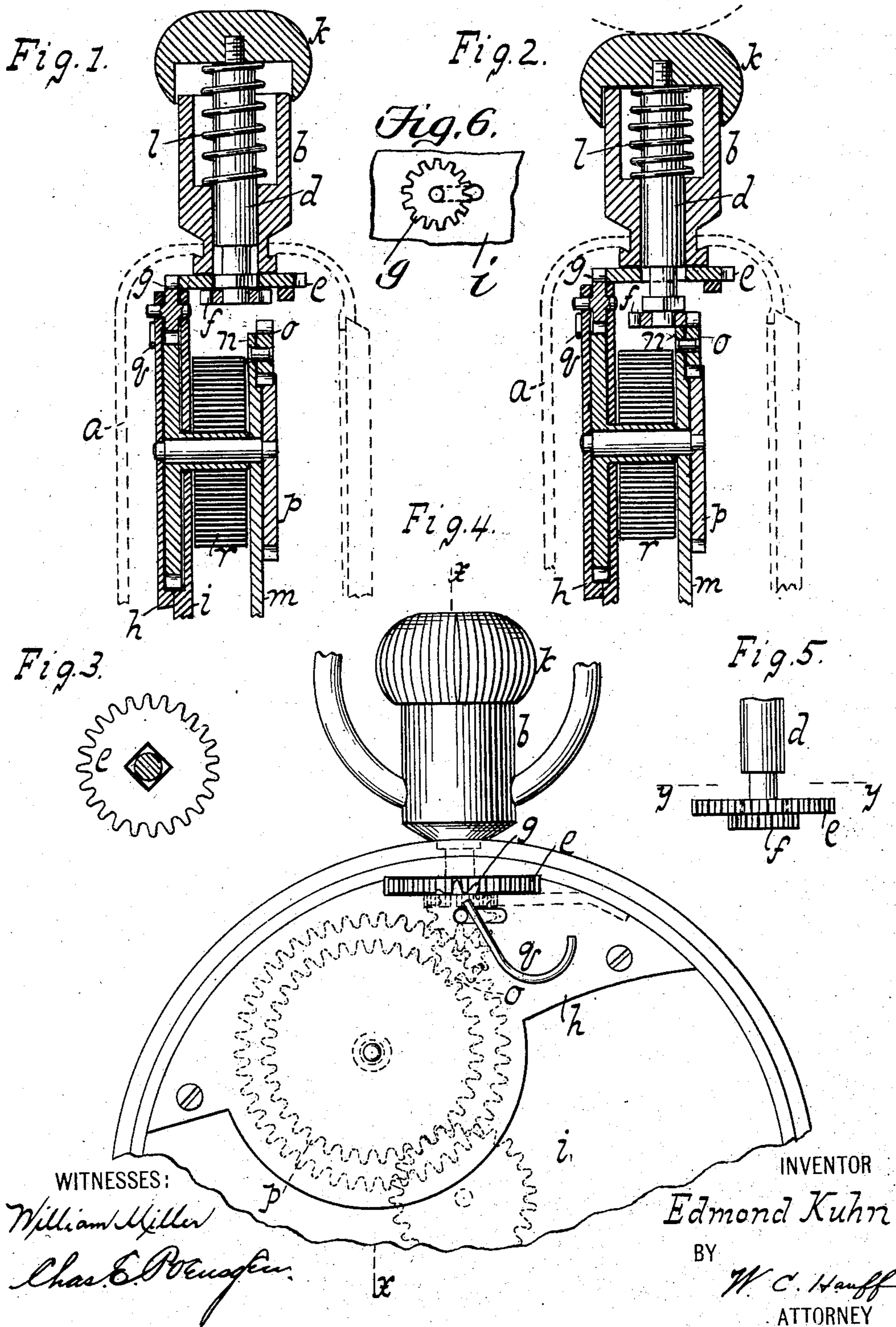


E. KUHN.
STEM WINDING AND SETTING WATCH.
APPLICATION FILED JAN. 30, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 736,270, dated August 11, 1903.

