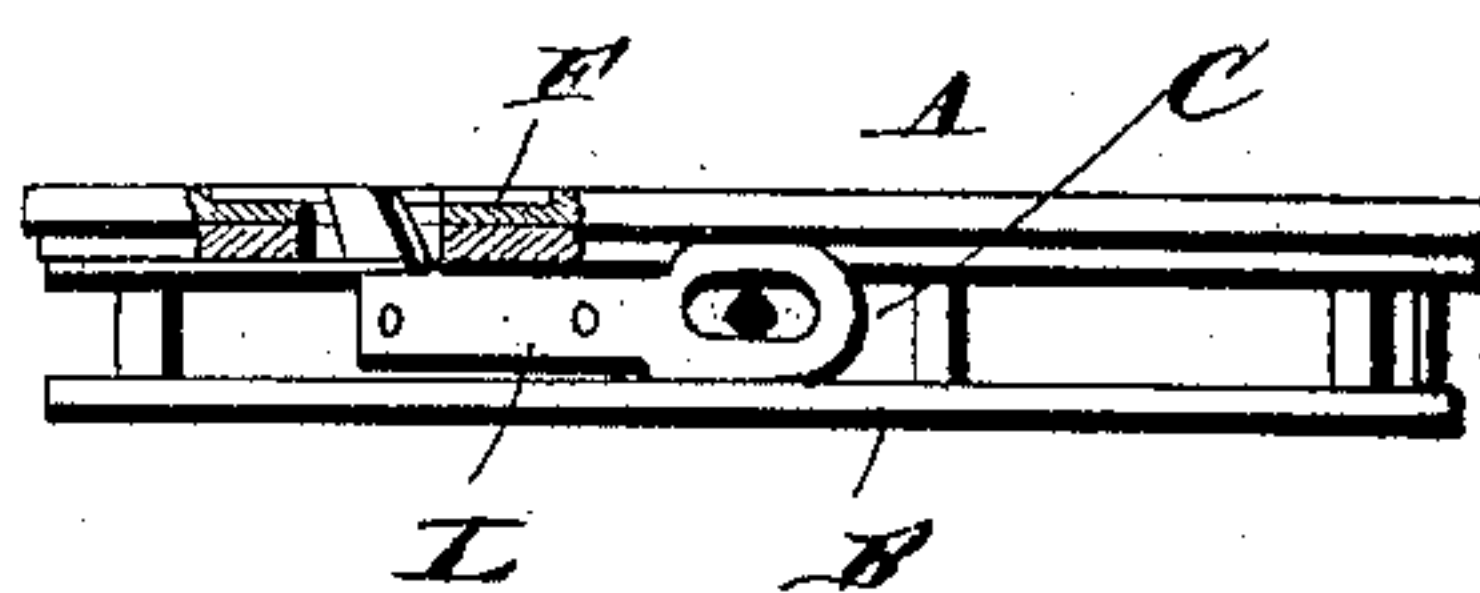
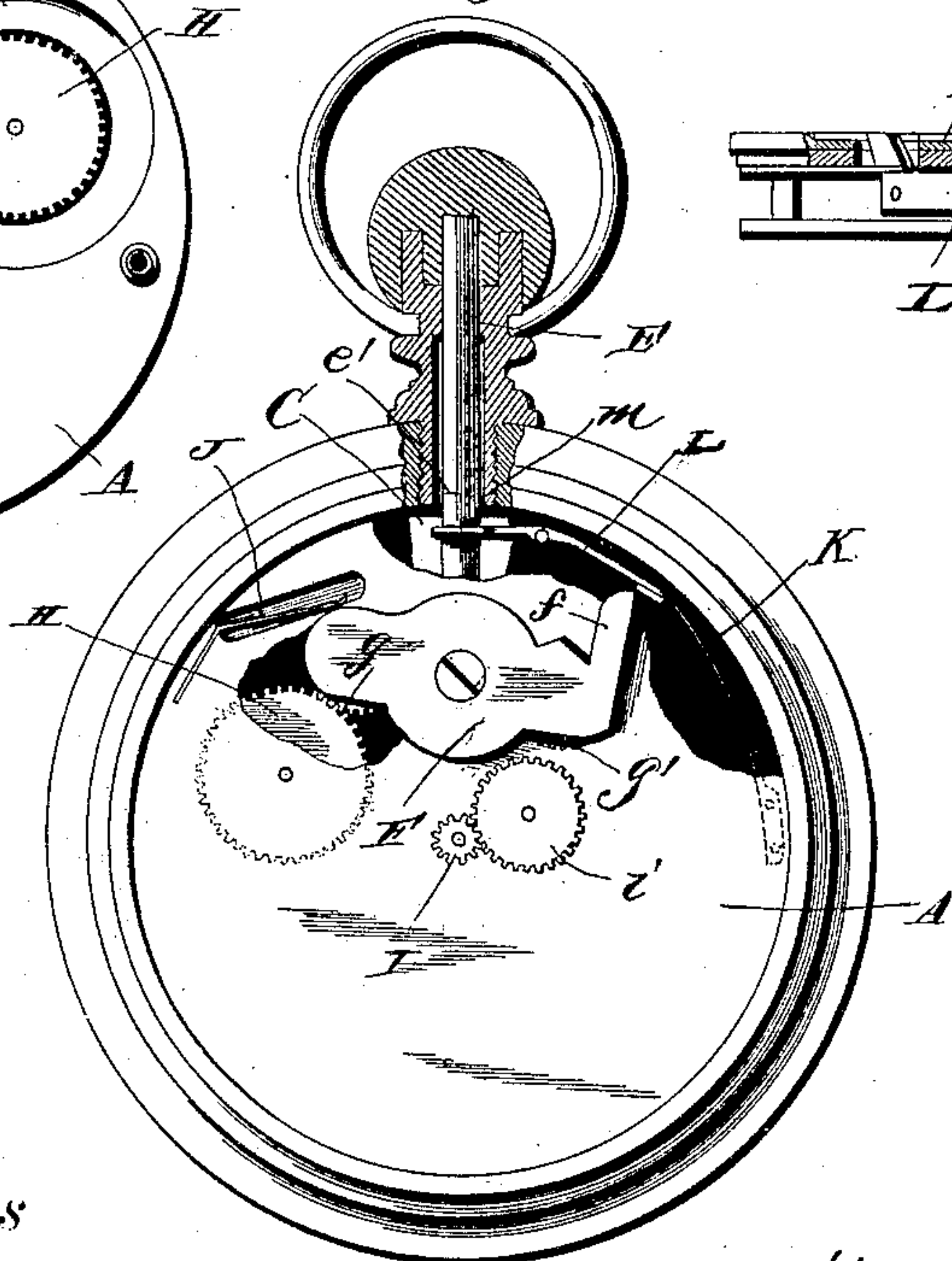
