

J. A. BOREL & P. & J. COURVOISIER.

Improvement in Stem-Winding Watches.

No. 127,452.

Patented June 4, 1872.

Fig: 1.

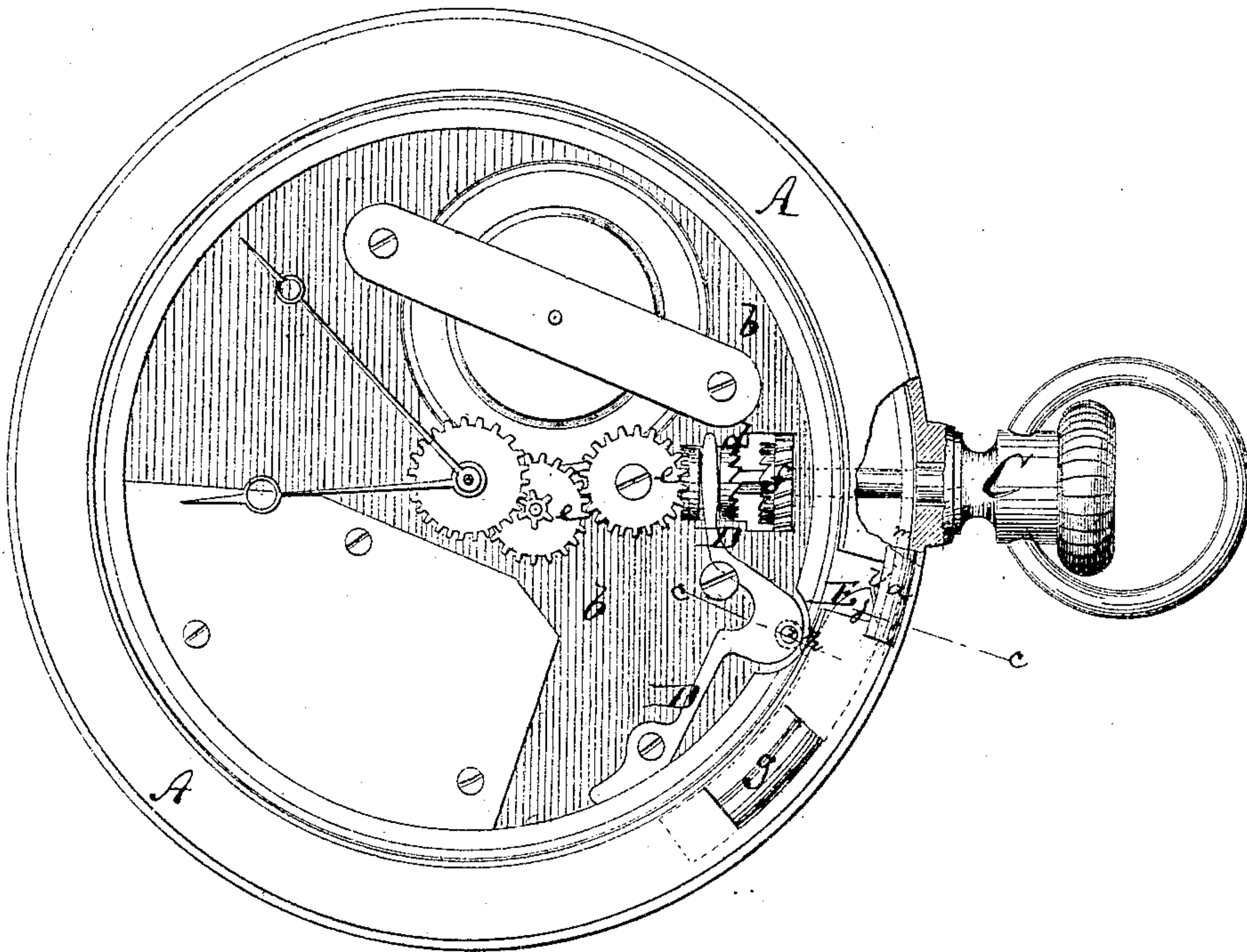


Fig: 3.

