(Model.)

W. E. DENNISON.

WINDING STEM FOR WATCHES.

No. 304,623. Patented Sept. 2, 1884.

Fig. 1.

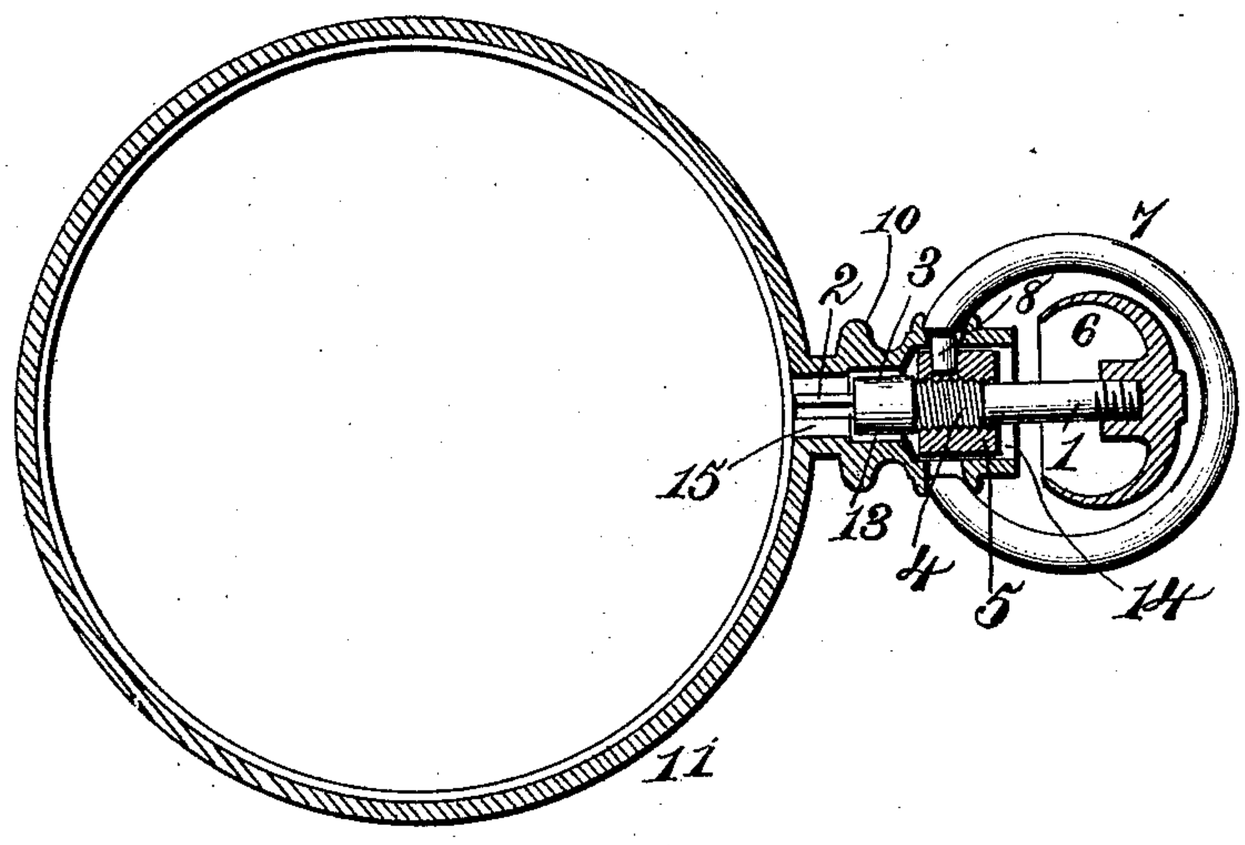


Fig. 2.

