

(No Model.)

H. SCHÜTZ.

STEM WINDING AND SETTING WATCH.

No. 397,313.

Patented Feb. 5, 1889.

Fig. 1

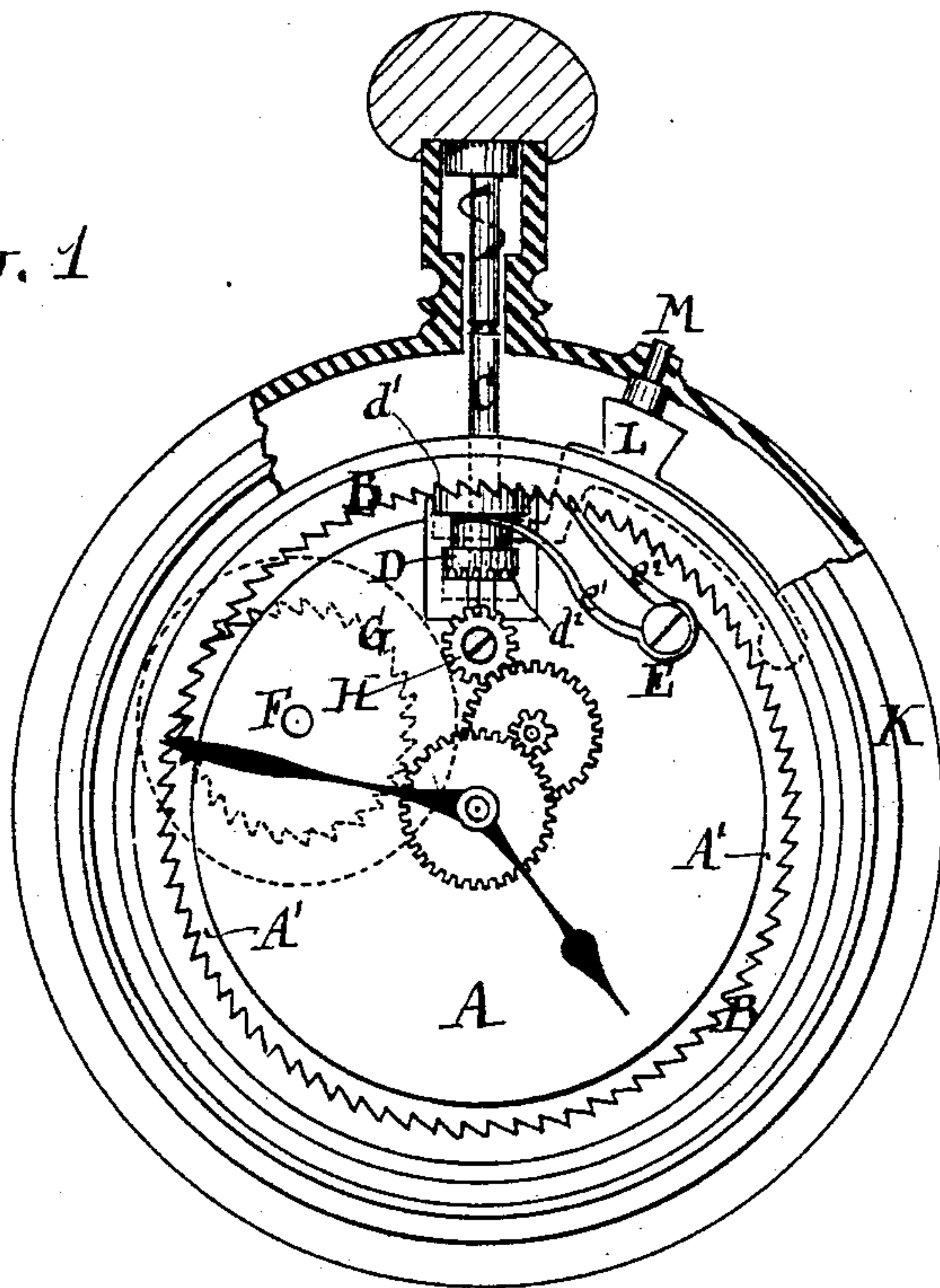
