(No Model.)

O. W. BUERGER.

WATCHCASE PENDANT.

No. 503,714. Patented Aug. 22, 1893.

Fig. 1.

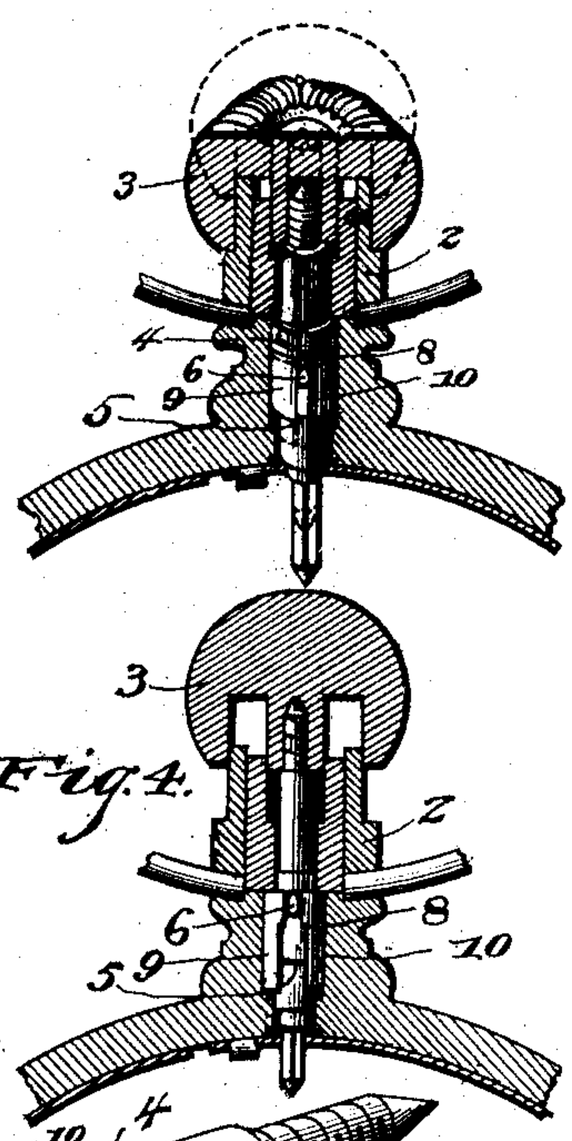


Fig. 4.

Fig. 2.

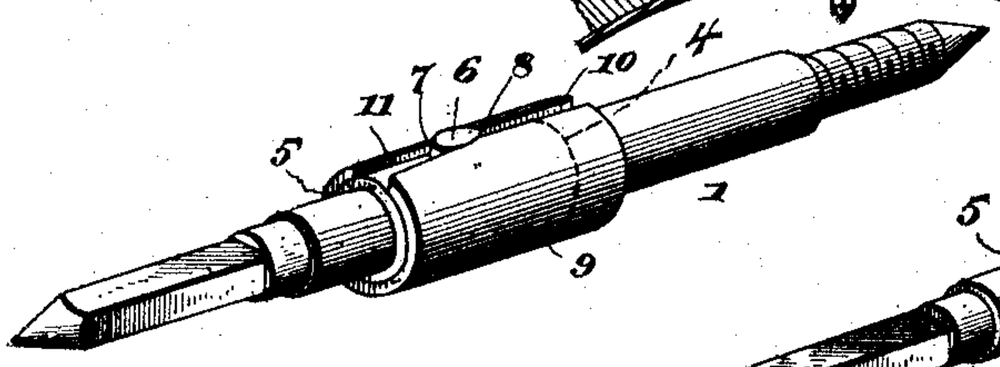
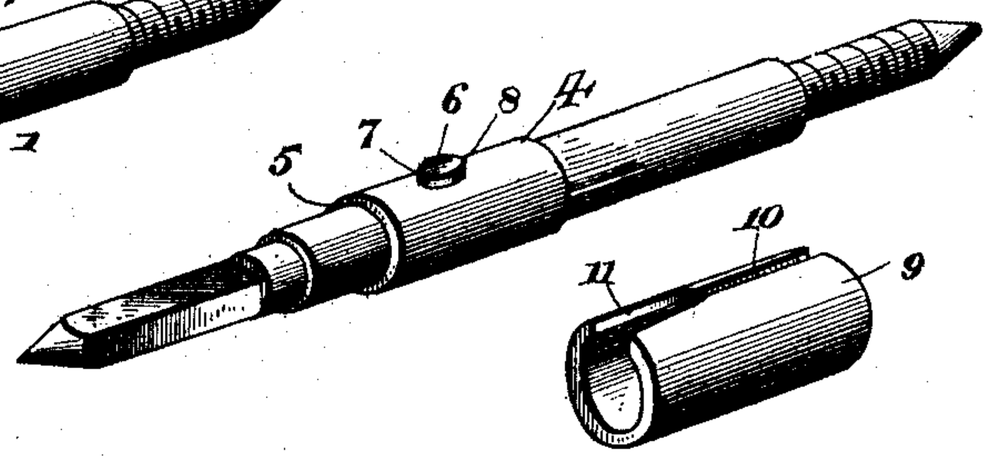


