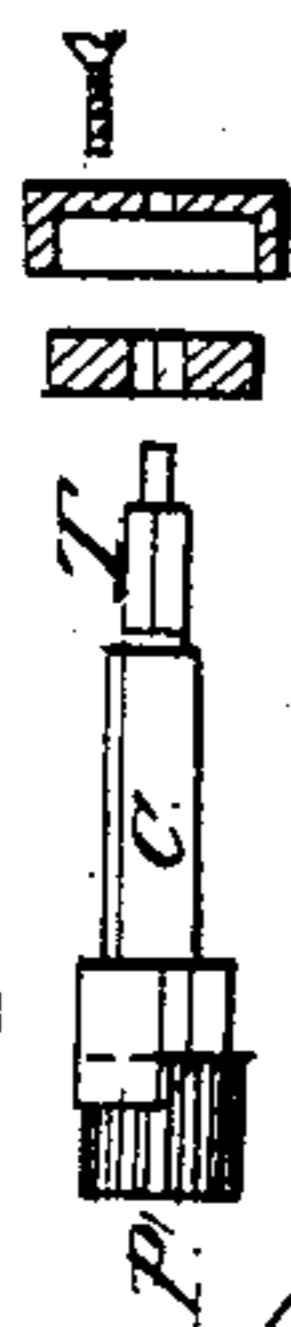
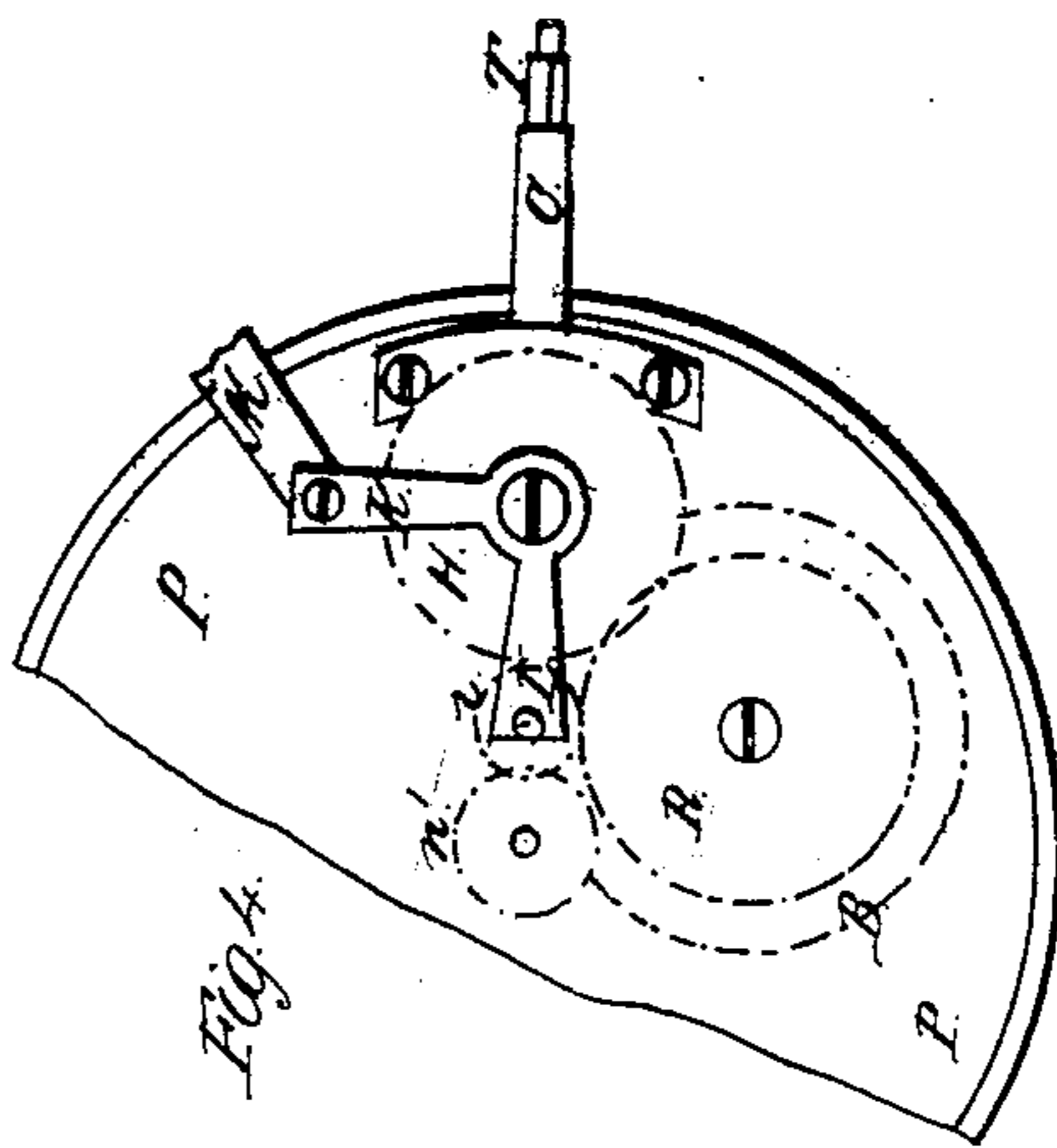
