

(No Model.)

A. G. GUERIN.
STOP WATCH.

No. 495,583.

Patented Apr. 18, 1893.

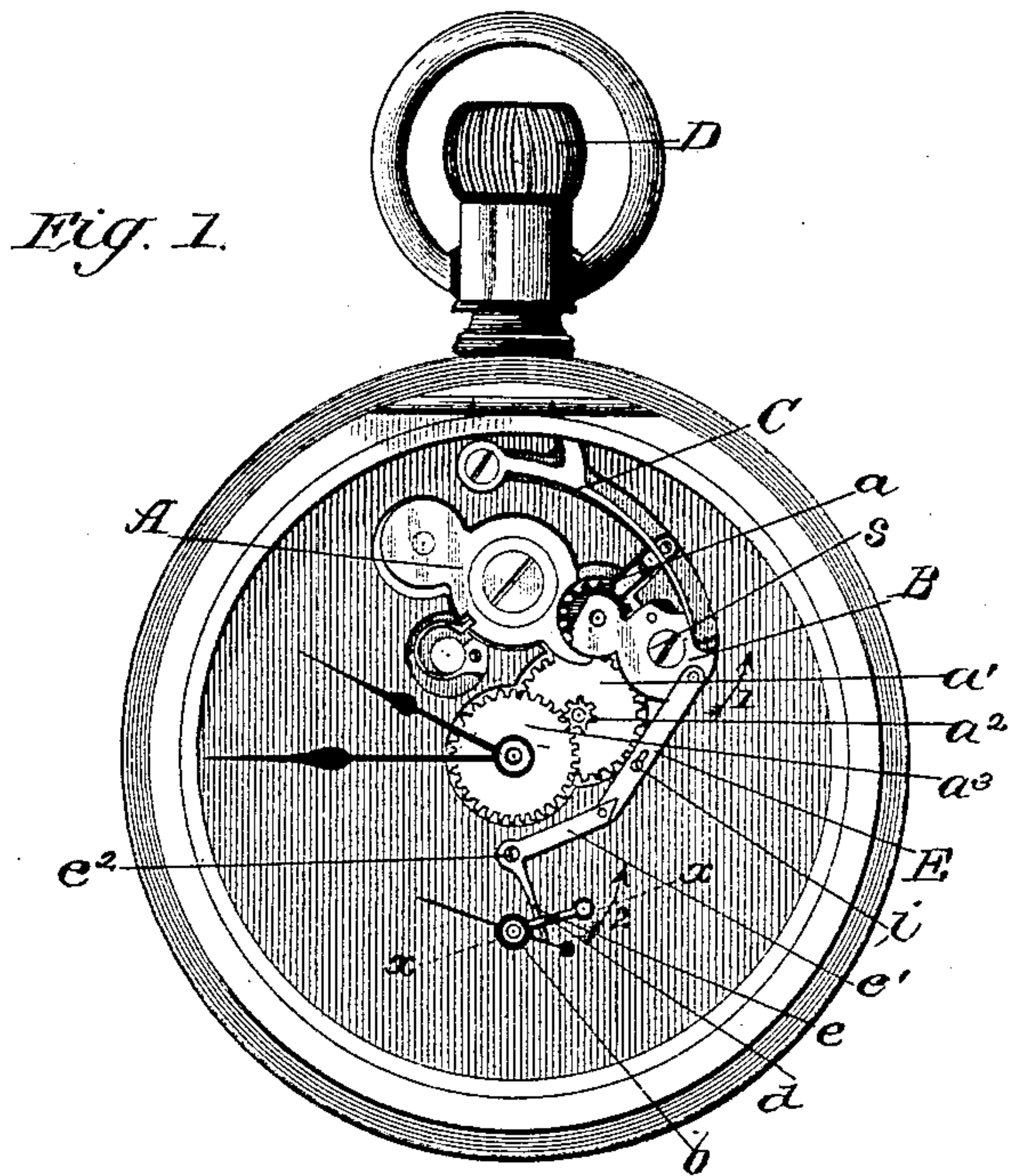
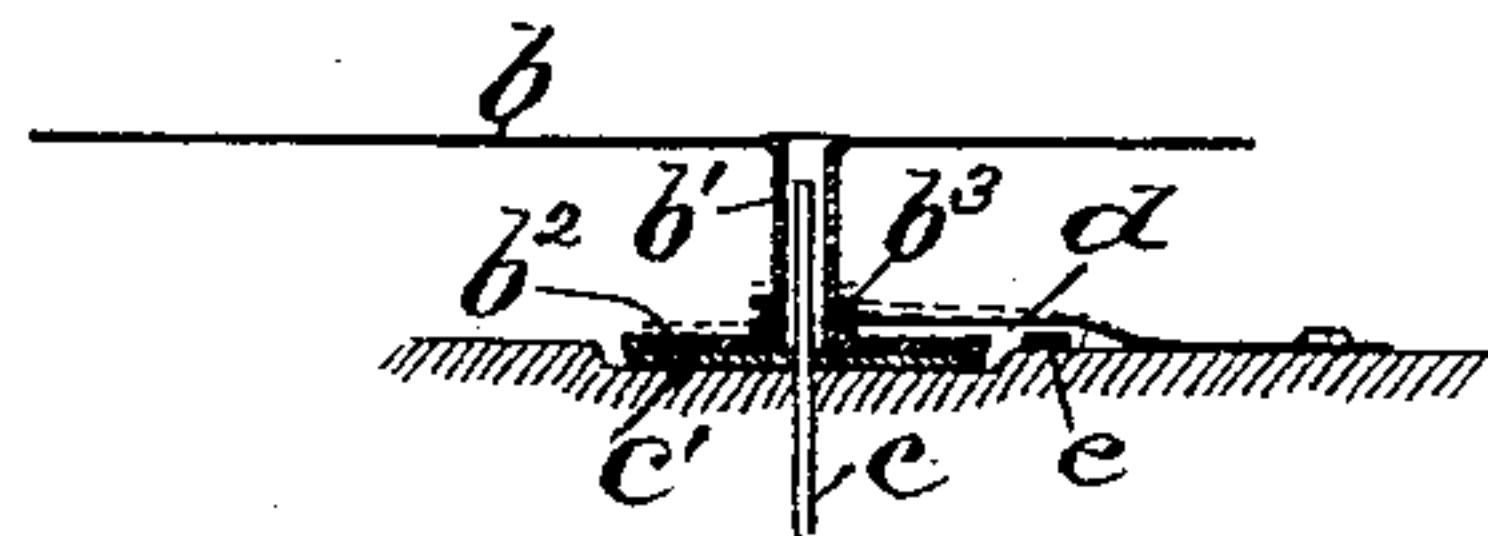


