

No. 639,177.

Patented Dec. 12, 1899.

J. L. KURTZ.
WATCH MOVEMENT BRIDGE.

(Application filed May 13, 1899.)

(No Model.)

Fig: 1.

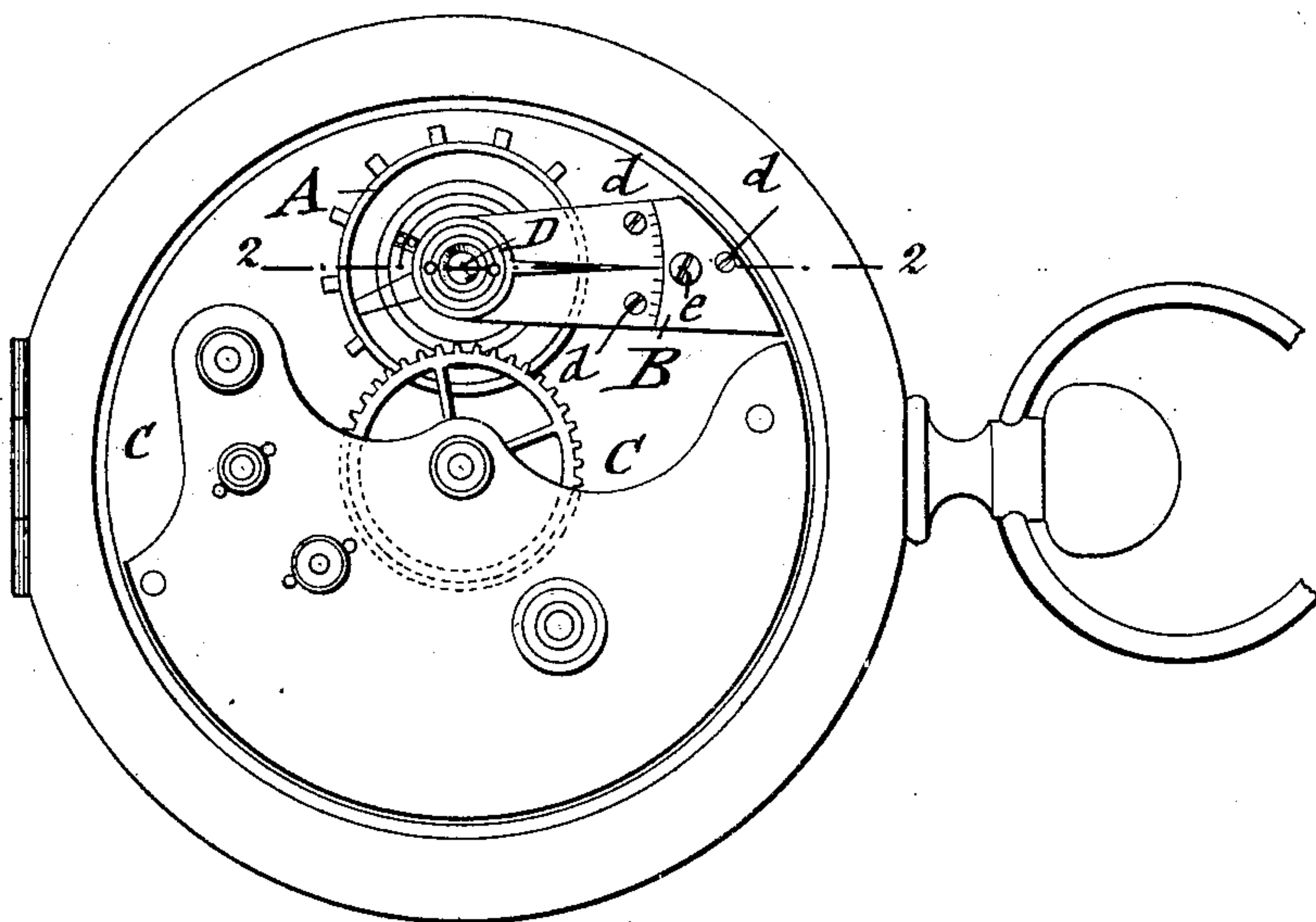
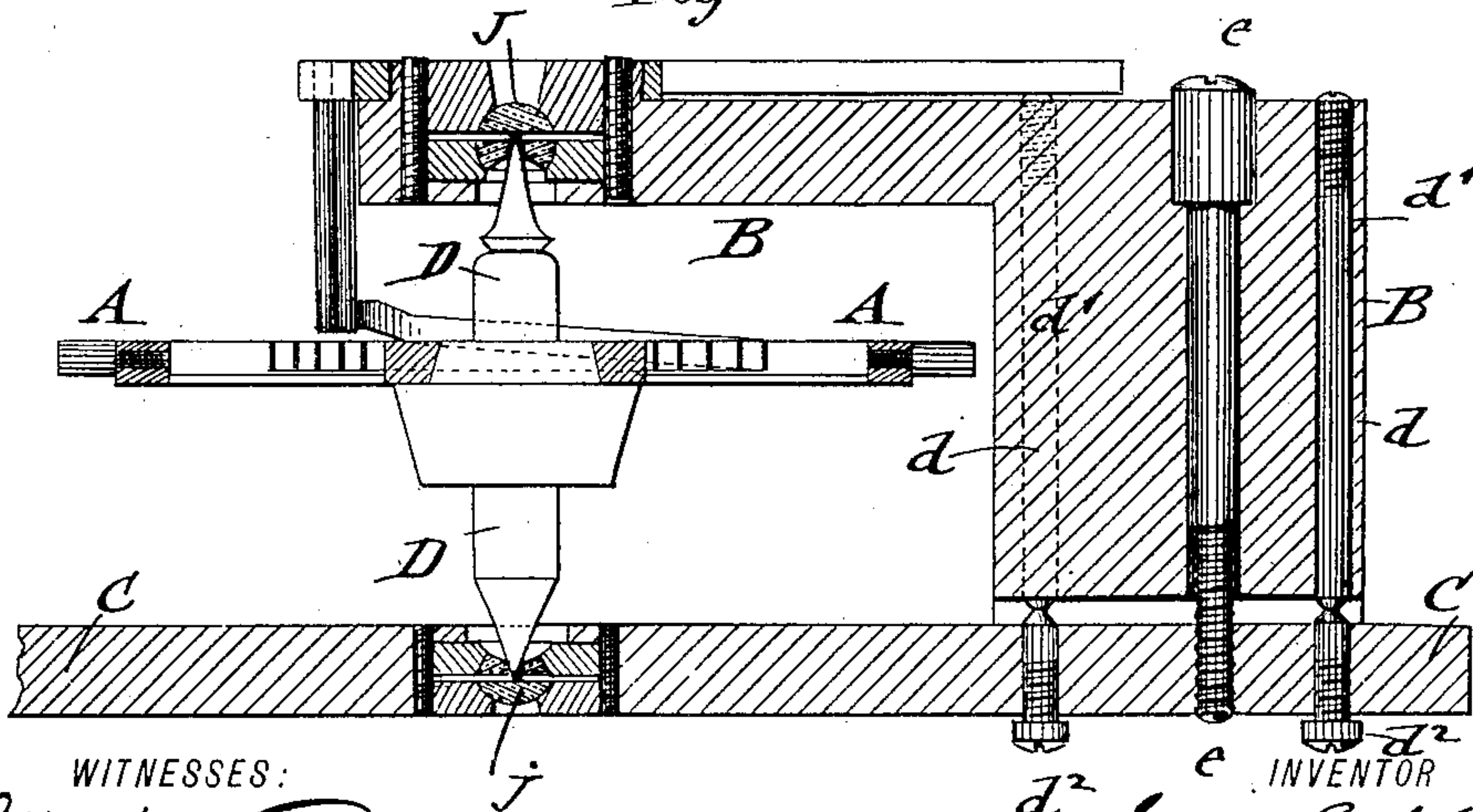


Fig: 2.