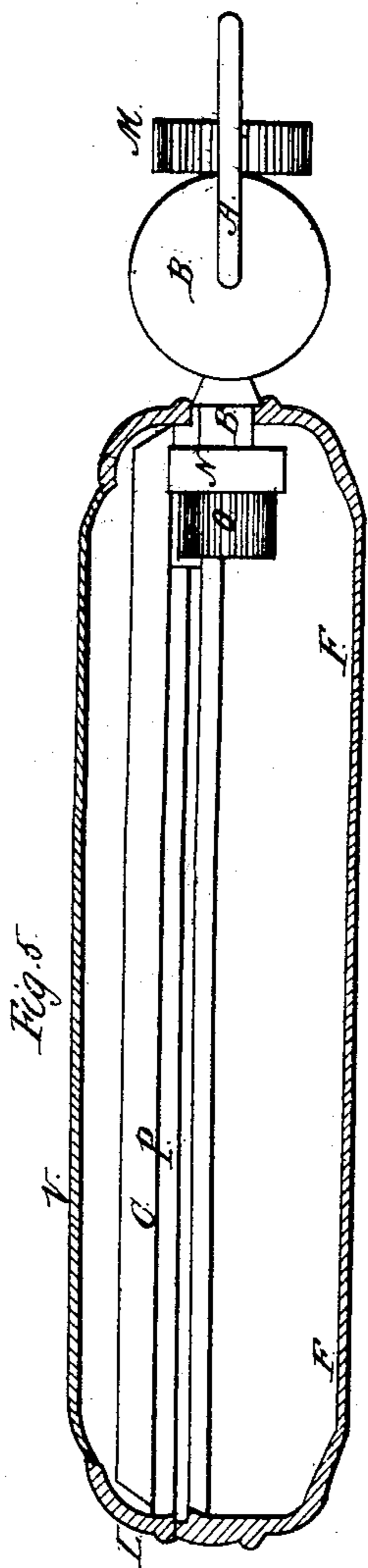


