

(No Model.)

3 Sheets—Sheet 1.

G. E. HART.
WATCH MOVEMENT PLATE.

No. 418,129.

Patented Dec. 24, 1889.

Fig. 1.

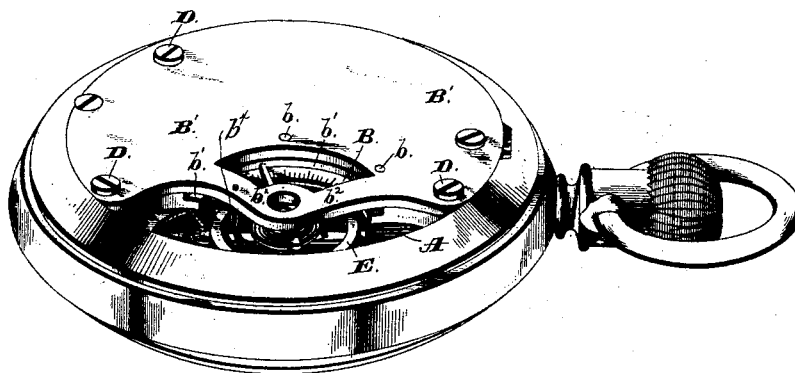
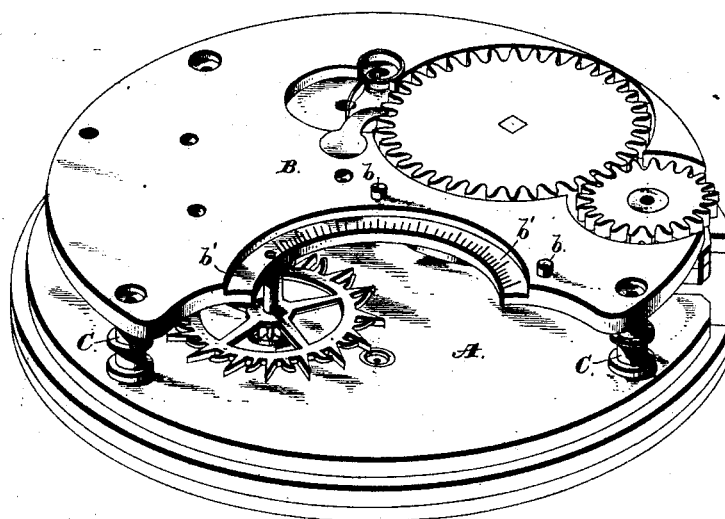


Fig. 2.



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Fig. 3.

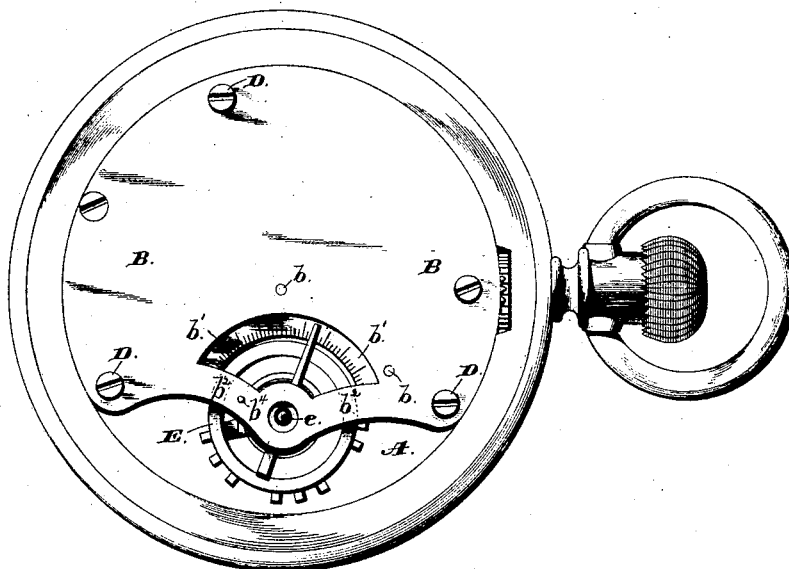
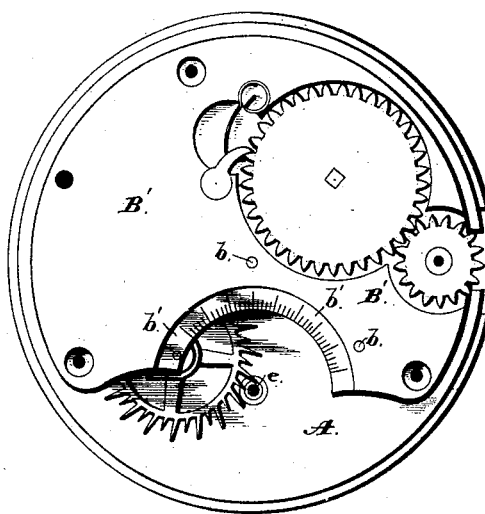


Fig. 4.



