(No Model.)

C. R. BLAKE.

WATCH REGULATOR.

No. 285,959. Patented Oct. 2, 1883.

Fig. 1.

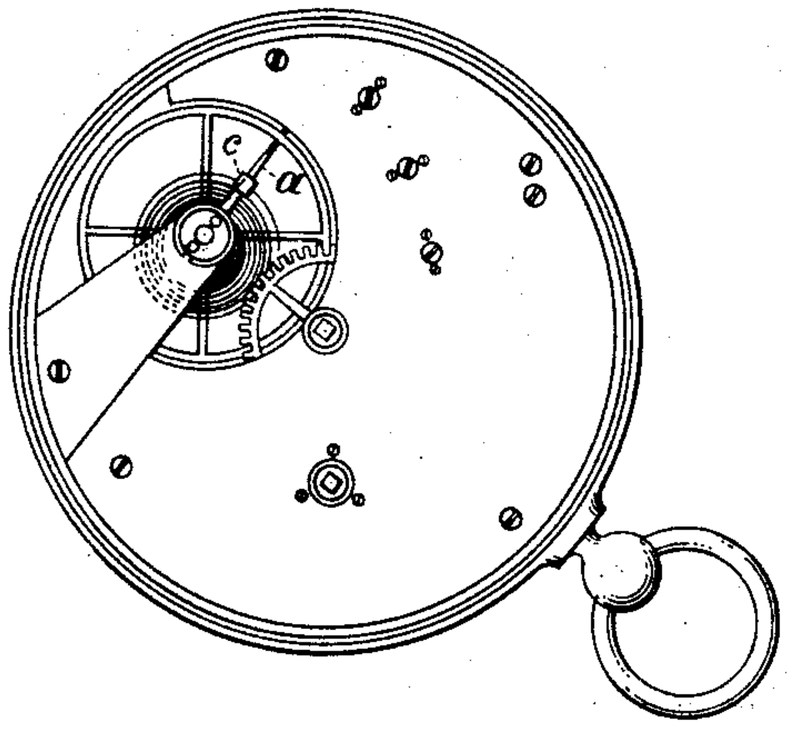


Fig. 2.

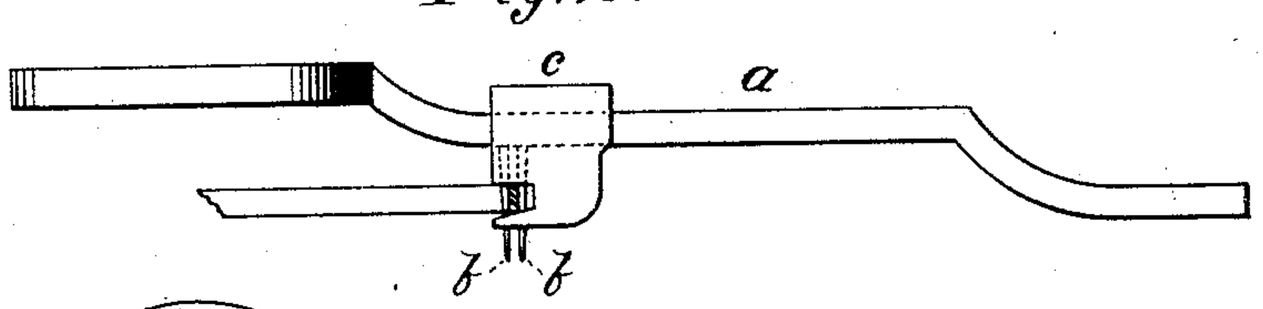


Fig. 3.

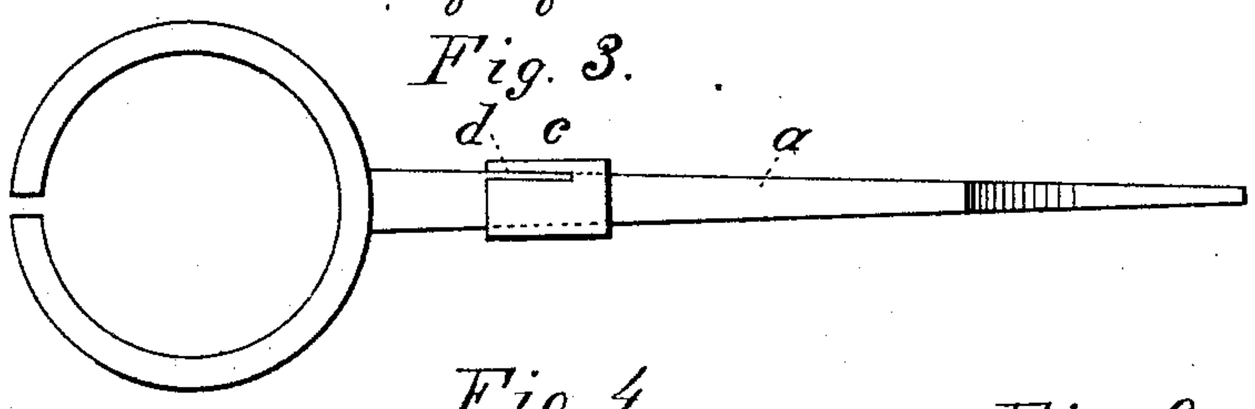


Fig. 5.

