(No Model.)

A. M. YEAKEL.

WATCH CASE PENDANT.

No. 467,390. Patented Jan. 19, 1892.

Fig. 1.

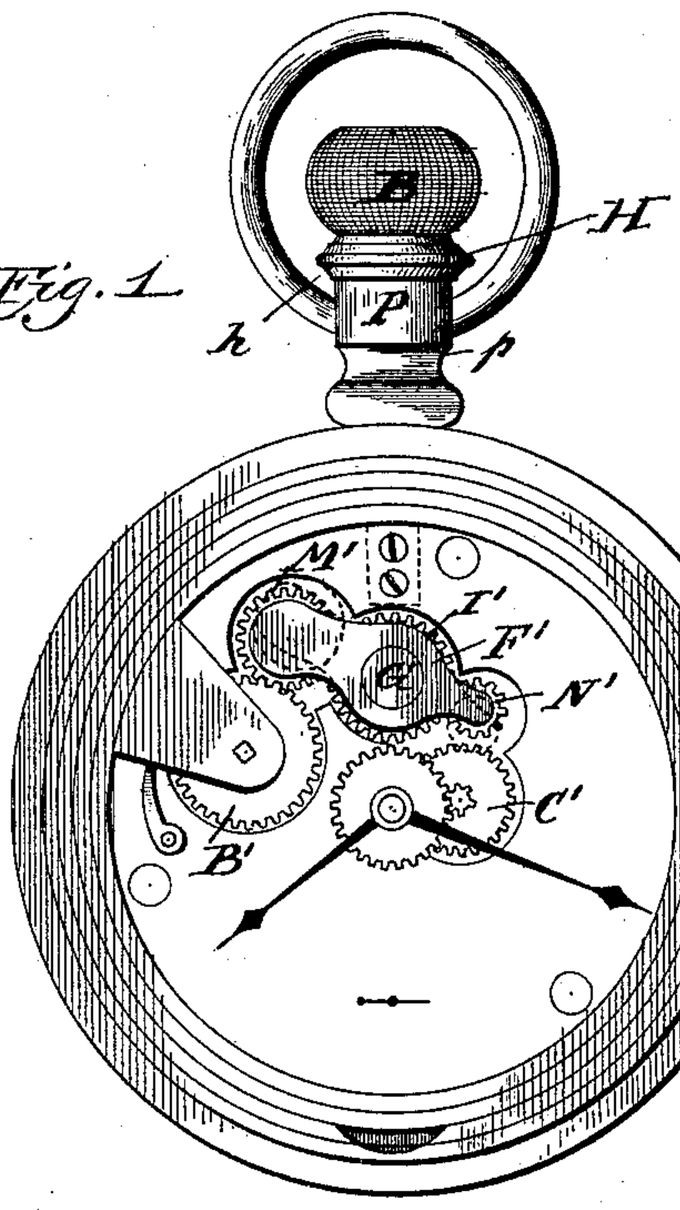


Fig. 2.

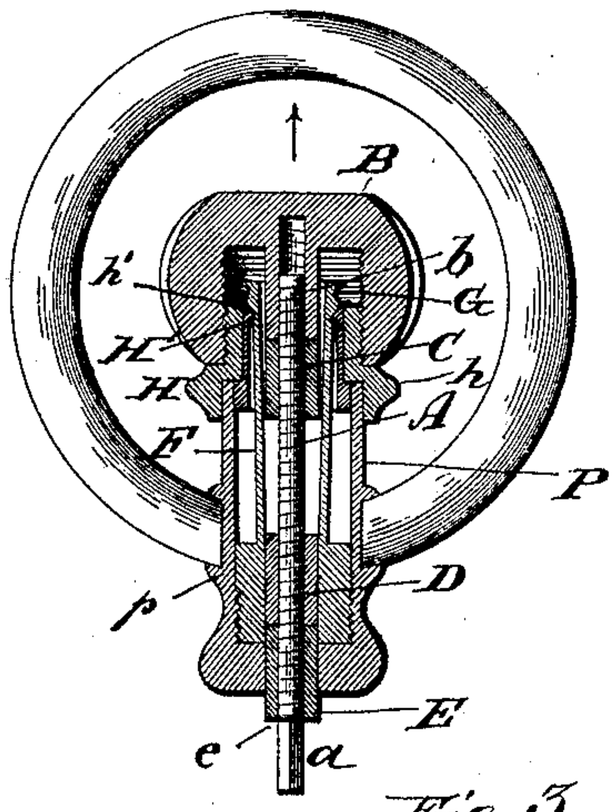


Fig. 3.

