

(No Model.)

W. E. PORTER.
CLOCK.

No. 587,136.

Patented July 27, 1897.

Fig. 1.

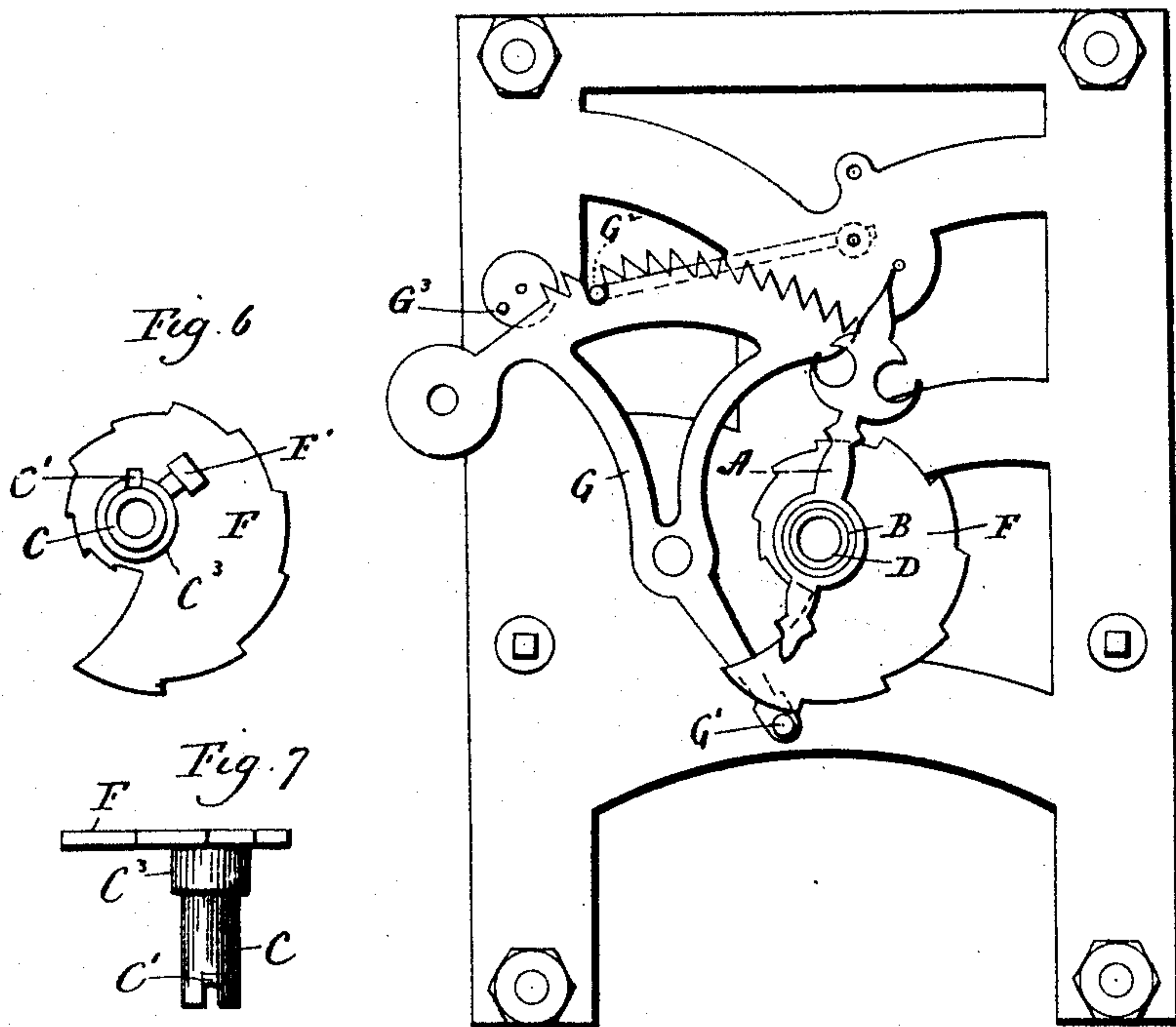


Fig. 6

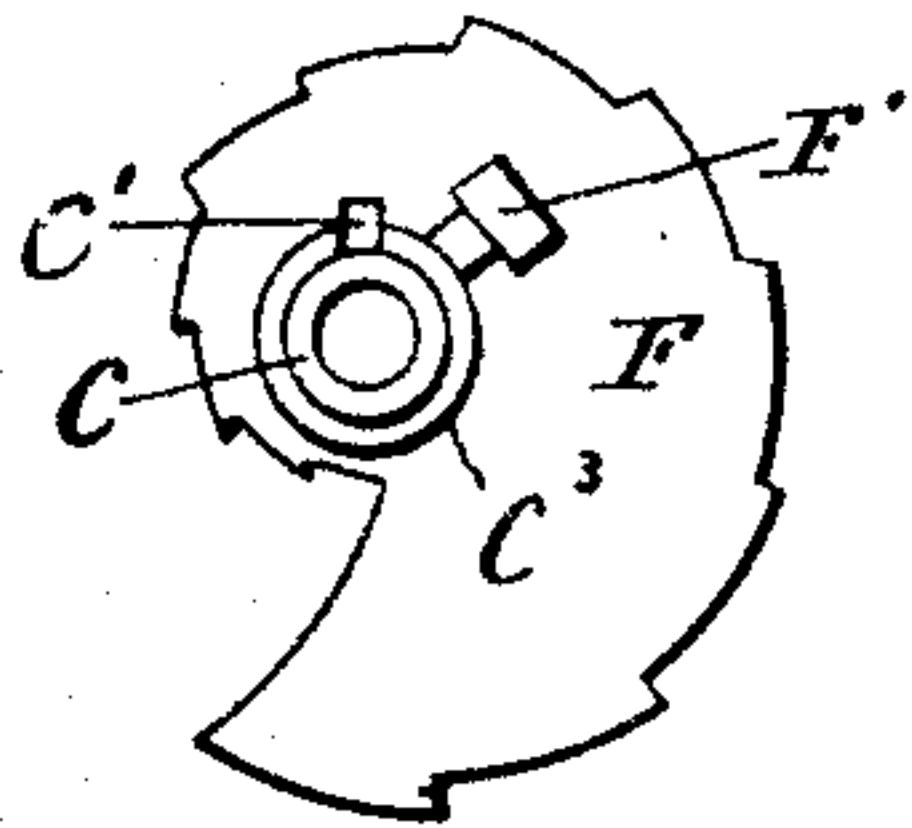


Fig. 7

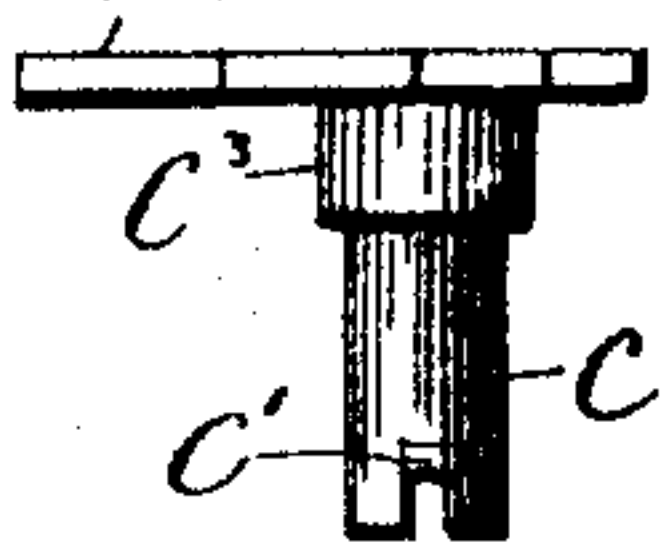


Fig. 2