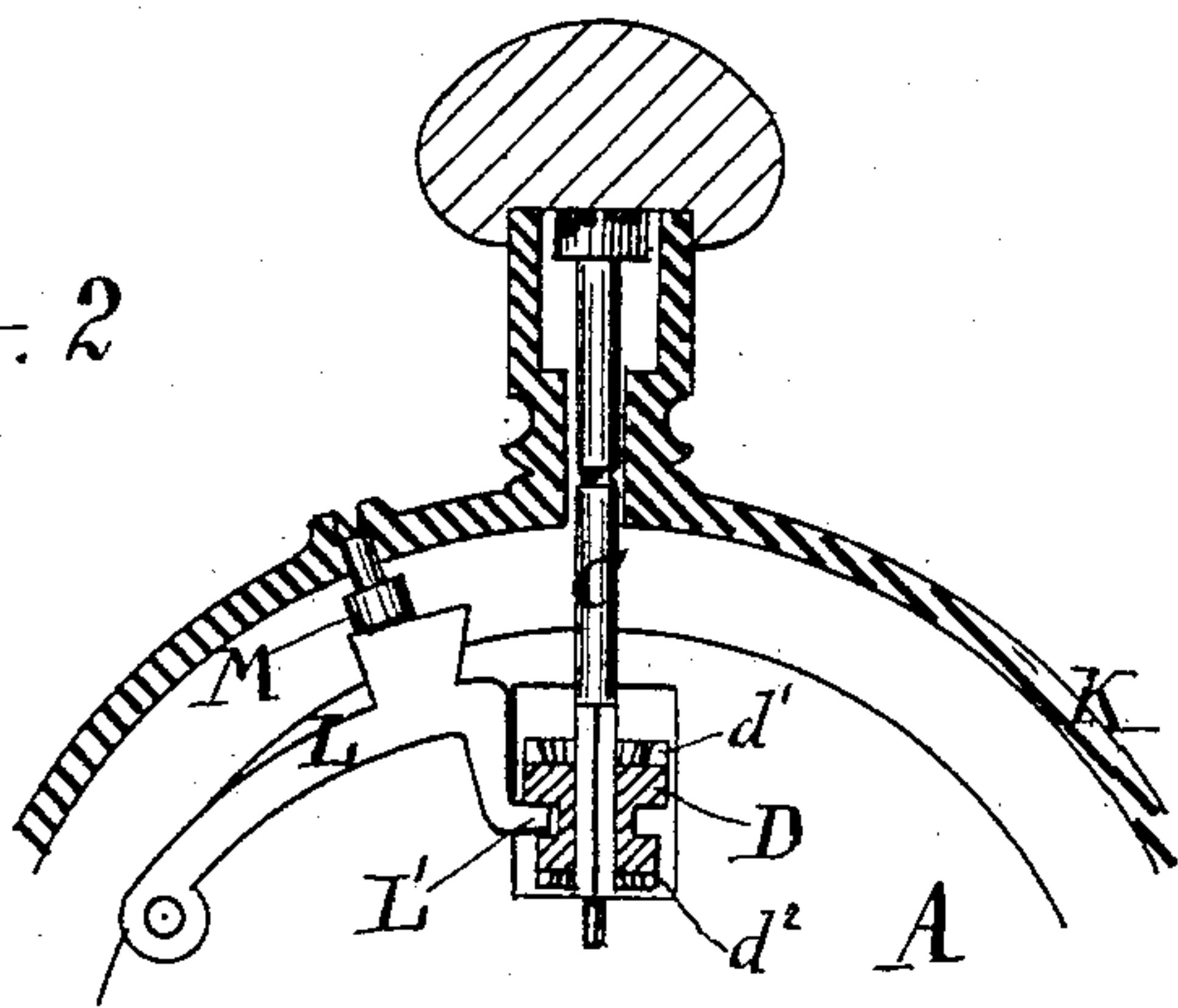


Fig. 2



Witnesses

Chas. H. Smith
J. Stail

Inventor

Hippolyte Schutz
per Lemuel W. Terrell
att'y

UNITED STATES PATENT OFFICE.

