

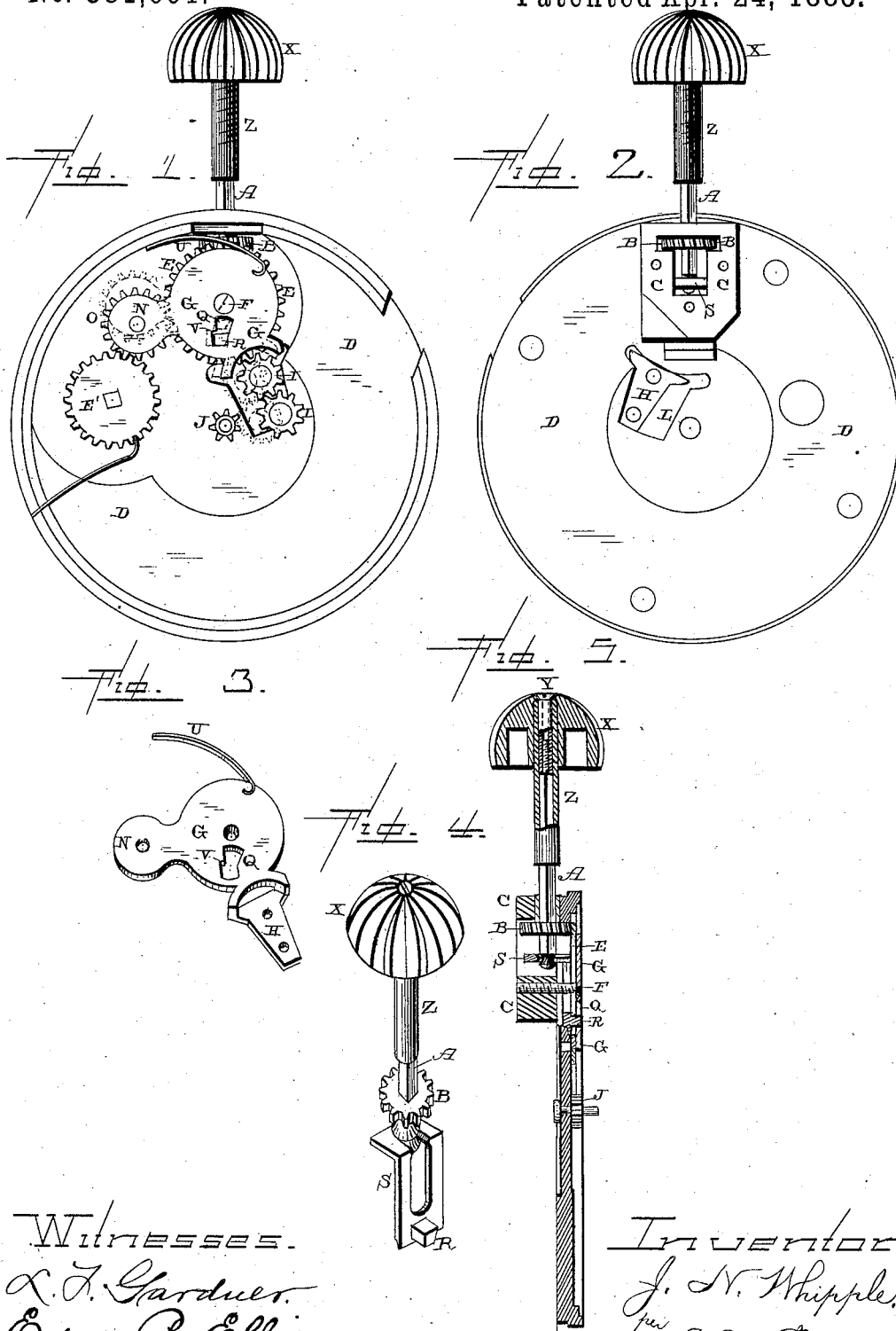
(No Model.)

J. N. WHIPPLE.

STEM WINDING AND SETTING WATCH.

No. 381,601.

Patented Apr. 24, 1888.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOEL NETTLETON WHIPPLE, OF VOLGA, IOWA.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 381,601, dated April 24, 1888.

Application filed December 9, 1887. Serial No. 257,438. (No model.)

To all whom it may concern:

Be it known that I, JOEL NETTLETON WHIPPLE, of Volga, in the county of Clayton and State of Iowa, have invented certain new and useful Improvements in Stem Winding and Setting Watches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stem winding and setting watches; and it consists in the combination of an endwise-moving winding-stem having loosely placed thereon a pinion through which the winding-stem moves back and forth, and which communicates to the pinion only a rotary motion; a wheel with which the pinion engages, and which operates both the intermediate setting and winding wheels; a pivoted yoke which carries the intermediate setting-wheel upon one arm and an intermediate winding-wheel upon the other, and a slide provided with a projection to catch in the arm, and which is loosely connected to the inner end of the winding-stem, as will be more fully described hereinafter.

