

(No Model.)

E. C. FITCH.
WATCHCASE PENDANT.

No. 513,907.

Patented Jan. 30, 1894.

FIG. 1.

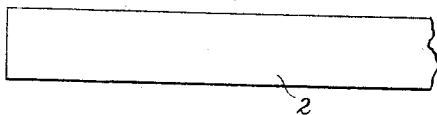


FIG. 2.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.

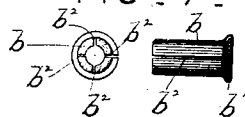


FIG. 8.



FIG. 9.

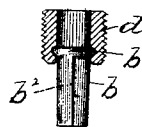


FIG. 11.

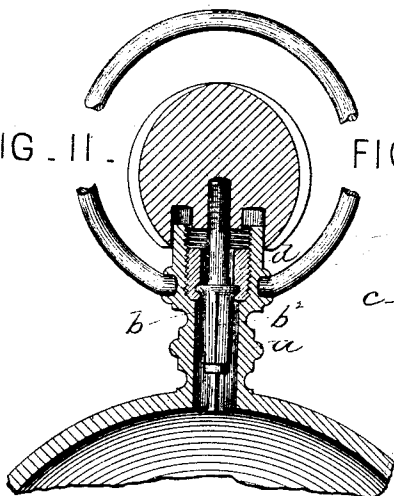
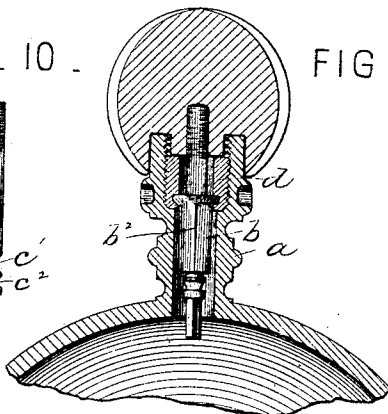


FIG. 10.



FIG. 12.



Attest:

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H. S. McLeod.

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UNITED STATES PATENT OFFICE.

EZRA C. FITCH, OF NEWTON, MASSACHUSETTS.

WATCHCASE-PENDANT.

SPECIFICATION forming part of Letters Patent No. 513,907, dated January 30, 1894.

Application filed August 19, 1892, Serial No. 443,469. (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 Spring-Sleeves for Watchcase-Pendants and Methods of Making the Same, of which the following is a specification.

This invention relates to spring sleeves which are engaged with the pendants of watch-cases, for the purpose of engaging the longitudinally-movable winding-bar, when the movement contained in the case is so organized that the engagement of the winding-bar is shifted from the winding to the hand-setting mechanism and vice versa, by a longitudinal movement of the winding-bar. In watches of this class, it has for some time been customary to provide the pendant of the watch-case with a spring sleeve, secured to the pendant so that it cannot move lengthwise therein, and formed at one end to yieldingly grasp the winding-bar and hold the same from endwise movement excepting when a considerable degree of force is applied, the winding-bar being provided with two grooves, one of which engages said sleeve when the winding-bar is in one position, and the other when the winding-bar is in the other position, the grooves being formed so that the winding-bar may be moved from one position to the other by the application of a sufficient degree of force, the engagement of the spring sleeve with the winding-bar holding said bar in either position sufficiently to prevent its loose or accidental movement to its other position.

Heretofore, the spring sleeve has been made by boring out or otherwise treating a solid rod or blank of metal, in such manner as to form a tube, which is continuous at one end and split at the other end, the split portion of the tube constituting spring fingers or jaws, which grasp the winding-bar. The time and labor necessarily involved in converting a solid rod or blank into a sleeve of the kind described makes the construction of said sleeve slow and comparatively expensive.

It is the object of my invention to enable spring-jawed sleeves of the kind above described to be produced more rapidly and economically than heretofore, and to this end

the invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming part of this specification: Figures 1 to 7 inclusive illustrate different stages of the operation of making a spring-jawed sleeve in accordance with my invention. Fig. 8 represents a side view and a sectional view of the holder which secures the sleeve to the watchcase pendant. Fig. 9 represents a sectional view of said holder, and a side view of the sleeve engaged therewith. Fig. 10 represents a side view of the winding-bar. Fig. 11 represents a sectional view of a watch-case pendant and the sleeve-holder engaged therewith, and a side view of the winding-bar and the spring-jawed sleeve, the winding-bar being shown in its outer position. Fig. 12 represents a view similar to Fig. 11, showing the winding-bar in its inner position.

