

J. F. THIM.
STEM WINDING AND SETTING WATCH.

No. 567,207.

Patented Sept. 8, 1896.

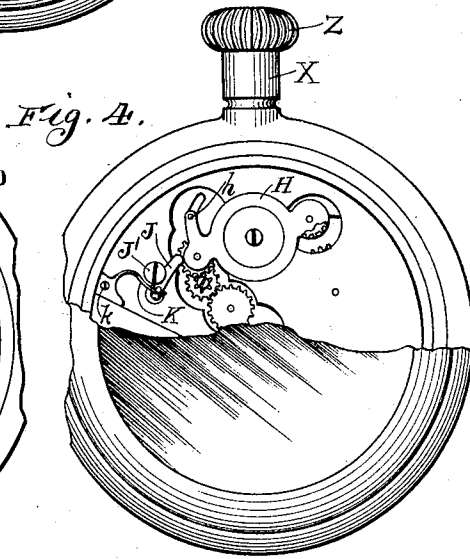
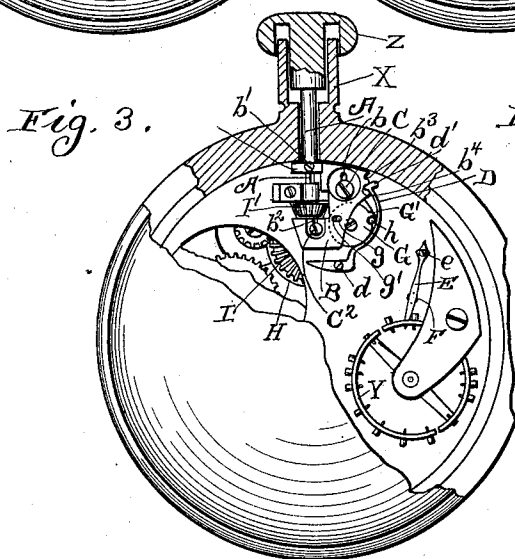
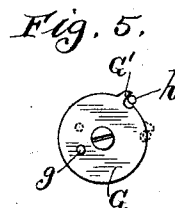
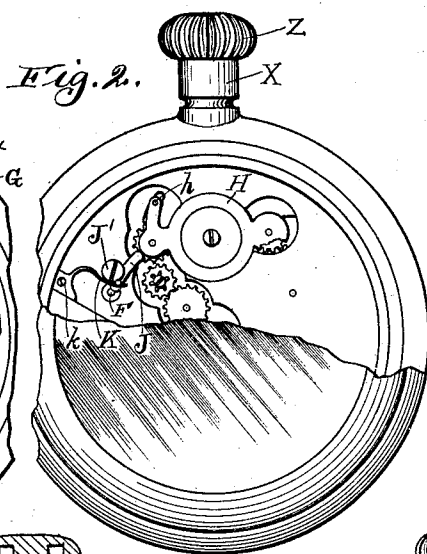
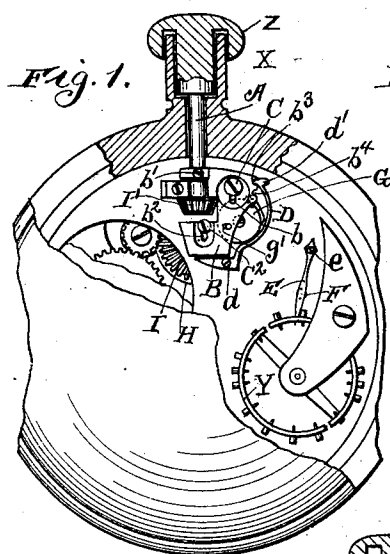


Fig. 6.

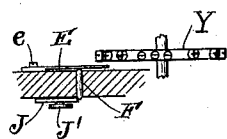
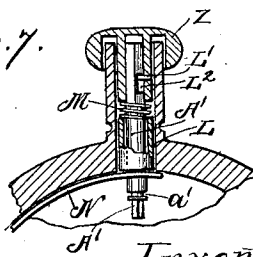


Fig. 7.



Witnesses:
R. J. Jaeger,
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 8.

