(No Model.)

E. C. FITCH.

WATCH BOW FASTENER.

No. 417,999. Patented Dec. 24, 1889.

Fig. 1.

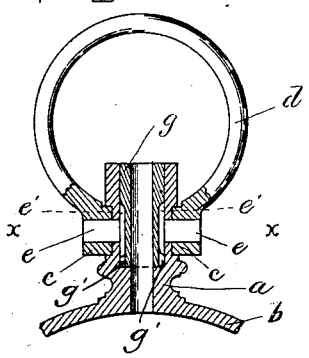


Fig. 2.

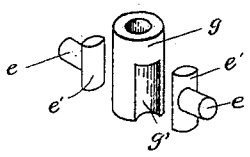


Fig. 3.

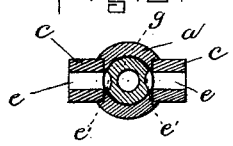


Fig. 4.

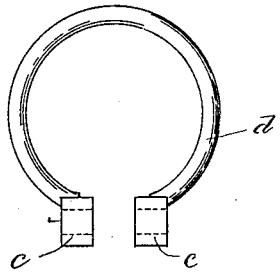
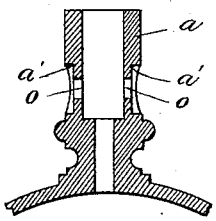


Fig. 5.



WITNESSES:
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UNITED STATES PATENT OFFICE.

EZRA C. FITCH, OF NEWTON, MASSACHUSETTS.

WATCH-BOW FASTENER.

SPECIFICATION forming part of Letters Patent No. 417,999, dated December 24, 1889.

Application filed February 18, 1889. Serial No. 300,226. (No model.)

To all whom it may concern:

Be it known that I, EZRA C. FITCH, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Watch-Case Pendants, of which the following is a specification.

The ordinary method of constructing watch-case pendants and bows may be briefly described as follows: The pendant is formed (from a piece of heavy wire of proper size and of any desired material) into the desired form, and after being suitably attached to the body or center of the case is held in position by suitable fixtures, and two holes are drilled in to a slight depth on opposite sides of the pendant and in position desired. If the case is of the better grade, these two holes are made suitable to receive sockets, which are made to project slightly from the body of the pendant and are firmly attached to it by solder, so as to be practically integral with it. In cheaper forms of cases, however, the sockets do not project, but are made in the body of the pendant. The bow or ring is made from wire or any desired metal, and is formed by being wound upon a suitable-sized arbor in the form of a cylindrical spiral, and is then sawed into pieces, so that each encircling-coil will form an independent ring, or, rather, a portion of a ring, enough metal being removed from the coil to allow the ends to be sprung into the sockets of the pendants above described. As the rings or bows are held in place in the sockets by their resilience only, it sometimes happens that a sudden strain on the bow—such as might be caused by a watch slipping from one's pocket and being caught by the vest-chain or the snatching of a watch by a pick-pocket—will serve to detach the ring from the pendant, with the result of the loss of or injury to the watch. Moreover, as both the bow and pendant are ordinarily of soft metal—as gold or silver—there will inevitably be a wear of the two surfaces, resulting in time in dangerous looseness.

To overcome this danger and liability, and also to provide a pendant-bow of tasteful design, and which will permit the use of the winding-bar of stem-winding watches, is the object of my invention, which consists in the improvements hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a sectional view of the watch-case pendant and bow provided with my improvements. Fig. 2 represents a perspective view of the bow-securing pins and the collar which secures the same to the pendant. Fig. 3 represents a section on line $x\,x$ of Fig. 1. Fig. 4 represents a side elevation of the bow and its pin-receiving bosses. Fig. 5 represents a sectional view of the pendant.