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

In the drawings: *a* represents a watch-case pendant, and *b* represents the spring-jawed sleeve which is secured to said pendant and is adapted to engage and hold the winding-bar *c* in either its winding or its hand-setting position. The sleeve *b* is of tubular form, and is enlarged at one end to form a flange or shoulder *b'*. The sleeve is divided from its opposite end nearly to the base of said flange by longitudinal slots *b²*, there being preferably four of said slots, subdividing the sleeve into four spring jaws, the bases of which are united by the flange *b'*. The free ends of the spring jaws thus formed are provided with inwardly-projecting lips, which enable the jaws to engage either of two grooves *c' c²* (Fig. 10) formed in the periphery of the winding-bar *c*. The sleeve *b* is secured to the pendant *a* by means of a holder *d*, comprising a metal ring or tube, externally screw-threaded, and provided at its interior near one end with a cavity *d'* formed to receive the flange *b'* of the sleeve *b*. The sleeve is engaged with the holder *d* by upsetting one end of said holder over the flange *b'*, as shown in Figs. 9, 11 and 12. The holder *d* is or may be engaged with the pendant by means of the threaded exterior of said holder and an internal thread formed in the pendant, the two threads being engaged as shown in Figs. 11 and 12.

There is nothing new in the general form of the sleeve *b*, or in the means for securing it to the pendant, a sleeve of the same general form having been heretofore made from
 5 a solid cylindrical blank or rod, by turning off or reducing a portion of the periphery of the blank to form a flange at one end thereof, and boring out the blank to give it a tubular form and then slotting the tube to convert it
 10 into a series of spring jaws, the interior of the tube being provided with an inwardly-projecting flange, which is subdivided by the slots and enables the spring jaws to engage the grooves *c'* *c''* of the winding-bar.
 15 In carrying out my invention, I construct the spring-jawed sleeve in the following manner: I first make a metal tube of uniform thickness from end to end and in doing this I prefer to take a flat strip or blank 2 of sheet
 20 metal, and form the same by stages, as indicated in Figs. 2 and 3, into a tube having a joint or seam extending along one side. I then subdivide the tube into short lengths 3, as shown in Fig. 4, each length being a blank
 25 for one of the spring-jawed sleeves. I next turn one end of the blank 3 inwardly to form an inwardly-projecting lip or flange 4, as shown in Figs. 5 and 6. I then turn the opposite end of the tubular blank outwardly to form the flange *b'*, as shown in Figs. 6 and 7.
 30 I then cut slots *b''* in the tubular blank, beginning at the end on which the inwardly-projecting lip or flange 4 is formed, said slots extending through said lip and to the base of the flange *b'*. One of said slots extends along
 35 the joint or seam formed by the coming together of the two edges of the strip 2 thus extending the full length of the sleeve. If desired, the free ends of the jaws formed by
 40 the slots may be bent inwardly to give the jaws a stronger hold upon the winding-bar.

It will be seen that, by the described method, I am enabled to produce spring-jawed sleeves for the purpose described, much more rapidly and economically than heretofore. 45

The improved sleeves produced by the method described are distinguishable from sleeves made as heretofore by the fact that the inner and outer surfaces of the sleeves are substantially parallel at all parts, there being no extra thickness of metal at the solid end, or the end having the outwardly-projecting flange *b'*, because the inner surface of said flange is flared outwardly parallel with its outer surface. 50 55

By forming the sleeve with one of the slots extending its full length, the said sleeve possesses a certain amount of elasticity, so that the flange or shoulder *b'* may be caused to fit the cavity *d'* of the holder *d* even if said cavity *d'* should not be quite correctly formed as to size. 60

I claim—

A spring-jawed sleeve for watch case pendants, the same consisting of a metal tube having parallel inner and outer surfaces from end to end and having one end enlarged or spread to form an outwardly projecting flange and its other end contracted to form an inwardly projecting flange or lip; the said tube being slotted to form spring jaws having segments of the inwardly projecting flange at their free ends, one of said slots extending the entire length of the sleeve; as set forth. 65 70

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 9th day of August, A. D. 1892. 75

EZRA C. FITCH.

Witnesses:

DANIEL W. ELDRIDGE,
EDWARD A. MARSH.