

H. A. LUGRIN.

STOP-WATCH.

No. 176,231.

Patented April 18, 1876.

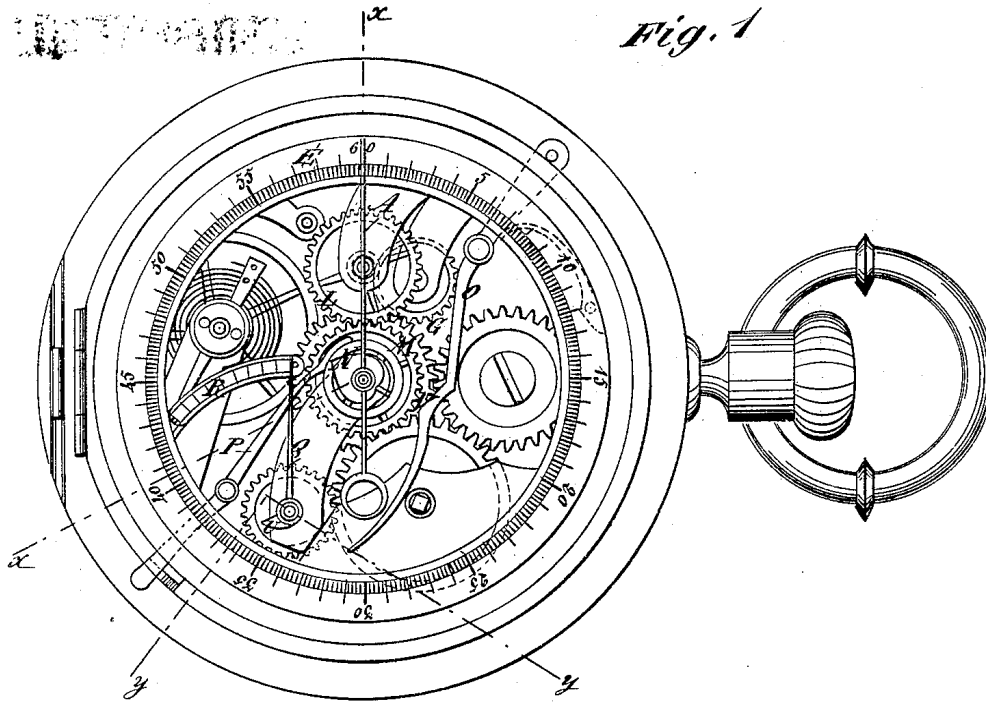


Fig. 2

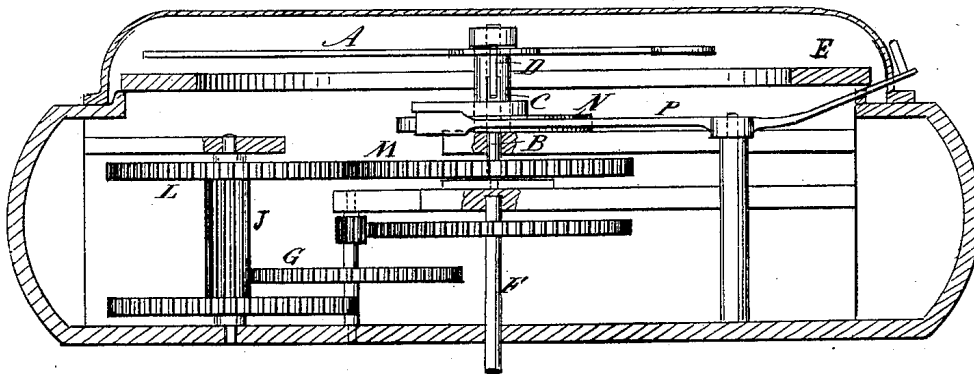
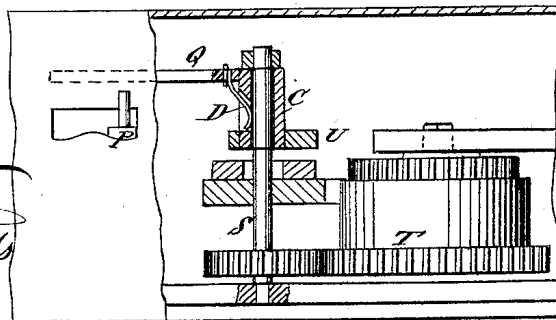


Fig. 3



WITNESSES:

C. Verux
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UNITED STATES PATENT OFFICE.

HENRI A. LUGRIN, OF NEW YORK, N. Y.

IMPROVEMENT IN STOP-WATCHES.

Specification forming part of Letters Patent No. **176,231**, dated April 18, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, HENRI ALFRED LUGRIN, of the city, county, and State of New York, have invented a new and Improved Timing-Watch, of which the following is a specification:

My invention consists of the quarter-second hand and its dial, located on the top of the watch-movement instead of the face, as heretofore, whereby the hand can be geared with less complication of machinery than when located on the other side, and the hand and dial are removed from the other dial and hands, so as to prevent confusion.

My invention also consists of a minute-hand located on the same side of the movement and at one side of the center-post, so as not to interfere with the quarter-second, in combination with a short section of a dial to be used, if necessary, for counting minutes.

My invention also consists of the adjusting-lever, for shifting the quarter-second back to the starting-point, also arranged for shifting the minute-hand back at the same time.

Figure 1 is a plan view of the top of a watch-movement having my improved arrangement of timing apparatus. Fig. 2 is a section on line *xx* of Fig. 1. Fig. 3 is a section on line *yy*.

Similar letters of reference indicate corresponding parts.

A is the quarter-second hand, mounted on the short center-post B by the tube C and friction-spring D, and E is the dial for the same. They, A and E, are located on the top of the movement, the hour and minute hands being located on the other side, on the short post F. The hand is geared with the second-wheel G of the regular watch-train by the pinion J and wheel L, which is a simpler train than is required when arranged in the ordinary way. The usual heart-shaped cam N and lever O are employed for returning the hand A to the starting-point; also the stop-lever P. Q is the minute-hand, which, with a sectional dial, R, I propose to locate at one

side of the quarter-second hand, as shown. The hand Q is connected with a post, S, which gears with the barrel-wheel T, for being turned thereby, and I use a tube, C, and friction-spring D, the same as are employed for connecting the hand A. A simple and efficient connection is thus formed, which is capable of carrying the hands properly, and also of allowing the posts to turn, when the hands are stopped, without obstructing the watch-movement.

The hand Q has a cam, U, for returning it to the starting-point, and the lever O is extended beyond the point V, which acts on the heart-cam, and is so arranged, relatively to the two posts, that it returns both hands to the starting-points at the same time.

In this example the hand A is made to be at fifths of seconds, but is designated by the more common term "quarter-second" for convenience.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The quarter-second hand and its dial, located on the top of the watch-movement, substantially as specified.

2. The minute-hand Q and sectional dial R, located on the top of the watch-movement, and relatively arranged with the quarter-second hand, substantially as specified.

3. The quarter-second hand, mounted on the short center-post B, and geared with the second-wheel G of the watch-train, substantially as specified.

4. The adjusting-lever O, arranged in relation to the quarter-second and minute hands, whereby it adjusts both at the same time, substantially as specified.

5. The hand A, connected to the post B by tube C and spring D, substantially as specified.

HENRI ALFRED LUGRIN.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.