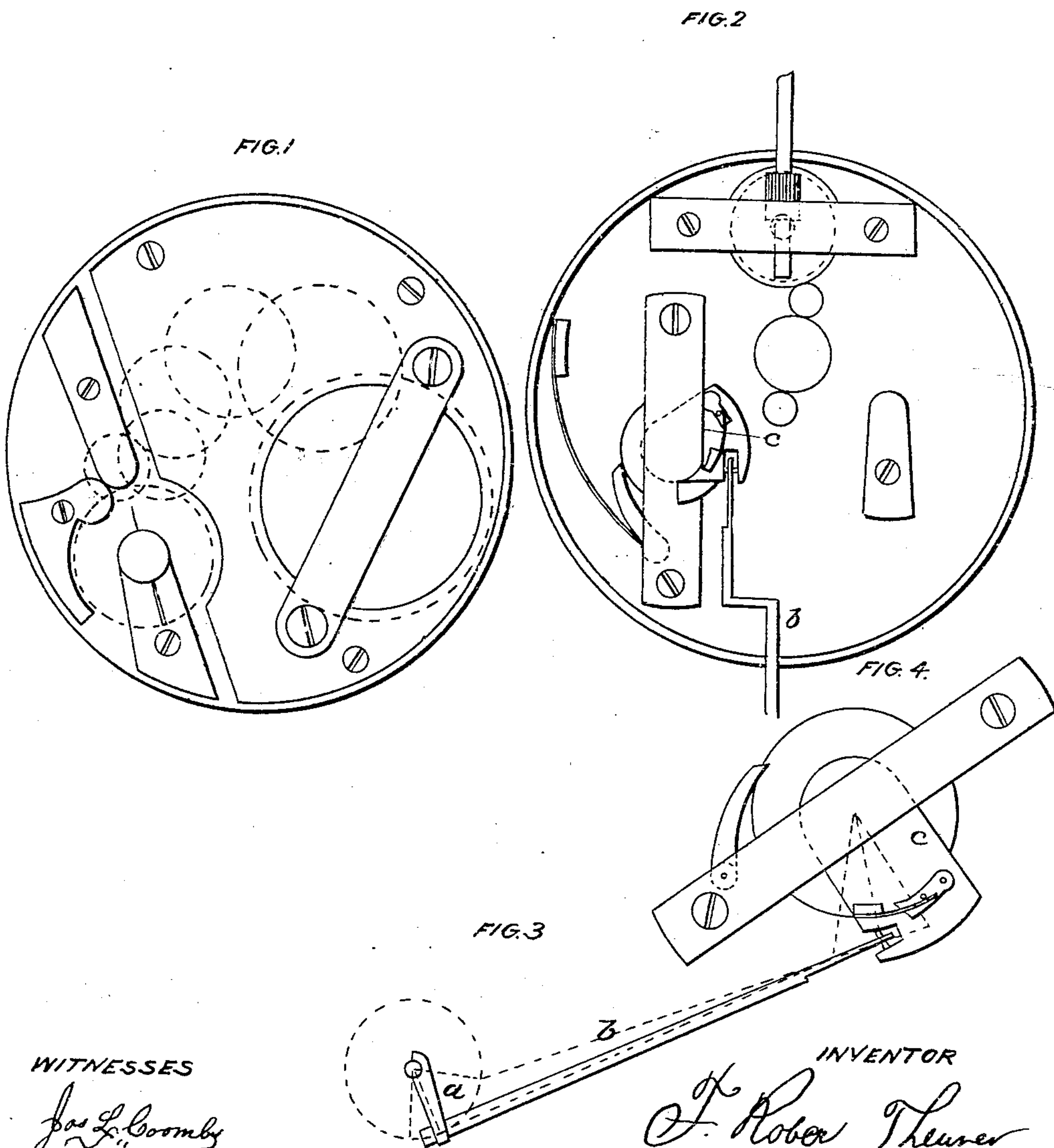


F. R. THEURER.  
Self Winding Watch.

No. 52,505.

Patented Feb. 6, 1866.



WITNESSES

*James L. Coombs*  
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# UNITED STATES PATENT OFFICE.

F. ROBERT THEURER, OF CHAUX DE FONDS, SWITZERLAND, ASSIGNOR TO  
CHARLES RUBENS & CO.

## IMPROVEMENT IN SELF-WINDING WATCHES.

Specification forming part of Letters Patent No. 52,505, dated February 6, 1866.

*To all whom it may concern:*

Be it known that I, FRITZ ROBERT THEURER, of Chaux de Fonds, Switzerland, have invented certain new and useful Improvements in Winding Watches and other Time-Keepers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to a new method of winding watches which is applicable to and independent of all sorts of escapements, its object being the winding of watches when in use by automatic means, so that the watch will keep in running order without attention being paid by the wearer to the periodic winding without which watches as heretofore constructed will inevitably stop. This magic winding of the watch is effected by the opening and closing of the cover of the hunting-case in which the work is inclosed. Thus by looking for the time, say, five times the watch will be wound up for twenty-four hours, more or less, and it will be wound up for forty-eight hours, more or less, if opened for inspection ten times, and for eight days, more or less, if the cover be moved on its hinge forty times, and the mechanism is such that the cover may be opened and closed any indefinite number of times without injuring the works.

This invention, which is of great importance in watch-making, I have carried into effect in a very simple form and by means which are readily applied to any watch without necessarily increasing its bulk.

In the accompanying drawings, Figure 1 represents a watch drawn on an enlarged scale exhibiting the works in the rear or with the rear cover removed. Fig. 2 shows the watch with the dial removed, exhibiting such parts of the watch which relate to the winding mechanism. Fig. 3 is a profile view of the hinge of the cover opposite the face; and Fig. 4 indicates the operation of the organs of transmission of movement whereby the automatic winding of the watch is effected.

From the foregoing it will be seen that this invention is adaptable to watches provided with hunting-cases.

The hinge of the face-cover of the hunting-

case which performs the functions essential to this invention is composed of five parts, the central portion of which constitutes a lever, *a*, Fig. 3, which by means of a connecting-rod, *b*, is coupled with the block *c*. This block is mounted upon the ratchet-wheel of the winding-spring, and is movable upon the pivots of the arbor of the spring-barrel.

The opening and closing of the cover of the hunting-case imparts a reciprocating movement to the lever *a*, which, through the intermediary of the connecting-rod *b*, is transmitted to the block *c*, which in its turn, by means of two clicks or pawls, rotates the drum or ratchet-wheel, and thus winds the watch.

To obviate excessive tension of the spring in consequence of too frequent movement of the cover, I dispense with the mechanism known as the "fixed stop"—such, for instance, as shown in the patent of Adrien Philippe, of July 5, 1864.

To adjust the hands I use, in connection with the rod whereby the spring-catch of the cover is operated, a pinion, which, when the said rod is drawn up, meshes in with a cog-wheel, the movement of which is transmitted by intermediary wheels to the hands. In Fig. 2 such an arrangement is shown.

Having thus described my invention, I would observe that I do not wish to limit myself to the particular arrangement, construction, or the precise combination of parts, as hereinbefore shown, to effect the object of my invention, it being obvious that the movement of the cover either way in closing or opening may be made to actuate the winding mechanism without changing the character of the invention. Therefore

What I claim is—

Actuating the winding mechanism of the watch by the movement of the cover, substantially as herein set forth.

In testimony whereof I have signed my name to this specification before three subscribing witnesses.

F. ROBERT THEURER.

Witnesses:

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ALBERT U. CINGRIA,  
W. ROSSELET.