

B. CHARLES.

DEVICE FOR WINDING WATCHES.

No. 175,424.

Patented March 28, 1876.

Fig. 1.

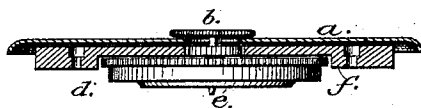


Fig. 3.

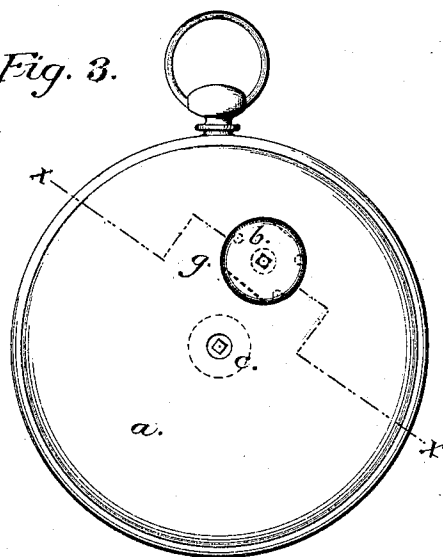
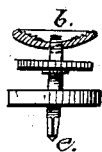


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE

BENJAMIN CHARLES, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN DEVICES FOR WINDING WATCHES.

Specification forming part of Letters Patent No. **175,424**, dated March 28, 1876; application filed January 23, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN CHARLES, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Devices for Winding and Setting Watches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to an improvement in the construction of watches, by which the necessity of carrying a separate key for the purpose of winding up the instrument is avoided; and it consists in applying, by a screw-thread connection, directly to the winding-shaft, a circular concave disk, milled at the edges and projecting sufficiently above the inner case of the watch to allow the fingers to obtain a sufficiently firm hold thereof to rotate the same.

In the accompanying drawings similar letters of reference indicate corresponding parts in the different figures.

Figure 1 is a sectional view of the watch, showing the relative position of the winding-shaft to the other parts. Fig. 2 is a section showing the cap of the concave form as screwed onto the winding-shaft. Fig. 3 is a view of the inner case, with the circular disk which performs the function of a key in winding the watch.

The inner case *a* is provided with two circular openings, the central one *c* being for the purpose of giving access to the shaft which carries the hour and minute hands. A larger orifice, *g*, placed between this one and the periphery of the case, is for the admission of the circular milled disk *b*, which is attached to the outer end of the winding-shaft *e*. This shaft passes through the bearing-plate *f* and the spring-box *d*, and is provided with the customary click-pawl and ratchet-wheel, which prevent the unwinding of the spring without causing the wheels of the watch to revolve with it. In forming this winding-disk I use a piece punched from a plate of metal of suitable

thickness, which is then secured upon the shaft *e* by means of screw-threads, as seen in Fig. 3, and, after being properly finished, its edges are milled, and, if desired, the whole outer surface may be corrugated in order to give the fingers a firmer hold.

In my drawings I have shown, in Fig. 1, the head flat and milled on the edges, but I do not wish to be debarred the use of a head either concave or convex, and roughened in any manner known, so as to give a hold to the fingers.

This device, although shown in my drawings as being applicable to watches, may also be used for clocks or any registering apparatus, so as to dispense with the ordinary detached key, where springs or weights are used.

The device may also be used for setting clocks, watches, or registers. In clocks it may be applied to the arbors or posts in the front or face of some, to serve as a ready key, at all times answering the purpose of the stem-winder without the expense of the gearing-necessary to the operation of the same.

In operating this device, it is only necessary to open the outer case of the watch, when the winding-disk will be exposed to view; the watch being then held in the left hand, face downward, the forefinger and thumb of the right are applied to the winding-disk, and, by a series of movements similar to those required for winding with the ordinary key, the spring is wound up.

I am aware that devices have been heretofore used which formed part of the watch, for winding the same, as in the so-called stem-winders. I am also aware that a disk formed solid as a part of the winding-shaft is not new. These, therefore, I do not claim; but

I do claim, and desire to secure by Letters Patent, the following:

The disk, with its screw-hole, in combination with the winding-post of a watch, which is formed into a screw, substantially as set forth.

BENJN. CHARLES.

Witnesses:

EDW. W. DONN,
M. GARDNER.