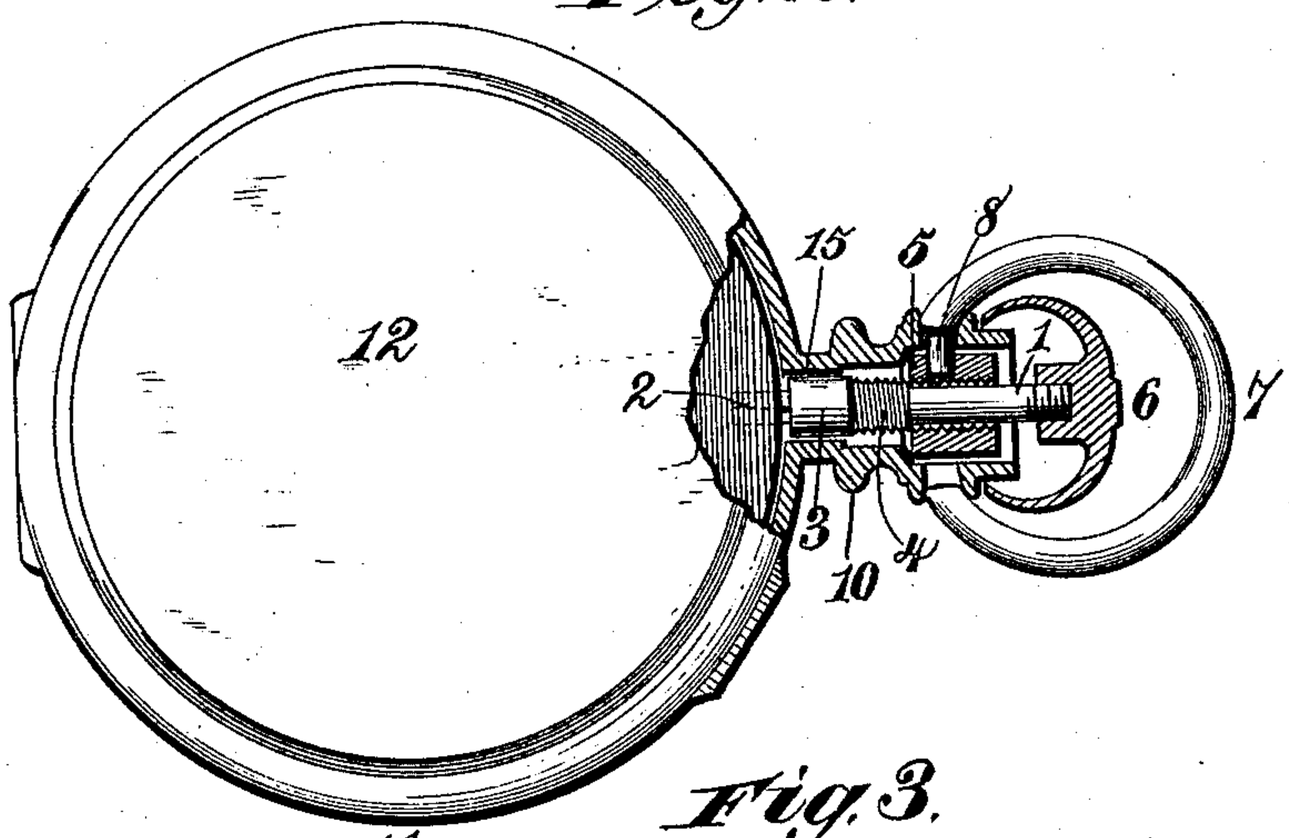
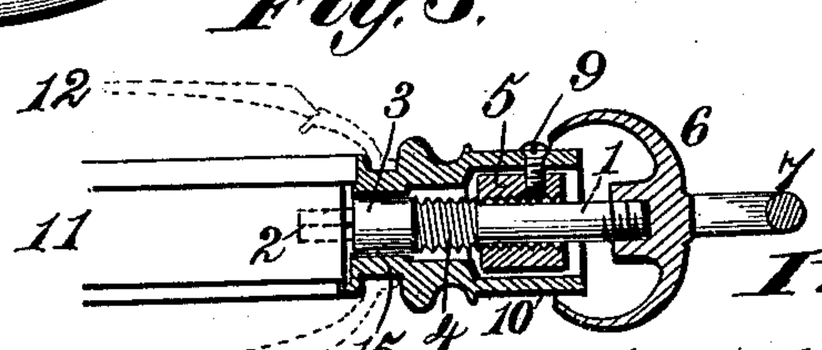


Fig. 3.



