

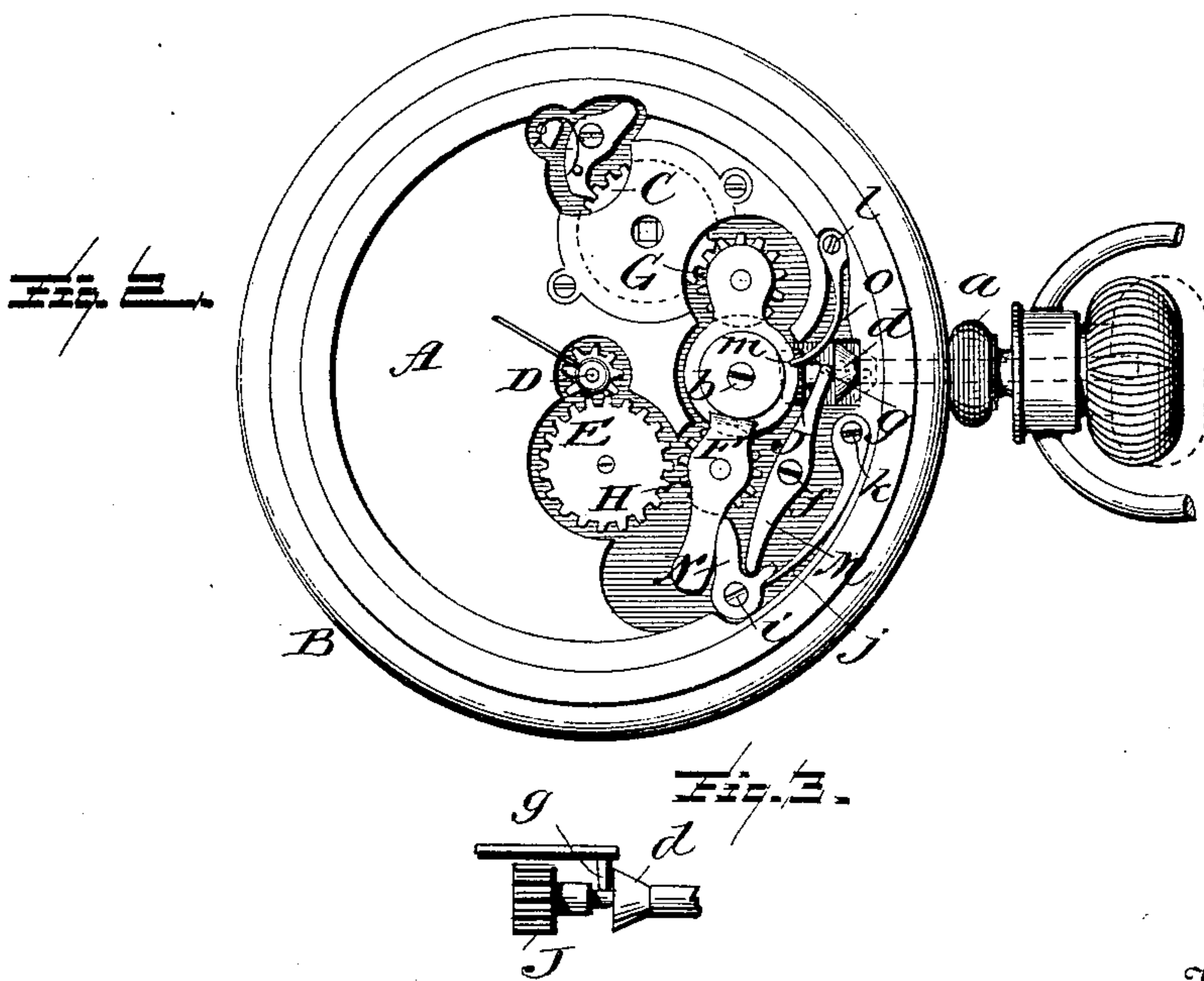
