(No Model.)

C. F. MORRILL.

WATCH CASE PENDANT.

No. 441,436. Patented Nov. 25, 1890.

Fig. 1.

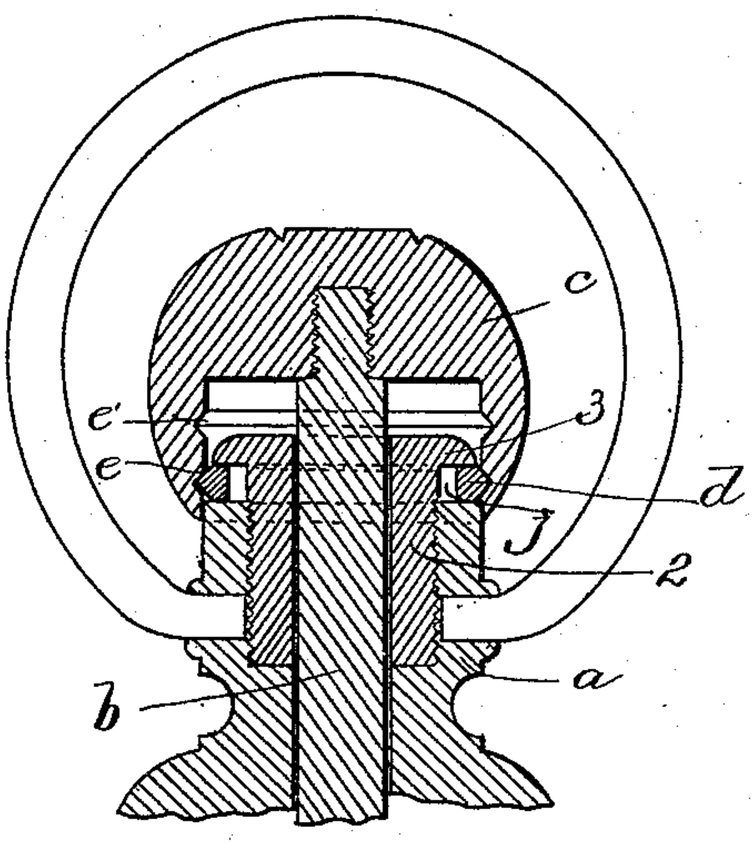


Fig. 2.

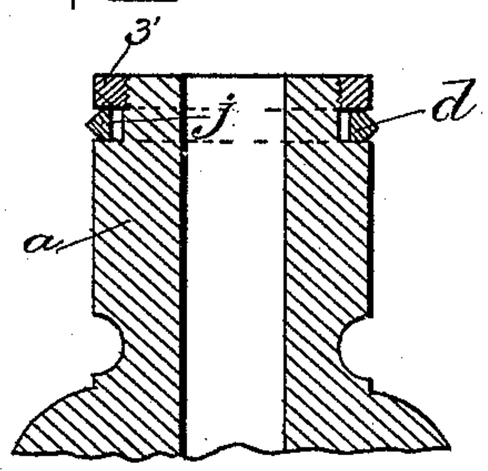


Fig. 1a.

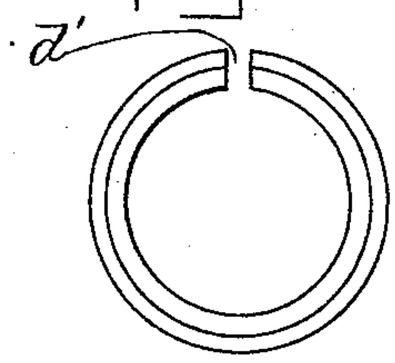


Fig. 3.

