

(No Model.)

J. SCHAEPPI.
STEM WINDING WATCH.

No. 286,852.

Patented Oct. 16, 1883.

Fig. 1.

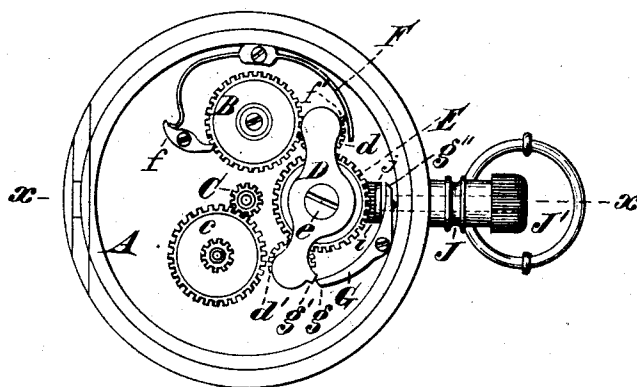


Fig. 2.

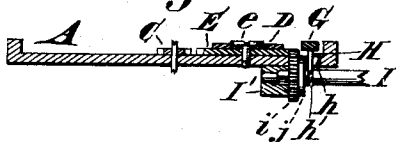


Fig. 3.

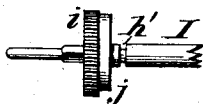
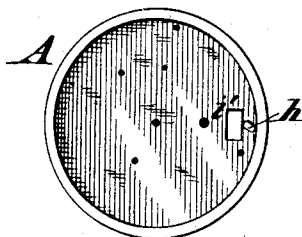


Fig. 4.



Attest
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JULIUS SCHAEPPi, OF CINCINNATI, OHIO, ASSIGNOR OF TWO-THIRDS TO
EDWARD S. WAYNE AND JEROME B. HOLMAN, OF SAME PLACE.

STEM-WINDING WATCH.

SPECIFICATION forming part of Letters Patent No. 286,852, dated October 16, 1883.

Application filed January 20, 1883. (No model.)

To all whom it may concern:

Be it known that I, JULIUS SCHAEPPi, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stem-Winding Watches, of which the following is a specification.

My invention relates to that class of stem-winding watches in which the winding and hand-setting devices are thrown into engagement with the gearing for winding up the mainspring and the gearing for setting the hands by means of a longitudinally-movable stem.

The invention consists in the combination of a centrally-pivoted yoke or arm having a pin or projection at one end, upon which bears the free end of a bow-shaped spring, that also serves to hold a dog engaged with the spur-wheel on the spring-barrel. The other end of the pivoted yoke is provided with a projection or lug, which engages with the outer end of a centrally-pivoted dog, the inner end of which has a pin that extends through an oblique slot made in the pillar-plate and enters a circumferential groove in a longitudinally-movable stem. The pivoted yoke carries an end pinion, which meshes into the spur-wheel on the spring-barrel, and with an intermediate pinion that engages with a spur-wheel on the longitudinally-movable stem. These parts constitute the setting-gear, which is held in an operative position by means of the pivoted dog bearing upon one end of the pivoted yoke and the spring bearing upon the other end of the same. The setting-gear consists of the afore-said stem and its spur-wheel, the central spur-wheel on the pivoted yoke, and a pinion on the end of the latter, in connection with the ordinary pinions on the arbors of the hands. When the stem is drawn out to operate the hand-setting devices, the pivoted dog is vibrated and caused to bear upon the toe or beak of the pivoted yoke, the spring on the other end of said yoke sliding freely on the pin or point of contact. When in this position, the spring holds the toe or beak on the forward end of the yoke against the dog, so as to constitute a positive stop device, which effectually holds the winding-pinion at the op-

posite end of the yoke from mesh with the mainspring-pinion.

