(No Model.)

G. NEWTON.

WATCH CASE HINGE.

No. 457,739. Patented Aug. 11, 1891.

Fig. 1

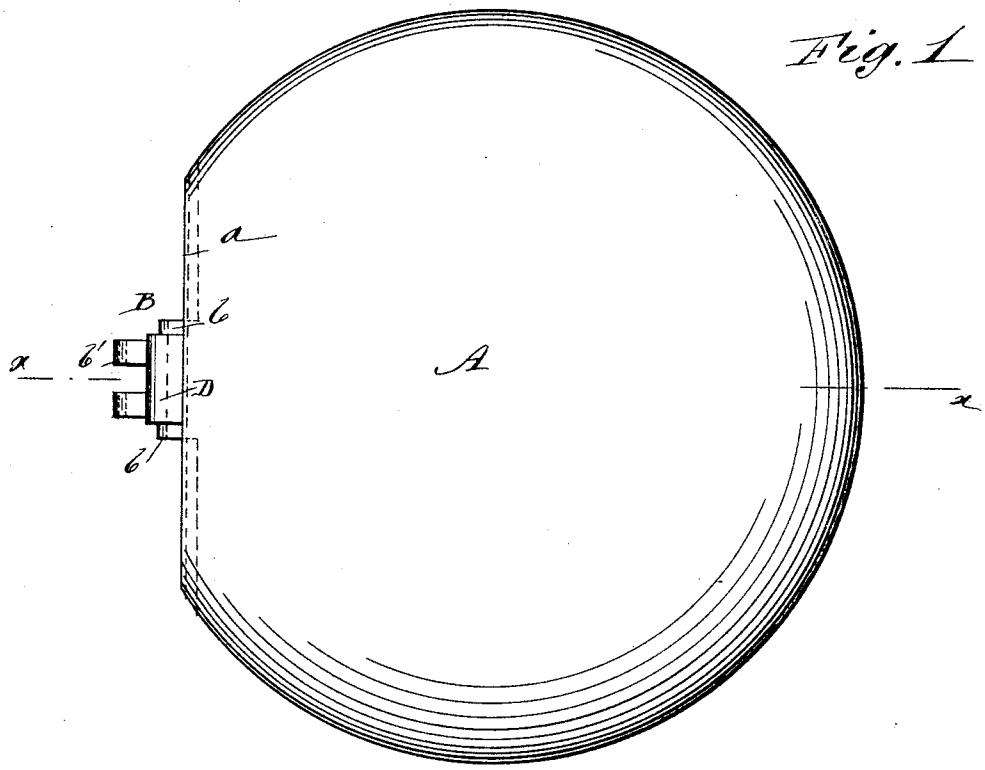


Fig. 2

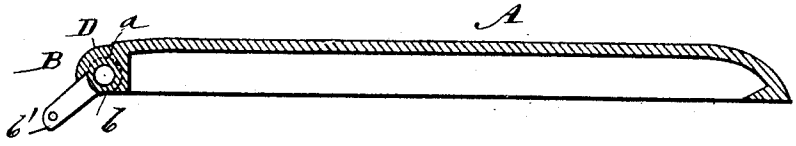
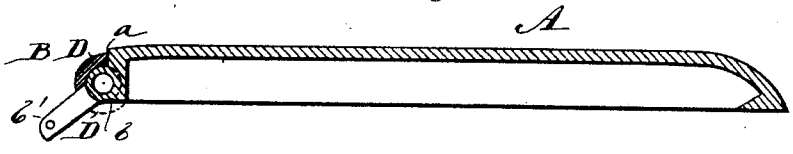


Fig. 3



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UNITED STATES PATENT OFFICE.

GEORGE NEWTON, OF NEW YORK, N. Y.

WATCH-CASE HINGE.

SPECIFICATION forming part of Letters Patent No. 457,739, dated August 11, 1891.

Application filed August 14, 1888. Renewed November 22, 1890. Serial No. 372,289. (No model.)

To all whom it may concern:

Be it known that I, GEORGE NEWTON, of the city, county, and State of New York, have invented a new and useful Improvement in Cap-Joints for Cap-Winding Watches, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the cap-joints of cap-winding watches, and has for its object to provide a means whereby the connection of the pulling-knuckles with the joint and cap will be strengthened in a simple manner at the point of attachment of the pulling-knuckles with the joint and cap or dome and effectually prevent breakage at that point.

The invention will be hereinafter described in connection with the drawings, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of a watch cap or dome having my improvement applied. Fig. 2 is a central section on the line $x\,x$ of Fig. 1, and Fig. 3 is a similar section illustrating another mode of applying the improvement.

The prime object of the invention is to provide a simple and effective means of strengthening the connection of the pulling-knuckles with the cap and with the cap or dome joint of cap-winding watches and to insure the same from breakage—as, for instance, the attachment of the pulling-knuckles to the joint and cap or dome of a watch embodying the improvements secured by Letters Patent to U. H. Ramuz April 28, 1868, and numbered 77,213.

In carrying out the invention the cap or dome A is provided with the usual under-cut *a*, at or about the center of which point a hinge B is applied. The hinge B consists of the usual knuckle or knuckles, adapted to receive the knuckles secured to the rim or band of a watch-case, and the usual joint-pin. The hinge B in cap-winding watches is usually provided with integral or attached pulling-knuckles or spaced ears *b'* at a right angle to the length of said hinge, between which ears or pulling-knuckles *b'* a lever is pivoted, communicating motion from the cap or dome, when opened or when closed, to the winding mechanism of the watch.

The main trouble heretofore experienced in cap-winding watches consists in the breakage of the hinge, which is very frail, and tearing the same away from the cap or dome, owing to the extra function of winding imposed upon said cap. I overcome this weakness by attaching a brace D at the upper or lower side of the hinge or to both, which brace consists of a block of metal of suitable contour formed integral with the hinge or attached thereto, as shown in Figs. 2 and 3, the said brace-block being disposed longitudinally of the hinge constituting a portion of the cap or dome, terminating at any desired point at or near the ends of the middle hinge, whereby a portion only or all of the entire middle hinge may be covered by the block, which brace-block integrally connects and combines said pulling-knuckles *b'* with the cap or dome, and also with the middle joint, which is also integrally connected with the cap or dome of the watch-case.

In practice, if deemed advisable or desirable, the brace-block, the cap-hinge section, and the cap may be formed of one piece of metal, as illustrated in Fig. 2.

The dotted lines in Fig. 3 illustrate the application of the brace-block to the under side of the hinge.

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

1. In a cap-winding watch, the combination, with the cap or dome, the hinge, and the pulling-knuckle *b'*, of a brace-block secured to the middle knuckle and to the pulling-knuckle *b'* of said hinge and dome, substantially as shown and described.

2. In a cap-winding watch, the combination, with the cap or dome, the hinge, and the pulling-knuckle *b'*, of a block integral with the

center knuckle of the hinge and dome and secured to the pulling-knuckle b', substantially as shown and described.

3. The cap or dome A for cap-winding watches, provided with the hinge B, having spaced ears or pulling-knuckles b' at right angles to the length of the hinge, in combination with the brace-block D, secured to the cap or dome and to the hinge over the knuckle thereof and to the pulling-knuckles b', substantially as shown and described.

GEORGE NEWTON.

Witnesses:
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