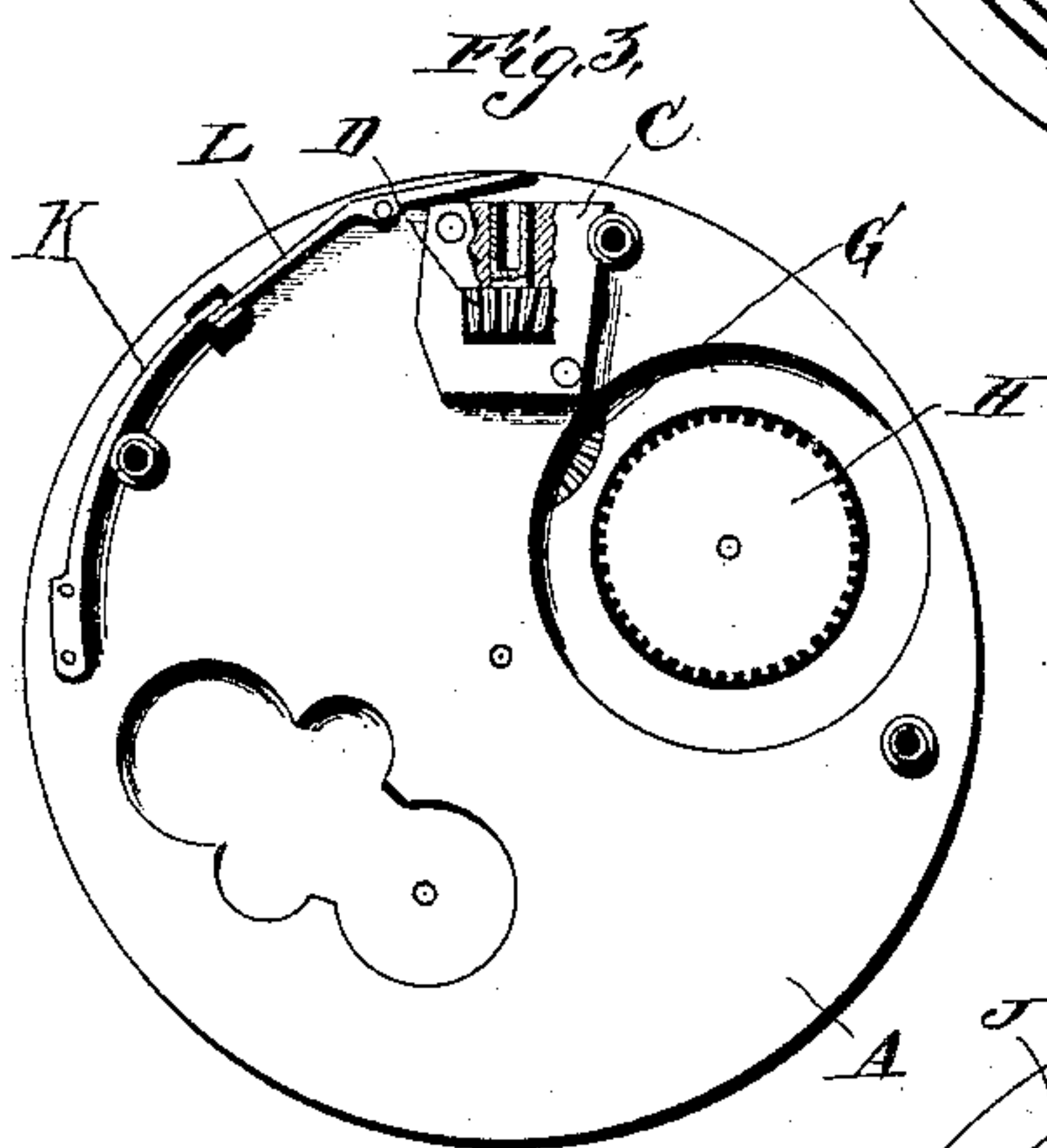
