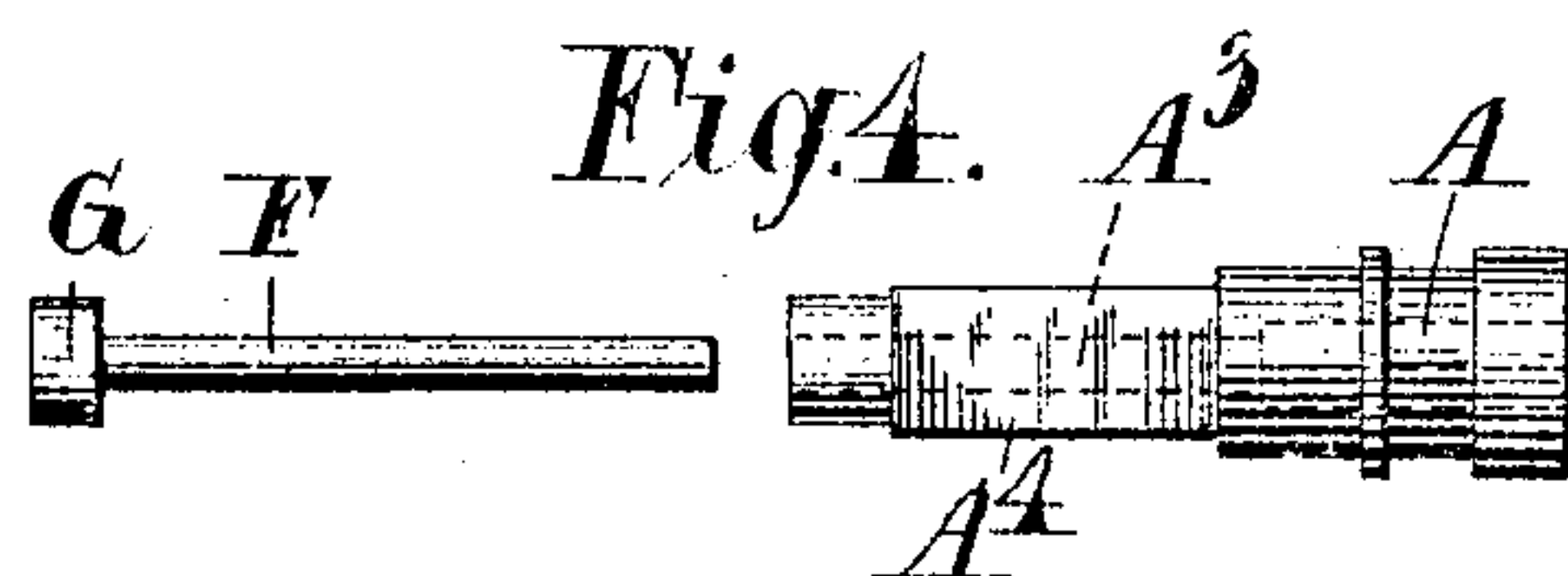
