

(Model.)

G. E. HART.
WATCH MOVEMENT.

No. 324,689.

Patented Aug. 18, 1885.

Fig. 1.

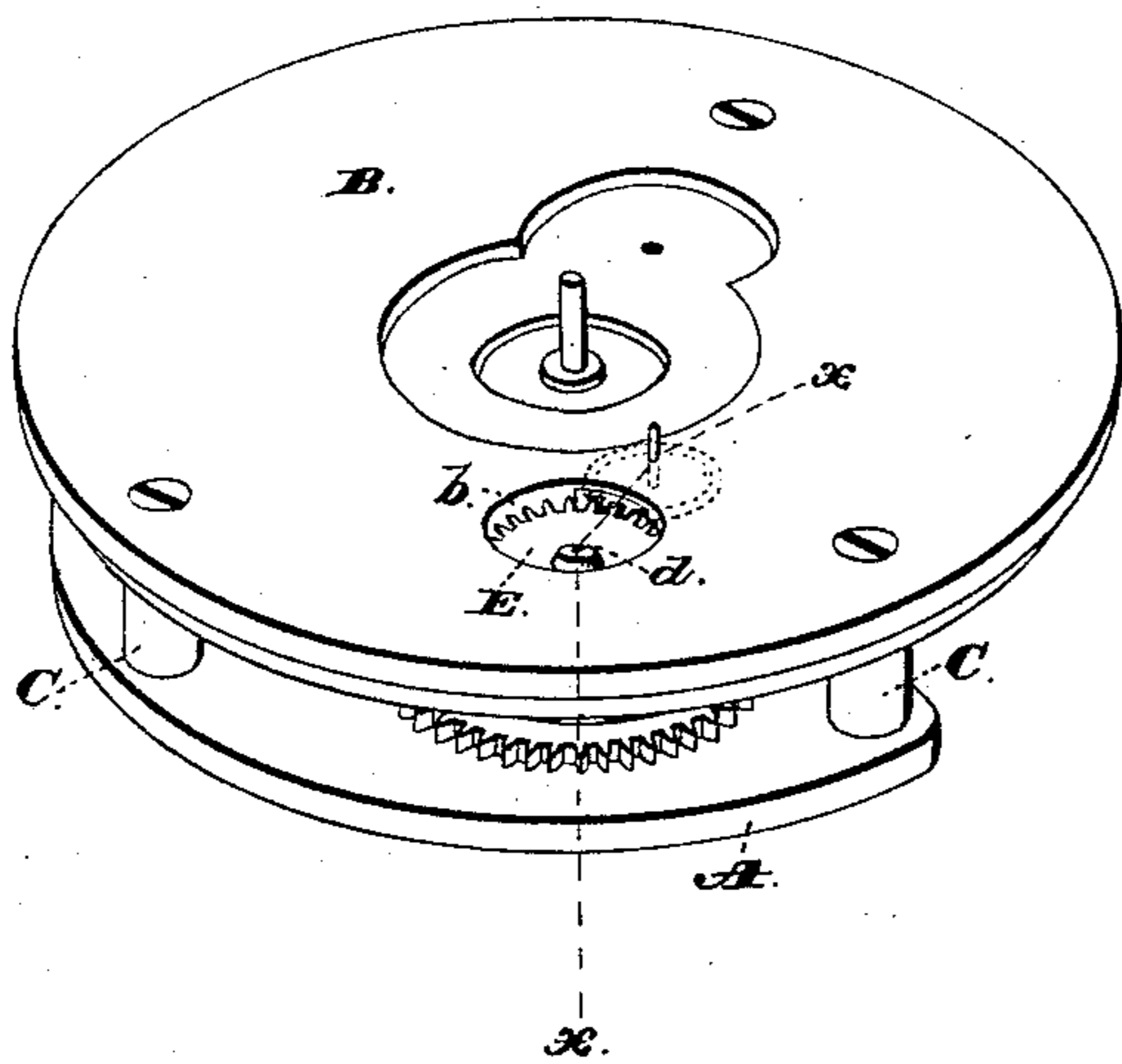


Fig. 2.

