2 Sheets—Sheet 1.

J. ELSON.

Watch Regulator.

No. 100,511. Patented March 8, 1870

Fig. 1.

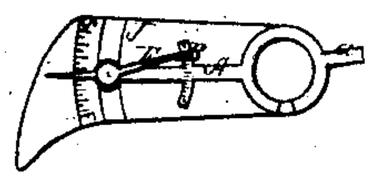


Fig. 2.

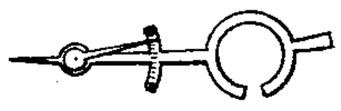


Fig. 3.

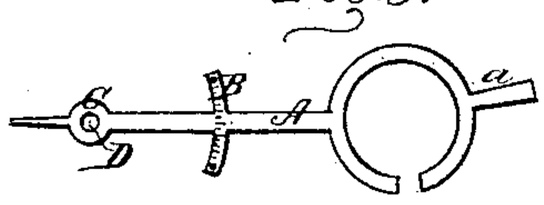
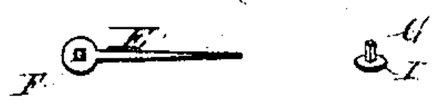


Fig. 4.



Witnesses.
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Inventor:
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2 Sheets—Sheet 2.

J. ELSON.

Watch Regulator.

No. 100,511. Patented March 8, 1870.

Fig. 5.

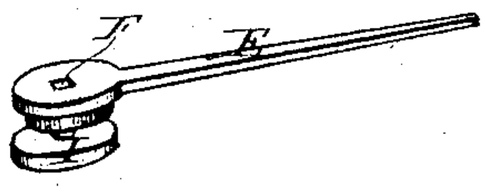
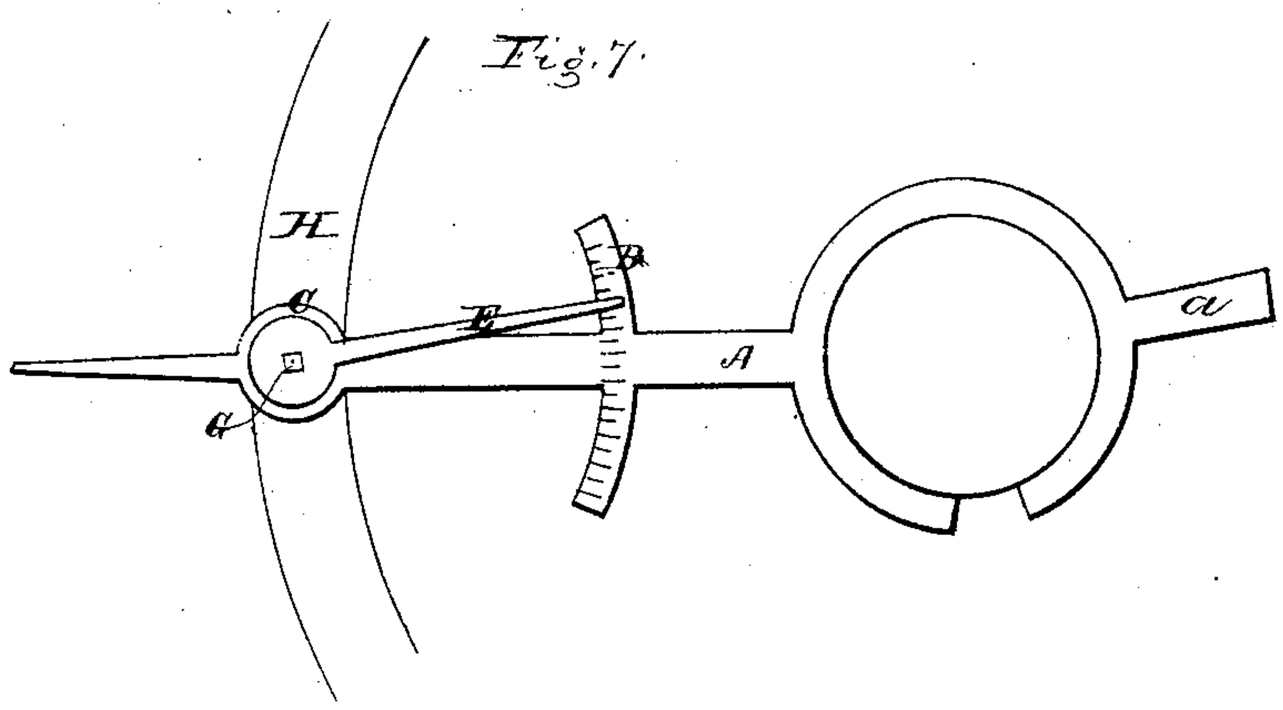


Fig. 6.

Fig. 7.



Witnesses,
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JULIUS ELSON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 100,511, *dated March* 8, 1870.

IMPROVEMENT IN WATCH-REGULATORS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JULIUS ELSON, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an Improved Watch-Regulator; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings and letters of reference marked thereon, in which—

Figure 1 is a plan view of my invention attached to the balance bridge of a watch;

Figure 2 is a similar view of the regulator detached; and

Figures 3 and 4, views of the parts in detail.

Figure 5, a perspective view of the pointer E and disk I.

Figure 6, a side elevation of the regulator; and

Figure 7, an enlarged plan view of the same.

The object of this invention is to facilitate the regulation of watches, to which end certain details of construction are employed, which will be more fully described hereafter.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the regulator, which is constructed of the usual form at the inner end *a*, which operates on the balance spring.

Near its center it is provided with a graduated arc, B, which projects on each side, and forms the arc of a circle, whose center is in the enlargement C, near the outer end of the regulator.

In the enlargement C is a circular orifice, D, in which is fitted the socket of the small hand or pointer E, in which socket is a minute square or other equivalent-shaped orifice F, in which the concentric disk I is secured.

H represents a curved groove or way in the balance bridge J, which groove is perfectly concentric with the arc described by the regulator.

The operation of my invention is as follows:

The disk I, which is on the lower side of the regulator, is placed in the groove H, and bears closely against the concave side thereof, and, when the pointer E is moved in either direction, it affords sufficient friction to move the regulator minutely. In other words, the pointer E forms a lever of the first degree, whereof the fulcrum is in the center G of the disk I, and when operated, effects a regulation of any desired minuteness. The regulator may be moved in the ordinary manner when special minuteness is not required.

A raised bearing-edge may be substituted for the groove H, as the concentric disk I will produce the same effect on an elevated as on a depressed edge.

Having thus fully described my invention,

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

The disk or roller I, connected with an index or pointer, E, pointing to a graduated arc, B, on the regulating arm A, in combination with the grooved or projecting arc H, constituting a fine adjustment regulator for watches, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JULIUS ELSON.

Witnesses:

CHARLES F. BROWN,

GEORGE H. ELSON.