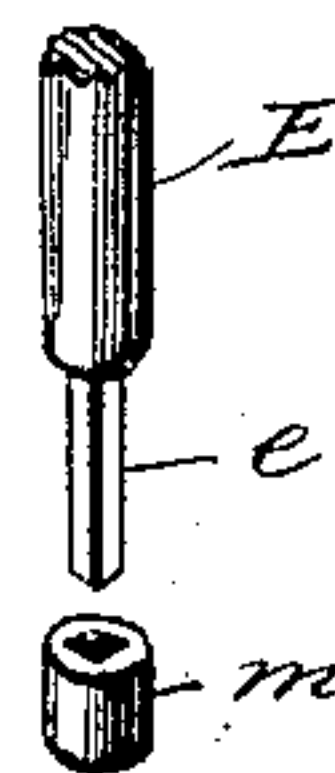
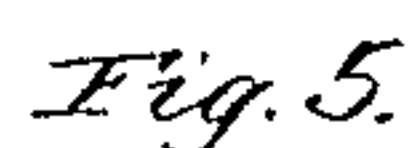
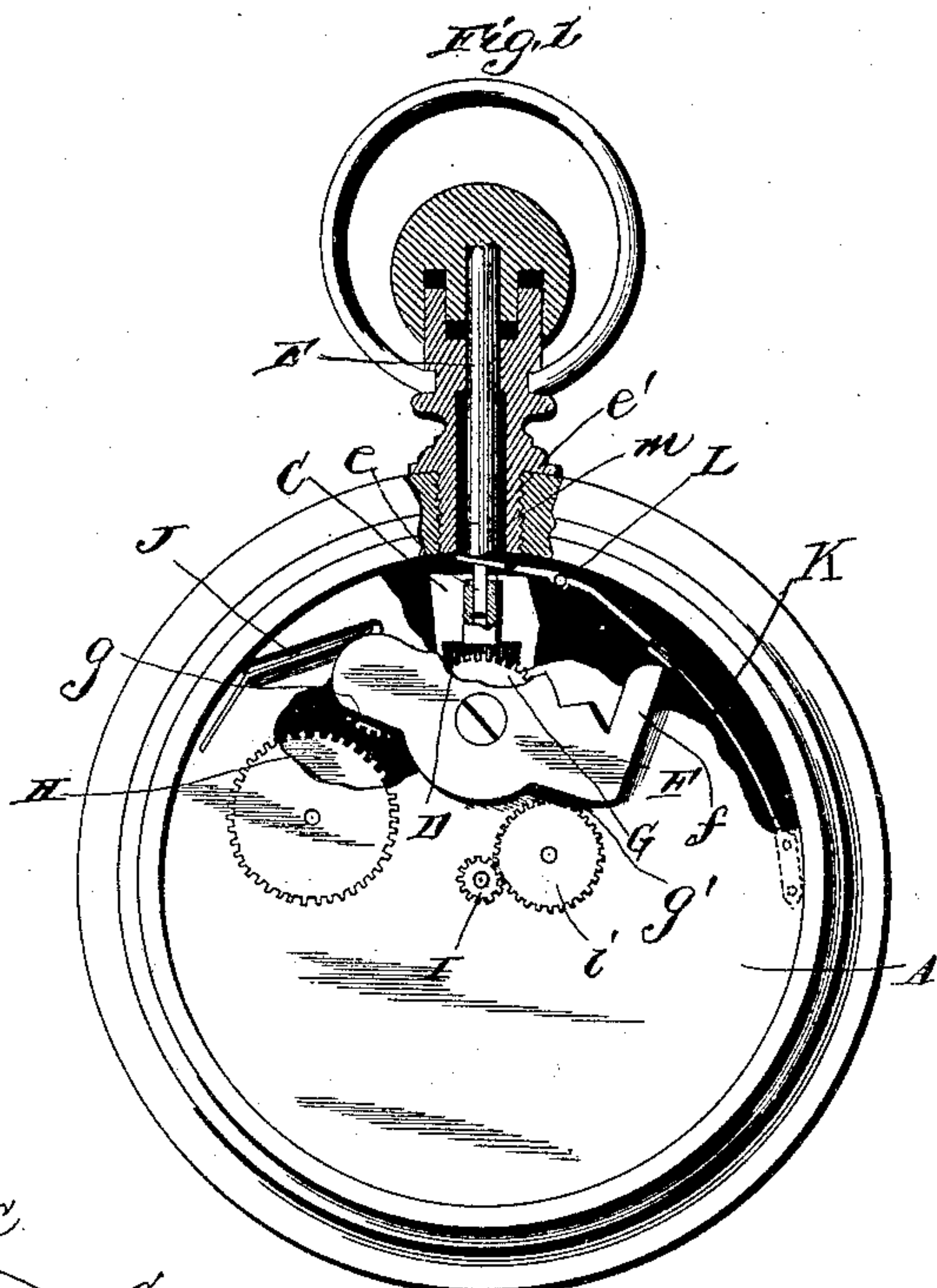