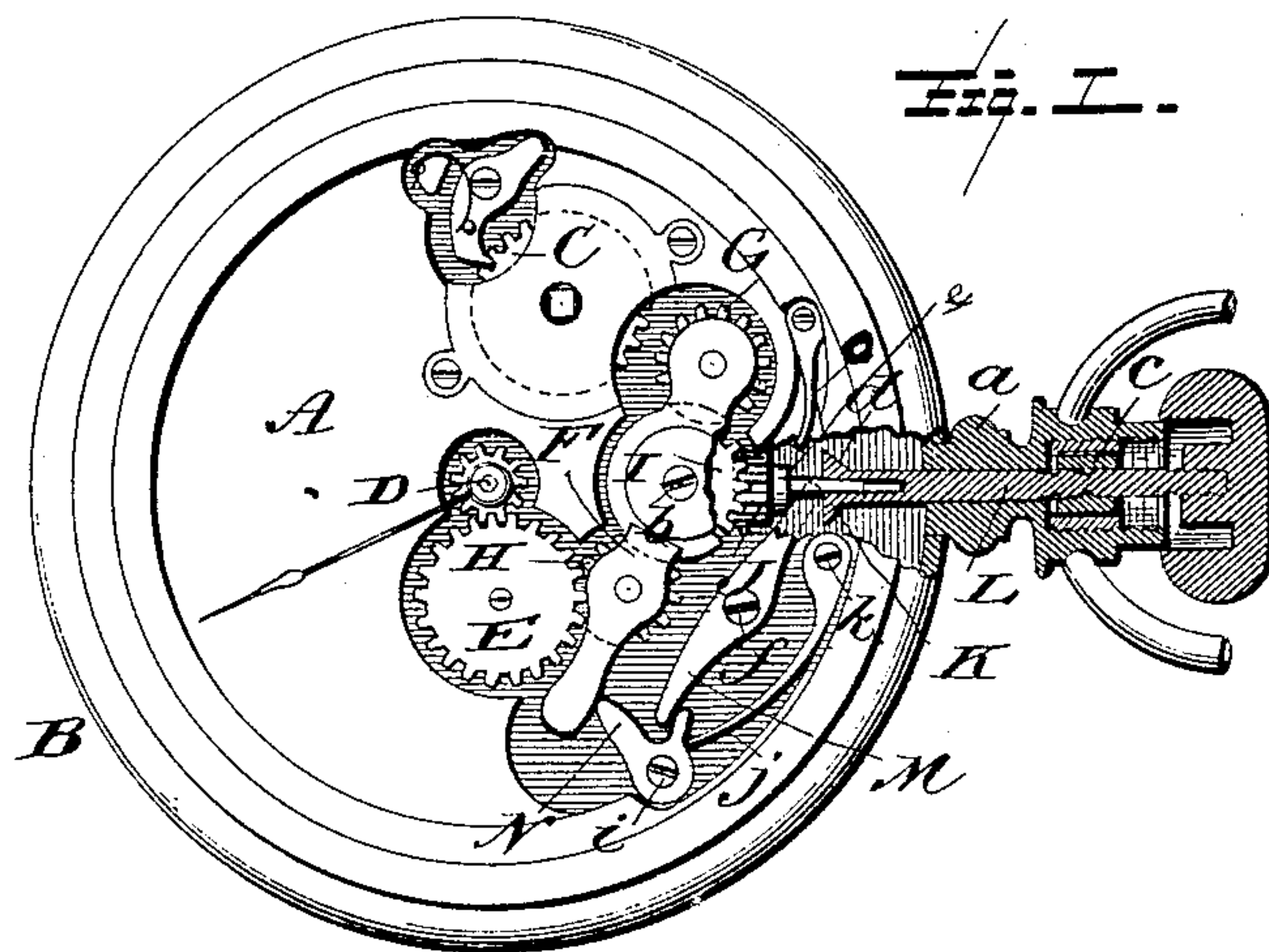
(No Model.)