In the accompanying drawings, Figure 1 is a plan view of a stem-winding watch, with the dial removed to show the application of my improvements which are embodied therein. Fig. 2 is a central section on line *x x*, Fig. 1. Fig. 3 is a longitudinal elevation on an enlarged scale, showing the winding-arbor with the driving-wheel and a washer mounted thereon, and the circular groove in which rests the pin of the shifting-lever. Fig. 4 is a plan view of the pillar-plate, showing the openings for the reception and operation of the driving-gear on the arbor and the pin on the shifting-bar.

A represents the pillar-plate, of the usual construction, and on which are mounted the great wheel B, connecting with the spring-barrel, the center hand-wheel, C, intermediate gear, *c*, and the yoke D, containing the winding-wheel *d*, setting-wheel *d'*, and intermediate driving-gear, E.

F is a bow-spring, pivotally secured between its ends to the pillar-plate, holding the winding-wheel *d* at one of its ends in engagement with the spring-wheel B, and the pawl *f* in engagement with the said spring or great wheel B, to prevent its backward movement.

f' is a downwardly-projecting pin or lug on one end of yoke D, against which the end of the spring rests to prevent its coming in contact with the winding-wheel *d*. Winding and setting wheels *d d'* are pivoted on studs or pivots projecting from the bottom of yoke D, the intermediate driving-wheel, E, being pivoted on the screw *e*, which secures the yoke pivotally in position on the pillar-plate.

G is a shifting bar or lever, pivoted between its ends on the pillar-plate, so that its end *g* engages the lug *g'*, constructed on the end of the yoke D at which the setting-wheel *d'* is mounted, to shift said yoke and bring the wheel *d'* into engagement with the wheel *c* to set the watch.

H is a pin on the under side of the end *g'* of lever G. This pin projects through an opening, *h*, in the pillar-plate, and engages a groove, *h'*, made on the shaft or arbor I. Arbor I is pivoted at its inner end in a box, I', secured to the bottom of the pillar-plate, as shown in

Fig. 2, and passes through the stem J, having a crown or cap, J', on its outer end for operating it, as customary.

i is a gear-wheel mounted on the square part of the arbor, and operating within the opening *i'* made in the pillar-plate A and box I', in connection with the gear-wheel E, to wind or set the watch, as the case may be.

j is an ordinary washer, placed on arbor I adjacent the gear *i*, to sustain it firmly in place.

In order to set the watch, arbor I is drawn outwardly a short distance, thereby drawing with it the end *g''* of the shifting-lever G by its pin-and-groove connection therewith, the winding-wheel being thrown out of gear and the setting-wheels into gear, both driving-gear *i* and washer *j* sliding on the square part of the arbor, and not interfering with the driving-connection between said gear *i* and gear E.

The construction herein shown and described makes a simple, durable, and economical stem winding and setting mechanism for a watch, and is particularly adapted to the rough handling that other devices of a similar nature are not, there being no extraneous mechanism to become impaired by a short limited use of the same.

I claim—

1. The combination of the centrally-pivoted yoke D, having the projection *f'* and pinion

d at one end and the toe or beak *g'* and pinion *d'* at the other end, and provided with a central spur-wheel, E, the bow-spring F, having a free end bearing upon and adapted to slide on the projection *f'* of the yoke D, and the centrally-pivoted dog or shifting-lever G, adapted to bear upon the toe or beak *g'* of the pivoted yoke for locking the setting and winding devices, with the watch-case, the longitudinally-movable stem, and the pinions or spur-wheels of the spring-barrel and hands, substantially as described.

2. The combination of the pillar-plate having the oblique slot *h* and adjacent opening *i'*, and the centrally-pivoted dog or shifting-lever G, having the pin *h*, with the longitudinally-movable stem having a groove to receive said pin, and a pinion through which said stem can slide, and the pivoted yoke, adapted to be shifted and locked by the lever G, and the spring bearing upon said pivoted yoke, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JULIUS SCHAEPPPI.

Witnesses:

JOHN A. SCHMIDT,
JNO. E. JONES.