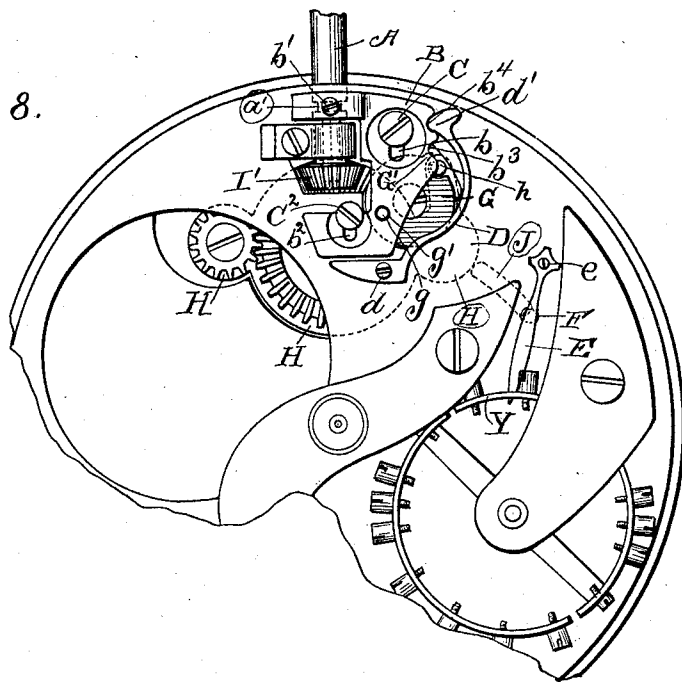


Fig. 9.

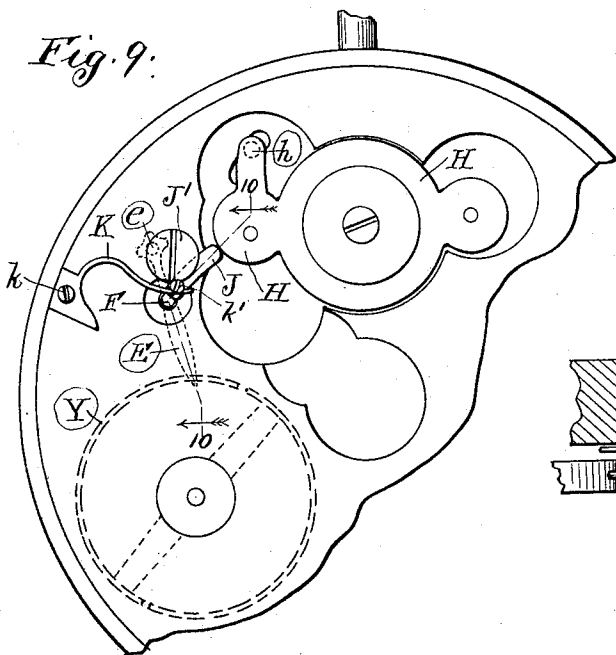
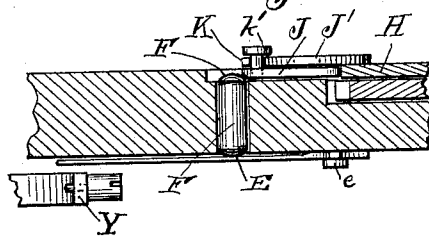


Fig. 10.



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UNITED STATES PATENT OFFICE.

JOHN F. THIM, OF CHICAGO, ILLINOIS.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 567,207, dated September 8, 1896.

Application filed April 20, 1895. Serial No. 546,576. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. THIM, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Pendant-Setting for Winding and Setting Watches, of which the following, when taken in connection with the drawings accompanying and forming a part hereof, is a full and complete specification, sufficient to enable those skilled in the art to understand, make, and use the same.

This invention relates to pendant setting and winding mechanism of watches, that is to say, adjustable mechanism whereby a watch may be wound or set as desired; and the object of this invention is to obtain a well-constructed mechanism, not expensive in character, with which a watch may be wound or set, (by properly adjusting the mechanism,) and in such setting the seconds-hand as well as the hour and minute hands will be set.