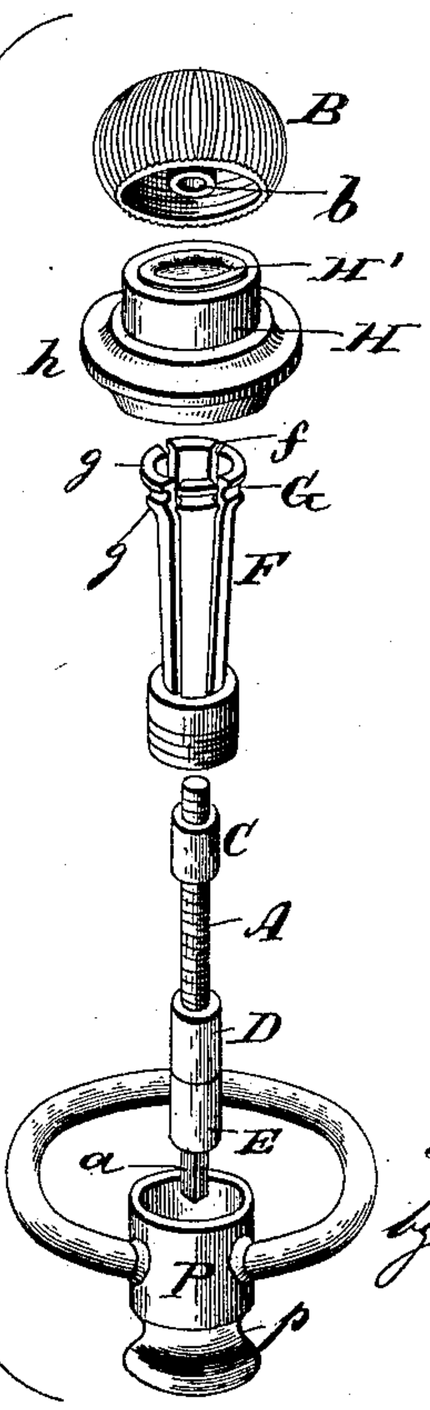
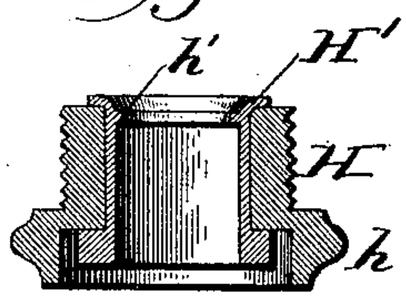


Fig. 4.



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UNITED STATES PATENT OFFICE.

ABRAHAM M. YEAKEL, OF ALLENTOWN, PENNSYLVANIA.

WATCH-CASE PENDANT.

SPECIFICATION forming part of Letters Patent No. 467,390, dated January 19, 1892.

Application filed August 7, 1891. Serial No. 401,980. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM M. YEAKEL, a citizen of the United States, and a resident of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Stem Winding and Setting Watches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front or face view of a watch with the dial-plate removed, so as to show the tilting or rocking yoke and its wheels for winding and setting the watch. Fig. 2 is a longitudinal sectional view of the pendant and attachments. Fig. 3 is a perspective view of the same, showing its several component parts separated from one another; and Fig. 4 is a sectional detail view of the threaded collar with its interior steel bushing.

Like letters of reference denote corresponding parts in all the figures.

My invention relates to that class of stem winding and setting watches in which, in the normal position of the winding and setting stem, the mainspring will be wound by revolving the crown or winding-knob in which the stem is fastened, while to set the hands it is necessary first to pull the crown (and with it the winding and setting stem) upward or outward from the case before revolving it. As types of this class of watch-movements may be mentioned the later models of the "Waltham," "Elgin," "Rockford," and many other watches in the market, both of domestic and foreign manufacture, in which the winding-stem answers a threefold purpose, viz: operates to wind the watch, to set the hands, and push down the case-spring to open the case in so-called "hunting-case" watches. In this type of watches it is of the utmost importance that the winding and setting stem should be of exactly the proper length and proportions in order to fit both the movement and the case; and the object of my present improvement is to so construct this stem that it may readily be adjusted without filing or cutting to fit not only the various styles and makes of stem winding and setting movements in the market, all of which differ more or less from one another in detail of construction and arrangement of parts, but also the various styles and makes of so-called "dust-proof," "hunting," and other cases in which the case-spring is operated by the winding and setting stem—*i. e.*, by pushing upon the knob or crown in which this is fastened. Hence my invention consists in the improved construction of the winding and setting stem and certain parts of the pendant with which it is combined and cooperates, as will be hereinafter more fully described, and particularly pointed out in the claims.

Referring to the drawings, I have shown in Fig. 1 the mechanism for winding and setting the watch, to which, however, I make no claim in my present application. This may be the same device described and claimed in my patent, No. 403,820, dated May 21, 1889, or some other similar device adapted to be operated in substantially the same manner—viz., by tilting or rocking the yoke F′ upon its circular bearing G′ so as to bring either the winding-wheel M′ into mesh with the mainspring-wheel B′ or the hand-setting wheel N′ into mesh with a wheel C′, which gears with the pinion upon the post of the minute-hand.