WITNESSES:

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WATCH-MOVEMENT BRIDGE.

SPECIFICATION forming part of Letters Patent No. 639,177, dated December 12, 1899.

Application filed May 13, 1899. Serial No. 716,683. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH L. KURTZ, a citizen of the United States, residing in the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Bridges for Watch-Movements, of which the following is a specification.

This invention relates to an improved bridge for watch-movements, and more especially to an improved bridge for watch balances and escapements; and the invention consists of a bridge for watch-movements in which the rear end of the bridge is attached by a screw-post to the bottom plate of the movement and supported on three regulating-screws arranged near the fastening screw-post, each regulating-screw being formed of two sections, a shorter section passing through the bottom plate of the watch-movement and a longer section passing through the rear end of the bridge, said sections abutting near the base of the bridge, so as to permit the accurate adjustment of the front end of the bridge to the staff of the balance-wheel and the expansion and contraction of the attaching screw-post and regulating-screws uniformly with the staff, so as to prevent a binding action of the bridge on the staff, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a top view of a watch-movement with my improved bridge applied thereto; and Fig. 2 is a vertical longitudinal section through the bridge on line 2 2, Fig. 1, drawn on a larger scale.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a balance-wheel, B the bridge of the same, and C is the bottom plate of the movement. The staff D of the balance-wheel A is centered in the usual manner in suitable jewels *j j* of the bottom plate and bridge, respectively, and the bridge B, instead of being made with a shouldered rear end, is preferably made with a solid or "full" rear end, as shown in Fig. 2. This shape is made for the purpose of arranging a number of regulating-screws *d d*, by means of which the accurate adjustment of the bridge B to the staff D of the balance-

wheel can be obtained. The rear end of the bridge B is attached to the bottom plate C by a fastening-screw *e* and adjusted, preferably, by means of three regulating-screws *d d*, which are arranged near the fastening-screw *e*. The rearmost regulating-screw *d* is located in line with the fastening-screw *e* and the staff D of the balance, while two additional regulating-screws *d* are preferably located in front of the fastening-screw *e*, one at each side thereof, as shown clearly in plan view in Fig. 1.

The regulating-screws *d d* are each formed of two sections—namely, of a longer section *d'*, which passes through the rear end of the bridge B, and of a shorter section or stud *d''*, that passes through the bottom plate C. The sections *d'* and *d''* abut one against the other by means of flat faces formed at their adjacent ends, as shown in Fig. 2, so that the regulating-screws *d* can be readily adjusted to the staff after the fastening-screw *e* is placed in position in the rear end of the bridge. By adjusting the regulating-screws *d d* the bridge can be set in the most accurate manner to the staff D of the balance-wheel. As the bottom of the rear end of the bridge B does not form contact with the bottom plate C, it can expand or contract independently of the regulating-screws, which latter, being preferably of steel, like the staff, expand or contract uniformly with the latter and keep up the proper distance between the jewels of the staff, so that the so-called "end shake" of the staff is equalized in all temperatures. When the screws are once properly adjusted, the bridge will always retain its proper position toward the staff owing to the independent expansion of the staff, fastening-screw, and regulating-screws. My improvement is also adapted for the escapement-bridges of watches.

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

1. The combination, with the bridge of a watch-movement and its staff, of a fastening-screw attaching the rear end of the bridge to the bottom plate of the movement, and regulating-screws arranged adjacent to said fastening-screw and formed of two sections each, one section being attached to the bottom plate and the other to the rear end of the

bridge so as to retain the bridge in accurate position relatively to the staff in all temperatures, substantially as set forth.

2. The combination, with the bridge of a
5 watch-movement and its staff, of a fastening-screw for attaching the rear end of the bridge to the bottom plate of the movement, and regulating-screws arranged in proximity to said fastening-screw, said regulating-screws
10 being formed each of two sections, a shorter section located in the bottom plate of the movement and a longer section located in the

rear end of the bridge, said sections abutting against each other below the bottom of the rear end of the bridge, substantially as set forth. 15

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOSEPH L. KURTZ.

Witnesses:

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