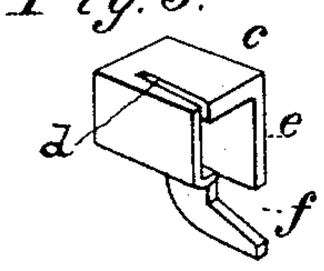


Fig. 4.

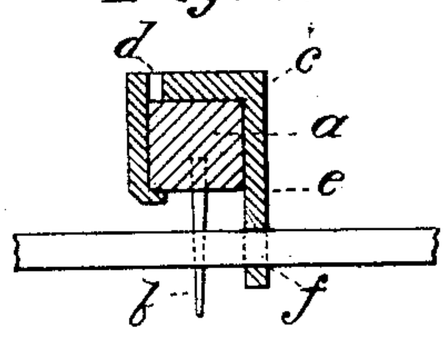


Fig. 6.

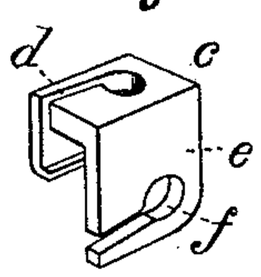
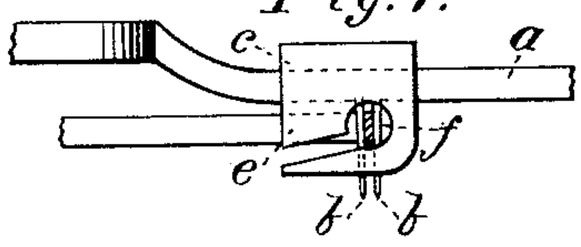


Fig. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES R. BLAKE, OF FRANKFORT, INDIANA.

WATCH-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 285,959, dated October 2, 1883.

Application filed January 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. BLAKE, a citizen of the United States, residing at Frankfort, in the county of Clinton and State of Indiana, have invented certain new and useful Improvements in Watch-Regulators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention applied to a watch, and shows a top view. Fig. 2 is a side view. Fig. 3 is a top view. Fig. 4 is a cross-section. Fig. 5 is a perspective view. Fig. 6 is a modification in perspective. Fig. 7 is a side view of the same.

This invention has relation to watch-regulators; and it consists in the construction and novel arrangement, in connection with a common regulator-arm for a watch, of an attachment for the hair-spring, made adjustable on the regulator-arm, whereby the hair-spring may be prevented from jumping the pins, and thus causing the time action of the watch to be reliable, as will be hereinafter more fully described and particularly claimed.

I have found in my experience as a watchmaker and jeweler that the owners of watches brought to me for repairs have complained that their watches gain or lose from two to four hours per diem. Upon examination of the watches I have found the cause to be that the hair-spring had jumped the pins, and hence either accelerated or retarded the movement. To remedy this defect I have constructed the attachment hereinbefore alluded to and hereinafter more minutely described.

Referring by letter to the accompanying drawings, *a* designates the regulator-arm, which varies in size in different watches.

b b designate the regulating-pins for the hair-spring.

c designates the adjustable or sliding hair-spring guard, which is constructed of steel or other suitable metal, and which is constructed in dimensions to suit the regulator-arm to which it is to be applied. This attachment is provided in one side with a slit, *d*, and is curved in at the bottom to furnish spring-action to cause the attachment to clamp the regulator-arm when adjusted to place. The slide is open on its lower side to permit the regulator-pins to pass down, and its longer side *e* is provided with a slot or notch, *f*, opening toward the pins, through which one coil only of the hair-spring may pass, but is sawed back far enough to permit it to spring to admit hair-springs of different sizes. This slide, when pushed to place on the regulator-arm, will prevent the hair-spring from jumping the regulator-pins, and will consequently render the time-keeper more reliable. No jarring motion can throw the coils of the hair-spring over the regulator-pins when this device is used.

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

In a watch-regulator, the combination, with the regulator-arm carrying the regulating-pins, of the sliding attachment provided with the clamp-slit and the notch or slot for engaging the coil of the hair-spring, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES R. BLAKE.

Witnesses:
JAMES W. MORRISON,
WILLIAM KEMP.