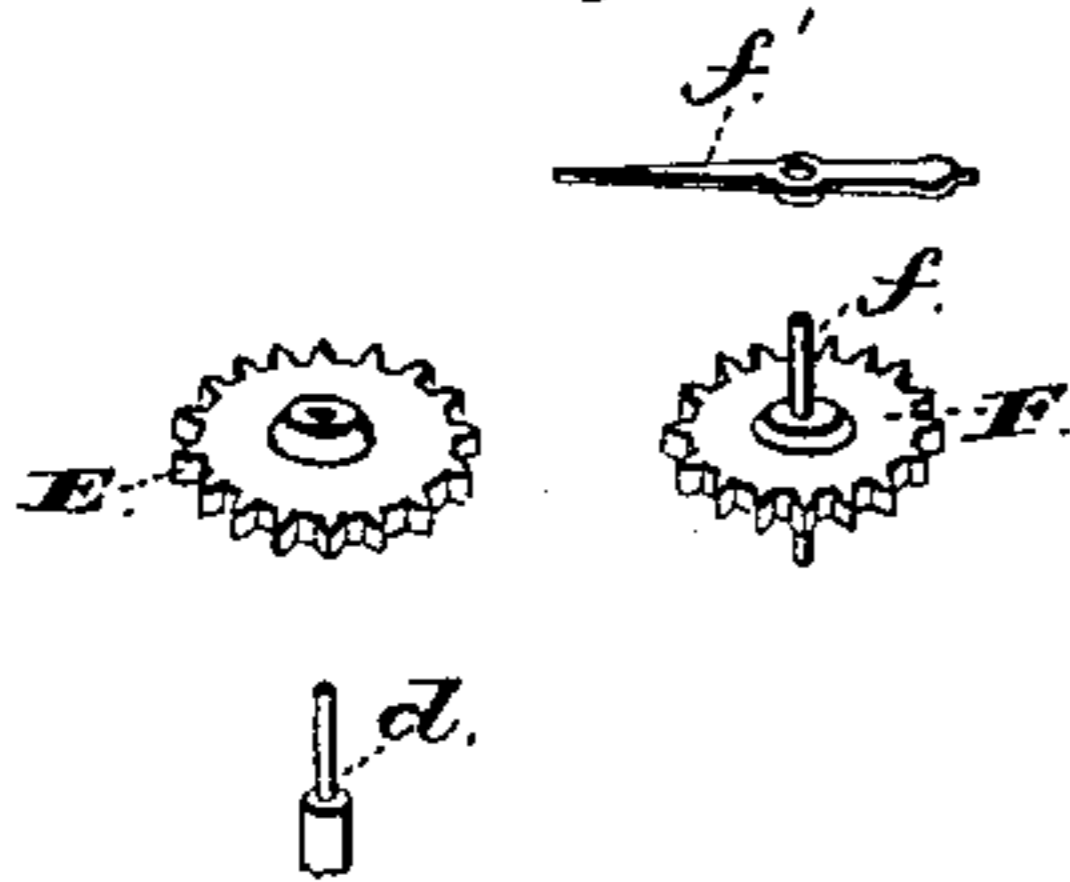
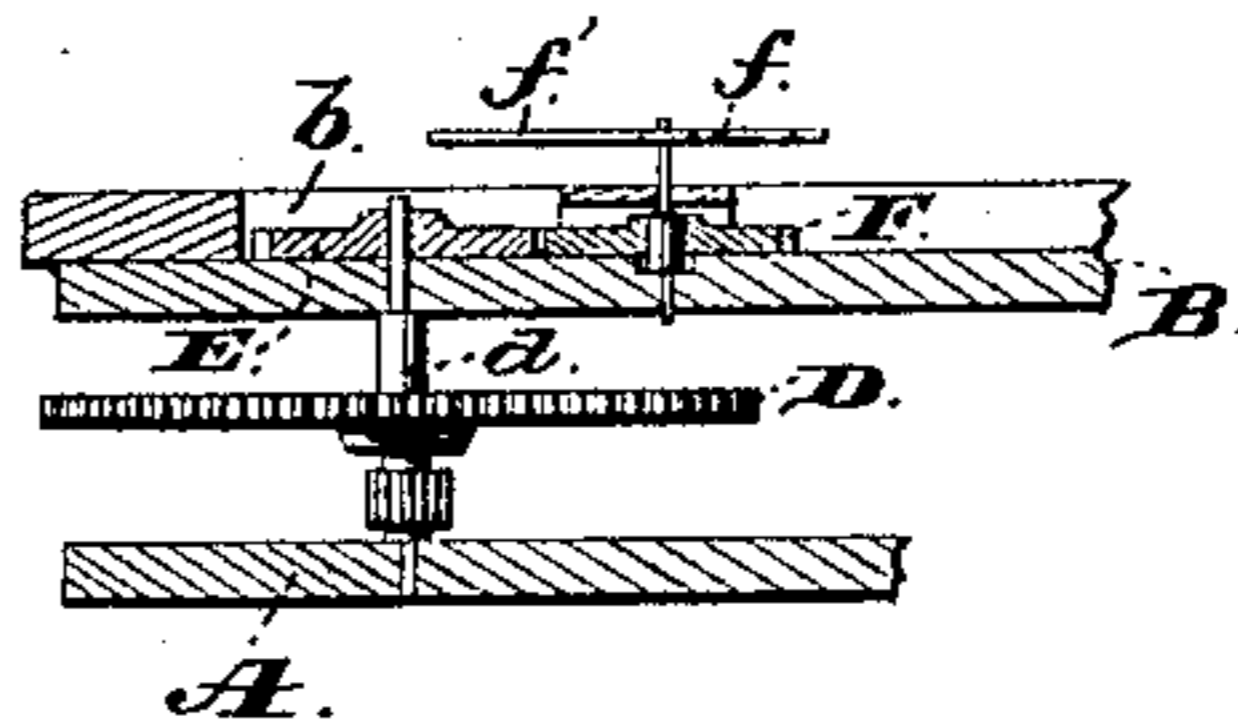