Application filed January 30, 1903. Serial No. 141,202. (No model.)

To all whom it may concern:

Be it known that I, EDMOND KUHN, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Stem Winding and Setting Watches, of which the following is a specification.

The object of this invention is to simplify the construction or reduce the number of parts of a watch. Cheapening and reduced liability to get out of order are thus effected.

The invention is set forth in the following specification and claim and illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of a stem winding and setting mechanism embodying this invention, the parts being in winding position and sectioned along *xx*, Fig. 4. Fig. 2 shows the same parts in setting position. Fig. 3 is a section along *yy*, Fig. 5. Fig. 4 is a front view of Fig. 1. Fig. 5 is an elevation of the stem and gears. Fig. 6 is an elevation of a part of the rear plate and showing the slot in which is arranged one end of the arbor of the winding-pinion.

The watch-case *a* has the pendant *b*, with chamber for spring *l* for pressing the crown *k* and stem-arbor *d* outward.

The setting-wheel *f* is fixed to the inner end of the stem-arbor *d* and moves in and out with such arbor, as well as rotating with the same.

The inner end of the arbor *d* just outside the setting-wheel *f* is square or non-circular to correspond to the hole, Fig. 3, in the winding-pinion *e*. Adjacent to this square or non-circular portion the arbor *d* is cut away or diminished in diameter.

When the arbor *d* is pressed or moved out, Fig. 1, the setting-wheel *f* is moved out of gear with the intermediate pinion *o*; but the square portion of arbor *d* engages winding-gear *e* to rotate the same, with the intermediate gear *g* engaging the gear of spring drum or barrel *r*.

When the arbor *d* is moved inward, Fig. 2, the diminished portion of such arbor is carried to the hole in gear *e*, so that arbor *d* will turn in gear *e* while the latter remains at rest.

At the same time the arbor *d* moves the gear *f* to engagement with gear *o* of the well-known

setting-train *p*. The rotation of arbor *d* now causes the gears *f* and *o* to rotate and set the hands. Allowing the spring *l* to move the arbor *d* out will restore the parts to winding position, as seen in Fig. 1.

In winding, the usual click or ratcheting back movement of pinion *g* is allowed by spring *q*, Fig. 4, yielding for pinion *g* to slip in the slots forming the seat of such pinion. These slots are formed in bridge *h* and rear plate *i*, forming the bearings for the arbor of pinion *g*.

The pinion *o* is mounted on a stud at the offset *n* of front plate *m*.

The setting-train and setting-wheel are both in direct engagement with intermediate setting-wheel *o* during the setting operation, and three gears, as shown, form a simple arrangement not liable to get out of order.

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

A stem winding and setting watch comprising an inwardly and rotatably movable stem having its outer part of greater diameter than its inner part and its inner part provided with a squared portion projecting therefrom, a setting-wheel fixed to the free end of said part of smaller diameter and arranged in close proximity to the inner face of said squared portion, a winding-pinion provided with a centrally-arranged opening of greater diameter than the said inner part of said stem and adapted to receive the said squared portion for coupling said winding-pinion to the stem so that when the stem is rotated the winding-pinion is adapted to move therewith, said stem when forced inwardly adapted to be free of said winding-pinion, a bridge provided with a slot, a plate *i* extending parallel to said bridge and provided with a slot in alignment with the slot of the bridge, a plate *m* extending parallel to said plate *i*, a winding mechanism carried by said bridge and plate *i*, a pinion having an arbor journaled in said slots of the bridge and plate *i* and engaging with said winding mechanism, said arbor projecting from said bridge, a spring engaging the projecting end of said arbor for retaining the said pinion in position, said pinion adapted when operated by said winding-wheel to operate said winding mechanism, a setting-

gear, and a setting-pinion supported by, at
the front of and extending above the top of the
said plate *m* and engaging and operating the
said setting-gear, said setting-pinion adapted
5 to be engaged and operated by the setting-
wheel when the said stem is moved inwardly
and operated.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

EDMOND KUHN.

Witnesses:

E. F. KASTENHUBER,
CHAS. E. POENSGEN.