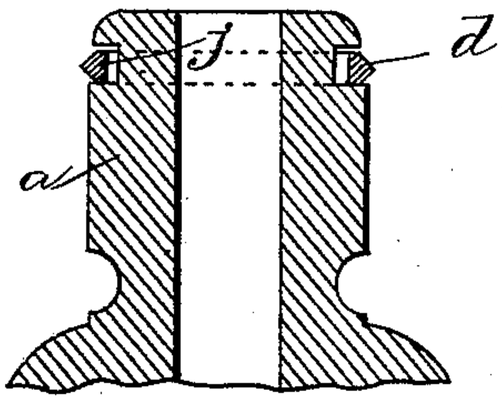
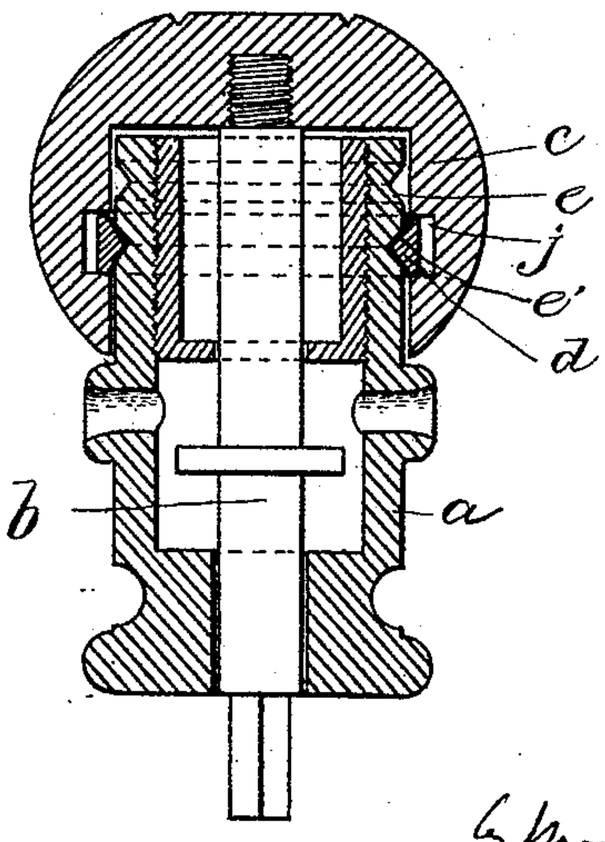


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES F. MORRILL, OF BOSTON, MASSACHUSETTS.

WATCH-CASE PENDANT.

SPECIFICATION forming part of Letters Patent No. 441,436, dated November 25, 1890.

Application filed June 16, 1890. Serial No. 355,565. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. MORRILL, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Watch-Case Pendants, of which the following is a specification.

This invention relates to the cases of stem-winding and stem-setting watches, in which the winding bar or key in the pendant or stem of the watch-case is moved in one direction to adapt it for winding and in the opposite direction to adapt it for setting the hands.

The object of the invention is to provide improved means for holding said winding bar or key in either of its positions; and to this end the invention consists, first, in the combination of a watch-case pendant and a winding-bar provided with a knob or crown covering the outer end of the pendant, as usual, one of said parts being provided with a ring which is adapted to be compressed by pressure exerted upon its periphery and to expand to its normal diameter after the removal of said pressure, while the other part is provided with two beveled or inclined shoulders arranged to engage the ring and by such engagement hold the winding bar or key and the crown with sufficient force to prevent accidental or loose endwise movement thereof, one of said shoulders being arranged to hold the winding-bar in its winding position and the other in its hands-setting position.

The invention also consists in the combination of a watch-case pendant having a peripheral groove in the portion covered by the crown, an elastic ring inserted in said groove, the periphery of the ring being normally larger than that of the pendant, and a crown having internal shoulders formed to co-operate with said ring in holding the winding-bar attached to said crown in different positions, said ring being compressible to allow said shoulders to pass across it and adapted to expand and engage one of said shoulders after each change of position of the winding-bar and crown.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a longitudinal section of a watch-case pendant, the winding-bar therein, and the crown on said bar embodying my invention, the ring being shown as applied to the pendant and the shoulders co-operating therewith formed on the interior of the crown. Fig. 1ª represents the ring. Figs. 2 and 3 represent sectional views of the pendant, showing modifications hereinafter referred to. Fig. 4 represents a longitudinal section of the pendant, winding-bar, and crown, showing the ring inserted in a groove formed in the inner surface of the crown and the co-operating shoulders formed upon the periphery of the pendant.

The same letters and figures of reference indicate the same parts in all the figures.

In the drawings, *a* represents the pendant, *c* the crown, and *b* the winding-bar, which extends through the pendant, and to which the crown is secured in the usual or any suitable manner, the crown being formed to cover the outer portion of the pendant, as usual.

Referring first to Figs. 1, 2, and 3, *d* represents a ring, which is inserted in a groove *j* in the periphery of the pendant, said groove being located close to the outer end of the pendant. Said ring is cut at *d'*, so that it is adapted to be contracted and to expand to its normal diameter after the compressing pressure is removed. The ring is preferably of finely-tempered steel, and its periphery may be V-shaped in cross-section, as shown in Figs. 1, 2, and 3, or of any other suitable shape. The diameter of the ring when in its normal condition is somewhat greater than the diameter of the pendant, so that the periphery of the ring projects outside of the periphery of the pendant. The depth of the groove *j* is such as to permit the compression of the ring until its external diameter is not greater than that of the pendant.

e and *e'* represent beveled shoulders formed on the inner surface of the crown, said shoulders being preferably the sides of V-shaped grooves formed in the crown, as shown in Fig. 1. The shoulder *e* is arranged so that when the winding-bar is pulled outwardly to its outer or hands-setting position it will engage the ring *d*, as shown in Fig. 1, and prevent the crown and the winding-bar from being pushed inwardly unless sufficient force is applied to the crown to cause the beveled shoulder *e* to compress the ring. When the crown is pushed inwardly to move the winding-bar to its inner or winding position, the

ring is compressed by the surface of the crown between the shoulders *e e'* until the shoulder *e'* comes into position to engage the ring *d*, whereupon said ring springs outwardly to its normal position and engages the shoulder *e'*, thus yieldingly retaining the crown and winding-bar in the position last described.

