H. R. L. JONES.

Stem-Winding and Setting Watches.

No. 149,757. Patented April 14, 1874.

FIG. 1.

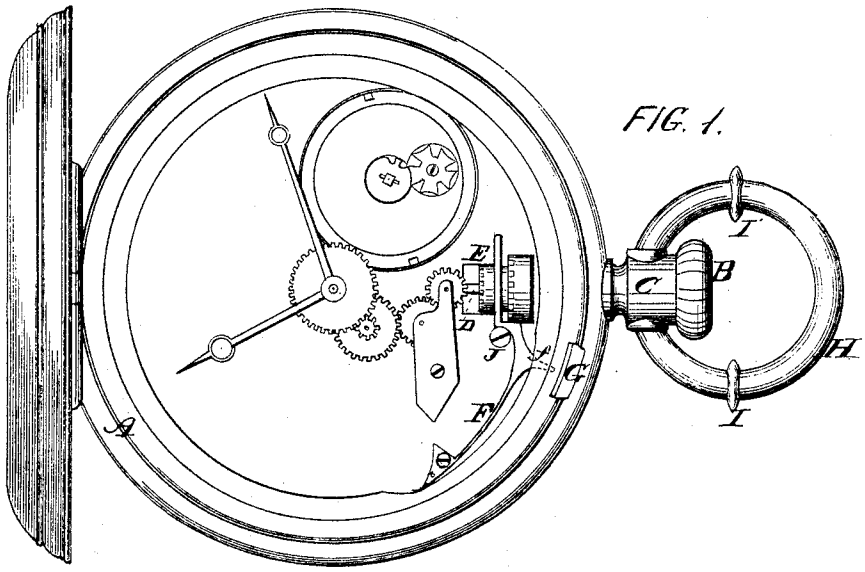



FIG. 2.

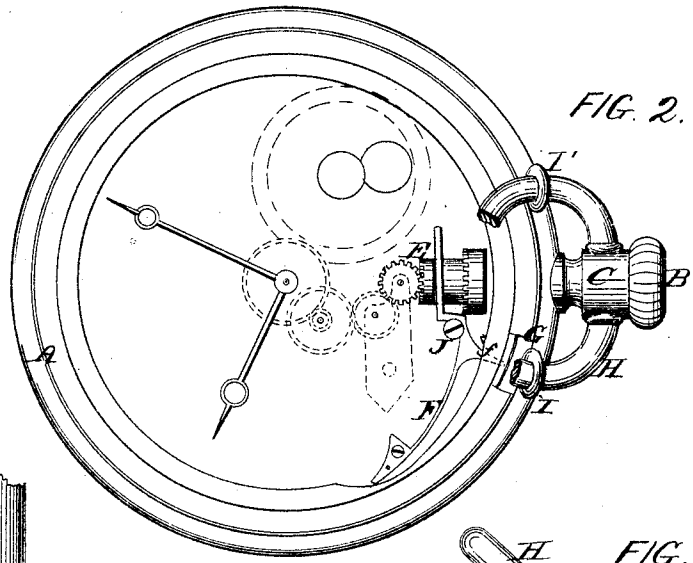
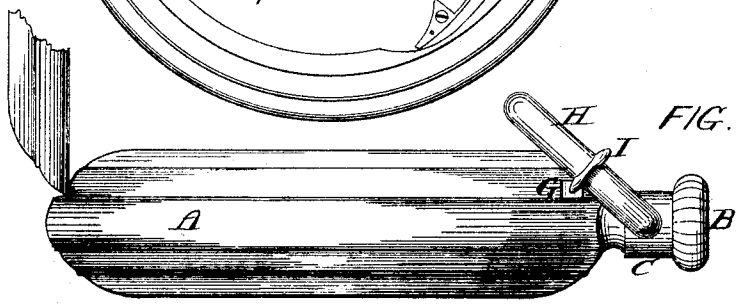



FIG. 3.




WITNESSES

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HARRY R. L. JONES, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN STEM WINDING AND SETTING WATCHES.

Specification forming part of Letters Patent No. **149,757**, dated April 14, 1874; application filed January 27, 1874.

*To all whom it may concern:*

Be it known that I, HARRY R. L. JONES, a resident of the city and county of St. Louis, State of Missouri, have invented new and useful Improvements in Stem-Winding Watches, of which the following is a full, clear, and exact description, reference being had to the annexed drawing making a part of this specification, and to the letters of reference thereon marked, in which—

Figure 1 is a face view, showing position of spring-lever and clutch and lock-spring when the winding mechanism is in gear. Fig. 2 is another face view, showing position of lever, clutch, lock-spring, and bow when the hand-setting mechanism is in gear. Fig. 3 is an edge view, showing position of the bow when turned down against the lock-spring.

Like letters of like kind indicate like parts.