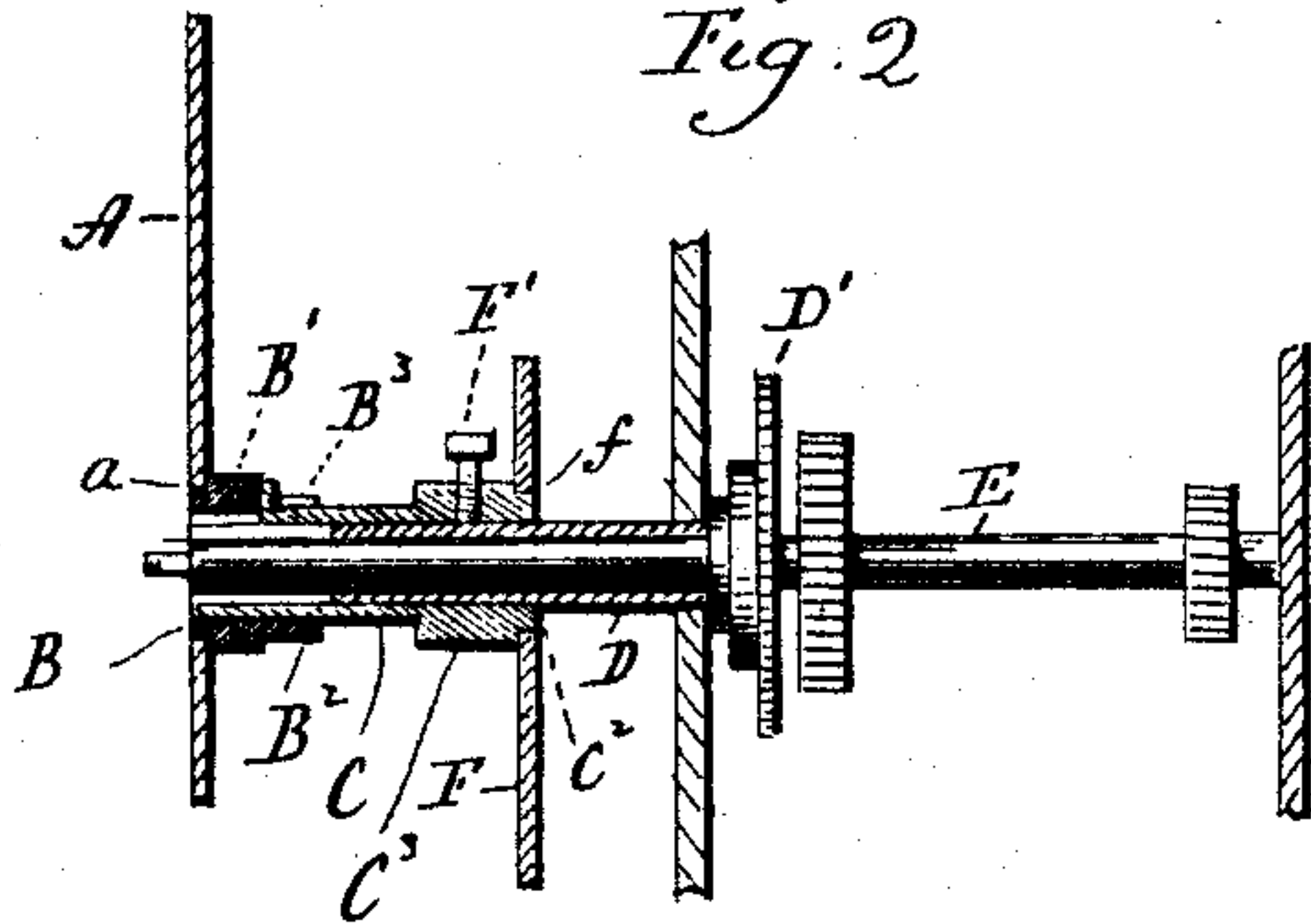


Fig. 3



Fig. 4

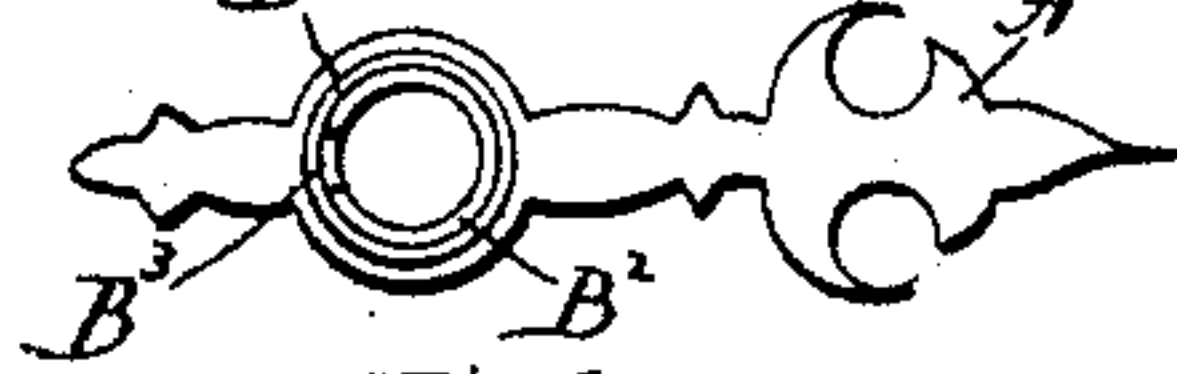


Fig. 5



Witnesses.

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UNITED STATES PATENT OFFICE.

WILSON E. PORTER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
NEW HAVEN CLOCK COMPANY, OF SAME PLACE.

CLOCK.

SPECIFICATION forming part of Letters Patent No. 587,136, dated July 27, 1897.

Application filed April 13, 1896. Serial No. 587,254. (No model.)

