

JACQUES LAURENT.

Improvement in Stem-Winding Watches.

No. 119,858.

Patented Oct. 10, 1871.

Fig. 1.

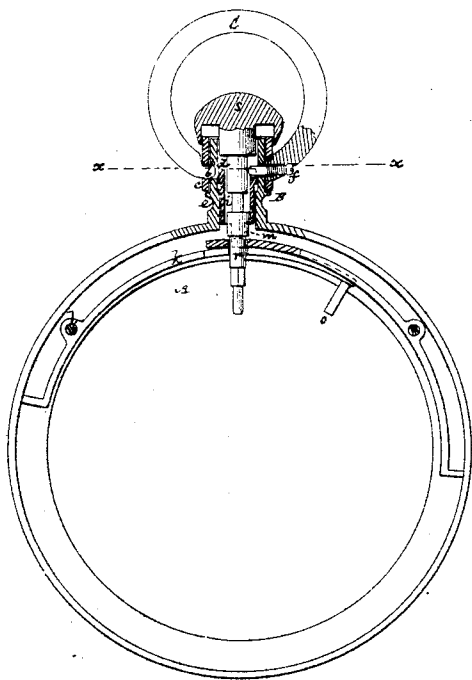


Fig. 2.

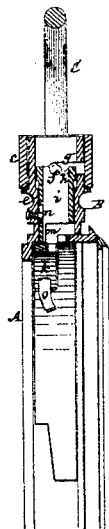
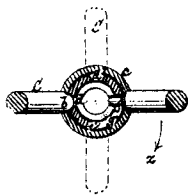


Fig. 4.



Fig. 3.



Witnesses:

Geo. Haines
Geo. Meech

Jacques Laurent

UNITED STATES PATENT OFFICE.

JACQUES LAURENT, OF NEW YORK, N. Y.

IMPROVEMENT IN STEM-WINDING WATCHES.

Specification forming part of Letters Patent No. 119,858, dated October 10, 1871.

To all whom it may concern:

Be it known that I, JACQUES LAURENT, of the city, county, and State of New York, have invented a new and useful Improvement in Setting Arrangements for Stem-Winding 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, and in which—

Figure 1 represents a partly-sectional inside face view of a watch-case having my improvement applied to it; Fig. 2, a transverse sectional view through the axial line of the stem, but omitting the latter; Fig. 3, a horizontal section through the line *x x* in Fig. 1; and Fig. 4, a longitudinal view of a sliding inner sleeve forming a part of the improvement.

Similar letters of reference indicate corresponding parts throughout the several figures of the drawing.

My invention relates to stem-setting arrangements for stem-winding watches in which the movement of the pendent bow is made to operate or release the stop by which gear of the mechanism connected with the minute-hand of the watch is established or broken with the stem-spindle; and the invention consists in an arrangement whereby the turning of the bow around the axial line of the stem, as contradistinguished from swinging or swiveling it toward or from the face of the watch, is caused to effect the necessary changes in the devices whereby the stem-spindle is put in or out of gear with the minute-hand. This movement of the pendent bow admits of a much longer range of action for the bow when setting the watch, and dispenses with the opening of the cap, or in the case of an open-faced watch the opening of the glass, for the final and operating movement of the bow, as when swinging the bow toward the face of the watch to put the stem-winding mechanism in gear; also, said movement further allows of the usual hook, by which the watch is attached to the guard-chain of the wearer, having free play at all times on any portion of the bow without interfering with the adjustment of the latter.

Referring to the accompanying drawing, A represents a watch-case; B, its pendent or stem portion; and C, the bow or pendent ring. Said bow C, which is divided at its attachment to the stem, has its one end, *b*, sprung into a hole in the one

side of a rotating outer stem-sleeve, *c*, and so as to enter one or other of two holes or notches, *d* *d'*, in the fixed portion *e* of the stem, accordingly as it is required to hold the bow by the rotation of the sleeve *c* in the position represented for it by lines in full in Figs. 1 and 3 or in the position shown for it by dotted lines in the latter figure. To effect this adjustment or change the holes *d* *d'* are made with tapering sides, so that by exerting a turning action with the fingers through the bow on the sleeve *c* the end *b* of the bow will be sprung out of its hole *d* or *d'*; and on the turning of said sleeve so as to bring said end *b* opposite the other hole *d* or *d'*, according to the direction in which the bow and attached sleeve are turned, such end *b* will snap into the hole *d* or *d'* that is brought opposite, and thus hold the bow in lock in either of the positions represented for it by full or dotted lines in Fig. 3, but in either case not restricting the bow from swinging on its ends as centers of motion. The opposite end of the divided bow to that marked *b* simply fits within a hole in the outer rotating sleeve *c*, and has a screw or pin, *f*, in it arranged to project through a slot, *g*, in the fixed portion *e* of the stem, to provide for the turning of the sleeve *c*, as required, said screw *f* projecting so as to take its bearing on an obliquely-grooved or recessed portion, *h*, of an inner sleeve, *i*. This inner sleeve *i* is made capable of a longitudinally-sliding movement within the fixed stem *e*, and is borne up against the screw *f* by the action of a spring, *k*, arranged within the rim of the case and having its fulcrum at *l*, the sleeve *i* resting, by a side leg or extension, *m*, on the spring, and said sleeve being prevented from turning by means of a slot in its side and guide-pin or screw, *n*, arranged to project from the fixed portion *e* of the stem into the slot. The spring *k* carries at its outer or free end the stop or shifter *o*, by which, when pressed inward, the usual clutch or other mechanism is shifted to establish gear, indirectly, of the minute-hand spindle with the stem-spindle *r*, as in other stem-setting arrangements, or in any suitable manner. When said stop or shifter *o*, however, is thrown backward or outward by the spring *k*, then the turning of the stem-spindle *r* is out of gear with the minute-hand and in gear with the winding mechanism only, so that till the stop *o* is pressed inward there is no provision for setting the watch by means of the stem. Said shifter *o*

is forced inward by the turning of the bow C in direction of the arrow *z*, in Fig. 3, from the position represented for it by full lines to that indicated for it by dotted lines, such turning action causing the screw *f*, by its pressure on the inclined portion *h*, to press inward the inner sleeve *i*, which, bearing by its leg *m* on the spring *k*, forces the latter inward, and with it the stop or shifter *o*. Upon turning the bow C and its attached sleeve *c* back to their normal positions, the spring *k* forces outward or backward the inner sleeve *i* and the stop or shifter *o*, to break connection of the stem-spindle with the mechanism by which the setting of the hands is effected. The stem-spindle *r* is turned by a milled head, *s*, as usual in other stem-winding and stem-setting arrangements.

What is here claimed and desired to be secured by Letters Patent is—

1. The combination of the pendent bow C and its attached sleeve *c*, constructed so as to be capable of turning around the axis of the stem with the obliquely-grooved portion *h* of the sleeve *i*, for moving the stop or shifter *o* by such turning action of the bow, substantially as and for the purposes herein set forth.

2. The attachment of one end, *b*, of the bow to the rotating sleeve *c* so as to be capable of springing in or out, in combination with the holes *d d'* in the fixed portion *e* of the stem, into which said free end of the bow is made to snap, essentially as described.

JACQUES LAURENT.

Witnesses:

FRED. HAYNES,
R. E. RABEAU.

(36)