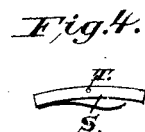
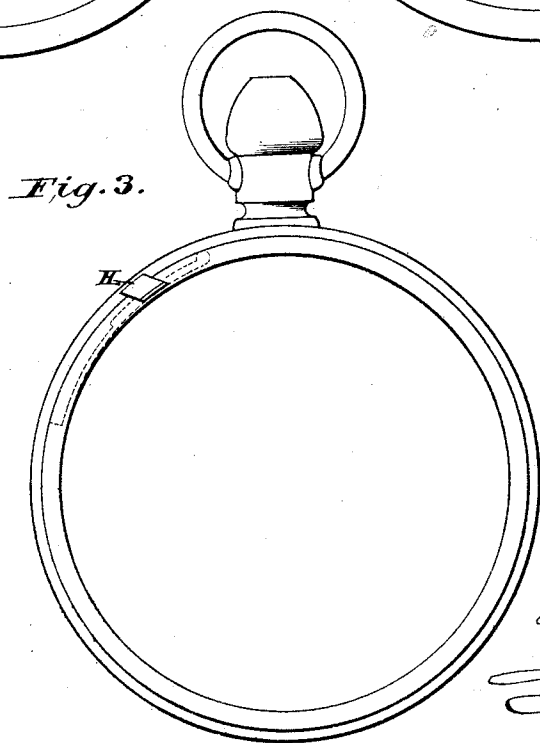
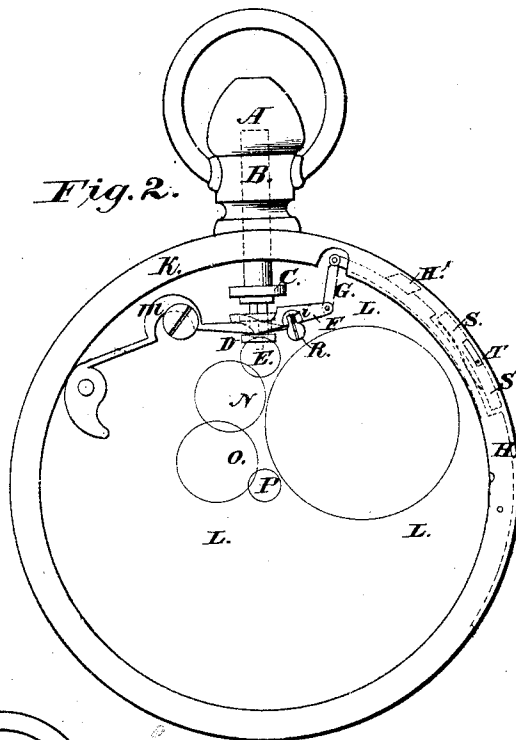
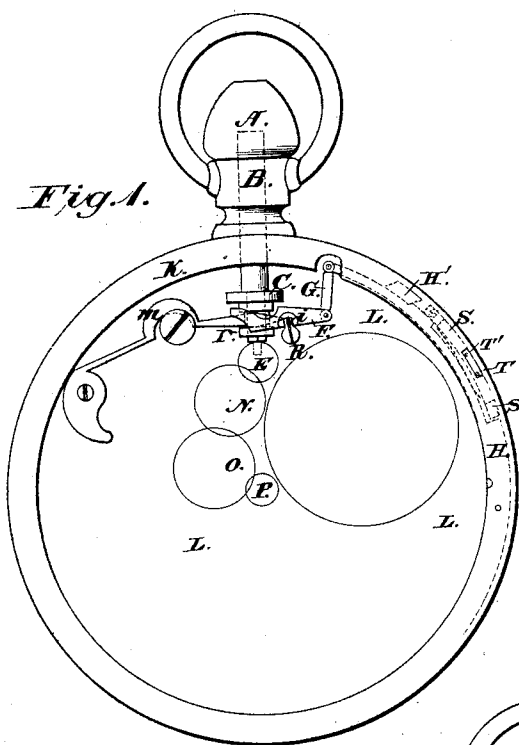


U. NARDIN.

Stem-Winding and Setting Watches.

Patented Dec..2, 1873.

