G. HUNTER.

Hand-Setting Attachments for Watches.

No. 152,113. Patented June 16, 1874.

Fig. 1.

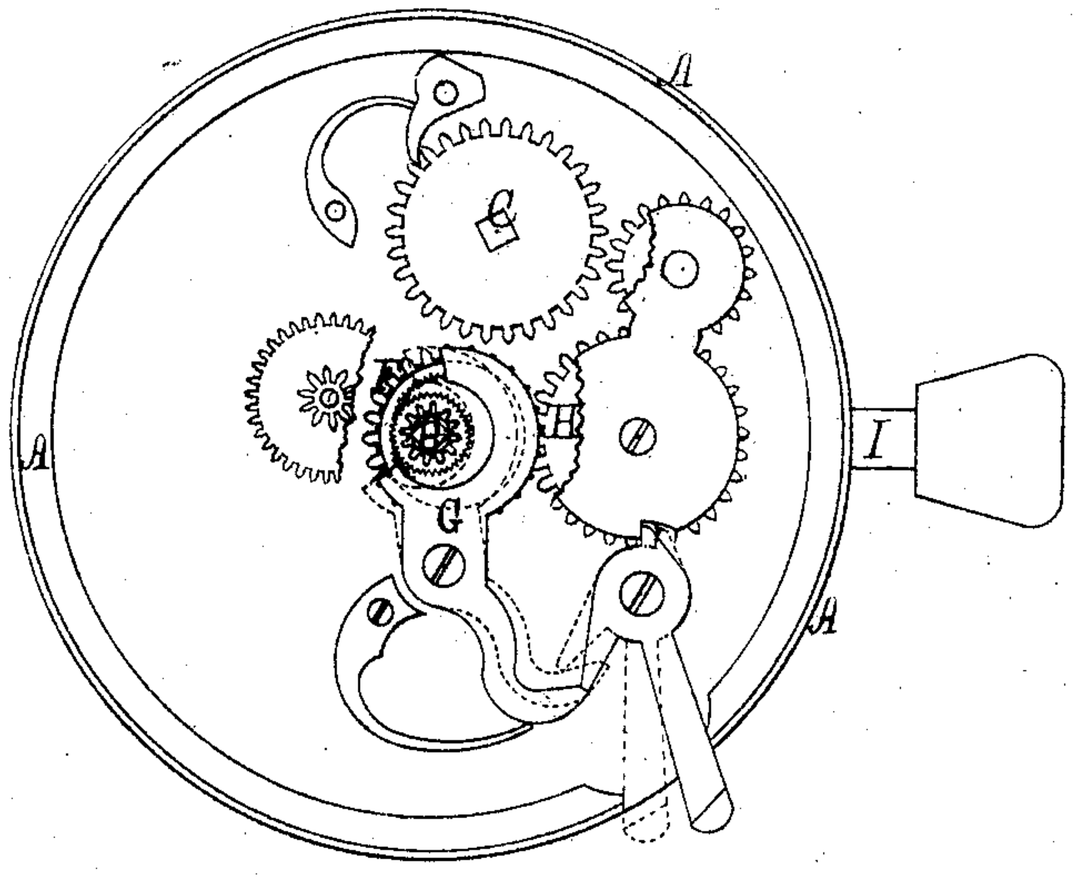


Fig. 3.

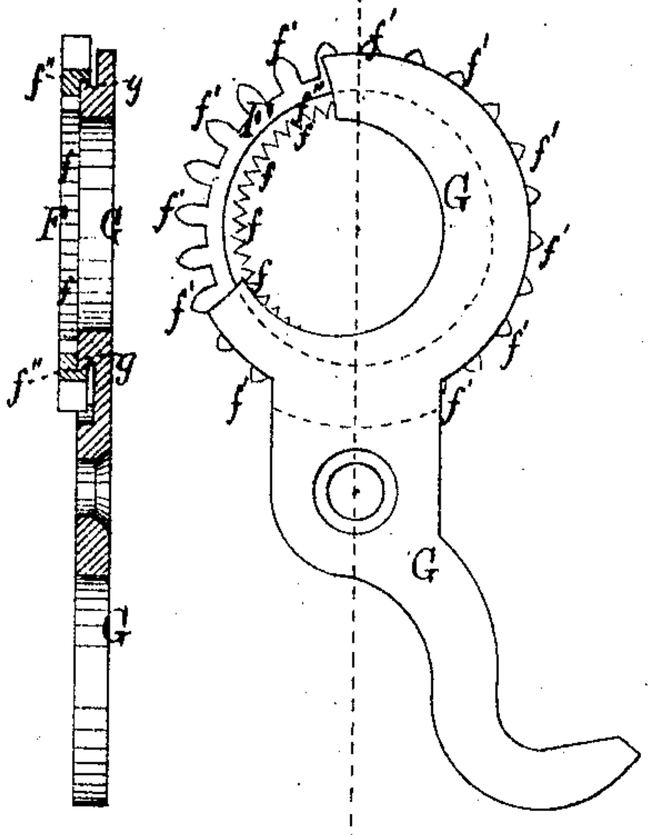


Fig. 2.

Fig. 4.