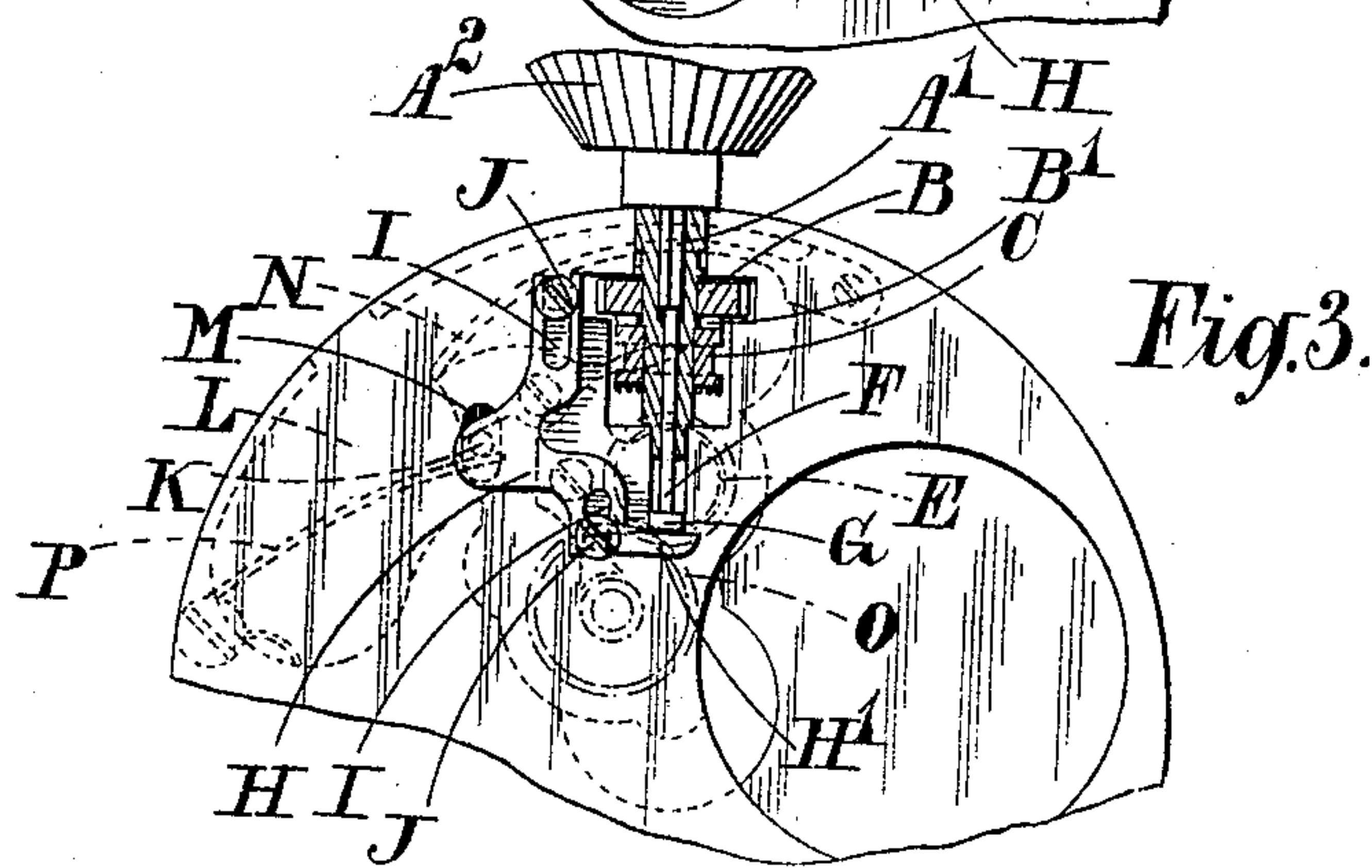
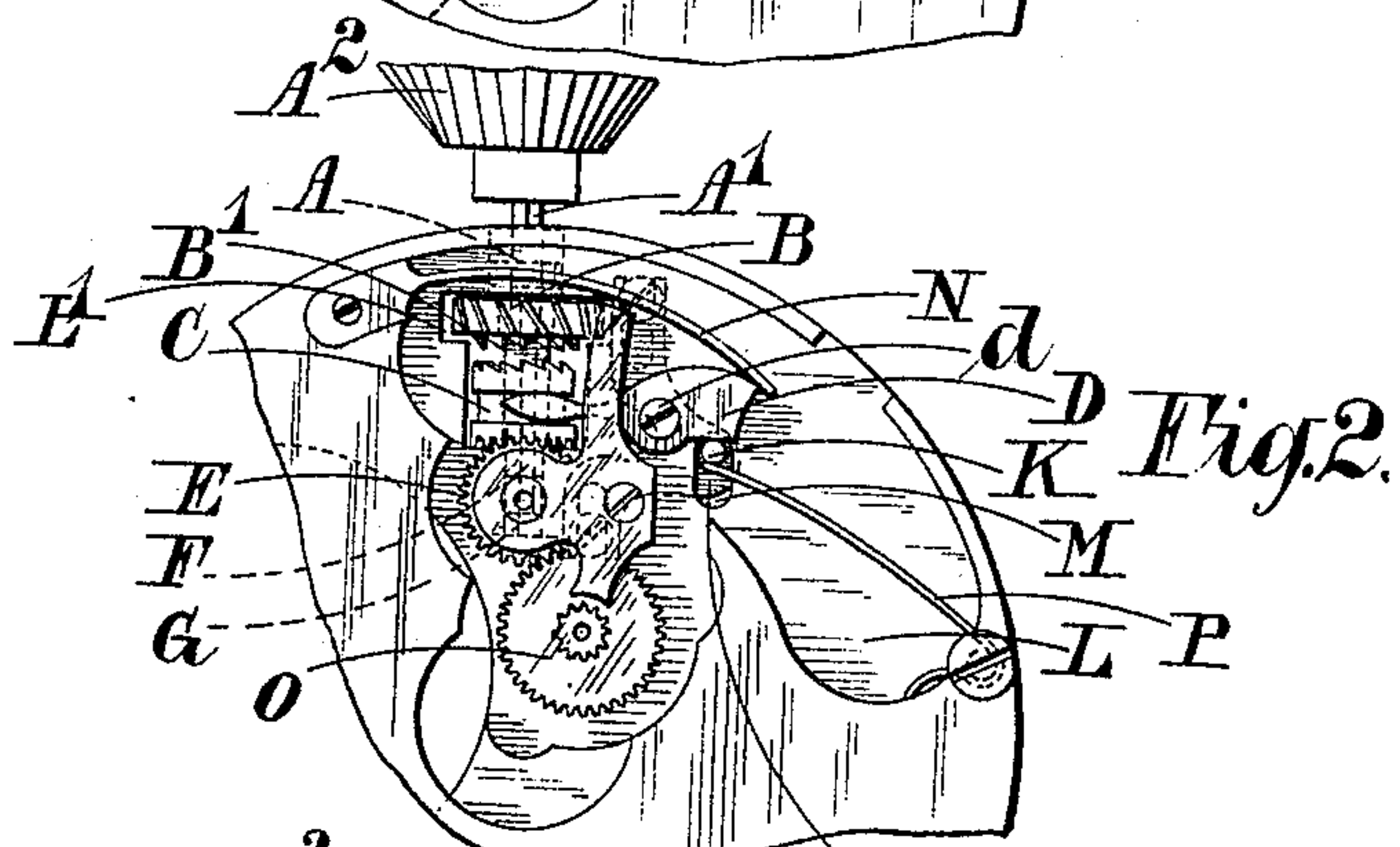