HIPPOLYTE SCHÜTZ, OF RECONVILLIER, SWITZERLAND, ASSIGNOR TO KUHN
& FIÈCHE, OF SAME PLACE.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 397,313, dated February 5, 1889.

Application filed June 21, 1888. Serial No. 277,749. (No model.) Patented in France February 10, 1887, No. 187,194; in Belgium October 15, 1887, No. 79,123, and in Germany January 5, 1888, No. 42,809.

To all whom it may concern:

Be it known that I, HIPPOLYTE SCHÜTZ, watch-maker, residing at Reconvillier, in Switzerland, have invented a new and useful
5 Improvement in Stem-Winding Watches, (for which Letters Patent have been granted in France, numbered 187,194, dated February 10, 1887; in Belgium, numbered 79,123, dated October 15, 1887, and in Germany, numbered
10 42,809, dated January 5, 1888,) of which the following is a specification.

Stem-winding devices have been made in which there is a ring with internal teeth for communicating motion from a pinion on the
15 stem to the gear-wheel upon the spring-barrel. In this case it was necessary to have two pinions on the stem and interlocking ratchet-teeth.

In my improvement I make use of a ring
20 with inclined or ratchet teeth and a single pinion on the winding-stem with ratchet-teeth on one end and gear-teeth on the other end, thus dispensing with the second pinion and two sets of teeth, so as to simplify the
25 construction and lessen the cost.

In the accompanying drawings, Figure 1 shows a plan view of the stem-winding mechanism as it is to be seen when the dial is removed, and Fig. 2 is a partial section showing
30 the pusher of the hand-setting mechanism.

In both figures similar letters refer to similar pieces.

The plate A of the work is provided with a circular groove, A', in which an annular rack, B, is caused to revolve, and there are inclined or ratchet teeth on the inside of the same. Three screws fixed to the plate have their heads projecting over the rack B to prevent its lifting out of the groove A'. Upon the
35 square part of the stem C there is placed a sliding pinion, D, having at one end a range of inclined or ratchet teeth, d', and on the other end a range of ordinary teeth, d². A

double-armed spring, E, bears with its arm e' upon the upper border of the groove of the
45 sliding pinion D, and with its other arm, e², which has the form of a click, it bears upon the teeth-range of B. The axis F of the main-spring-barrel is provided with a wheel, G, engaging into the teeth-range of B. The teeth-
50 range d' being pressed into the teeth-range of B by the spring e', it follows that if the stem is turned in the direction shown by an arrow in Fig. 1 the mainspring will be wound up, the rack B being turned in the same direc-
55 tion as the arrow, and causing thereby the rotation of wheel G. If one turns the stem backward, the sliding pinion works like a click.

To set the hands it is necessary to have the
60 teeth-range d² put into gear with the wheel H. To that effect there is affixed underneath the plate A—that is to say, between the plate A and the spring-barrel bridge—a lever, L, Fig. 2, having a pivot, l, and a hook, L', the
65 latter engaging into the groove of the sliding pinion D. A pusher, M, bearing upon the lever L, allows the pinion D to be put into gear with H, so as to set the hands by turning the stem in one direction or the other. 70

I claim as my invention—

The combination, with the spring-barrel and the wheel G, of the ring B, having inclined or ratchet teeth on the inner edge thereof, the stem C and pinion D, having inclined or
75 ratchet teeth at one end gearing with the teeth on the ring B and gear-teeth on the other end, and the train of gear-wheels to the hands, and the spring E, substantially as set forth.

In testimony whereof I have signed my name
80 to this specification in the presence of two subscribing witnesses.

HIPPOLYTE SCHÜTZ.

Witnesses:

HENRY RIECKEL,
J. CHAPNY.