

A. L. COLBURN.
TIME MOVEMENT.
APPLICATION FILED MAY 31, 1912.

1,044,140.

Patented Nov. 12, 1912.

Fig. 1.

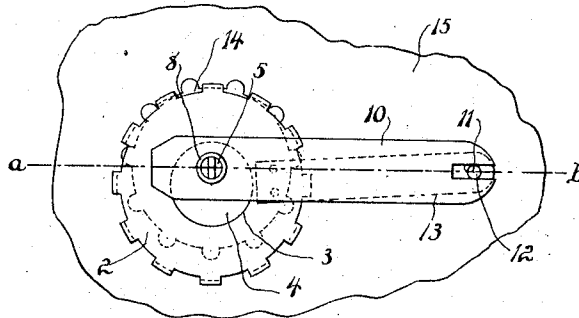


Fig. 2.

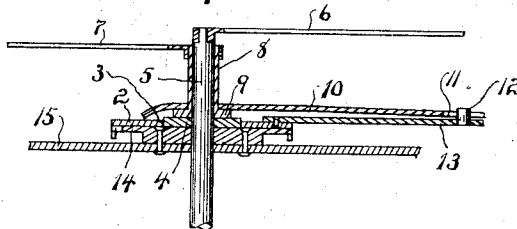


Fig. 3.

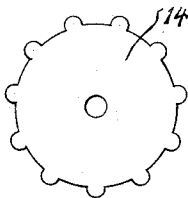
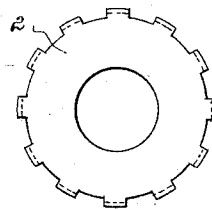


Fig. 4.



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TIME-MOVEMENT.

1,044,140.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed May 31, 1912. Serial No. 700,646.

To all whom it may concern:

Be it known that I, ALBERT L. COLBURN, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Time-Movements; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1, a broken view in front elevation of the front movement-plate of a clock to which my improvement has been applied. Fig. 2 a broken view thereof in horizontal section on the line *a—b* of Fig. 1. Fig. 3 a detached view of the fixed gear. Fig. 4 a detached view of the driven gear.

My invention relates to an improvement in time-movements, the object being to reduce the number of parts required for the driving of the hands.

With these ends in view, my invention consists in a time-movement having certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

As shown, I employ a crown-wheel 2 having a circular central opening 3 receiving an eccentric 4 mounted upon the center-arbor 5 to the projecting outer end of which the minute-hand 6 is secured. The hour hand 7 is mounted upon the outer end of a sleeve 8 the inner end of which is formed with an annular flange 9 resting upon the eccentric 4 aforesaid. A connecting arm 10 rigidly secured to the inner end of the said sleeve 8, is formed at its outer end with a slot 11 receiving a coupling-pin 12 mounted in the outer end of an arm 13 the inner end of which is secured to the crown-wheel 2, whereby the same is connected to the hour hand 7. The crown teeth of the crown wheel 2 co-act with the teeth of a fixed gear 14 concentric with the center arbor 5, fixed to the front movement-plate 15, and having a smaller number of teeth than the crown-

wheel 2. Under this construction and combination of parts, the fixed gear 14 constitutes, as it were, a point of purchase for the step-by-step revolution of the crown-wheel 2 under the action of the eccentric 4 turning with the center arbor 5. The crown-wheel 2 and fixed gear 14 therefore take the place of ordinary dial work which generally consists of two gears and two pinions.

I claim:—

1. In a time-movement, the combination with the center-arbor thereof, of an eccentric mounted thereupon, a rotatable gear mounted upon the said eccentric and bodily moved in a circular path thereby, a non-rotatable gear arranged concentric with the center-arbor and located in position to co-act with the teeth of the said rotatable gear which is held against other than step-by-step rotation by the teeth of the said non-rotatable gear, an hour-hand sleeve, and connections between the said hour-hand sleeve and the rotatable gear, whereby the circular bodily movement of the said gear is transmitted to the hour-hand sleeve.

2. In a time-movement, the combination with the center-arbor thereof, of an eccentric mounted thereupon, a rotatable gear mounted upon the said eccentric and bodily moved in a circular path thereby in addition to its rotary movement, a non-rotatable gear arranged concentric with the said center-arbor and located in position to co-act with the teeth of the said rotatable gear which is held against other than step-by-step rotation by the teeth of the said non-rotatable gear, an hour hand sleeve, an arm fixed thereto, and an arm fixed to the said rotatable gear and having its outer end non-rigidly connected with the outer end of the arm connected with the said hour-hand sleeve.

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

ALBERT L. COLBURN.

Witnesses:

CLARA L. WEED,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."