C. V. WOERD.

Stem-Winding Watch.

No. 161,725. Patented April 6, 1875.

*Fig. 1.*

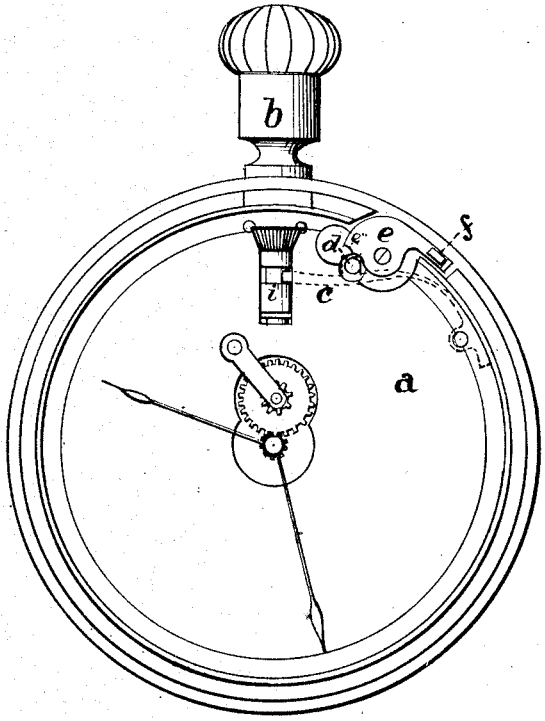
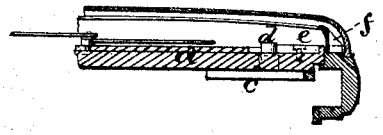



*Fig. 2.*




*Witnesses.*

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# UNITED STATES PATENT OFFICE.

CHARLES V. WOERD, OF WALTHAM, MASSACHUSETTS, ASSIGNOR TO AMERICAN WATCH COMPANY, OF SAME PLACE.

## IMPROVEMENT IN STEM-WINDING WATCHES.

Specification forming part of Letters Patent No. **161,725**, dated April 6, 1875; application filed February 19, 1874.

*To all whom it may concern:*

Be it known that I, CHARLES V. WOERD, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Stem-Winding Watches, of which the following is a specification:

My invention relates to the combination of finger-catch and cam, with spring-lever for engaging and disengaging the hand-setting mechanism to and from the stem or winding-arbor, with the watch-case, in such a manner that the finger-catch is entirely covered by the case-cover when the case is closed.

The object of my invention is to bring the finger-catch out of sight, and to cover the same by the watch-case, and thus improve the appearance of the watch over watches of this kind, in which the finger-catch is on the outside of the case, and interferes with the smooth surface and finished appearance of the watch; further, to reduce the cost of watch-cases, and to enable the watch-maker to use the watch-cases as they come from the case-maker, without requiring extra drilling and fitting in order to make the connection of finger-catch with cam through the case.

Another object of my invention is to simplify the combination of finger-catch and cam with spring-lever, to reduce the number of pieces, and also to protect the inside of watches effectually from dust and dirt.

Figure 1 represents an enlarged drawing of the watch and hand-setting mechanism embodying my invention. Fig. 2 is a section of a portion of the same.

Referring to the drawings, *a* is the upper movement-plate; *b*, the stem-winding mechanism, substantially the same as described in the Letters Patent No. 118,415, granted to me August 22, 1871. *c* is the spring-lever, which with one end operates into the clutch *i*, and engages and disengages the hand-setting mechanism, and with the other end is firmly attached to the rim of movement-plate *a*. The pin *d*, forming part of spring-lever *c*, is acted upon by cam *e*. The latter, being pivoted to movement-plate *a*, is provided with two points and intervening cavity, conforming to the curvature of pin *d*, and an arm with finger-catch *f*, extending through a slot in watch-case.

When the hand-setting mechanism is disengaged, the arm and finger-catch *f* is pushed by the shutting of the case-cover or by the finger closely against the projecting rim of movement-plate, and into a recess of frame holding the glass covering, and when the metallic cover is closed, it will shut over the finger-catch and arm, and hide it entirely from view. The spring-lever *f*, being released from the pressure of cam *e* against pin *d*, throws the clutch *i*, and thus disengages the hand-setting from the stem-winding mechanism.

When the finger-catch *f* is pushed outward, the point of contact of cam *e* with pin *d*, the center of pin, and pivot of cam are brought into position of a straight line, thus locking pin *d*, and causing the spring-lever *c* to shift clutch *i* in the opposite direction, and engaging the hand-setting mechanism with the winding-stem.

The watch-case, forming a separate branch of manufacture, and coming often from a distance, requires no extra work by the case-maker, as the slot and recess for arm and finger-catch *f* can be easily cut by the watch-maker.

It will be seen that when the watch is closed the cover will fit closely around the watch-case, and that the inside work is perfectly protected from dust and dirt, which cannot be done with watches where the finger-catch or knob is on the outside of the case.

I do not claim a mechanism in connection with a watch-case in which the shutting of the watch-cover changes automatically the hand-setting to the stem-winding mechanism, as this has been done before by others; but

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

The means for actuating the mechanism whereby the watch is changed from a stem-winder to a stem-setter, consisting of the combination, with a watch, of a cam, *e*, and thumb-catch *f*, for actuating the cam, and the flattened surface or landing *e''*, whereby the cam is caused to rest steady, after being raised, until again pressed back into the case, substantially as and for the purpose described.

CHAS. V. WOERD.

Witnesses:

JULIUS A. WILDE,

ROBT. A. SHAILER.