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

In the drawings, a represents a watch-case pendant secured to the case-center b, in the usual or any suitable manner. In the exterior of the pendant and at opposite sides of the same are formed suitable seats, sockets, or depressions $a'\,a'$, to receive the inwardly-projecting bosses $c\,c$ formed on the bow d. Said bosses are provided with sockets to receive the pins $e\,e$, which secure the bow to the pendant. Said pins are detachably secured to the pendant and project outwardly therefrom through orifices $o\,o$, extending from the seats a' to the interior of the pendant. I have shown the pins provided at their ends with elongated heads e', which are longer than the diameter of the orifices o, and being placed within the pendant prevent the pins from being withdrawn. Said pins are held in place and prevented from moving inwardly by the sleeve g, which is detachably secured in the pendant and is provided with longitudinal sockets or cavities g', formed to receive the heads e' of the pins e. The sleeve g may be secured to the pendant by any suitable means, such as a small screw inserted in the pendant and bearing against or pointed into the sleeve. The ends $c\,c$ of the bow d are sprung into the seats a', which are formed for them in the pendant, and after said ends are in place in said seats the pins $e\,e$ are inserted from within the pendant, the heads e' of said pins bearing against the inner surfaces of the pendant. The collar g is then secured, as described, and the pins are then firmly attached to the pendant, and by their projection into the sockets formed in the bosses $c\,c$ of the bow they secure said bow to the pendant, so that it cannot be detached by a twisting movement or by springing its ends

outwardly, it being impossible to remove the pendant without removing the pins *e*, which operation can only be performed by first removing the collar, as will be readily seen.

It is evident that by the described improvement not only is all danger of accident from a disengagement of the bow obviated, but also that the wearing-surfaces are so increased that a far greater durability is secured, and also that still greater strength and durability are insured by the opportunity to use a harder and more rigid metal for the acting surfaces. It will be observed that the pins are wholly outside the longitudinal center of the pendant, so that ample room is left for the winding-bar within the pendant. The bow with its bosses *c c* may be made by forming a blank in disks by suitable swaging and trimming operations. The pins *e e* are preferably made of a metal or alloy harder than gold or silver, to prevent them from being worn by the friction caused by the swinging of the bow and also to impart additional strength.

I am aware that it has heretofore been proposed to provide the ends of the bow with inwardly-projecting grooved studs or projections formed integral with or rigidly attached to the ends of the bow, their inner ends being engaged within the pendant by a sleeve which is inserted in the pendant to prevent the withdrawal of said studs. In the construction last described the studs are necessarily parts of the bow when the latter is applied to the pendant; hence the bow has to be opened or expanded to enable said studs to be sprung into the holes formed to receive them in the pendant, so that the bow has to be distorted or widely expanded preparatory to the insertion of said studs. It will be seen that in my improvement the pins *e e* are not attached to the bow, but are inserted in the sockets of the bow after the latter is in place in the pendant. Consequently no unusual opening or expansion of the bow is required to apply it to the pendant.

I am also aware that it has been proposed to secure a bow to a watch-pendant by screws inserted from the outside of the pendant through sockets formed in the ends of the bow, their threaded inner ends being engaged with threaded sockets formed in a collar within the pendant; but I am not aware that pins made independent of the bow and passing through sockets made in the ends of the bow have ever been locked within the pendant, so that they cannot be removed from the pendant. In the proposed construction last referred to there is nothing to prevent the withdrawal of the screws by their accidental rotation; hence there is always a liability of the screws working loose and releasing the bow from the pendant. By my improvement the pins are locked within the pendant, so that they cannot be withdrawn therefrom without first releasing their inner ends.

I claim—

A watch-case pendant having orifices in its sides combined with the smooth-surfaced or unthreaded bow-securing pins inserted in said orifices, and having heads within the pendant larger than the orifices, the collar *g*, inserted within the pendant and provided with recesses or seats *g'*, formed to support the heads of the pins and prevent inward movement thereof, and the bow having socketed ends formed to receive the projecting portions of the pins, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 8th day of February, A. D. 1889.

EZRA C. FITCH.

Witnesses:
EDWARD A. MARSH,
C. F. BROWN.