No. 145,070.



Witnesses:

Ch. Buffin.
J. Cabrol.

Inventor:

Ulysse Nardin.

UNITED STATES PATENT OFFICE.

ULYSSE NARDIN, OF LOCLE, SWITZERLAND.

IMPROVEMENT IN STEM WINDING AND SETTING WATCHES.

Specification forming part of Letters Patent No. **145,070**, dated December 2, 1873; application filed October 17, 1873.

To all whom it may concern:

Be it known that I, ULYSSE NARDIN, of Locle, Switzerland, have invented a new Automatic System to Set the Time, applied to keyless watches, of which the following is a specification:

This system applies equally well to all kinds of watches for gentlemen and ladies—glass-face watches, hunting-watches, and complicated watches—which wind up without a key. It has none of the objections met with in the different systems hitherto employed for setting the time, whether it be that with a push-piece, which breaks the uniformity of the case, and can set itself in motion accidentally by some exterior contact, and by which the wheels can be injured if the hand has not a great deal of practice, or whether it be the system by the reversing of the bow, with which one can break the glass of the watch with the swivel of the chain—a system which is, besides, only applicable to hunting-watches.

My system has the incontestable advantage of requiring no exterior opening of the case, which is very important in order to preserve the works from the introduction of dust produced by the wearing of the pockets.

The method of winding a watch constructed in this manner is one of the simplest. The watch is wound up from the crown once in twenty-four hours, like other keyless watches. To set the time it is sufficient to open the back of the case, then to turn the same crown right and left, in order to advance or retard the hands, at pleasure. The watch, when closed, is in a condition to give the time regularly.

In order to instruct all those whom it may concern, I shall now give a description of my mechanism, referring to the design here appended, in which three figures present on an enlarged scale this mechanism in its functions and different positions; then a fourth figure representing aside an independent piece of the mechanism—the little bolt which is found in the contour of the case, and which is set in motion at pleasure with a knob.

Figure 1 represents the plate Z in the case, seen from the side of the face, the back be-

ing closed. The mechanism is here in a proper situation to wind up the watch. The closed back holds in check the spring H, which has pushed, by the link G, the lever F, pivoted at I, in such a manner that the lever F allows the spring M to act, which holds in check the clutch D in the ratchet C, for the work of the winding up of the watch.

Fig. 2, seen from the same side, but with the back of the case open. Here the action of the mechanism for winding up has ceased, in order to give place to the setting of the time. The spring H, being no longer compressed by the back, is thrown toward the exterior, drawing with itself, by the piece of attachment G, the lever F, which, in its turn, has compressed the spring M in such a manner as to stop the catch for the winding up by the ratchet C, to transport it to the wheel E, which transmits its motion to the hands P by the second-wheel N and the minute-works O, so that in the turning to the right or to the left the crown for winding A, adapted to the stem B, the whole system connected makes the hands move backward or forward.

Fig. 3 represents the reverse side of the watch with the back open, which allows you to see part of the spring H, upon which the back acts, and which is the only visible part of the mechanism.

The bolt of the safe-guard S (represented by Fig. 4) has only one optional function for the case: when it would be desirable to open the watch without changing the time, then the bolt S serves to annul the action of setting the time of the spring H. For this object it is only necessary to open the watch from the side of the face, and to push forward the aforesaid bolt with the knob T as far as T, Fig. 1. In this state the watch can be wound up and go open or closed.

It is understood that in bringing back the bolt S to its place the spring H resumes its action of setting the time. Consequently my new system of setting the time is composed of four pieces, viz: First, the spring H, placed in the contour K of the case; second, the link G, connecting the spring H with the bal-

ance F; third, the balance F upon the pivot I, maintained freely in place by the key R; fourth, the safe-guard bolt S.

I claim as my invention—

1. The combination of the spring H, having beveled piece H', and levers G and F, with the spring-clutch, all arranged substantially as shown and described.

2. The slide S, having stud T, passing through a slot in the center or rim K, in combination with the spring H, substantially as set forth.

ULYSSE NARDIN.

Witnesses:

LE GUFFURN DU INHUROL,
Z. GALERD HUGUNAS.