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

OTTO W. BUERGER, OF QUINCY, ILLINOIS.

WATCHCASE-PENDANT.

SPECIFICATION forming part of Letters Patent No. 503,714, dated August 22, 1893.

Application filed January 31, 1893. Serial No. 460,322. (No model.)

To all whom it may concern:

Be it known that I, OTTO W. BUERGER, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented a new and useful Pendant-Set for Watchcases, of which the following is a specification.

This invention relates to pendant sets for watch-cases, and has for its object to provide a novel, simple, and perfectly safe device of the character set forth, that needs no adjustment after being put in operative position, is easily pulled out and pushed back, indestructible and convenient, and is adapted to be applied to any stem-wind case; it also has the additional advantage of being capable of use with either an open face or hunting-case watch in large or small sizes, and allows all the present pendant-set watch movements to be operated by it, except those where movement and case are fitted up as one part and sold as such.

With the said objects and advantages in view, the invention consists of the construction and arrangement of the parts as will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a sectional perspective of the stem-wind of a watch pendant embodying the invention and showing the same employed in connection with a rim adapted to be used with a hunting-case watch, the mechanism being shown depressed in full lines. Fig. 2 is an enlarged perspective view of the arbor of the stem-wind, showing the improved invention in connection therewith. Fig. 3 is a similar view of the arbor of the stem-wind and the improved device, showing the two parts detached. Fig. 4 is a vertical central sectional view of the pendant with the mechanism elevated.

Similar numerals of reference indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 designates the winding arbor of a stem-wind or pendant-set device, which is mounted in a watch pendant 2, and supplied at its outer end with a crown 3, and has its inner end suitably formed to be thrown into connection with or withdrawn from the winding train, and to be properly thrown into engagement with the hand-operating train. Within the pendant 2, at the upper and lower portions thereof, are located stops or shoulders that are adapted to be engaged by parts of the pendant set device, formed on the arbor 1, by a cylindrical enlargement on said arbor, it being understood that other shoulders or circumferential grooves will be formed in the said arbor to adapt the same to be properly fitted within the pendant 2, and to position the same relatively to the trains of gearing. On the said cylindrical enlargement of the arbor, and between shoulders 4 and 5, is formed a steel tooth 6, that is oval in plan with a broad base or lower end 7, and a tapered point or apex 8, at the upper portion thereof that stands in or about in the central longitudinal vertical line of the arbor, and over the said cylindrical enlargement and a portion of the arbor is movably mounted a steel tube 9, that is cut open lengthwise, as at 10, a part of the said opening 10 being as wide as the greatest width of the said steel tooth, as at 11, and in which the said tooth is normally positioned when the arbor is in engagement with the winding train or mechanism. The said tooth 6, as stated, may be formed directly upon the arbor or be secured thereto in any suitable manner, and the opening 11 in the tube 9 is in the form of a recess that permits the said tube to have loose engagement with the arbor and the tooth, but the opening 10 of the tube 9 is always held in alignment with the apex of the said tooth 6.