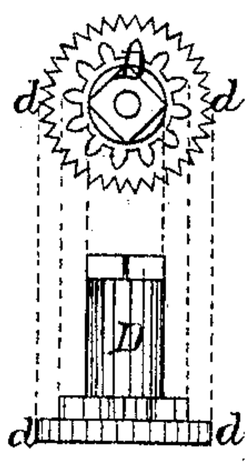
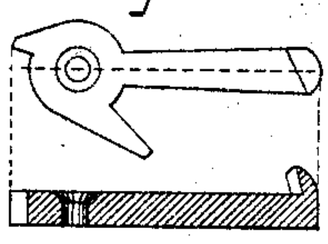


Fig. 5.



WITNESSES=

Jas. E. Hutchinson.

John R. Young

INVENTOR.

George Hunter, by

Prindle and Deane, his Attys.

UNITED STATES PATENT OFFICE.

GEORGE HUNTER, OF ELGIN, ILLINOIS, ASSIGNOR OF ONE-TENTH HIS RIGHT TO THE NATIONAL WATCH COMPANY, OF SAME PLACE.

IMPROVEMENT IN HAND-SETTING ATTACHMENTS FOR WATCHES.

Specification forming part of Letters Patent No. **152,113**, dated June 16, 1874; application filed March 30, 1874.

To all whom it may concern:

Be it known that I, GEORGE HUNTER, of Elgin, in the county of Kane and in the State of Illinois, have invented certain new and useful Improvements in Hand-Setting Attachments for Watches; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper or face side of a watch-movement containing my improved attachment. Fig. 2 is an enlarged plan view of the toothed driving-ring, and the pivoted lever within which it is journaled. Fig. 3 is a section of the same upon line *x x* of Fig. 2. Fig. 4 is a plan view and a side elevation of the cannon-pinion; and Fig. 5 is a plan view and a longitudinal section of the lever employed for throwing the setting attachment into engagement, and for locking the winding-gearing.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to simplify the construction and increase the efficiency of mechanism employed for setting the hands of a watch through or by means of the stem or push-pin; and it consists, principally, in an externally and internally toothed ring surrounding the cannon-pinion, and capable of lateral adjustment, so as to cause its inner teeth to engage with the same, and its external teeth to simultaneously mesh with one of the wheels of the winding-train, substantially as and for the purpose hereinafter specified. It consists, further, in the construction of the pivoted lever upon which the toothed ring is journaled, and its combination with said ring, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A represents the upper plate of a watch-movement, within which are journaled the center-wheel staff B, winding-arbor C, and other portions of an ordinary train. The cannon-pinion D, placed upon, and revolving with, the staff B, is of usual construction, except that at its lower end is provided a disk, *d*, which has a somewhat larger diameter, and is serrated or toothed upon its periphery, as seen in Fig. 4. Within a recess formed in the plate A, below the dial-wheel E, is placed a ring, F, which, upon its inner periphery, is provided with teeth or serrations *f*, that correspond to the tooth upon the disk *d* of the pinion D, while upon the outer periphery of said ring are formed gear-teeth *f'*, of usual size and shape, the interior dimensions of said ring being such as that, when placed equidistant at all points from said cannon-pinion, their contiguous surfaces shall not come into contact. Within the upper side of the toothed ring F is formed a recess, *f''*, the bottom of which is parallel with its faces, while the side of said recess inclines upward and inward, as seen in Fig. 3.

The recess *f''*, thus constructed, receives a correspondingly-shaped annular boss or enlargement, *g*, that is formed upon one end of a bar, G, a section of said boss being removed, so as to enable it to be sprung together sufficiently to pass within said recess, after which, by expansion, it will be caused to closely fill the latter, and will then furnish a bearing for and upon which the ring F may revolve.

The bar or lever G, having the form shown in Figs. 1, 2, and 3, is pivoted, at or near its longitudinal center, upon the plate A, and, moving in a horizontal plane, enables the toothed ring F to be thrown laterally into or out of engagement with the cannon-pinion D.

When the toothed ring F is thrown into engagement with the cannon-pinion D, its outer teeth *f'* mesh with the corresponding teeth of a spur-gear wheel, H, which latter forms the main wheel of the train that connects the winding-arbor C and the stem or push-pin I, and enables said arbor to be revolved within its bearings by said stem; by which means it will be seen that the motion of said stem, communicated through said gear H and toothed ring F, will cause said cannon-pinion to revolve, and thus enable the hands to be adjusted.

As the means employed for throwing the hand-setting devices into or out of engagement will vary with styles of movement to which said devices are attached, no especial description of such means is required, those used in

this instance being sufficiently illustrated in the drawings.

Although the serrated disk or enlargement at the lower end of the cannon-pinion is, preferably, employed, if desired said pinion may have its length increased to correspond with the thickness of the toothed ring, and the latter caused to engage with the usual teeth formed upon said pinion.

The advantages obtained by my improvement are, first, the hand-setting parts are entirely disconnected from either the watch or the winding-trains when not in use, and in no manner increase the bulk or change the operation of the same; second, in construction the operative parts are simple, durable, not liable to get out of order, and add but slightly to the cost of a watch.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The ring F, provided with the internal and external teeth *f* and *f'*, respectively, surrounding the cannon-pinion D, and capable of lateral adjustment, so as to cause said teeth *f* to engage with said pinion and its teeth *f'*, to simultaneously mesh with the teeth of the spur-gear H, substantially as and for the purpose specified.

2. The internally and externally toothed ring F, provided with the recess *f''*, in combination with the bar or lever G, having the sectional annular boss or enlargement *g*, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of March, 1874.

GEORGE HUNTER.

Witnesses:
P. S. BARTLETT,
CHAS. S. MOSELEY.