

F. ROTIG.
WATCH STOP.

No. 103,505.

Patented May 24, 1870.

Fig. 1.

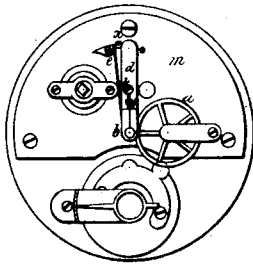


Fig. 2.

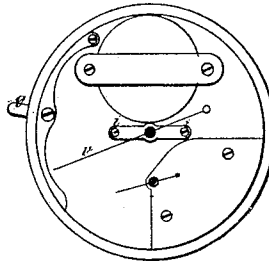


Fig. 3.

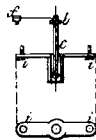
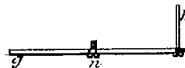


Fig. 4.



Witnesses:
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FREDERIC ROTIG, OF HAVRE, FRANCE.

Letters Patent No. 103,505, dated May 24, 1870.

IMPROVEMENT IN STOP-WATCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FREDERIC ROTIG, of Havre, in the Empire of France, have invented a new and useful Improvement in Watches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to what are known as "stop-seconds" movements; and

It consists in certain improved means of transmitting motion to the stop-seconds hand, whereby greater simplicity is obtained and the cost of a stop-seconds watch much diminished.

The invention is illustrated in the accompanying drawing, in which—

Figure 1 is a back view of the stop-seconds mechanism.

Figure 2 is a front or face-side view of the same, the hour and minute-hands being omitted.

Figures 3 and 4 are detail views, which will be hereinafter explained.

Similar letters of reference indicate corresponding parts in the several figures.

The front end of the center axis or spindle *c*, which carries the stop-second hand *v*, is held in place under the dial of the watch by means of a small stationary bridge, *i*, which is shown in place in fig. 2, and is shown in axial section and in plan in fig. 3, and its back end is supported in a small cock, *d*, which is arranged to oscillate slightly on a pin, *k*, which is screwed into the back plate *m* of the watch, the said cock being outside of the said plate.

The bridge *i* also serves to carry the minute and hour-wheels and hands, and is provided with a long socket or tube for that purpose.

On the center spindle *c*, just inside of the cock *d*, there is secured a small rough-edged ruby disk, the diameter of which may be equal to that of the ordinary seconds pinion, and on the pinion-staff of the "third wheel" there is a smooth-edged disk, *a*, the

diameter of which may be equal to that of the "third wheel."

Attached to the outside of the plate *m* there is a thin steel spring, *e*, which presses against the cock *d* with sufficient force to keep the ruby disk *b* in close enough contact with the disk *a* to enable the latter to give rotary motion to the disk *b* and the stop-seconds hand *v*.

g is the stop-lever, arranged to work on a stationary fulcrum-pin, *n*.

One end of this lever protrudes through the rim of the watch-case, as shown in fig. 2, and the other end carries a vertical steel spring, *h*, the end of which protrudes through a small opening, *x*, (see fig. 1.) in the back plate *m* sufficiently to press against the outer end of the cock *d*.

By pressing the protruding end of the stop-lever *g* in one direction, the vertical spring is removed from contact with the cock *d*, and the pressure of the spring *e* is made to press the ruby disk *b* in contact with the disk *a*, and the stop-seconds hand is thereby caused to start instantaneously, and afterward allowed to operate freely.

By pressing the protruding end of the stop-lever in the opposite direction, the vertical spring *h* is made to press upon and so displace the cock *d* that the ruby-disk *b* is brought out of contact with the disk *a*, and the stop-seconds hand *v* then stops instantaneously, its movement being prevented by the friction of a small spring, *f*, shown in figs. 1 and 3, which presses against the center axis *c*.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the disks *a* and *b*, and the oscillating cock *d*, with the axis of the stop-second hand and the pinion-staff of the third wheel, substantially as and for the purpose herein described.

FREDERIC ROTIG.

Witnesses:

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LOUIS MUTEL.