In operating the arbor by means of the crown to disconnect the said arbor from the winding gears, the crown with the arbor is drawn outward or upward through the pendant casing and the tube being held against longitudinal movement by proper shoulders or projections at the upper and lower portions of the pendant casing, the tooth 6 is forced upward into the opening 10 of the tube 9, and spreads the latter, thereby forming a positive means of holding the arbor withdrawn from engagement with the winding-train and in operative connection with the train controlling the movement of the hands. In this adjustment of the arbor the tube is of such length, and the movement of the arbor is limited in such manner, that an entire disconnection from the winding train of gearing is obtained, and the rotation of the arbor to move the hands will in no wise conflict with

the winding mechanism and avoid injury to the latter while the hands are being set. By simply pressing downward on the crown the arbor is forced backward into its engaging position with the train of winding gears, and where the device is employed in connection with a hunting-case watch is also in position to operate the catch-spring of the case to release the same from engagement with the lid, as will be readily understood. It will be observed in this connection that the tooth 6 acts as a wedge to separate or spread the spring-steel tube 9 in the operation of holding the arbor withdrawn, and it will also be seen that the binding action between the opposite sides of the tooth and the adjacent engaging walls of the opening 11 causes a firm temporary fastening by reason of the fact that the tension of the said tube exerted in its effort to return to its normal position produces a firm binding upon the said tube. It will also be seen that the opening 10, of the tube 9, has normally parallel walls, but that when the tooth engages the same the said walls are spread apart outwardly from a true parallel line on each side. A further important feature of the preceding construction and arrangement, as fully set forth, is the fact that the tube 9 embraces or surrounds the arbor continuously, and that it is of equal diameter throughout its length to accommodate this arrangement, and thereby form a compact structure.

The annoying end-shake and grinding action prevalent in many devices of this character are entirely avoided and done away with by the present construction, as the winding arbor rests in open-face cases with the shoulder firm at the bottom of the pendant, while in hunting-cases the shoulder of the winding arbor rests against the case-spring, as fully shown in the accompanying drawings. The steel tube rests at the bottom of the pendant, as one limitation, and on top it is held by a screw-sleeve or analogous device that is fitted in the opening of the case of the pendant, the said sleeve being screw-threaded, preferably, and regulates the end-shake of the tube, a small screw, for safety, being put in through the pendant and the said sleeve. For hunting-case watches, in order to allow the lock-spring to be pushed back by the winding arbor, it is only necessary to allow as much end-shake or movement to the winding arbor as is required to force the lid from the lock-spring. These incidental features enhance the value of the attachment by causing it to have a positive action, as well as to avoid too free play of the arbor, which is unnecessary and often proves a matter of considerable inconvenience and possible injury to the mechanism of the watch.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having described the invention, what is claimed as new is—

1. In a device of the character set forth, the combination of the arbor having a tooth thereon, and a sleeve loosely fitted over said arbor and having an opening extending lengthwise thereof with a larger opening at one end of the same, said openings being engaged by the said tooth on the arbor, substantially as described.

2. In a device of the character set forth, the combination of a winding arbor having a tooth thereon with an upper pointed termination or apex and a lower widened portion, and a spring-tube fitted over said arbor and having an opening extending lengthwise thereof with a larger opening at one end of the same in which the said tooth is normally seated, the smaller of the two openings in the said tube being adapted to have the tooth forced upward thereinto to hold the arbor withdrawn from engagement with the winding mechanism of the watch, substantially as described.

3. In a device of the character set forth, the combination of an axially-slidable winding and setting arbor, a rotatable sleeve surrounding said arbor and held against longitudinal movement therewith, said sleeve being provided with a longitudinal slot or opening, and a wedge-shaped tooth carried by the arbor to engage said slot or opening to expand the sleeve, substantially as specified.

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

OTTO W. BUERGER.

Witnesses:
J. M. RIFENBERICK,
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