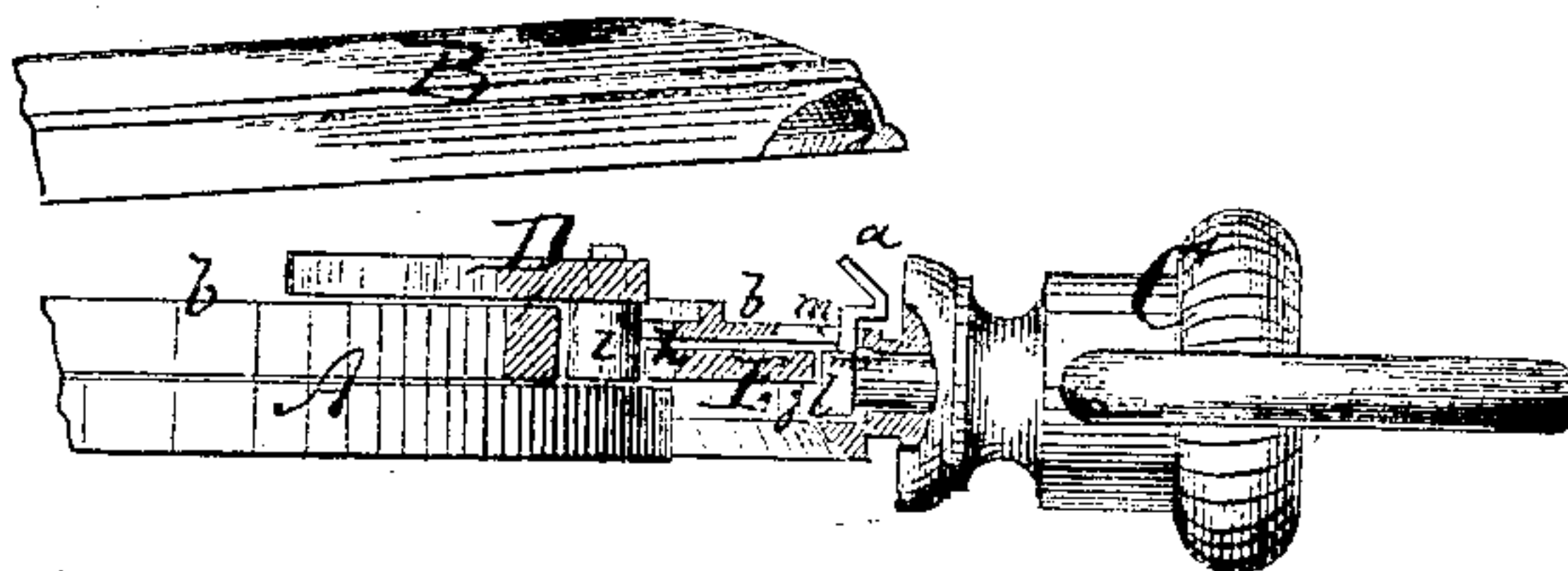
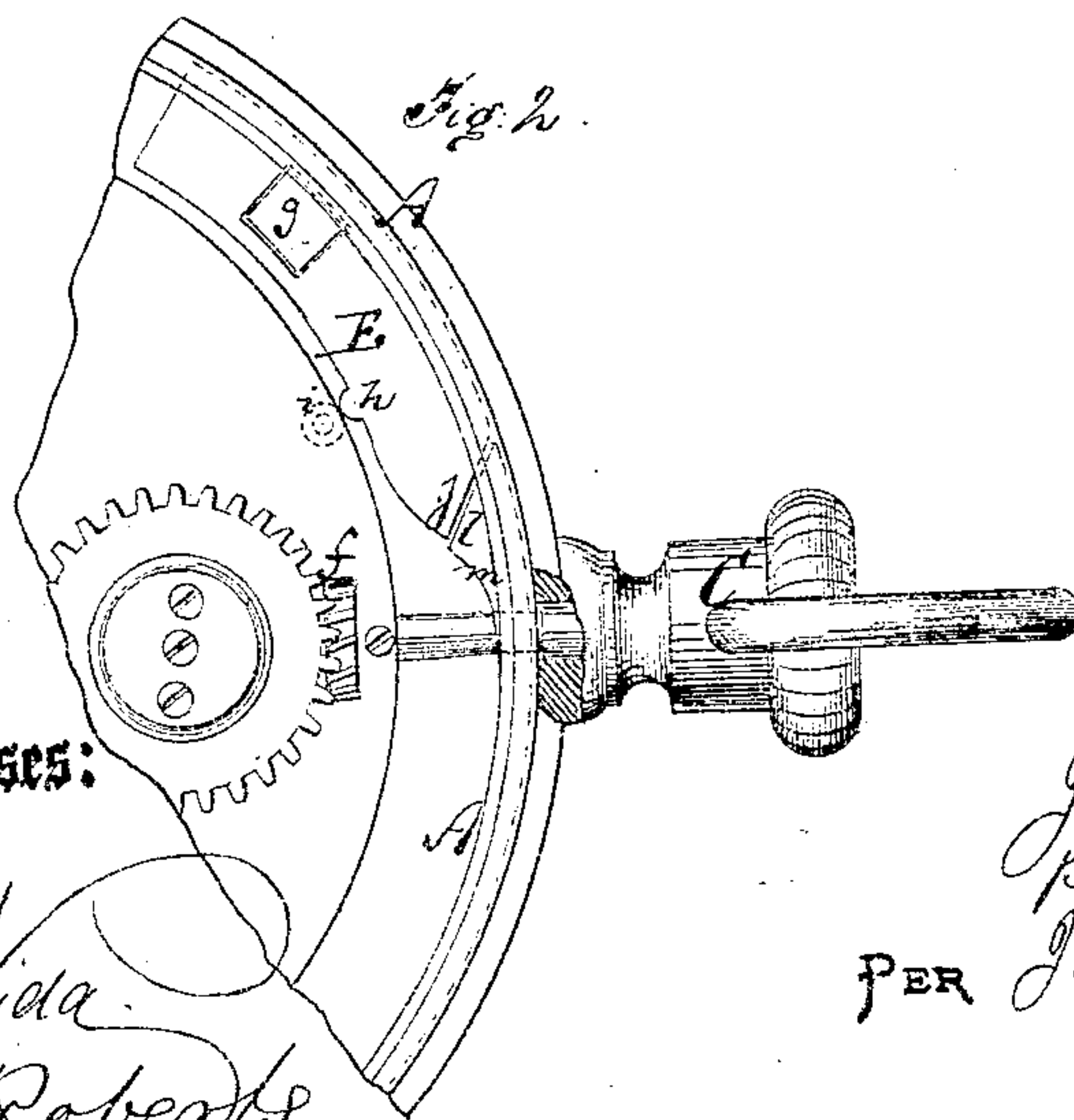