Fig. 2.



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ADOLPHE GEORGE GUERIN, OF SAVANNAH, GEORGIA.

STOP-WATCH.

SPECIFICATION forming part of Letters Patent No. 495,583, dated April 18, 1893.

Application filed June 2, 1890. Serial No. 354,069. (Model.)

To all whom it may concern:

Be it known that I, ADOLPHE GEORGE GUERIN, of Savannah, in the county of Chatham and State of Georgia, have invented a new and useful Improvement in Stop-Watches, of which the following is a specification.

The object of my invention is to provide a stop watch in which the seconds hand is stopped through the stem winding mechanism without stopping the minute and hour hand, or interfering in any wise with the movement of the watch, the purpose being to readjust the seconds hand in relation to the minute and hour hand in setting the watch for correct time, and also to adapt the watch for use for racing purposes.

It consists in the peculiar construction and arrangement of the seconds hand with special mechanism connecting the same to the stem winding and setting devices, whereby the adjustment of the latter to the winding position allows the seconds hand to rotate, while the adjustment for setting the minute and hour hands, serving to stop the seconds hand as will be hereinafter fully described.

Figure 1 is an enlarged face view of the watch with the dial removed showing the position of my improvement beneath the dial and in proper relation to the seconds hand and the stem winding and setting devices. Fig. 2 is an enlarged sectional view taken through the line $x-x$ of Fig. 1.

In the drawings A represents the yoke, B the shifting cam, C the spring, and D the crown of an ordinary and well known form of stem winding and stem setting mechanism. As these devices in themselves form no part of my invention it is not necessary to give any prolix description of their relation and action. It will be sufficient for the purposes of my invention to say that when the crown is pulled out, the small wheel a behind the shifting cam is thrown into gear with the train of wheels $a' a^2 a^3$ and a rotation of the crown D serves to set or turn the minute and hour hand. When, however, the crown D is forced in, the shifting cam B throws the little wheel a out of gear with the train $a' a^2 a^3$, and the parts are in position to allow the watch to be wound by a rotation of the crown.

I utilize the motion of the shifting cam B to stop the seconds hand by the same adjustment which puts the parts in position for setting *i. e.* by the pulling out of the crown. I will now describe the instrumentalities for carrying out this result.

The seconds hand b is rigidly fixed to a tubular sleeve b' Fig. 2 which has at its lower end a friction disk b^2 and just above it a grooved collar b^3 . The axial stem or shaft c of the seconds hand which rotates intermittently with the escapement is provided with upwardly flanged friction disk b^2 . Attached to the plate of the watch at one end is a spring arm d which bends upwardly or away from the plate as it approaches the seconds hand, see Fig. 2, and its end next to the seconds hand is forked and lies within the groove of the collar b^3 , which latter it embraces. When the spring arm is lifted away from the watch plate, as shown in dotted lines it lifts the seconds hand, its sleeve and friction disk, and brings the latter out of contact with the rotating flanged friction disk below, so that the seconds hand stops, but when the friction disk b^2 lies on the flanged disk with the pressure of the spring arm, the seconds hand rotates with its actuating stem. E is a small slide bar whose upper end is pivoted to the lower end of the shifting cam B, and whose middle part is slotted longitudinally and held to the plate by a guide screw i . The lower end of this slide bar is pivoted to one arm e' of an elbow lever $e e'$. This elbow lever is fulcrumed at its angle e^2 upon the plate and its arm e projects beneath the spring arm d under which it plays in a nearly right angular position. Now whenever the crown D of the watch is pulled out for setting the watch, the shifting cam B is turned about its center screw s , and the lower end of said shifting cam with slide bar moves upwardly as indicated by arrow 1, and the motion communicated to the elbow lever $e e'$ throws it in the direction of arrow 2, which brings its arm e against the curved under side of spring arm d , raising it, and disconnecting the seconds hand friction disk from its subjacent friction disks, stops the seconds hand. The reverse motion of the shifting cam, caused by the forcing in of the crown, restores the

parts to their former position and the seconds hand moves along again.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a stem winding and stem setting watch, the combination with the shifting cam B; of the slide bar E pivoted thereto and guided about its middle, the elbow lever *ee'* pivoted to the slide bar, the spring arm *d* curved and

overlapping the arm *e* of the elbow lever and grasping the sleeve of the seconds hand, and the seconds hand having a separable friction clutch *b² c'* substantially as shown and described.

ADOLPHE GEORGE GUERIN.

Witnesses:

JOSEPH HENRY KOCH,
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