(No Model.)

A. F. ROBBINS.

MAINSPRING WINDER.

No. 325,973. Patented Sept. 8, 1885.

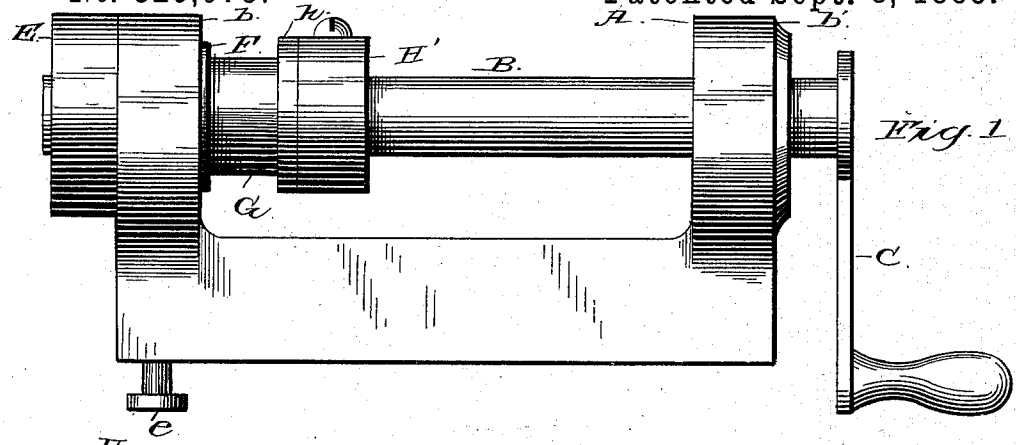


Fig. 1.

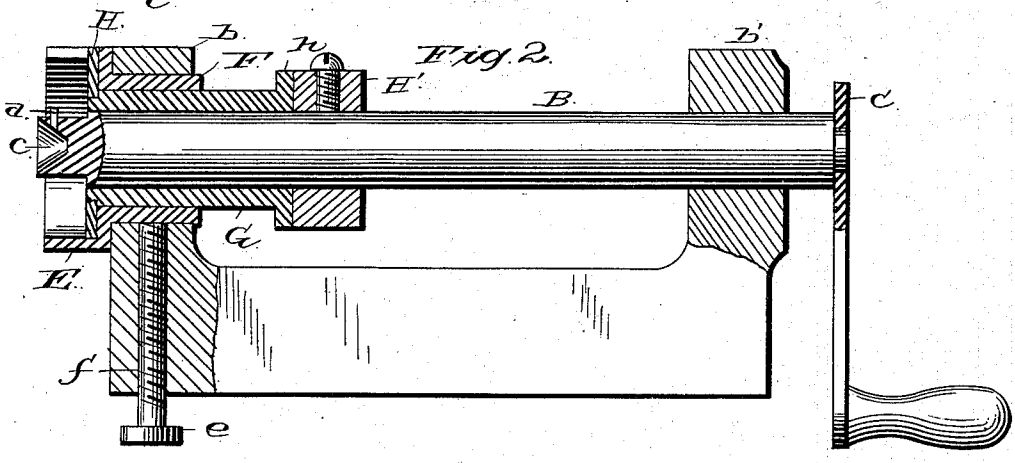
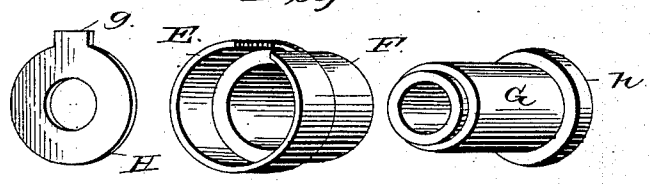
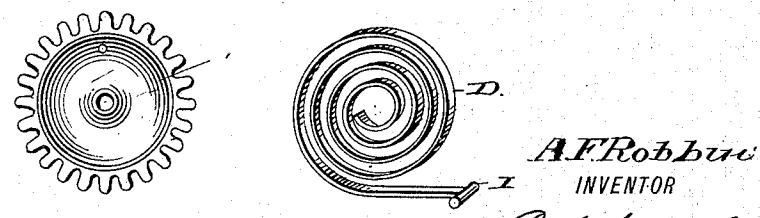


Fig. 2.

Fig 3.





WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT F. ROBBINS, OF ORANGE, MASSACHUSETTS.

MAINSPRING-WINDER.

SPECIFICATION forming part of Letters Patent No. 325,973, dated September 8, 1885.