In the drawings referred to, Figure 1 is a sectional view of a pendant-setting with the mechanism embodying this invention, which can be seen in viewing the watch from one side thereof, shown in plan view; Fig. 2, a plan view of the mechanism forming a part of the device and to be seen from the opposite side of the watch, the case of the watch being broken away to expose the same; Fig. 3, a plan view of a watch on the same side as Fig. 1 and showing the same parts, but in a different position; and Fig. 4 is a plan view of a watch and mechanism mounted therein embodying the invention, viewed on the same side of the watch as Fig. 2, but with the several parts in the position corresponding with the parts illustrated in Fig. 3. Figs. 1 and 2 show the several parts in position to wind the watch; and Figs. 3 and 4 show such parts in position to set the hour, minute, and seconds hands of the watch. Fig. 5 is an elevation, (or plan view,) on an enlarged scale, of one of the elements of the mechanism embodying the invention. Fig. 6 is a side elevation of a balance-wheel of the watch and of the mechanism adjacent thereto and acting thereon, and Fig. 7 is a sectional view of a pendant having the mechanism therein forming a part of this device, as the same may well be mounted in a hunting-case watch. Fig. 8

is a back plan view of the back plate of a watch, on an enlarged scale, and of the several parts of the device embodying my invention attached thereto and exposed to view, also shown on an enlarged scale, with such parts in the position illustrated in Figs. 1 and 2; Fig. 9, a front plan view of a portion of the front plate of the watch and of the parts embodying my invention which are attached thereto or exposed to view, such plate and parts being shown on an enlarged scale and in the same position as in Figs. 1, 2, and 8; and Fig. 10, a cross-sectional view on line 10 10 of Fig. 9, viewed in the direction indicated by the arrows.

A reference-letter applied to a given part is used to designate such part wherever the same appears throughout the several figures of the drawings.

A is a stem mounted in pendant X, such stem being longitudinally movable in the pendant and rotatable therein.

B is a movable plate, having slot *b* therein, through which slot the screw C extends, securing the plate B to the back plate of the watch.

b' is a screw secured in plate B and extending into the slot *a'* in stem A. Longitudinal movement of the stem A thus produces movement of the plate B, and to obtain sliding movement in such plate B slot *b*² is placed therein, with screw C² extending therethrough into the back plate of the watch.

D is a spring rigidly secured, as by set-screw *d*, to the back plate of the watch, so that the free end *d'* thereof may press against one or the other of the notches *b*³ *b*⁴, according to the position of the stem A and the remaining parts of the mechanism, and maintain all the several parts in place while the watch is being wound or set.

E is a spring secured at one end thereof by the set-screw *e*, or by other suitable means, to the back plate of the watch, and so that the free end thereof may be forced against the balance-wheel Y of the watch with sufficient force to stop the same, and so stop the watch, when the longitudinally-movable pin or shaft F (see Figs. 6 and 10) is actuated by the placing of the stem A in the position thereof shown in Figs. 3 and 4.

G is a disk rotatably mounted on the back plate of the watch and having thereon pin *g*,

fitting or extending into the slot g' in plate B. Sliding movement of the plate B thus produces a partial rotation of the disk G.

G' is a projection on the periphery of disk G, forming a lip adapted to engage with the pin h of yoke H (see Figs. 2 and 4) and so produce turning of the yoke H to correspond with the turning of the disk G. Yoke H is mounted on the front plate of the watch and has rotatably secured thereon beveled gear-wheel I, intermeshing with the beveled gear-wheel I' on stem A and the additional gear-wheels ordinarily mounted on such yoke, such gear-wheels being arranged to alternately engage with the winding and the setting mechanism of the watch. The yoke H and the gear-wheels thereon form no particular part of my invention, not being claimed by me as new, and hence no detailed description thereof is deemed necessary.

J is a longitudinally-movable bar held in place to the front plate of the watch by the screw J' . Bar J is moved longitudinally in what I term a "forward" direction and against the spring K by the turning of the yoke H, one end of such longitudinally-movable bar being at all times held in contact with such yoke H by the spring K. Spring K is secured in place by the screw k , the free end thereof pressing against screw k' , secured in such bar J. (See Fig. 10.) The end of the longitudinally-movable pin F adjacent to the longitudinally-movable bar J is rounded, so that as the bar J moves from the position in which it is illustrated in Fig. 2 into the position thereof illustrated in Fig. 4 it extends over the pin F and forces such pin against the spring E, and the spring E is thereby forced against the balance-wheel Y. The watch-movement is thus stopped, and the hands being set by the turning of the crown Z of the pendant in the ordinary way, the hour and minute and seconds hands of the watch can be set.