Fig 2.



Witnesses:

Chas. Nida.
Alex F. Roberts

Inventor:

J. A. Borel
 P. Courvoisier
 PER J. Courvoisier
 Munnell
 Attorneys.

UNITED STATES PATENT OFFICE.

JULES A. BOREL, PAUL COURVOISIER, AND JEAN COURVOISIER, OF NEUF-CHATEL, SWITZERLAND, ASSIGNORS TO FLORIAN QUINCHE AND CHARLES L. KRUGLER, OF NEW YORK, N. Y.

IMPROVEMENT IN STEM-WINDING WATCHES.

Specification forming part of Letters Patent No. 127,452, dated June 4, 1872.

Specification describing a new and useful Improvement in Stem-Winding Watches, invented by JULES ALPHONSE BOREL, PAUL COURVOISIER, and JEAN COURVOISIER, of Neufchatel, Switzerland.

Figure 1 represents a face view without the dial of a stem-winding watch having our improvement. Fig. 2 is a back view of the same, and Fig. 3 a transverse section of the same on the line *c c*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new arrangement of stem-winding watch whereby the setting apparatus will be automatically thrown out of gear whenever the face of the watch-case is closed or the stem pushed inward. The invention consists in the arrangement of a peculiar slide, which actuates the clutch-lever for throwing the winding or setting mechanism into gear and which has a wedge-shaped attachment for contact with the fastening-catch of the case. When said catch is crowded in, either by the closing of the case or by the pushing in of the stem, the slide will be moved and the spring-clutch lever liberated to connect with the winding mechanism.

A in the drawing represents the annular part of the watch-case in which the works are held. B is the hinged face-plate or lid of the case, which when closed is held down by a spring-catch, *a*, set into the ring A. The catch *a* is so connected with the sliding stem C, in ordinary or suitable manner, that by the inward motion of said stem the catch will also be crowded inward to release the lid B and allow it to swing open, all of which is well known. D is the spring-lever pivoted to the bottom-plate *b* of the watch directly under the dial. It connects with the sliding clutch *d*, which it either holds in gear with the setting mechanism *e*, as in Fig. 1, or with the winding mechanism *f*. The tendency of the lever D, if liberated, is to hold the clutch in gear with the

winding mechanism. In the face of the ring A is arranged a knob, *g*, which connects with a concealed slide, E. When the knob *g* is, by hand, moved toward the catch *a* a projecting lug, *h*, of the slide E is brought against a small friction-roller or ear, *i*, on the lever D, and thereby crowds said lever inwardly to make it connect the stem with the setting mechanism. All parts are then in the position shown in Fig. 1, the lid B, of course, being opened, as otherwise the knob could not be reached. In this position an oblique edge, *j*, of the slide E is directly parallel with and close to a similar oblique edge, *l*, on the spring-holder *m* of the catch *a*. As soon as the lid B is closed and the catch *a* thereby momentarily carried inward, the consequent contact of the surfaces *l j* will cause the slide E to be pushed and the lug *h* to pass the most prominent point of the roller or ear *i*, the spring of the lever D aiding in the final return of the slide to its normal position and of the clutch to contact with the winding apparatus. Thus the closing of the watch-case inevitably effects the contact of the clutch with the winding apparatus. The same effect is obtained by pushing against the stem, which moves the catch *a* in manner equivalent to the closing of the lid.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, with a double clutch, *d*, placed between the wheels *e f* of the watch, of the spring-lever D, operated alternately by a sliding stem, C, and slide E, as and for the purpose described.

JULES ALPHONSE BOREL.
PAUL COURVOISIER.
JEAN COURVOISIER.

Witnesses:

CHS. DU BOIS,
H. SALATRE.