Application filed January 26, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. ROBBINS, a citizen of the United States, residing at Orange, in the county of Franklin and State of Massachusetts, have invented a new and useful Improvement in Mainspring-Winders, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a mainspring-winder for watches; and it has for its object to provide a device of this character whereby watch-springs of different sizes may be accommodated by constructing the winder to receive heads or barrels of different sizes.

A further object of the invention is to provide a device of this character which shall be cheap and simple in its construction, effective in its operation, and one that will be strong and durable.

In the drawings, Figure 1 is a side elevation of a watch mainspring-winder constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section of the same, and Fig. 3 is a detail view of parts detached.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents a supporting-frame, consisting of the longitudinally-disposed base having at its ends upwardly-extending brackets *b b'*, provided with holes or openings to receive a shaft, B. The said shaft B is somewhat longer than the frame and extends beyond the same at each end. On one end of the said shaft B is rigidly mounted a crank-handle, C, said end upon which the crank-handle is mounted being reduced, as shown in Fig. 2. The other end of the shaft B is provided with a countersink, *c*, and an upwardly-extending pin, *d*, which is adapted to enter a slot in the inner end of the mainspring D when the same is to be wound.

E represents the barrel, which has a central opening and an inwardly-extending sleeve, F, the diameter of the opening or passage of which is the same as that of the barrel E. This sleeve F fits in the hole or opening in the bracket *b*, the barrel being located outside of said bracket. The barrel and its sleeve are held against movement in the opening of the bracket *b* by means of a set-screw, *e*, which is located in an opening, *f*, preferably on the under side of the frame, as shown.

G represents a sleeve, which is mounted upon the shaft B and within the sleeve F, its end extending through said sleeve into the barrel E, and said end extending into the barrel E is reduced, and fitted upon said reduced end is a disk, H, having a nib or lug, *g*, which is adapted to fit a notch in the barrel E. The inner end of the sleeve G is provided with an annular flange, *h*, and upon the shaft B is an adjustable collar, H', which is adapted to limit the inward movement of the sleeve G further than to allow the disk on the end of the same to bear against the inner end of the barrel.

The operation is as follows: The pin *d* is engaged with the slot in the inner end of the mainspring. The crank-handle is then turned until the catch I on the other end of the mainspring engages the nib or lug of the disk H. This is effected by coiling the spring D tightly upon the shaft B, and when it has been wound to the proper tightness the pin or catch I engages the nib or lug *g*, and the spring, with the exception of the portion containing the pin or catch I, will be coiled in the barrel of the winder. The barrel of the watch is then placed over the barrel E of the winder, so that the small hole of the barrel of the watch fastens on the pin or catch I. The shaft B is then turned one half-revolution and moved forward, which moves the disk H, and with it the spring. Then turn the shaft backward until the spring expands in the barrel of the watch, and said barrel may then be removed from the winder.

The device above described is simple in its construction, readily and easily operated, may be manufactured and supplied at a slight cost, and is strong and durable.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mainspring-winder, the combination, with a supporting-frame having a shaft journaled therein, of a removable barrel having a notch and a disk having a nib to engage said notch, said disk being adapted to be moved to force the mainspring from the barrel, as set forth.

2. In a mainspring-winder, the combination, with a supporting-frame having a shaft journaled therein, said shaft having a countersunk end and a pin, as shown, of a removable barrel and a disk adapted to be moved to force

the spring from said barrel, substantially as set forth.

3. In a mainspring-winder, the combination, with a supporting-frame having a shaft journaled therein, said shaft having a countersunk end and a pin, as shown, of a removable barrel having a notch and a disk having a nib to fit the same, substantially as set forth.

4. In a mainspring-winder, the combination, with a supporting-frame having a shaft journaled therein, said shaft having a countersunk end and a pin, as shown, of a removable barrel having an integral sleeve, a sleeve fitting within the same, and a disk on the end of said last-mentioned sleeve, as set forth.

5. In a mainspring-winder, the combination, with a supporting-frame having a shaft journaled therein, said shaft having a countersunk end and a pin, as shown, of a removable barrel having a notch and an integral sleeve, a sleeve fitting within the same, a disk on the end of said last-mentioned sleeve, which is also provided at its other end with a flange, said disk having a nib, and an adjustable collar on the shaft, substantially as set forth.

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

ALBERT F. ROBBINS.

Witnesses:
J. H. HACKELTON,
W. B. ANDREWS.