In Fig. 7 is shown the manner in which I prefer to place the stem A in the pendant of a hunting-cased watch. A' is the stem, corresponding with stem A. L is a sleeve longitudinally movable on the stem A' . L' is a pin in the stem or shank of the crown, extending therefrom into the slot L^2 in stem A' , and M is a spring on stem A' , one end whereof abuts against the end of the stem or shank of the crown and the other end against the sleeve L. N is the spring holding the face of the watch closed. When the face of the watch is to be exposed to view, (that is, the dial and hands,) the crown is pressed down on the pendant in the ordinary way, the spring M is compressed, or there is a tendency to compress such spring, and the sleeve is pressed against the spring N with sufficient force to release the front case of the watch, and it is permitted to open in the ordinary way. It will of course be understood that the stem A (as well as the stem A') is squared at the end thereof, entering a like or corre-

sponding squared hole in the beveled gear I, so that rotation of the stem produces rotation of the beveled gear, but permitting longitudinal movement of such stem.

The operation of the device is as follows: When the several parts are in the position illustrated in Figs. 1 and 2, the turning of the crown of the pendant winds the watch. When the crown of the pendant is pulled out, thereby pulling out the stem A and putting the several parts in the position illustrated in Figs. 3 and 4, the turning of the crown of the pendant will set the watch. At such time the spring E is forced against the balance-wheel of the watch and the movement is stopped. The seconds-hand is thus held after the minute and hour hands have been set until the seconds-hand is right, and the stem A is then forced, together with the other parts of the mechanism, into the position shown in Figs. 1 and 2. The spring E being thus released from the balance-wheel, the watch will go, all the hands thereof being set.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a spring friction-plate arranged to be forced against the balance-wheel of a watch, a longitudinally-movable pin extending through the plate of the watch, one end of the pin abutting against spring friction-plate so that longitudinal movement thereof will force the spring friction-plate against the balance-wheel of the watch and the other end rounding and yieldingly projected by the spring friction-plate beyond the face of the plate, a longitudinally-movable bar abutting at one end thereof against the rounded end of the longitudinally-movable pin and at the other end against the edge of the setting and winding yoke, and yieldingly held against such yoke, whereby the movement of the yoke in changing from a winding to a setting position will project the longitudinally-movable bar against the rounded end of the longitudinally-movable pin and actuate the same and thereby the spring friction-plate will be forced against the balance-wheel and the watch thereby stopped; substantially as described.

2. The combination of a sliding plate, a connection between the plate and the longitudinally-movable stem of the pendant of a watch, such connection consisting of a groove around the stem and an adjustable abutment in the sliding plate extending into engagement with the groove, and permitting rotation of the stem without movement of the plate and permitting longitudinal movement of the plate, a spring yieldingly holding the plate in a given position, a yoke carrying the ordinary connecting gear-wheels of a pendant watch setting and winding mechanism, and a connection between such yoke and the sliding plate; such connection consisting of

a disk rotatably mounted in a plane between the sliding plate and the yoke, a pin on the disk engaging with the sliding plate and a peripheral notch engaging with a pin on the yoke; substantially as described.

3. The combination of a sliding plate, a connection between the plate and the longitudinally-movable stem of the pendant of a watch, such connection consisting of a groove around the stem and an adjustable abutment in the sliding plate extending into engagement with the groove and permitting rotation of the stem without movement of the plate and permitting longitudinal movement of the stem with corresponding sliding movement of the plate, a spring yieldingly holding the plate in a given position, a rotatable disk underneath the sliding frame, a connection between the sliding frame and the disk consisting of a pin in one end thereof loosely fitting into a hole in the other end thereof, a yoke carrying the ordinary connecting mechanism of a pendant watch setting and winding mechanism, and a connection between such yoke and the disk; consisting of a peripheral notch on the disk engaging with a pin on the yoke; substantially as described.

4. The combination of a sliding plate, a connection between the plate and the longitudinally-movable rotatable stem of the pendant of a watch, such connection permitting rotation of the stem without movement of the plate and permitting longitudinal movement of the stem with corresponding sliding movement of the plate, a spring yieldingly holding the plate in a given position, a yoke carrying the ordinary connecting mechanisms of a pendant watch winding and setting mechanism, a connection between such yoke and the sliding plate, a spring one end whereof is secured to the watch-plate and the other end is adjacent to the balance-wheel of the watch, and a connection between the yoke and the spring whereby the longitudinal movement of the stem will force the spring against the balance-wheel and so stop the movement of the watch while the minute and hour hands are being set by the rotation of such stem; substantially as described.

JOHN F. THIM.

In presence of—

CHARLES TURNER BROWN,
FLORENCE MCPHAIL.