The present invention relates to improvements in that class of stem-winding watches whose winding mechanism and hand-setting mechanism are, respectively, thrown into and out of gear with the stem by means of a clutch, which, by being slipped in and out on the arbor extending from the stem through the pendant, and to which the stem is fitted, respectively connects and disconnects the hand-setting and the winding train. The invention consists mainly in the improved means employed in operating the sliding clutch above mentioned.

Hitherto, in the construction of stem-winding watches, the mechanism employed in connecting and disconnecting the hand-setting and winding trains has been expensive, intricate, uncertain in its operation, and difficult to repair. Further, through the openings in the pendant and elsewhere, occupied by such mechanism, dirt is apt to enter and cause difficulty; also, in stem-winding watches of the class referred to the movement of the stem in the operation of winding is apt to affect the position of the hands of the watch. To obviate these objections is mainly the purpose of my invention.

In the accompanying drawing, A represents the watch-case, which may be of ordinary construction. B represents the stem, likewise of any preferable form, and fitted to an arbor extending through the pendant C into the interior of the watch. D represents the arbor, made square, as is customary. It is provided near its inner end with the usual clutch E, which is arranged to slide in and out on the arbor, and engage either with the hand-setting or the winding mechanism. F represents a spring-lever, fastened at one end to the case or plate, its other end engaging in the groove in the clutch E. The lever F is provided with a projection, *f*, extending toward the rim of the watch, and arranged opposite the lock-spring G of the case of the watch. When the lock-spring is not pressed inward into the watch, its inner edge is a slight distance from the point of the projection *f*. The lock-spring is of the usual construction. It is arranged opposite one side of the bow H, so that when the latter is turned down toward the watch-case it will come over and against the lock-spring. The bow H is of ordinary construction and arrangement, and is provided with a boss, I I′, on either side thereof. The boss is arranged so that when the bow is turned down it will come opposite and against the lock-spring.

In the operation of winding the watch, owing to the constant outward pressure of the spring-lever F upon the clutch E, the stem (unless the lever F is pushed inward, as hereinafter described) is always in gear with the winding-train, and, by turning the stem, the watch is wound up.

To set the hands of the watch, the case is first opened, which, if desired, can be done by pressing in the stem in the ordinary way. The construction is such, however, that no pressure on the stem will cause the lock-spring G to come against the projection on the lever F. The case being opened, by pressing the lock-spring inward it can be brought against the projection *f* on the lever F, and, in turn, cause the latter to throw the clutch E out of gear with the winding-train, and into gear with the hand-setting train. The lock-spring, in this last-mentioned operation, can be moved by pressure, in any suitable way, being applied. To enable this, however, to be done readily, and in such a way as to enable the operator to have perfect control over the operation, the procedure is as follows: Resting the watch in either hand, hold, by means of the thumb, the bow H down against the lock-spring G. Ow-

ing to its position, and to the leverage afforded by the bow, the clutch can be securely held in connection with the hand-setting train, and then, by turning the stem with the other hand, the watch-hands are readily set. The pressure on the bow being relieved, the clutch E is immediately disengaged from the hand-setting train. The stop J prevents the lever from going too far.

The advantages of the construction and operation above set forth are, mainly, first, the number of pieces required to effect the operations is less than that employed in any of the present approved constructions; second, the present construction is simple, economical, and so exposed that it can be readily reached for repair; third, the operation of hand-setting can be performed only when the case is opened and the lock-spring pushed in by some agency acting directly upon it, thus preventing any movement saving when it is intended; fourth, there being no opening in the case saving that occupied by the lock-spring, and the case being closed most of the time, but little, if any, dirt can enter; fifth, the use of the stop J prevents the clutch from being pushed too near the hand-setting gear.

It is obvious that the lock-spring and spring-lever can be arranged on either side of the watch, and be connected with the hand-setting train in either position. I therefore do not wish to be limited to the arrangement on the face side only, as shown. Nor do I wish to be confined to the special arrangement of the projection *f* of the spring-lever and lock-spring with relation to the bow.

I am aware the use of a spring-lever to operate a sliding clutch is not new; nor is a lock-spring novel; and bows provided with a boss have been made. I am also aware that the hand-setting gear of a stem-winding watch has been operated by a slide projecting through the center of the rim, and so arranged as to be actuated by the turning down upon it of the pendent bow, provided the case is open; and I am also aware that such gear has been operated by a slide projecting through the bezel and into the case, but not through it, and so arranged as to be actuated by the turning down of a bow provided with a collar when the case is open, and therefore I do not claim such broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. The clutch E, spring-lever F, provided with the projection *f*, the lock-spring G, and the bow H, provided with the boss I and pendant C, all arranged and operating substantially as described.

2. The clutch E, spring lever F, provided with the projection *f*, and the lock-spring G, combined, arranged, and operating substantially as set forth.

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Witnesses:
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