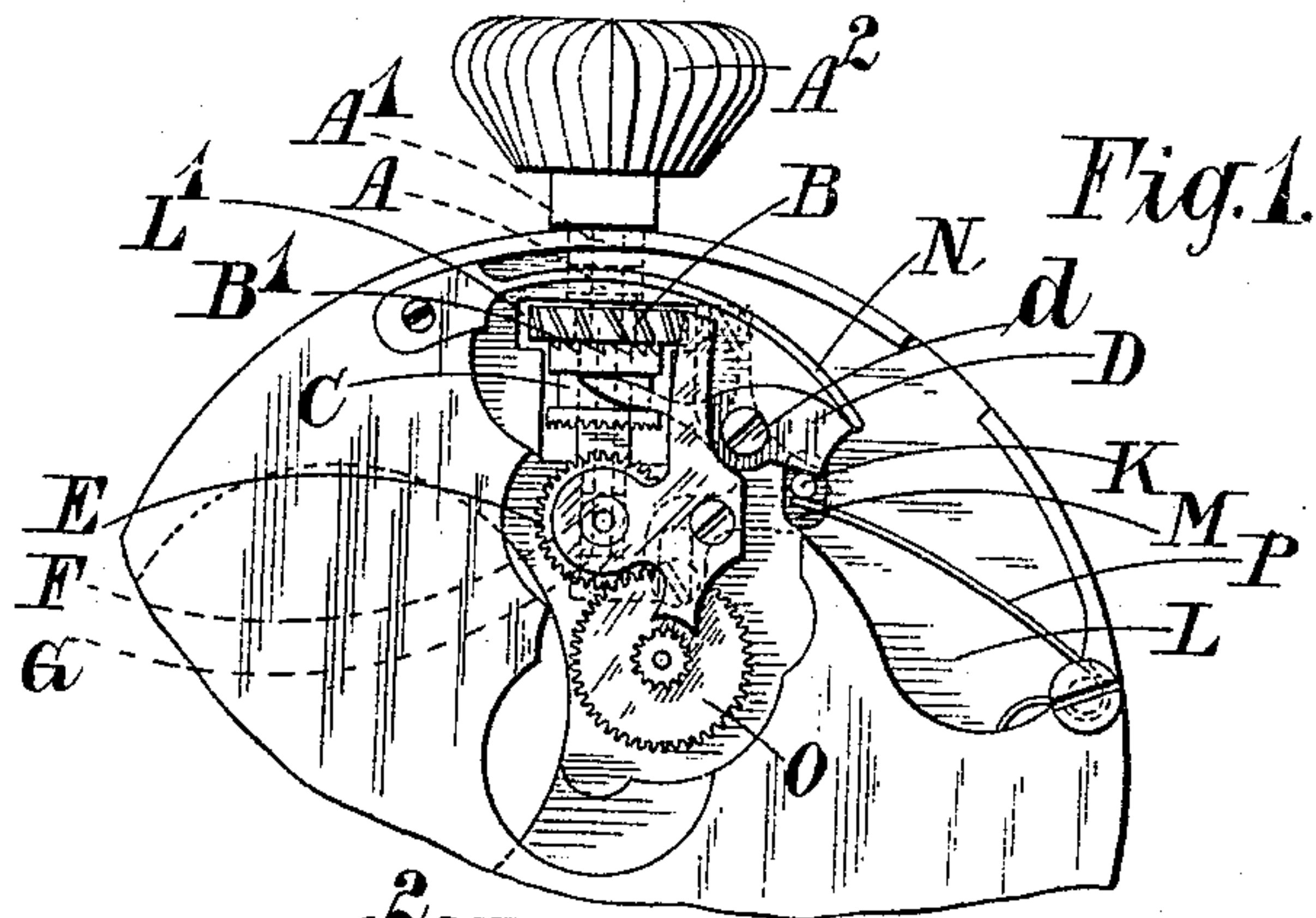


