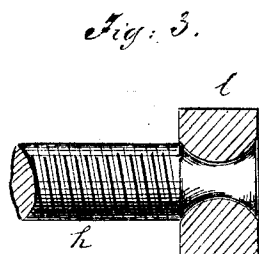
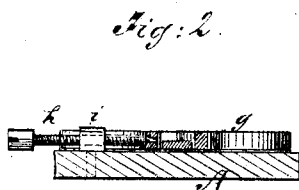
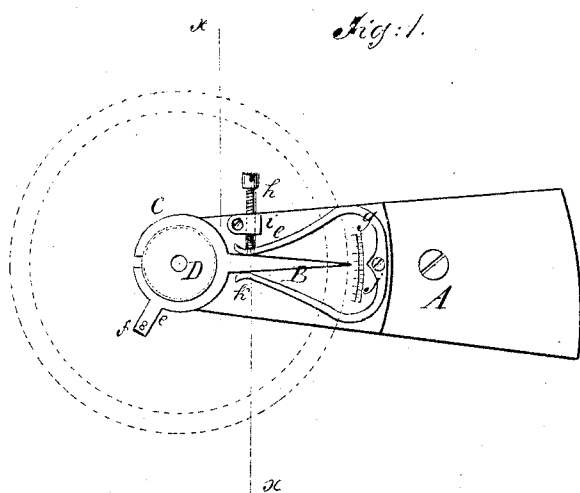


J. W. HURD.
Watch-Regulators.

No. 151,537.

Patented June 2, 1874.



WITNESSES:

Chas. N. V. A.
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INVENTOR:

J. W. Hurd

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UNITED STATES PATENT OFFICE.

JOSEPH W. HURD, OF GRAND CROSSING, ILLINOIS.

IMPROVEMENT IN WATCH-REGULATORS.

Specification forming part of Letters Patent No. **151,537**, dated June 2, 1874; application filed April 25, 1874.

To all whom it may concern:

Be it known that I, JOSEPH W. HURD, of Grand Crossing, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Micrometer Watch-Regulator, of which the following is a specification:

The object of this invention is to furnish means for regulating watches by the application of a micrometer-screw, so as to vary the hair-spring, and consequently the running of the watch, in the most delicate and precise manner.

In the accompanying drawing, Figure 1 is a top view. Fig. 2 is a cross-section of Fig. 1 on the line *x x*. Fig. 3 is an enlarged view of the regulating screw and arm.

Similar letters of reference indicate corresponding parts.

A is the regulator-plate. B is the regulator hand or pointer attached to the band C, which is moved on the center D. *e* is the arm which has the two little pins *f*, which receive the hair-spring and vary it as the hand or pointer is turned. The pointer is confined in the harp-shaped pivoted piece *g*. *h* is the regulating-screw, the nut *i* of which is attached to the plate by a pivot-screw, which allows it to accommodate itself to the position of the regulating-screw. The piece *g* is attached to the plate by a pivot-screw, *j*, so that, as a whole, it can swing laterally in either direction, but the arms *k l* are both springs, the curved ends

of which are in contact with the pointer B. The regulating-screw *h* is attached to the arm *l* by means of a slot in the arm and a round or circular groove at the end of the screw. The enlarged view, Fig. 3, shows this connection, the screw being slipped into the slot from the end of the arm. As the regulating-screw is turned back or forward the hand B is carried to the right or left, as may be desired. The arms *k l*, always being in contact with it, govern its position and keep it steady.

By means of this attachment the watch may be regulated with the greatest accuracy and precision. The head of the regulating-screw *h* may be provided with holes, so that the screw may be turned with a pin instead of a screw-driver, if desired.

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

1. The combination, with the plate A and regulator-point of a watch, of the harp-shaped pivoted piece *g*, as and for the purposes described.

2. The regulating-screw *h*, in combination with the piece *g* and plate A, substantially as shown and described.

JOSEPH W. HURD.

Witnesses:

JOHN A. JOHNSON,
JOSIAH P. CLARK.