Witnesses.
Robert Everett.
J. A. Rutherford

Inventor.
William E. Dennison,
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM EDMUND DENNISON, OF SAG HARBOR, NEW YORK, ASSIGNOR TO THE FAHYS WATCH CASE COMPANY, OF SAME PLACE.

WINDING-STEM FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 304,623, dated September 2, 1884.

Application filed April 16, 1884. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM EDMUND DENNISON, a citizen of the United States, residing at Sag Harbor, in the county of Suffolk and State of New York, have invented new and useful Improvements in Watches, of which the following is a specification.

In stem winding and setting watches as ordinarily constructed the removal of the works or movement from the containing-case for cleaning, repairs, or inspection is attended with difficulties and objectionable features. For instance, the crown-piece and its attached stem engaging with the winding-gear of the movement must be removed entirely from the pendant, inasmuch as it passes therethrough and projects into the movement. The screw by which this stem is retained normally in the pendant is exceedingly small and difficult of manipulation, and its removal to permit the withdrawal of the stem, or its replacement to retain the stem in the pendant is a tedious and delicate operation. This screw, removed, is liable to loss, while if not lost from the delicacy of its threads a few usings ordinarily destroy its practical efficiency.

The object of my invention, therefore, is to provide a crown and winding-stem attached thereto, and means of attachment therefor to the winding-gear of a movement and to the pendant of such construction that the stem at will may be instantaneously withdrawn from engagement with the winding-gear of the movement, but without removal from the pendant, in which it will still remain seated, ready for instantaneous re-engagement with the winding-gear, thus permitting the removal of a movement from its inclosing-case without regard to the removal of the winding-stem and crown. In accomplishing these objects a perforated or hollow pendant is attached in the usual manner to the case-center, or it may be attached to a ring or band adapted to receive the movement and be held within the case-center. Through this hollow pendant passes the winding-stem connected at its outer end to the usual crown, while its inner end is formed into a male or female coupling to engage with the winding-gear attached to the movement. Immediately above this coupling a shoulder, pin, or feather is formed upon the stem, succeeded by a screw-thread cut in a portion of smaller diameter than that of the shoulder, pin, or feather. From the screw-thread to the outer end of the point of union with the crown this stem is made plain and of smaller size than either the shouldered or screw-threaded portions. Within the outer portion of the hollowed pendant is secured a female nut threaded to correspond with the screw-threaded portion, the screw-threaded portion and the nut being so arranged relatively to each other that when the stem is brought into the nut the coupling upon the end of the stem shall be withdrawn into the pendant and disengaged from the winding-gear of the movement; but if the stem is so turned as to disengage the screw-threaded portion thereof from the nut, leaving it in a plain chamber of larger diameter in the pendant, the coupling of the stem will be forced into engagement with the winding-gear of the movement. The securing of the nut referred to within the pendant may be accomplished in several ways. For instance, a pin may pass through the pendant into an aperture in the nut, the point of passage through the pendant being one of the points in which one of the ends of the ordinary ring attached to the pendant has its bearing, the ring then holding such pin in place and preventing its displacement or loss, or a screw seated in the pendant may pass therethrough and have its inner end take in an aperture in the nut. In either case the nut will be held rigid and without capacity of rotation within the pendant. This construction for embodying my invention and accomplishing the results noted may be better understood by reference to the drawings, in which—

Figures 1 and 2 are sections showing embodiments of the invention in different positions, while Fig. 3 is a modification thereof.

11 represents a ring or band, to which the hollow pendant 10 is attached. This ring or band may be the ordinary case-center, or it may be a ring or band intended to receive and contain the movement and then be placed within the case-center. The hollow pendant 10 is chambered or bored out so that chambers 13 14 15 are formed therein of varying sizes. Through this hollow pendant passes