*J. A. J. Redier,*

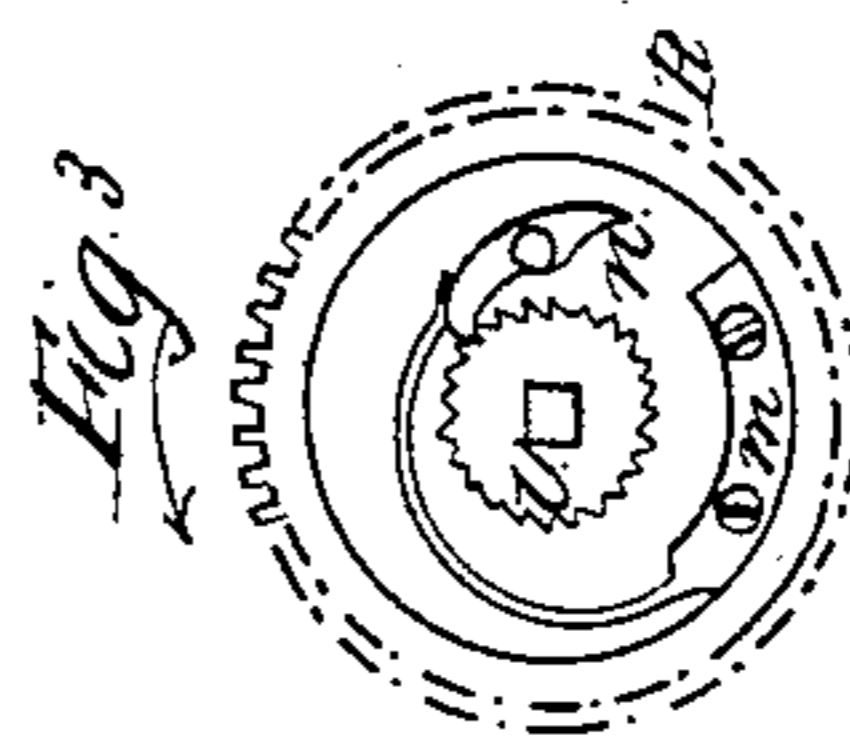
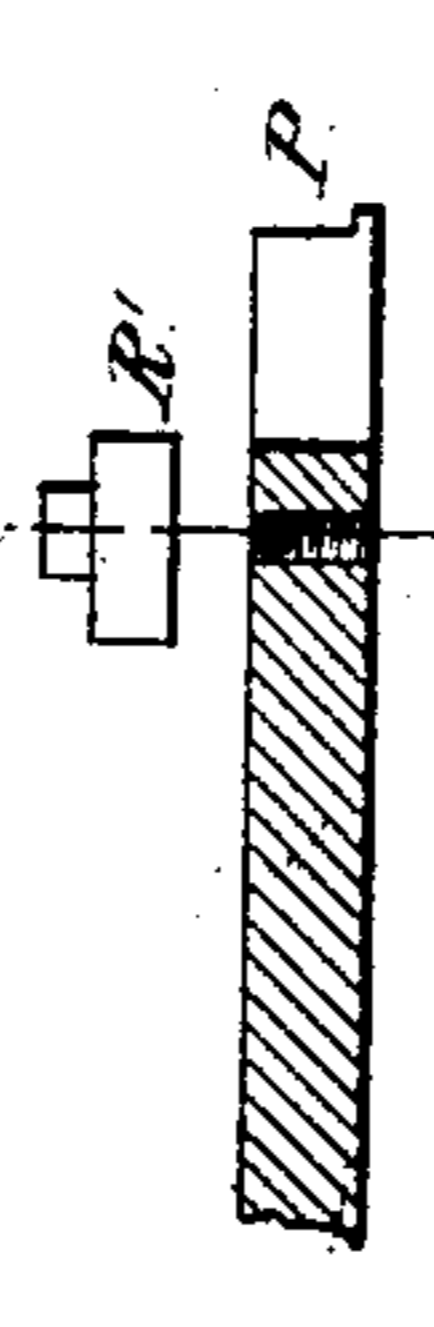
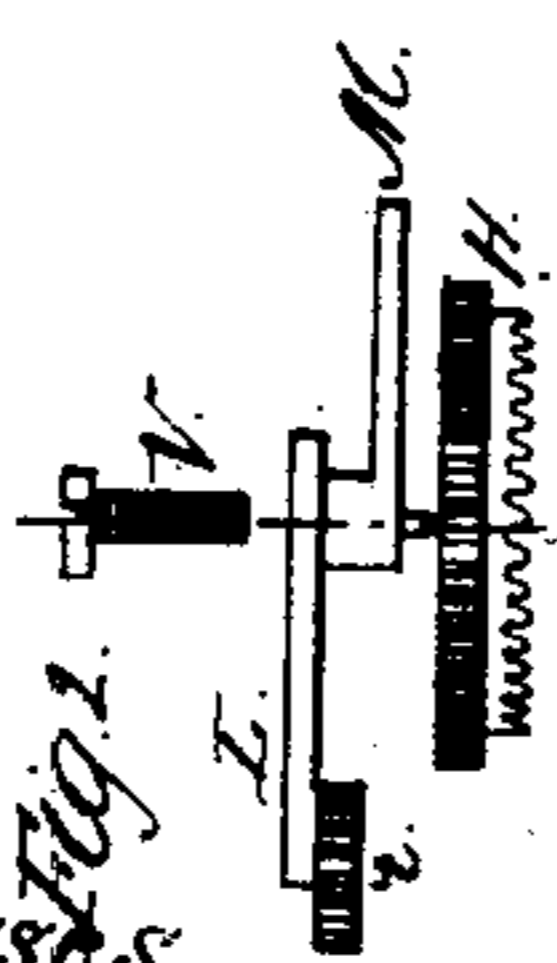
*Watch.*