No. 819,713.

PATENTED MAY 8, 1906.

N. BÉGUELIN.  
STEM WINDING WATCH.  
APPLICATION FILED SEPT. 16, 1904.



Witnesses:  
E. H. Bond  
F. A. Spencer

Inventor  
Numa Béguelin  
By H. E. Boulter  
Atty



# UNITED STATES PATENT OFFICE.

NUMA BÉGUELIN, OF SOLOTHURN, SWITZERLAND.

## STEM-WINDING WATCH.

No. 819,713.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed September 16, 1904. Serial No. 224,703.

*To all whom it may concern:*

Be it known that I, NUMA BÉGUELIN, a citizen of the Republic of Switzerland, residing at Solothurn, Switzerland, have invented certain new and useful Improvements in Stem-Winding Watches, of which the following is a specification.

This invention relates to a keyless mechanism for winding up and setting the hands of watches whereby according as the winding-stem is pushed more or less inward the hands will be set or the going-spring wound up.

A construction of the mechanism according to this invention is illustrated by way of example in the accompanying drawings, in which—

Figure 1 is a plan view, the parts being shown in the position for the winding of the watch. Fig. 2 is a plan view with the parts arranged for setting the hands. Fig. 3 is an under side view of the mechanism opposite to that of the Fig. 1, and Fig. 4 is a detail view of the winding-stem.

The stem-arbor A, operated by a square pin A', provided with a turn-button or knob A<sup>2</sup>, has loosely mounted upon it a crown-wheel B. The lower square portion A<sup>4</sup> of the said arbor A carries a sliding ratchet-clutch C, which can be made by the action of a balance-lever D, pivoted at d, either to engage with the minute-wheel pinion E for setting the hands or to become coupled to the crown-wheel B of the winding-gear. The arbor A is provided throughout the whole of its length with a central cylindrical passage A<sup>3</sup>, in which can move a pin F, provided at the bottom with a head G, which constantly presses against a slide H, mounted between the two covers and having guide-grooves I, whereby it can move in the direction parallel to the axis of the pin F, being guided by two headed screws J. The slide H is provided on its under side with a pin or projection K, passing through the plate L, through an elongated opening M therein, and has a finger or projection H' projecting in the path of the head G of the pin F. The pin A' when pushed inward, Figs. 1 and 3, causes, through the intermediary of the headed pin F, the slide H, Fig. 3, to move inward. The pin K no longer presses the lever D outward; but the spring N causes the

lever D to swing inward, thereby pushing the sliding clutch C toward the crown-wheel B and causing its teeth to engage the lateral teeth B' thereon to effect the winding up of the going-spring on turning of the knob A<sup>2</sup>. On the other hand, if the pin A' is moved slightly outward or not pressed fully in, as shown in Fig. 2, the pin F will move inward in the bore A<sup>3</sup> of the sleeve A under the influence of the spring P (which is stronger than the spring N) acting on the pin K of the slide H, thereby moving the latter outward, the pin K forcing the end of the lever D outward and causing the other end of the lever D to swing and carry the sliding pinion C toward the minute-wheel pinion E, with which it engages for setting the hands of the watch by turning the knob A<sup>2</sup>.

The winding and setting pin can be secured from complete withdrawal from the watch-casing in any usual or suitable manner.

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

1. A watch hand setting and winding mechanism comprising a longitudinally-movable winding and setting pin, a rotatable sleeve, a crown-pinion loosely mounted on said sleeve, a double clutch longitudinally movable on said sleeve, a slide operated by the winding and setting pin, a pin on said slide, a strong spring acting against said pin, a pivoted clutch-operating lever and a spring acting against the tail of said lever in opposition to the first-named spring, substantially as set forth.

2. In a watch hand setting and winding mechanism the combination of a rotatable hollow sleeve of part circular and part angular bore, a winding and setting pin adapted to engage and move longitudinally in the angular portion of the bore, a pin longitudinally movable in the circular bore of said sleeve, a head on the bottom end of the pin, a crown-pinion loosely mounted upon the sleeve, a double clutch longitudinally movable on said sleeve, a slide adjusted to move in a direction parallel to the axis of the setting-pin, a projection on said slide, said projection being adapted to be engaged by the headed pin moving longitudinally in the circular bore of the sleeve, a pin on the slide, a strong spring

acting on said pin and tending to move the  
slide upward against the headed pin, a piv-  
oted clutch-operating lever and a spring act-  
ing against the tail of said lever in opposition  
5 to the first-named spring substantially as set  
forth.

In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

NUMA BÉGUELIN.

Witnesses:

R. MOSSMANN,  
A. FROELICHER.