I prefer to make the pendant in two parts, one of which—viz., the main portion or body of the pendant—forms one side of the groove *j*, the other, which is an externally-screw-threaded sleeve 2, provided with an outwardly-projecting flange 3 at its outer end, forming the opposite side and the bottom of said groove. The body of the pendant is internally screw-threaded to engage the externally-screw-threaded periphery of the sleeve 2. This construction enables the ring to be secured in place without straining and injuring it by snapping it into the groove *j*, as would be necessary if the pendant were made in one piece, including both sides of the groove.

In Fig. 2 I show the pendant provided with an internally-screw-threaded ring 3', taking the place of the flange 3, (shown in Fig. 1,) the sleeve being omitted and the pendant made in one piece, excepting the ring 3'.

In Fig. 3 I show the pendant made in one piece, which includes both sides of the groove, so that the ring *d* has to be sprung or snapped into the groove. This construction is not so desirable, however, as those previously described, because there is liability of straining and breaking the ring in expanding it to the extent required to spring it into the groove.

In Fig. 4 I have shown the reverse of the arrangement above described—that is to say, the ring *d* is inserted in a groove *j* in the inner surface of the crown. The ring *d*, when in its normal condition, is formed to bear on shoulders *e e'* on the outer surface of the pendant, and thereby engage the crown with the pendant. Sufficient space is left around the ring in the groove *j* that engages it with the crown to permit the ring to expand or spring outwardly when the crown is being moved from one position to the other. The shoulders *e e'* on the pendant are in such position that when one of them is engaged with the ring *d* in the groove *j* on the crown the winding-bar will be in its hands-setting position, and when the other is engaged with the said ring the winding-bar will be in its winding position.

It will be seen that in both forms here shown the winding-bar is held in either of its two positions by the engagement of the crown with the pendant, and that in each case said engagement is effected by means of an elastic ring loosely sprung into a groove in one part, and in its normal condition projecting therefrom and engaging one shoulder on the other part. The elasticity of the ring allows it to yield and disengage itself from the groove in the pendant in which it may be when sufficient pressure is applied to the crown.

In another application for Letters Patent filed by me May 19, 1890, Serial No. 352,339, I have shown and specifically claimed the arrangement shown in Fig. 4 and sundry modifications thereof; but it is my intention in this application to cover, broadly, the combination of a pendant and crown, one of said parts having a plurality of shoulders, and an elastic ring loosely inserted in a groove in the other part and adapted to engage said shoulders in the manner above described.

I claim—

1. The combination of a watch-case pendant, a crown attached to the winding-bar which passes through said pendant, one of said parts having a plurality of shoulders, as *e e'*, and an elastic ring inserted loosely in a groove in the other part and adapted to co-operate alternately with said shoulders in holding the crown and winding-bar in their winding and hands-setting positions, as set forth.

2. The combination of a watch-case pendant having a peripheral groove in the portion covered by the crown, an elastic ring inserted in said groove, the periphery of the ring being normally larger than that of the pendant, and a crown having internal shoulders formed to co-operate with said ring in holding the winding-bar attached to said crown in different positions, said ring being compressible to allow said shoulders to pass across it and adapted to expand and engage one of said shoulders after each change of position of the winding-bar and crown, as set forth.

3. The combination of a watch-case pendant comprising the body *a*, a portion of which constitutes one side of a groove *j* near the outer end of the pendant, and a flange removably attached to the pendant and constituting the opposite side of said groove, and an elastic ring loosely inserted in said groove and adapted to automatically engage shoulders formed on the inner surface of the crown, as set forth.

4. The combination of an internally-screw-threaded pendant *a*, the outer end of which constitutes one side of a groove *j*, the externally-threaded sleeve 2, inserted in said pendant and provided at its outer end with a flange 3, one side of which constitutes the opposite side of said groove, and an elastic ring *d*, loosely inserted in said groove, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 12th day of June, A. D. 1890.

CHARLES F. MORRILL.

Witnesses:

C. F. BROWN,

A. D. HARRISON.