To all whom it may concern:

Be it known that I, WILSON ERASTUS PORTER, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Clocks; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in front elevation of a clock-movement containing my invention; Fig. 2, a broken view thereof, in vertical central section, on the line *a b* of Fig. 1; Fig. 3, a detached plan view of the hour-hand; Fig. 4, a similar reverse view thereof; Fig. 5, a view thereof in end elevation looking directly at the coupling-slot formed in the inwardly-projecting sleeve of its hub; Fig. 6, a detached view, in front elevation, of the hour-hand, snail-sleeve, and snail; Fig. 7, a plan view thereof.

My invention relates to an improvement in that class of repeating striking-clocks which are constructed on what is known as the "rack-and-snail" principle, the object of my invention being to simplify and improve the construction of these clocks, particularly with reference to the connection of the hour-hand, the hour-hand snail-sleeve, and the snail.

With these ends in view my invention consists in certain details of construction and combination of parts, as will hereinafter be described, and pointed out in the claim.

In carrying out my invention I furnish the hour-hand A with a hub comprising a retaining-flange B, which is upset in the central opening *a* of the hand, with a shoulder B', upon which the hand has bearing, and with an inwardly-projecting sleeve or collar B², which is constructed with a longitudinal coupling-slot B³. The internal diameter of the said hub is such that it is adapted to fit snugly over the outer end of the hour-hand snail-sleeve C, which in turn is adapted to be slipped over the sleeve D of the hour-wheel D', which with its said sleeve D is mounted upon the center arbor E of the movement.

The forward end of the hour-hand snail-sleeve is formed with a radially-projecting coupling-finger C', adapted in width to enter the coupling-slot B³ of the hour-hand hub and engage with the side walls of the said coupling-slot to couple the hour-hand to the hour-hand snail-sleeve, so as to cause them to rotate together.

As herein shown, the coupling-finger is formed by making two longitudinal slits in the hour-hand snail-sleeve and lifting the metal so attached; but if desired the coupling-finger may be made independent of and applied to the hour-hand snail-sleeve. At its inner end the said sleeve is furnished with a retaining-flange C², which is upset in the central opening *f* of the snail F, which is thus rigidly connected with the hour-hand snail-sleeve. The inner portion of the said sleeve is furnished, as shown, with a set-screw F', designed to firmly couple the hour-hand snail-sleeve C with the hour-wheel sleeve D, the inner end of the sleeve C being enlarged to form an annular shoulder C³ for the reception of the screw F', the use of which, however, is not imperative, as some other means might be relied upon to maintain the hour-hand snail-sleeve, and hence the hour-hand and the snail, in fixed relations to the hour-wheel sleeve.

The rack G, which coacts with the snail F, may be of any approved construction. As herein shown, it is furnished with a pin G', which rides upon the edge of the snail, and with a toothed edge which coacts with the stop-arm G² and the gathering-pin G³; but so far as the rack is concerned that may be of any approved construction, as before stated.

It will be seen, in view of the foregoing, that my invention provides a simple and convenient mode of rightly connecting the hour-hand with the hour-hand snail-sleeve, so that it will uniformly rotate therewith, and also to rightly connect the snail with the hour-hand snail-sleeve, the snail-sleeve and hour-hand being virtually in one piece when the clock is assembled.

It is apparent that in carrying out my invention some changes in the construction herein shown and described may be made. I would therefore have it understood that I

do not limit myself to the exact form set forth, but hold myself at liberty to make such variations therefrom as fairly fall within the spirit and scope of my invention.

5 I am aware that United States Patent No. 248,935, granted November 1, 1881, to Charles E. Lewis for an improvement in repeating-clocks shows the provision of an hour-hand proper with an inwardly-projecting coupling-lug formed independently of its hub and arranged to enter a coupling-slot formed in the forward end of the sleeve of the snail of a repeating mechanism. I do not, therefore, broadly claim the provision of an hour-hand
10 with a coupling-lug and the provision of a snail-sleeve with a slot.

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

In a repeating, striking-clock of the rack- 20 and-snail type, the combination with the center arbor thereof, of an hour-wheel mounted upon the said arbor and provided with a long, forwardly-projecting hour-wheel sleeve, a snail-sleeve removably mounted upon the 25 hour-wheel sleeve to which it is adjustably secured, a snail mounted upon the rear end of the snail-sleeve, and an hour-hand removably coupled with the projecting forward end of the snail-sleeve, substantially as and for 30 the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILSON E. PORTER.

Witnesses:

GEO. A. WHITNEY,
FRANK S. CORNWELL.