A. PHILIPPE.

STEM-WINDING WATCH.

No. 173,053. Patented Feb. 1, 1876.

Fig. 1.

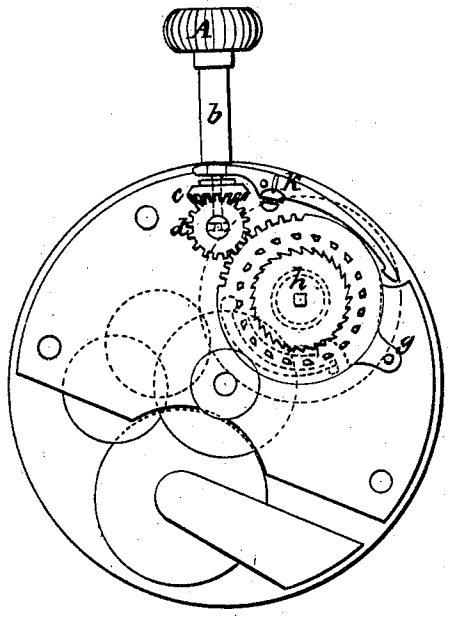


Fig. 2.

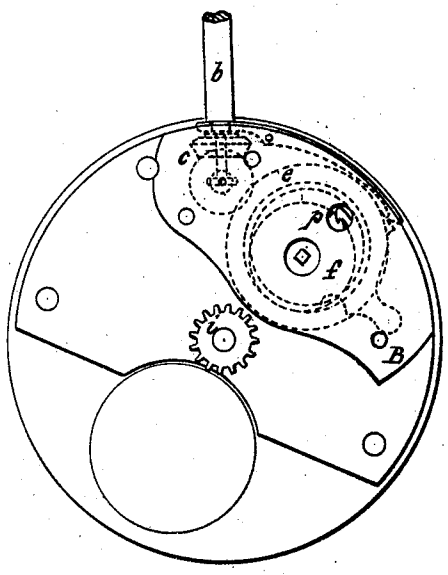


Fig. 3.

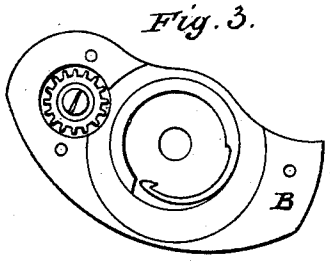


Fig. 4.

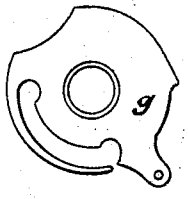


Fig. 5.

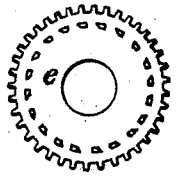
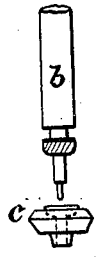


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

ADRIEN PHILIPPE, OF GENEVA, SWITZERLAND.

IMPROVEMENT IN STEM-WINDING WATCHES.

Specification forming part of Letters Patent No. **173,053**, dated February 1, 1876; application filed January 7, 1876.

To all whom it may concern:

Be it known that I, ADRIEN PHILIPPE, residing at Geneva, Switzerland, have invented certain new and useful Improvements in Watches, of which the following is a specification:

The invention, object of the present application for a patent, consists in a new disposition of the keyless watches with stem-winder.

The new mechanism I am going to describe presents great advantages from several points of view: first, simplicity of the functions; second, facility and economy of work; third, easy and sure hand-work for the function of winding up the motion-spring, as well as for turning the hands; fourth, the greatest strength and solidity in the acting pieces; fifth, facility of setting together and undoing the pieces.

The drawing No. 1 presents the mechanism put together and open; Fig. 2, same as first, in dotted lines, but covered with the barrel B.

The movement is represented without case, and on the side opposite the dial, the whole mechanism having its fittings on this side.

It is easy to understand that the arbor *b*, Fig. 1, over which is the knob A, runs into the inside part of the work, and that its extremity ends with a pivot, coming into a small piece fitted to the plate, and seen by dotted lines in *n*. This arbor is seen in Fig. 6, as well as the pinion, which heads itself on its arbor. This pinion *c*, Fig. 1, engages in the wheel *d*, this last in the wheel *e*, and this wheel *e*, which bears straight teeth perpendicular to its plan, goes engaging its small columns in the teeth of the ratchet-wheel *f*. This ratchet-wheel being mounted on the barrel-arbor, square, it is evident that, when the knob A is being turned, the motion-spring is wound up. The wheel with straight teeth, *e*, (seen in Fig. 5,) is mounted on the piece *g*, Fig. 4. This piece is, as can be seen, free, so as to form a spring, which remains one with the piece that we shall call "platform." This platform is lodged in a cavity made to the top plate, and turns on in *o*. There is still one piece, K, Fig. 1, that we shall call "lever." It is mounted on two pivots, and fixed between the two plates. One of the arms enters in a gullet made to the arbor *b*, whereas the other arm goes on pressing on the side of the platform *g*. It is ended with a hook.

In the position shown by Fig. 1, the knob A has been drawn by a strong impulse, so as to force the platform to incline itself toward the center of the plate, and in this forward motion the hook of the lever has met the retrench of that platform *g* which has kept hooked without being able to move backward by itself. The wheel *e* has followed the impulse of the platform, and finds itself engaged in the small wheel *i*, this last being mounted on an arbor, which passes through the drilled pinion of the center-wheel in the usual way. By this wheel the hands are set. Consequently, in turning the knob A, the hands are moved as required, and when they are at the desired hour it is only necessary to push slightly the same knob, and the arm engaged in the gullet of the arbor *b* will be drawn, and will disengage the piece *g*, which then, by means of its spring, shall come back to its normal position for the winding up of the motion-spring. This position is seen in dotted lines, Fig. 2. Here the straight teeth of the wheel *e* have engaged themselves in those of the ratchet-wheel *f*, which will be drawn when the knob upon the arbor *b* shall be turned to the right side.

When you turn backward the straight teeth slide on the inclined back of the ratchet-wheel teeth, and produce the effect of uncogging a Breguet key. I add that the ratchet-wheel *f* has a large thickness—one millimeter at the least—in order to facilitate the double function of the ratchet-wheel in *p*, and of the straight teeth of the wheel *e*, these last being bound to pass under the click.

The screw or key in *p*, Fig. 1, is destined to keep back the lever K when this key is being unturned a quarter of a turn. The lever can be raised only in reversing the movement. Then it disengages itself from the gullet of the arbor *b*, and this arbor can be completely taken off, in order to enable the movement to come out of the case without it being necessary to take any other piece out of the watch.

The dispositions I have just described can be applied to other calibers of watches—namely, to those with bridges, detached for every wheel of the train, with some variations in fit-

tings, preserving the same principles and the same functions; and

I here point out what I claim as my invention, and what privilege I wish to secure:

1. The barrel or covering-plate B, provided with a click, as described, in combination with the winding and setting mechanism, substantially as set forth.

2. The lever K, operated by the knob A, as described, in combination with the platform *g*, substantially as and for the purposes set forth.

In testimony whereof I have hereunto signed my name this 10th day of December, A. D. 1875.

ADRIEN PHILIPPE.

Witnesses:
J. CHABANEL,
J. PERRIERE.