*No. 39066.*

*Patented June 30. 1863.*



*Witnesses*  
*A. LeBlanc*  
*Curran*



*Inventor*  
*Redier*

# UNITED STATES PATENT OFFICE.

JOSEPH ANTOINE JEAN RÉDIER, OF PARIS, FRANCE.

## IMPROVEMENT IN WATCHES.

Specification forming part of Letters Patent No. 39,063, dated June 30, 1863.

*To all whom it may concern:*

Be it known that I, JOSEPH ANTOINE JEAN RÉDIER, of 2 Rue Sainte Appoline, Paris, Empire of France, have invented some new and useful Improvements in Pocket Watches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed sheets of drawings, making a part of the same.

The new watches differ from those hitherto known as regards the mechanism for setting to time and for winding up without a key.

The Figures 1, 2, 3, and 4 represent details of the works, in which P P, Figs. 2 and 3, is the plate; B, the barrel or spring-box; R, a wheel fastened on a ratchet on the ordinary winding-spindle, as seen in Fig. 4. In this figure, U is a ratchet fitted on the square cut of the said winding-spindle *m*; *n*, a little pawl acting on the ratchet so that when the wheel revolves in the direction of the arrow the mainspring will be wound up, while when it revolves in the opposite direction the pawl gives way and produces no action. If we cause this wheel R to be geared into the wheel H, which is provided with a double set of teeth, one of which is placed on edge, then by causing the pinion P', Fig. 1, to gear into the edge wheel, H, it will be understood how the watch can be wound up by means of a button fitted on the square end T, the same result being attained as with the Breguet key. The wheel H is fitted on the plate by means of the washer R', Fig. 2, and the screw V. The pinion P' T is maintained in its position (as shown in the drawings) by being fitted in the bush C, and the piece S C is secured to the plate by two screws. We will now state how the watch is set to time. Under the same screw V, which holds the wheel H, is placed a lever, L K, working freely, and having attached at its extremity, K, a pushing-knob, M, which is pushed toward the center of the watch when the hands have to be set, and carrying toward its extremity a wheel, *r*, gearing into the wheel R as well as the wheel *n'*. When the watch has to be set, it will only be necessary to turn the button to the left to cause the hands to revolve in the opposite direction. Immediately that the pushing-knob

M has been abandoned, the lever K L removes the wheel from the two gears R and *r*, and the different parts will remain at rest. Thus arranged the works can be placed in an ordinary case.

We will now describe how we can construct more economical cases, which are quite sufficient for the purpose, as it is never requisite for this description of watch to be opened. Fig. 5 represents the section of a watch on an enlarged scale. V is the glass; L, the glass ring; C, the dial; P, the plate, provided with two countersunk recesses, in which are adjusted the ring L, and the back F, which is being formed of one piece. The part forming usually the junction of the case is dispensed with. N is the bridge on which the winding-pinion *o* pivots. The button B is soldered with tin on the bush or tube forming parts of this bridge—say on the part C, Fig. 1—so as to form a portion of the same, while it remains unattached to any other part of the box. Thus it will be seen that the back F and the glass ring L can be removed while the button B and the ring A will remain attached to the works. If it were considered desirable to make use of hinges for this sort of case, a single hinge would suffice both for the back and the glass ring, it would be placed opposite to the pendant ring, and one of the jaws of the hinge would be fixed or movable, according to whether the glass ring or the back is made to open. This arrangement of parts can be applied to every description of watches—such as repeating watches, hunting-watches, watches with second-hands or with any description of escapement.

I claim as new—

1. The combination of the shaft T, pinion P', and wheels H R, arranged and employed as described to wind the watch.

2. The combination with the above parts, or their equivalents, of the knob M, lever K L, and pinions *i n'*, for setting the hands.

The 18th of November, 1862.

J. A. J. RÉDIER.

Witnesses:

A. LEBLANC,  
A. MATHIEU.