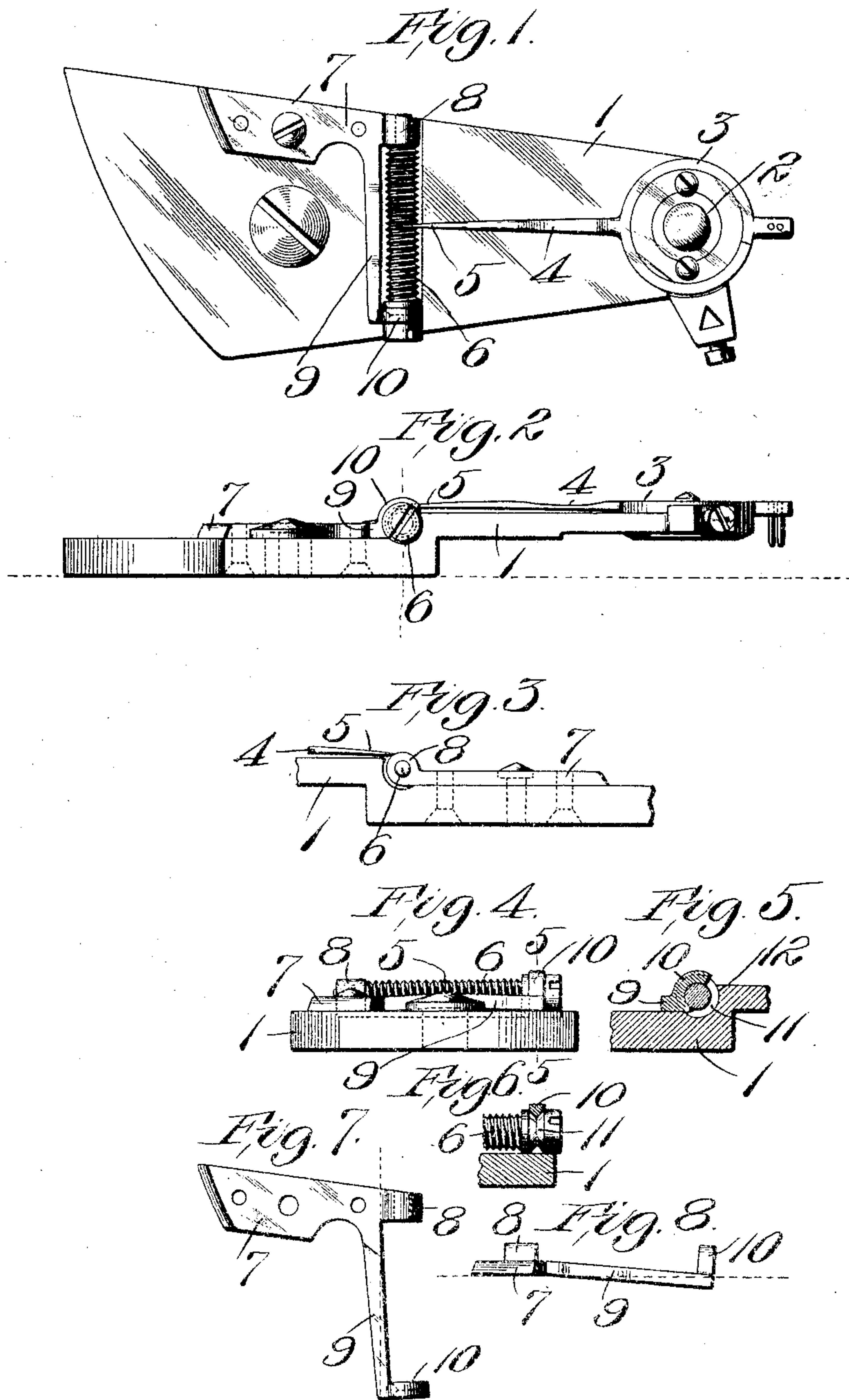


No. 780,160.

PATENTED JAN. 17, 1905.

C. E. DE LONG.  
WATCH REGULATOR.  
APPLICATION FILED JUNE 15, 1904.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## WATCH-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 780,160, dated January 17, 1905.

Application filed June 15, 1904. Serial No. 212,723.

