

H. ABBOTT.
LEVER-WINDING AND SETTING ATTACHMENT FOR WATCHES.
 No. 193,312. Patented July 24, 1877.

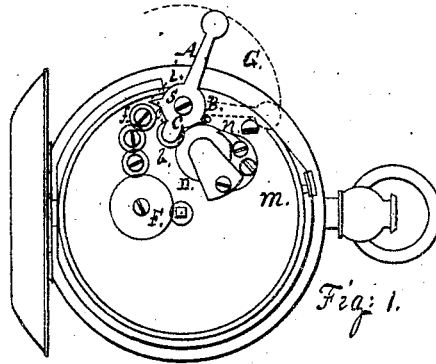


Fig: 10

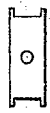


Fig: 8.

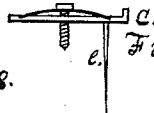


Fig: 9.

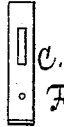


Fig: 7.



Fig: 5.

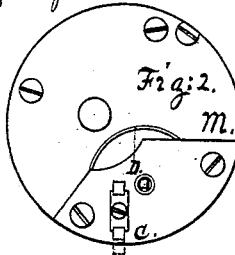


Fig: 2.



Fig: 3.

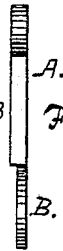


Fig: 4.

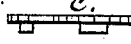


Fig: 6.

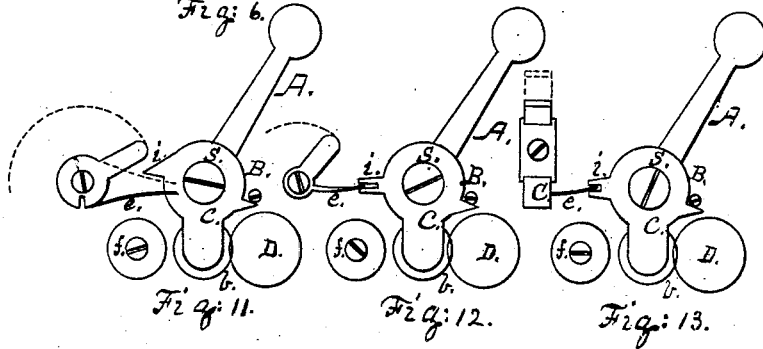


Fig: 11.

Fig: 12.

Fig: 13.

Witnesses
Sam. B. Mann
J. Dew. Scott.

Inventor
Henry Abbott

UNITED STATES PATENT OFFICE.

HENRY ABBOTT, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN LEVER WINDING AND SETTING ATTACHMENTS FOR WATCHES.

Specification forming part of Letters Patent No. **193,312**, dated July 24, 1877; application filed May 5, 1877.

To all whom it may concern:

Be it known that I, HENRY ABBOTT, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Improvement in Lever Winding and Hand-Setting Attachments for Watches, which improvement is fully set forth in the accompanying specification and drawings, in which—

Figure 1 is a plan view of a watch with the dial removed, showing a part of the improved attachment. Fig. 2 is a plan of the reverse side, disclosing a connecting feature of the attachment. Fig. 3 is a plan view of the lever, and Fig. 4 is an edge view of the same, showing a gear on the lower end. Fig. 5 is a plan of a yoke uniting the lever-gear and a small gear operating between the winding and setting departments. Fig. 6 is an edge view of the yoke. Fig. 7 is a plan of a slide, (shown also in Fig. 2,) to which a click-spring is fastened, which connects the slide with the yoke. Fig. 8 is a plan of a spring which holds the slide in position. Fig. 9 is an edge view of the slide and spring with the connecting click-spring attached. Fig. 10 is a screw which forms a pivot and bearing for the yoke and lever, and holds them to the plate. Figs. 11, 12, and 13 are plan views, showing some of the modifications of the movable click-spring, in combination with the winding and setting mechanism.

The object of my invention is to effect an improvement on my former patent, No. 180,739, August 8, 1876, in which the winding and hand-setting attachments were entirely separate; and my improvement consists in so uniting them that the lever shall perform both the office of winding and setting; and I have besides made the operation of the lever more simple and perfect.

The lever A has upon its inner end a gear-wheel, B, or segment, as only part of a gear comes into use. This gear, covered by the yoke c, is, by the yoke, united to the smaller gear b, and the lever and yoke are pivoted by the screw S to the plate m.

On the back of the works is a slide, C, and click-spring e, (see Fig. 9,) which is connected with the spur i of the yoke c. This slide and spring, by the connecting-gear b, throw the

lever into action with the ratchet-wheel D or the barrel-arbor, for winding the watch, (see Fig. 1,) and this connection is made by pushing in the slide C; but if the slide be drawn out it throws the gear b into action with gear f, which directly, or by connecting-gears, operates the cannon-pinion F for setting the hands. In this way, by moving the click-spring, the lever is made to operate either the winding or hand-setting devices.

To wind the watch, the slide C being pushed in, the lever A is pushed forward in the arc of the dotted line G. The lever is then drawn back, and, the strain being outward from the ratchet-wheel D, the gear b, by means of the click-spring e, is made to slip from one tooth to another, the click n the meanwhile retaining the ratchet-wheel D in position. The operation is repeated until the watch is wound up.

To set the hands, the slide C is drawn out, and the lever is operated the same as in winding.

The slide and click-spring may be placed on the face of the works; or the attachment, as a whole, may be on the back, or between the plates.

There are various ways of connecting the click-spring e with the yoke c, some of which are shown in Figs. 11, 12, and 13. The point of novelty, in this respect, is in a movable click-spring; or it may be a movable click without the spring, which, by suitable connecting mechanism, is made to operate on the yoke, or more directly on the lever, for moving the latter into action for winding or setting, as occasion may require; or, I may say, my improvement is in the one lever, which, by a movable click, or some equivalent device, is made to operate both the winding and hand-setting works.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The reciprocating lever A, in combination with the ratchet-wheel D, on barrel-arbor, and the cannon-pinion F, or center-post, having a suitable connecting mechanism for throwing it into action with either, for the purposes of winding and hand-setting, substantially as specified.

2. The combination of the lever A, having the gear B, with the yoke *c* and gear *b*, substantially as and for the purposes set forth.

3. The combination of the lever A, yoke *c*, and gear *b* with a movable click-spring, *e*, substantially as and for the purposes set forth.

4. The combination of lever A, yoke *c*, and gear *b*, by a suitable connecting mechanism,

with the ratchet-wheel D, operating the barrel-arbor, and with the cannon-pinion F, for turning the hands, substantially as specified.

HENRY ABBOTT.

Witnesses:

HORACE HARRIS,
I. W. BONNEL.