The object of my invention is to throw either the winding or setting mechanism into gear by moving the winding-stem endwise, and to place both the intermediate setting and the winding mechanisms upon a slotted yoke that is operated by a slide that is connected to the winding-stem.

Figure 1 is a plan view of the winding and setting mechanism which embodies my invention, taken from one side. Fig. 2 is a similar view taken from the opposite side. Fig. 3 is a detached view of the slotted yoke which carries the winding and setting mechanisms. Fig. 4 is a detached view of the slide which operates the slotted yoke. Fig. 5 is a vertical section taken through the plate and the parts which embody my invention.

A represents the winding-stem, which has an endwise movement through the pendant of the case, and which has its inner square or angular portion to pass through the pinion B, which is placed loosely thereon, and which is held in a suitable frame, C, attached to one

edge of the pillar-plate D. This frame is recessed at its outer edge, so as to hold the pinion B against any endwise movement, and yet allow it to revolve freely with the winding-stem when it is turned either for setting or winding the watch. This pinion meshes, through a slot in the plate, with the outer edge of the wheel E, which is journaled upon the screw or pivot F, and which operates both the intermediate setting and winding mechanism. Placed upon the same pivot, F, as the wheel E is the slotted yoke G, which has an arm, H, projecting therefrom, and upon which are placed the two pinions I, which mesh together and with the large wheel E, and which pinions, when the yoke is moved in one position, engage with the setting-wheel J, and thus enable the hands to be set when the winding-stem is turned in either direction. This arm H moves laterally in a slot, L, formed in the plate D to receive it, and has sufficient play to move the pinions I in and out of contact with the wheel J. Projecting, also, from one side of the slotted yoke is a second arm, N, which carries the pinion O, which also engages with the wheel E, and which can be thrown in and out of gear by the movement of the yoke with the winding-wheel E'. The yoke is provided with a slot, Q, to one side of its center, and in which an arm, R, extending from an inner side of the slide S, catches. This slide is swiveled to the inner end of the stem, and has a back-and-forth movement in the frame C, which forms a guide therefor.

When the winding-stem is forced inward, the slide is moved to the inner end of the frame C, and its arm is made to operate through the slot upon the yoke, so as to throw the pinion O in contact with the winding-wheel E'. The slotted yoke is held in this position by means of the shape of the slot and the spring U, which is connected to its outer edge, and which has its outer end to bear against the flange formed upon the plate. When the winding-stem is turned slightly backward and pulled outward, the slide is moved outward in the frame C, so as to bear against the inner side of the pinion B, and its arm is disengaged from the shoulder V in the slot and moved inward in the slot so as to cause the yoke to turn partially around upon its pivot, and thus bring the pinions I in

contact with the setting-wheel J. In whatever position the slotted yoke is moved the slot and the spring connected thereto hold it. Owing to the shoulder in the slot catching over the projection upon the slide, a lock is formed for the yoke, so as to prevent it from moving from a winding into a setting position. In order to move the yoke into a setting position, the crown and winding stem must first be turned backward at the same time that an outward pull is exerted upon them, and then the projection upon the slide will slip from behind the shoulder in the slot and move the yoke.

The outer end of the winding-stem extends into the crown stem, and is screw-threaded, and passing through the crown-stem, and making connection with the screw-threaded end of the winding stem, is the screw Y, which is internally screw-threaded upon its end, as shown.

The crown X and its stem are either made in a single piece or may be made separately and secured rigidly together, and the crown-stem Z passes down over the square portion of the winding-stem, so as to always cause the winding-stem to move with it. The screw Y prevents any possibility of the crown and crown-stem from pulling off from the winding-stem when the slotted yoke is being moved from a winding into a setting position.

The advantages of my invention are that there is only a single spring used to hold the slotted yoke in position. The parts are not likely to be moved by any pressure that may be brought to bear upon the crown in the pocket, and the parts can be used in connection with and can be readily attached to any stem-winding watch.

Having thus described my invention, I claim—

1. The combination of the plate D, having a slot or opening, L, formed therein, with the pivoted yoke which carries both the intermediate setting and winding mechanisms, and which has an arm projecting therefrom having the two pinions I pivoted thereon, and which arm moves below the wheels in the slot formed in the plate, substantially as shown.

2. The combination of the endwise-moving winding-stem, the pinion through which the winding-stem passes, and the slide provided with an arm swiveled upon the inner end of the winding-stem with the slotted yoke carrying the intermediate setting and winding mechanisms, and the wheel E, which is operated by the pinion, substantially as described.

3. In a stem winding and setting watch, the pivoted yoke carrying both the intermediate winding and setting wheels, a spring for holding the yoke in position, an endwise moving winding stem, and a slide connected to the winding-stem and provided with an arm for turning the yoke upon its pivot, substantially as set forth.

4. The combination of the winding-stem, made screw-threaded at its outer end, with the crown, crown-stem, and the screw, which is passed through the crown to make connection with the winding stem, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOEL NETTLETON WHIPPLE.

Witnesses:

WILLIS PARDU,
LEON LIBBY.