The yoke-wheels M′ and N′ are operated by the intermeshing middle wheel I′, which is in turn operated by a bevel-pinion at the lower end of a socketed winding-arbor, (not shown,) into which the lower squared end *a* of the winding and setting stem A fits in the usual way. This stem, with the exception of its lower squared end or tap, is screw-threaded its entire length, and is screwed with its upper end into a threaded socket *b*, projecting downwardly from the center of the hollow crown or winding-knob B. A cylindrical nut C is placed upon stem A and so adjusted as to regulate the length of that portion of the stem which is screwed into socket *b*, thereby regulating the length of the stem, or rather the distance which the same can project with its lower squared end into the socketed winding and setting arbor. After nut C has been properly adjusted the stem is then screwed home into socket *b* until stopped by the nut bringing up or taking against the lower end of the socket. In addition to this upper adjusting-nut C two other similar cylindrical nuts D and E are

placed upon the threaded stem A, the former of which operates as a lock-nut for the latter. The stem, with its nuts C, D, and E, is inserted centrally through the pendant P and also centrally through the concentric split locking-sleeve F, the enlarged lower end of which is threaded and screwed permanently into the neck *p* of the pendant P, while its upper flaring part is split into four or more sections by longitudinal slots *f*. The top of the split part has an annular groove G, formed by the parallel circular flanges *g g*, so as to engage and interlock with an annular shouldered steel bushing H′, which is inserted into and firmly secured to the flanged collar H, which slides upon the cylindrical part or body of the pendant P. The upper part of collar H above its exterior flange or shoulder *h* is screw-threaded on the outside and screwed into the interiorly-threaded rim of the crown or winding-knob B, into which the split and grooved top part of the locking-sleeve F projects, encircling the stem A and its upper nut C. Therefore when the crown is pulled outward, or in the direction indicated by the arrow in Fig. 2, collar H, with its interior shoulder *h′*, as well as stem A and nut C, will be pulled with it, thereby compressing the flaring and split ends of the locking-sleeve F, which, as we have seen, is fastened in the pendant until by the "spring" of the split sleeve the annular groove G will interlock with the inside shoulder *h′* of the bushing H′, thereby keeping the movable parts in their pulled-out position—*i. e.*, in the position of the stem for setting the hands of the watch without engaging the winding mechanism. On the other hand, to wind the watch the collar H, with its central shouldered bushing H′ *h′*, is disengaged from the split locking-sleeve and the stem replaced in its normal position simply by pushing down upon the crown, which compresses the split ends of the locking-sleeve and releases the collar and crown, at the same time placing the squared lower end of the stem in proper engagement with the winding mechanism.

As has already been stated, nut D is simply a locking device for the bottom nut E, which serves two purposes—viz., first, as a guide for the lower end of the stem through the neck *p* of the pendant and into the case, and, secondly, its lower part forms an offset or shoulder *e*, which overhangs and bears against the case-spring, (not shown,) so as to depress the spring and open the case when the crown B is depressed. The adjustment of the nuts D and E upon the threaded stem permits the position of nut E to be regulated so that the shoulder *e* will always be exactly in its proper position relative to the case-spring—that is, so as to cause said spring to be depressed by pressure upon the crown—thereby doing away entirely with filing, cutting, or fitting of the stem, as the nut E, whereby the spring-operating shoulder *e* is formed, may be adjusted to fit the spring in any style or make of case simply by first adjusting nut D, then moving nut E into its proper position with the fingers or a pair of pliers, and finally locking it in its adjusted position by screwing the lock-nut D up against it. Thus it will be seen that I am enabled to adjust the length of the winding and setting stem to fit any movement and case of this type of stem winding and setting watches, and this can be done in a moment of time and without the use of tools other than a pair of ordinary watch-makers' pinchers or pliers.

Another important advantage resulting from this construction is, that I provide a "free stem"—that is to say, the movement can be properly placed and adjusted in a hunting-case and the stem afterward put in and adjusted without removing the movement.

Having now fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a stem winding and setting watch of the described type, the combination of the crown, the pendant, the screw-threaded winding and setting stem, the adjustable regulating-nuts C and E, and the locking-nut D, substantially as and for the purpose set forth.

2. In a stem winding and setting watch, the combination of the crown, the screw-threaded winding and setting stem, the tubular pendant, the split locking-sleeve fastened in the pendant, and the sliding collar adapted to interlock with the split sleeve, substantially as and for the purpose set forth.

3. In a stem winding and setting watch of the described type, the combination of the crown, the screw-threaded winding and setting stem, the regulating-nuts placed adjustably upon the same, the tubular pendant, the split locking-sleeve fastened in the pendant, and the sliding collar adapted to interlock with the split sleeve, substantially as and for the purpose set forth.

4. The combination, with the winding and hand-setting mechanism of a watch of the described type, of the crown having a central depending and interiorly-threaded socket, the longitudinally adjustable screw-threaded winding and setting stem, the regulating-nuts, the tubular pendant, the split locking-sleeve, and the sliding collar, substantially as and for the purpose set forth.

5. The combination of the longitudinally-adjustable winding and setting stem constructed as described, the tubular pendant, the split locking-sleeve, and the sliding collar having an interior shouldered bushing adapted to engage a groove in the upper split end of the locking-sleeve, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ABRAHAM M. YEAKEL.

Witnesses:

BENNETT S. JONES,

AUGUST PETERSON.