(No Model.)

H. REMPE.  
STEM WINDING AND SETTING WATCH.

No. 407,243.

Patented July 16, 1889.



**WITNESSES**

Sarepta Specht  
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# UNITED STATES PATENT OFFICE.

HENRY REMPE, OF HOUTZDALE, PENNSYLVANIA.

## STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 407,243, dated July 16, 1889.

Application filed November 21, 1888. Serial No. 291,420. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY REMPE, a citizen of the United States, residing at Houtzdale, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Stem Winding and Setting Watches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to stem winding and setting watches, and has for its object the provision of a stem winding and setting mechanism that can be readily adapted to any watch, and which is especially designed to fit any American pendent-set watch-case, the said mechanism being normally in gear with the hands-staff. The yoke or swing-bridge is operated at its ends by a differential force, the pressure on the hands-setting end being superior to depress said end and maintain the said mechanism in gear with the hands-setting staff. When the stem is depressed, the superior force is overcome, and the inferior force, being in the ascendancy, swings the bridge and effects a gearing of the mechanism carried thereby with the winding staff or barrel.

The improvement consists in the novel features and the peculiar construction and combination of the parts, which will be hereinafter more fully described and claimed, and which is shown in the accompanying drawings, in which—

Figure 1 is a front plan view of a watch-movement with a part of the case and stem-support broken away, showing the application of my invention, the parts being in a normal position. Fig. 2 is a view similar to Fig. 1, showing the relative position of the parts when the stem is depressed and the winding and setting mechanism in gear with the winding-stem. Fig. 3 is a detail view of the inner side of the top pillar-plate; Fig. 4, a detail top view, parts being broken away, of the movement; and Fig. 5 is a detail perspective

view of the lower end of the winding and setting stem and the sleeve that is placed thereon, the sleeve being shown removed.

The top pillar-plate A and the bottom pillar-plate B are of ordinary construction. The block C, secured to the rear side of the pillar-plate A, forms a box for the master-pinion D, which is journaled between said block and the plate A, and has its shank made tubular to receive the lower square end *e* of the stem E. The master gear-wheel G, located intermediate of and meshing with the end pinions *g* and *g'*, is at all times in gear with the said pinion D. The pinion *g* is adapted to mesh with the gear-wheel H on the winding-staff, and the pinion *g'* is constructed to gear with the pinion I on the hands-staff through the intermediate pinion *i*.

The yoke or swing-bridge F, provided with the vertical extension *f*, is adapted to be depressed at one end by the spring J and at its other end by the spring K, which acts on the lower end of the lever L, that is pivoted midway of its ends between the plates A and B, said lower end being extended laterally to project through an opening in the plate and bear on the said arm *f* of the swing-bridge. The upper end of the lever L is apertured to receive the lower end of the stem E, which passes therethrough and enters the shank of the pinion D. The sleeve *m*, slipped on the square end of the stem, fills the space between the shoulder *e'* of the stem and the upper end of the lever, so that there will be no lost motion when the stem E is depressed.

Inasmuch as the space between the shoulder *e'* and the lever K varies in different watches, the sleeve *m* will not always be of the same length, and in practice different lengths of sleeves will be provided and kept in stock, so that a sleeve of required length can be readily obtained.

The operation of the invention is as follows: The stem E being at the end of its outward movement, the pinion *g'* will be held in gear with the hands-staff by the superior force of the spring K, which is stronger than the spring J. To wind the watch, push the stem E in. This depresses the outer end of the lever L and disengages its lower end from the



arm *f* of the swing-bridge, which, being free from the power of the spring K, is acted on by the spring J, which swings it and disengages the train of gearing carried by said bridge from the hands-setting staff and throws it in gear with the winding-staff.

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

10 1. In a stem setting and winding watch, the combination, with the yoke, the winding and setting mechanism carried by the yoke, and the spring J, of the lever L, pivoted midway of its ends, the lower end being extended laterally and engaging with the said lever, the spring K, stronger than the spring J, pressing on the lower end of the lever L, and the stem to depress the upper end of the lever L, substantially as and for the purpose described.

20 2. In a stem setting and winding watch, the combination, with the yoke having a vertical arm and the winding and setting mechanism carried by the yoke, of the lever L, piv-

oted midway of its ends and having its lower end extended laterally and engaging with the said vertical arm, the spring K, and the stem, substantially as described. 25

3. In a stem setting and winding watch, the combination of the plates A and B, the pinion D, the block C, the yoke having a vertical arm, the winding and setting mechanism carried by the yoke, the spring J, bearing on one end of the yoke, the lever L, having its lower end extended through an opening in the plate A and engaging with the said vertical arm, the spring K, stronger than the spring J, bearing on the lever L, the stem E, and the sleeve *m* on the lower end of the said stem E, substantially as and for the purpose described. 35

In testimony whereof I affix my signature 40 in presence of witnesses.

HENRY REMPE.

Witnesses:

C. A. LINDSEY,  
JOHN C. BURKERT,  
W. H. PATTERSON.