the winding-stem 1, attached at its outer end to the crown 6, its other end being formed into a male or female coupling, 2, adapted to engage with the winding-gear attached to a watch-movement. Immediately above this coupling a shoulder, 3, is formed upon the stem of a size about to fill the chamber 15 in the hollow pendant. Beyond this shoulder, and of somewhat smaller diameter, a screw-thread, 4, is formed upon the stem, while from the outer end of such thread to the point of junction of the stem 1 and crown 6 the stem is made plain and of less diameter or size than the screw-threaded portion 4. In the larger chamber 14 of the hollow pendant 10 is secured a female nut, 5, having a screw-thread corresponding to and adapted to engage with the thread 4. This nut is secured in such chamber by a pin, 8, passing through one of the seats of the ring 7 in the pendant, as shown in Figs. 1 and 2, the pin 8 being then securely retained in position by the ring 7, and retaining in turn the nut 4. This forms a simple and reliable hidden means of securing the nut; or, if desired, it may be secured within the chamber 15, as in the modification shown in Fig. 3, where a screw, 9, passes through and is seated in the side of the pendant, its inner end taking in an aperture in the nut 5. The hollow pendant being thus arranged and the stem attached to the crown and constructed as described being placed therein, and the nut being secured as set forth, the operation of the device is as follows: If it be desired to place a movement within the case-center 11, or to remove one therefrom, the crown 6 is turned with a slight outward pull in the proper direction, causing thread 4 to engage in the nut 5. Continued turning then causes the stem to be forced outwardly to the limit of its movement, which is determined by the shoulder 3 on the stem, when the stem is entirely withdrawn within the pendant, as shown in Fig. 1, permitting the placing of a movement within 11 or its removal therefrom. The movement being placed within the case-center, the parts, as before stated, being in the position shown in Fig. 1, the crown and attached stem are turned in the reverse direction to the limit of their movement, disengaging thread 4 and nut 5 and causing the coupling 2 of the stem to project into the case and engage with the winding-gear. In this position, as shown in Fig. 2, the shoulder 3 is in chamber 15, where it is free to turn, the thread 4 is in the plain chamber 13 of larger diameter, while within the nut 5 is the plain portion of the stem of considerably less diameter.

By this construction a stem-winding attachment is furnished, which becomes an integral part of the case-center, adapted to contain the movement, and which permits the removal of the movement therefrom without the removal or disarrangement of the exterior winding mechanism. It is easy of operation, requires no skilled labor, no delicate manipulation therefor, and there are no parts disassociated therefrom to be lost or broken.

Having thus described my invention, what I claim is—

1. In a stem-winding attachment for watches, the combination of a hollow pendant having chambers of various sizes, a nut secured within one of the chambers, a pin passing through the wall of the pendant for retaining the nut in position, and retained in turn by the ring attached to the pendant, and a winding-stem having portions of various sizes, substantially as described.

2. In a stem-winding attachment for watches, the combination of a hollow pendant, a winding-stem having a coupling for engagement with the winding-gear of the movement, a plain shoulder adjacent thereto, a threaded portion and a plain portion, and a nut secured within the pendant and adapted to receive and engage the threaded portion of the stem, substantially as described.

3. In a stem-winding attachment for watches, the combination of a hollow pendant, a threaded nut seated therein, a pin passing through the wall of the pendant and securing the nut in position, and a winding-stem having a threaded portion for engagement with the nut, substantially as described.

4. In a stem-winding attachment for watches, the combination of a hollow pendant, a nut for controlling the position of the winding-stem, and a pin for securing the nut in place, retained in position by the ring attached to the pendant, substantially as described.

5. In a stem-winding attachment for watches, the combination of the hollow pendant 10, having chambers 13 14 15, the winding-stem 1, having a plain portion, a screw-thread, 4, shoulders 3, and coupling 2, substantially as described.

6. In a stem-winding attachment for watches, the combination of a hollow pendant, a threaded nut seated and secured therein, and a winding-stem having a portion screw-threaded and adapted to engage with the nut for disengagement from a movement, and having, also, a shoulder limiting the amount of engagement of the stem and nut, and preventing the total withdrawal of the winding-stem from the pendant, substantially as described.

7. In a stem-winding attachment for watches, the combination of the stem 1, the nut 5, hollow pendant 10, pin 8, and ring 7, substantially as described.

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

WILLIAM EDMUND DENNISON.

Witnesses:
PETER DIPPEL, Jr.,
THOS. F. BISGOOD.