*To all whom it may concern:*

Be it known that I, CHARLES E. DE LONG, a citizen of the United States, residing at South McAlester, Indian Territory, have invented a certain new and useful Improvement in Watch-Regulators, of which the following is a full, clear, and exact description, 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, forming part of this specification, in which—

Figure 1 is a top plan view of a watch-regulator constructed in accordance with my invention. Fig. 2 is a side elevational view of the same. Fig. 3 is a fragmentary side elevational view of a portion of the base-plate secured to the bridge-plate and one end of the adjusting-lever. Fig. 4 is a rear elevational view of the regulator. Fig. 5 is a sectional view on the line 5 5 of Fig. 4. Fig. 6 is a cross-sectional view through the regulator-screw holder, the regulator-screw being shown in fragmentary elevation. Fig. 7 is a top plan view of the screw-holder, and Fig. 8 is a rear elevational view.

This invention relates to regulators for watches.

One of the objects of the invention is to provide means whereby the regulator-screw will be so held that it may rotate, but any longitudinal movement thereof will be prevented.

Another object of the invention is to provide means whereby the regulator-lever will remain in constant engagement with the screw.

Other objects and advantages, as well as the novel details of construction of this invention, will be specifically described hereinafter, it being understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages thereof.

In providing a regulator for watches it is essential that the determined adjustment of the regulator-lever be maintained that the adjustment thereof may take place to the minutest degree. If the screw is capable of having the slightest longitudinal movement, this adjustment will be destroyed, and to this end

my invention particularly relates to means for preventing the slightest longitudinal movement thereof.

The bridge-plate 1 is provided with the usual bearing 2 for the regulator-lever, which is provided at one end with a split collar 3, to be mounted on its bearing, the lever being provided with an intermediate end portion 4, the pointer end 5 having a tendency to deflect downwardly, whereby a positive engagement of the pointer end 5 of the lever with the threads of the screw 6 will be provided. The novel mounting for the screw is illustrated as comprising a base-plate 7, having a rigid socket 8 at one end thereof. Projecting from the base-plate 7 is an arm 9, having an inherent yielding tendency, said arm being preferably constructed of spring metal and carrying at its free end an arcuate bearing 10, which is wedge-shaped in cross-section, as clearly indicated in Fig. 6. The bearing edge of the bearing 10 being approximately V-shaped, a corresponding V-shaped groove 11 is formed in the head of the screw 6 to receive the V-shaped bearing edge of the bearing 10. This bearing 10 is in axial alignment with the bearing 8, so that when the end of the screw is inserted in the bearing 8 the arcuate bearing 10 will prevent any longitudinal movement of said screw.

It will be observed by reference to Fig. 5 that the bearing 10 does not engage the entire periphery of the screw; but a portion of the head thereof bears against a suitable recessed shoulder 12 in the bridge-plate 1. The yielding tendency of the arm 9 will permit the screw to be readily attached and detached, as occasion may demand. The portion of the regulator-lever provided with the collar 3 is substantially rigid, while that portion extending beyond the reduced part 4 is yieldable, the downward yielding tendency being sufficient to maintain the point of the lever and the screw in positive contact. It will thus be seen that a regulator constructed in accordance with my invention may be readily assembled and will efficiently perform the service for which it is intended.

I am aware that minor changes in the con-



struction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A regulator-screw for watches having a mounting comprising a base-plate provided with a resilient arm having bearing portions for the reception of the screw; substantially as described.

2. A mounting for regulator-screws for watches having a rigid bearing and a yielding bearing; substantially as described.

3. A mounting for regulator-screws for watches having a rigid bearing, and an arcuate, resiliently-mounted bearing provided with means for preventing a longitudinal movement of the screw; substantially as described.

4. A mounting for regulator-screws for watches having a yielding arm provided with an arcuate bearing approximately wedge-shaped in cross-section and engaging an approximately V-shaped groove in the screw; substantially as described.

5. A mounting for regulator-screws for watches comprising a base-plate, a rigid bearing integral with the base-plate, an arm resiliently secured to the base-plate and provided with a terminally-disposed bearing in

axial alinement with the rigid bearing; substantially as described.

6. A regulator for watches including a regulating-lever having an intermediate reduced portion to provide the lever with an inherent yielding tendency whereby the free end thereof will have a tendency to deflect downwardly; substantially as described.

7. The combination with a bridge-plate provided with a shoulder, a regulator-screw contiguous to the shoulder, and a mounting for said screw comprising a plate having a rigid bearing and a yielding bearing, whereby one end of the screw will be maintained in engagement with the shoulder; substantially as described.

8. A mounting for regulator-screws for watches provided with means for preventing longitudinal movement of the screw, said means consisting of an arm provided with a bearing approximately wedge-shaped in cross-section to engage an approximately V-shaped groove in the screw; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of May, 1904.

CHARLES E. DE LONG.

Witnesses:

JOHN B. CHALLES,  
FRANK SMITH.