Fig. 3.



Witnesses:
Jas. C. Hutchinson
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Geo. E. Hart, by
Pindle and Russell, his Attys

UNITED STATES PATENT OFFICE.

GEORGE E. HART, OF WATERBURY, CONNECTICUT.

WATCH-MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 324,689, dated August 13, 1885.

Application filed July 19, 1884. (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—

10 Figure 1 is a perspective view of my movement from the dial side, said dial being removed. Fig. 2 is an enlarged perspective view of the seconds arbor and its connecting mechanism, and Fig. 3 is a section upon line
15 *xx* of Fig. 1.

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

The design of my invention is to enable a seconds-hand to be applied to watches which
20 from their construction have heretofore been without the same, to which end said invention consists, principally, in a watch-train in which a seconds-arbor and pinion are placed between and journaled wholly within the sections of a pillar-plate that are united upon a
25 plane which is parallel with the faces of said plate, substantially as and for the purpose hereinafter specified.

It consists, further, in a watch-train in
30 which the seconds-arbor is journaled wholly within the pillar-plate, and is driven by means of a toothed wheel or pinion upon the contiguous end of an adjacent arbor, substantially as and for the purpose hereinafter
35 shown.

In the annexed drawings, A represents the top plate, and B the pillar-plate, of a watch, which parts are connected together and held in relative position by means of pillars C in
40 the usual manner.

Between the plates A and B is journaled a time-train, of which the arbor *d* of the third wheel, D, is located at one side of the lower center of the dial, and has its journal within
45 the pillar-plate B extend into a circular recess, *b*, which is provided in the outer face of

said plate, and upon said projecting journal has secured a toothed wheel, E.

The whole or a part of the pillar-plate B is made sectional and its sections united upon
50 a plane which is parallel with the faces of said plate, and within such sections is journaled a seconds-arbor, *f*, upon which, between said sections, is a toothed wheel, F, that engages with the wheel E and receives motion from the same. Upon the outer end of
55 said arbor *f* is a seconds-hand, *f'*, which indicates seconds upon a suitably-divided dial. The seconds-arbor, being wholly within the pillar-plate, in no manner interferes with the
60 other portions of the time-train, and can be readily applied to any style of watch and can be driven from any one of the arbors of such train by properly proportioning the connecting
65 toothed wheels upon the driving-arbor and said seconds-arbor. Should the arbor selected for actuating said seconds-arbor revolve in the wrong direction, an intermediate wheel will be required for producing the correct motion of
70 the seconds-hand.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. A watch-train in which a seconds-arbor and pinion are placed between and journaled
75 wholly within the sections of a pillar-plate that are united upon a plane which is parallel with the faces of said plate, substantially as and for the purpose specified.

2. A watch-train in which the seconds-arbor is journaled wholly within the pillar-plate and is driven by means of the toothed
80 wheel or pinion upon the contiguous end of an adjacent arbor, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of
85 March, 1884.

GEORGE E. HART.

Witnesses:

GEO. S. PRINDLE,
E. L. BRONSON.