(No Model.)

A. BITNER.

STEM HAND SETTING AND WINDING MECHANISM FOR WATCHES.

No. 261,655. Patented July 25, 1882.

Fig. 1.

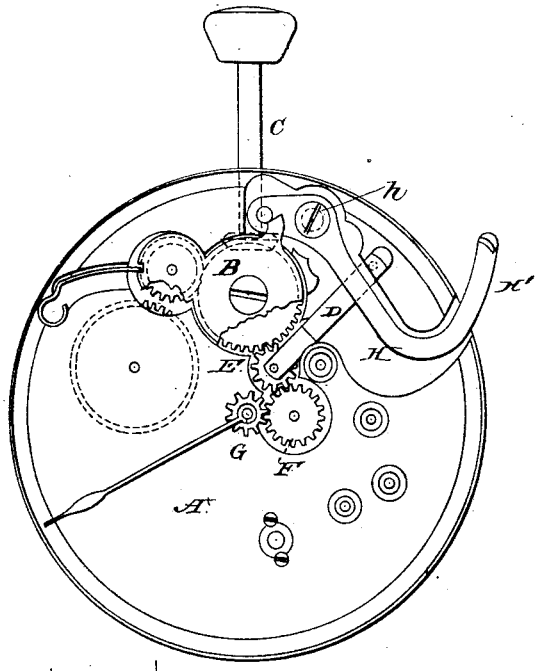


Fig. 2.

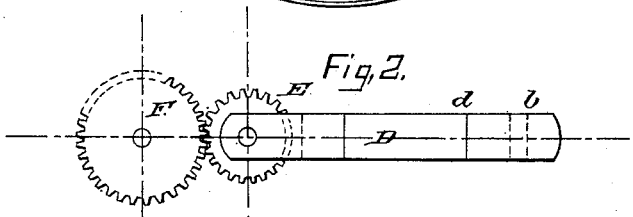


Fig. 3.

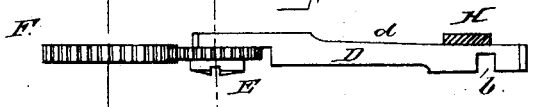
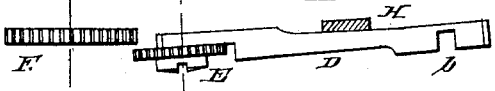


Fig. 4.



Abraham Bitner,
INVENTOR.

WITNESSES

Fred. L. Dieterich.
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his Attorneys.

UNITED STATES PATENT OFFICE.

ABRAHAM BITNER, OF LANCASTER, PENNSYLVANIA.

STEM HAND-SETTING AND WINDING MECHANISM FOR WATCHES.

SPECIFICATION forming part of Letters Patent No. 261,655, dated July 25, 1882.

Application filed November 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM BITNER, of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Stem Hand-Setting and Winding Mechanism for Watches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a plan view of the part of a watch-movement embodying my invention. Fig. 2 is a top view of the "tilting bar" and wheel for throwing the hand-setting mechanism into or out of gear. Fig. 3 is a longitudinal section of the same, showing the tilting bar in its raised or elevated position and its wheel meshing with the hand-setting gears; and Fig. 4 is a similar view, showing the tilting bar in its depressed position for detaching its wheel from the minute-wheel. Figs. 2, 3, and 4 have been made on an enlarged scale to show more clearly the detailed construction and combination of parts which they illustrate.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to the hand-setting mechanism of stem-winding and hand-setting watches; and the novelty consists in the construction and arrangement of parts, as will be set forth.

In the annexed drawings, A represents the pillar-plate.

B is the winding-wheel, which is operated by a bevel-pinion at the inner end of the winding-stem C in a manner well understood.

D is the tilting bar, the upper end of which forms a flat slope or incline, *d*, while its under side is notched to form a fulcrum, *b*. The inner end of the bar forms a yoke, which carries a pinion, E.

H is a curved arm or lever, which is pivoted at *h*, and is provided with an arm, H′, that extends out through a slot in the side of the case. Lever H plays upon the flat inclined top of the tilting bar D, and when the lever is pushed in, in the position represented in Fig. 4, the bar is depressed, so as to disengage its pinion E from the minute-wheel F, which meshes with the pinion G of the center staff; but when lever H is in the position shown in Figs. 1 and 3—that is, drawn out over the fulcrum *b* of the tilting bar D—the latter is raised and detaches the yoke and pinion from the winding-wheel B, connecting or intermeshing it with the hand setting-gears. Should the teeth come together sidewise, the tilting-bar pinion will press against the teeth of the intermeshing gears from the under side and rest in this position, without shipping or shifting the last-named gears, until the stem is moved, when it will intersect or mesh in with its connecting-gears.

The tilting bar D can be operated by the pulling out of the stem C by attaching a lever to the stem in place of the pivoted lever H H′, but operating, in respect of the tilting bar, in like manner as said lever. I do not therefore confine myself to the shape or means of operating lever H H′.

I am aware of Patents Nos. 121,260, of 1871, 133,264, of 1872, and 94,825, of 1869, and the construction set forth in either or all of these patents is not sought to be covered in this application.

What I do claim is—

The tilting bar D, fulcrumed at *b*, as shown, having inclined surface *d* and a yoke in which is journaled the pinion E, and the curved lever H H′, pivoted at *h* and acting upon the incline *d* to throw the pinion E in either of two directions at will, combined with the winding-wheel B, stem C, the said pinion E, minute-wheel F, pinion G, and center staff, the whole being arranged and adapted to serve as and for the purposes set forth.

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

ABRAHAM BITNER.

Witnesses:
CHARLES A. HEINITSH,
HUGH S. GARA.