P. NISIUS.

STEM WINDING AND SETTING WATCH.

No. 452,384.

Patented May 19, 1891.



Witnesses:

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UNITED STATES PATENT OFFICE.

PETER NISIUS, OF SPRINGFIELD, ILLINOIS.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 452,384, dated May 19, 1891.

Application filed December 30, 1890. Serial No. 376,211. (No model.)

To all whom it may concern:

Be it known that I, PETER NISIUS, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in 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 certain new and useful improvements in watches of that class wherein provision is made for operating the winding and hand-setting train by means of a rotatable stem-arbor; and it has for its objects, among others, to provide an improved watch of this character in which the winding and setting trains are operated in a novel manner, the movable yoke being actuated by an interposed lever having a right-angled end which works in a groove in the stem and the other end engaged by a spring-actuated arm, the said lever being at all times under the control of the stem.

The parts embodying my invention are simple, easily applied to watches of various manufactures, and in use have proved most efficient for the purpose for which they are intended.

In the following description it is to be understood that the parts which are not of the present invention may be of any of the well-known or approved forms of construction and arrangement.

The novelty in the present instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a plan view of a watch containing my improvements, the dial being removed and the pendant and a portion of the stem and center band shown in section, the parts

being in one position, that for hand-setting. Fig. 2 is a plan view with the parts in their other position, that ready for winding. Fig. 3 is a detail in side elevation.

Like letters of reference indicate like parts in all the views.

Referring now to the details of the drawings by letter, A designates the top plate of a watch-movement, which plate is contained within the center band B of a watch-case, and *a* is the pendant.

As the present invention relates to the winding and hands-setting mechanisms solely, only the main winding-wheel C and one of the dial-wheels D are shown of all of the time-train; but it is believed these will be sufficient for a clear and full understanding of the invention.

E is a cog-wheel which meshes with the wheel D, which controls the movement of the hands of the watch.

F is a yoke pivoted at *b* and carrying near one end a cog-wheel G, which meshes with the wheel C, and near the other end a cog-wheel H, which meshes with the wheel E, according to which position the said yoke assumes, the one wheel being out of mesh with its companion when the others are in mesh. On the pivot of the said yoke is a cog-wheel I, with which the pinion J on the shaft K is always in engagement. This shaft has a squared or other shaped portion which fits in the opening in the inner end of the stem L of the watch, as shown in Fig. 1, the said opening being of sufficient length as to allow sufficient endwise movement of the parts when desired. This stem is designed to move endwise in the pendant, and is provided with a suitable spring-retainer *c* of known construction. At its inner end the stem is formed with a square shoulder *d*, and the shaft of the pinion J is formed with a shoulder *d*, as seen best in Fig. 1.

M is a lever pivoted at *f* and at one end provided with a right-angled portion or lug *g*, which extends inwardly and engages the recess formed between the shoulders on the shaft and stem, as seen in Fig. 2. This lever at its other end works in the notch of the arm or bifurcated lever N, which is pivoted at *i*, and is acted upon by the spring *j*, which is

secured at one end, as at *k*, and the other bearing upon the short arm of the said lever *N*, as seen in all the views, the points of engagement of the two parts being preferably rounded, as shown, so as to lessen the friction during the operation thereof. The long arm of this bifurcated lever acts upon the outer end of the lever *F*, as shown.

O is a spring-arm secured at *l* and its free end engaging a notch *m* in the lever *F*, as seen in Fig. 2.

The operation is simple and will be readily understood from the above description when taken in connection with the annexed drawings. As shown in Fig. 2, the parts are in the position they assume when the stem is pushed in, and the watch may then be wound up for running. The hands-setting mechanism is then out of gear. When the stem is pulled out, the right-angled portion of the lever *M*, being no longer pressed upon by the shoulder of the stem, is free to be actuated by the spring *j*, which forces the short arm of the bifurcated lever against the outer end of the lever *M* and the long arm of the bifurcated lever against the outer end of the lever *F*, and the parts are thus thrown into the position shown in Fig. 1, the cog-wheel *H* meshing with the wheel *E*, and the hands may then be set at pleasure, the winding mechanism being then thrown out of gear. When the stem is pushed in, its shoulder engages the right-angled end of the lever *M*, and the parts are forced into

the position in which they are shown in Fig. 2.

What I claim as new is—

1. The combination, with the movable stem and the vibrating yoke and its wheels, of the pivoted bifurcated lever having its longer arm at all times in contact with said yoke, the pivoted lever *J*, substantially parallel with the yoke, with one end working between the arms of the bifurcated lever and the other end extended in the path of the movable stem, and the spring acting on the short arm of the bifurcated lever, substantially as shown and described.

2. The combination, with the movable stem having shoulder *d*, the vibrating yoke and its wheels, and the relatively-fixed pinion, of the pinion-shaft provided with shoulder *e*, the pivoted bifurcated lever having its longer arm at all times in contact with the yoke, the pivoted lever *J*, substantially parallel with the yoke, with one end working between the arms of the bifurcated lever and the other provided with a right-angled lug *g*, working between the shoulders *d* and *e*, and the spring acting on the short arm of the bifurcated lever, substantially as shown and described.

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

PETER NISIUS.

Witnesses:

JOHN LUTZ,
PHILIP SAUL.