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Fig. 5.

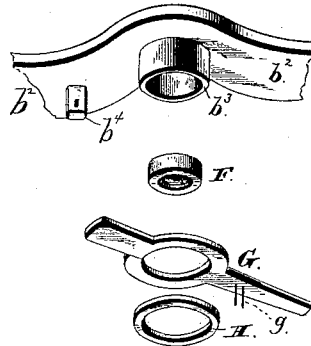


Fig. 6.

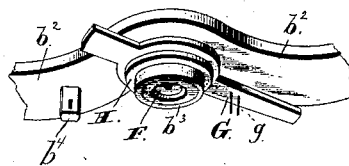
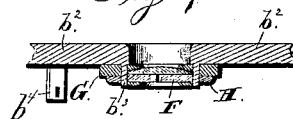


Fig. 7.



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UNITED STATES PATENT OFFICE.

GEORGE E. HART, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE
WATERBURY WATCH COMPANY, OF SAME PLACE.

WATCH-MOVEMENT PLATE.

SPECIFICATION forming part of Letters Patent No. 418,129, dated December 24, 1889.

Application filed November 30, 1887. Renewed November 26, 1889. Serial No. 331,589. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. HART, of Waterbury, in the county of New Haven, and in the State of Connecticut, have invented certain new and useful Improvements in Watch-Movements; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my watch from the rear side, the case-back being removed. Fig. 2 is an enlarged perspective view from the rear of the movement separated from the case and having the outer section of the back plate removed. Figs. 3 and 4 are plan views of said movement and show the same, respectively, with and without the outer section of the back plate. Fig. 5 is an enlarged perspective view from the lower side of the portion of the outer section of the back plate which constitutes the balance-bridge, the regulator, holding-ring, and balance-jewel separated from each other. Fig. 6 is a like view of said parts when combined, and Fig. 7 is a cross-section of the same upon a line passing through the axis of the jewel-opening.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to facilitate the setting up and taking down of a watch-movement; and to this end my said invention consists in the means employed for combining the balance-staff jewel, regulator-arm, and hair-spring stud with the movement, substantially as and for the purpose hereinafter specified.

In the carrying of my invention into practice I employ a front plate A and back plate B, which are connected together and held in relative positions by means of the usual pillars C and C. Said parts are of usual construction, except that the back plate is made in two flat sections B and B', the first of which is secured directly upon the ends of the pillars, while the last-named outer section B' is superimposed directly upon said section B and held in position thereon by means of steady-pins b and b and screws D and D, that pass through both sections and into threaded openings in said pillars. The inner section B is cut away over the balance-wheel E, as

shown, and within its edge is provided with a rabbet b', which has formed thereon a suitably-divided scale over which the end of a regulator-arm is designed to be moved. The outer section B' corresponds to the size and shape of the inner section B, except that it is provided with a bridge b², which extends over the balance E and furnishes means whereby the rear end of the staff e of the same may be pivoted. As seen in Fig. 5, the lower side of said bridge is provided with a hollow cylindrical boss b³, which interiorly is adapted to receive and contain a jewel F and its setting.

Upon the outer side of the boss b³ is journaled a regulator G, that is held in place thereon by means of a ring H, which latter is pressed down to position after said regulator is in place and is held upon said boss by friction. The usual hair-spring loop g is provided upon said regulator, and a hair-spring stud b⁴ is secured in a suitable position upon and projects forward from the inner side of the bridge b². The balance, being thus connected with said bridge, is removed from and replaced in the movement by the removal and replacement of the outer section B'. With the parts thus constructed, in assembling the movement the entire train, with the exception of the balance-wheel, is placed in position by comparatively unskilled cheap assistance, after which it only remains to apply the outer section of the back plate with the balance in order to complete the work of setting up. The last-named operation only requires skilled labor, and one competent operative can readily complete all of the movements which can be prepared for him by several other operatives.

Having thus described my invention, what I claim is—

1. A watch-movement in which the back plate is composed of two flat sections and the balance-bridge is constructed from and forms part of the outer section, substantially as and for the purpose specified.

2. A watch-movement in which the back plate is constructed from two flat sections and the balance-wheel, regulator, and hair-spring stud are connected to and removable with the outer plate-section, substantially as and for the purpose shown.

3. A watch-movement in which the back

plate is composed of two flat sections, and
upon or from the outer section is constructed
a bridge that is adapted to receive and sup-
port the regulator, the balance-staff jewel, and
5 the hair-spring stud, substantially as and for
the purpose set forth.

In testimony that I claim the foregoing I

have hereunto set my hand this 5th day of
August, 1887.

GEORGE E. HART.

Witnesses:

GEO. S. PRINDLE,

E. L. BRONSON.