N° 24,583 A.D. 1908

Date of Application, 27th Oct., 1908

Complete Specification Left, 27th Apr., 1909—Accepted, 14th Oct., 1909

PROVISIONAL SPECIFICATION.

Improvements in Secondary Electric Clocks.

I, THOMAS JOHN MURDAY, of 32, Avonwick Road, Hounslow, Middlesex, Electrical Engineer, do hereby declare the nature of this invention to be as follows:—

The mechanism of a secondary dial arranged to be operated by impulses from a primary or master clock is shown in the accompanying drawings to which the following description refers:—

In Fig. 1, *a* is an electro-magnet acting on a centrally pivotted armature *b*. A lever *c* fixed on the shaft of this armature partakes of its motion and gives an up and down movement to a rod *d*. The rod *d* is in guides *k* k^1—K^1 being slotted so as to allow the lower end of *d* to describe a somewhat circular path. This end of rod *d* terminates in a cross piece or pin *i*. One end of this pin moves within an elliptical guide *s*, and a moveable piece *n*, pivotted so as to lie centrally within the guide *s*, prevents the return of pin *i* in the wrong direction.

In Fig. 2, rod *d*, with pin *i*, is shown in three positions—the dotted outline showing the normal position of rest to which rod *d* falls after the magnet has been energised. The other end of *i* strikes in its path against a vane *h* fixed on the end of arbor *e*, and forces it round one revolution at each complete oscillation of rod *d*. The arbor *e* is pivotted between pillars *p* p^1 and carries a worm gearing with wheel *f*. The arbor of this wheel is intended to carry the minute hand and the usual motion work for the hour hand. Pillar p^2 gives support to the arbor of the lozenge shaped piece *n*, and a spring coiled on this arbor returns *n* to its normal position when pin *i* has passed between the ends of *n* and guide *s*.

Rod *d* may be made sufficiently heavy to fall by gravity to the normal position, as shown in Fig. 1, when the movement is placed in a vertical position; or a spring may be applied to the upper portion of *d*, or wound round the arbor of *b*, for the same purpose.

Dated this 27th day of October, 1908.

T. J. MURDAY.

COMPLETE SPECIFICATION.

Improvements in Secondary Electric Clocks.

I, THOMAS JOHN MURDAY, of 32, Avonwick Road, Hounslow, Middlesex, Electrical Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The mechanism of a secondary dial arranged to be operated by impulses from

[*Price* 8*d*.]

a primary or master clock is shown in the drawing accompanying the Provisional Specification.

In Fig. 1, *a* is an electro-magnet acting on a centrally pivotted armature *b*. A lever *c* fixed on the shaft of this armature partakes of its motion and gives an up and down movement to a rod *d*. The rod *d* is in guides *k* k^1—K^1 being slotted so as to allow the lower end of *d* to describe a somewhat circular path, while the screw *g*, connecting with lever *c*, is made sufficiently long to admit of the smaller lateral play of rod *d* which takes place at this point. This lower end of the rod *d* terminates in a cross piece or pin *i*. One end of this pin moves within an elliptical guide *s*, and a moveable piece *n*, pivotted so as to lie centrally within the guide *s*, prevents the return of pin *i* in the wrong direction.

In Fig. 2, rod *d*, with pin *i*, is shown in three positions—the dotted outline showing the normal position of rest to which rod *d* falls when the magnet is de-energised. The other end of *i* strikes in its path against a vane *h* fixed on the end of arbor *e*, and forces it round one revolution at each complete oscillation of rod *d*. The arbor *e* is pivotted between pillars *p* p^1 and carries a worm gearing with wheel *f*. The arbor of this wheel is intended to carry the minute hand and the usual motion work for the hour hand.

Pillar p^2 gives support to the arbor of the lozenge shaped piece *n* and a spring coiled on this arbor returns *n* to its normal position when pin *i* has passed between the ends of *n* and guide *s*.

Rod *d* may be made sufficiently heavy to fall by gravity to the normal position, as shown in Fig. 1, when the movement is placed in a vertical position; or a spring may be applied to the upper portion of *d*, or wound round the arbor of *b*, for the same purpose.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

The arrangement of a centrally pivotted armature limited to oscillate through a certain definite angle, and giving a reciprocal motion to a crank rod, said rod carrying a crank pin which, by means of guides, rotates a shaft or spindle, carrying a worm, through one complete revolution at each complete oscillation of the armature, substantially as described and shown for the purpose specified.

Dated this 26th day of April, 1909.

T. J. MURDAY.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1909.

A.D. 1908. Oct. 27. № 24,583.
MURDAY'S Provisional Specification.

(1 SHEET)

[This Drawing is a reproduction of the Original on a reduced scale.]

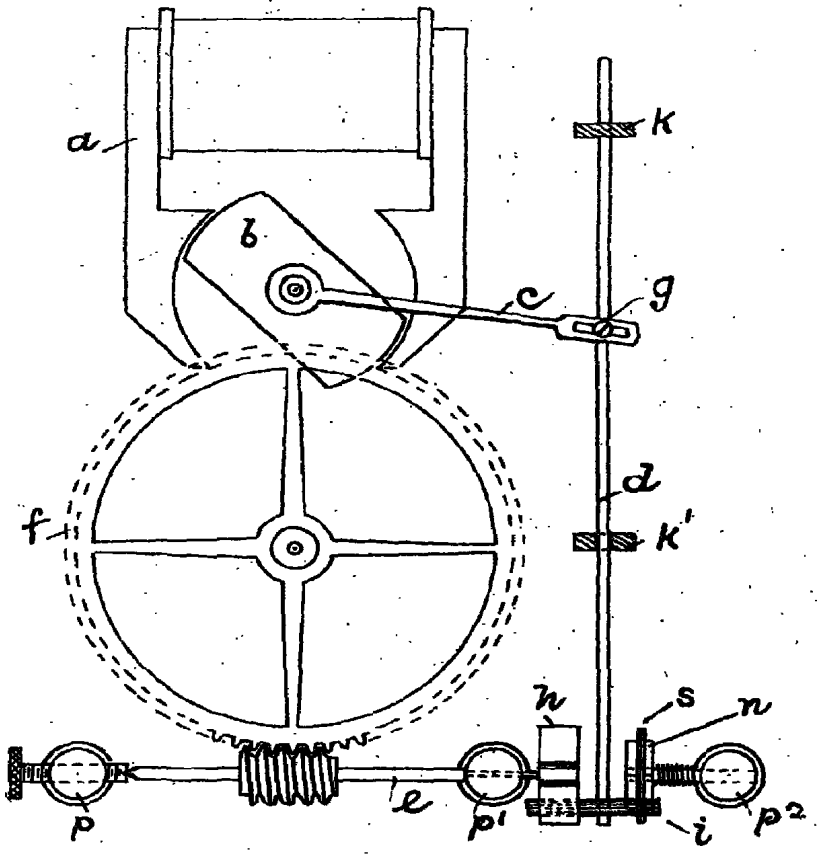

FIG: 1.

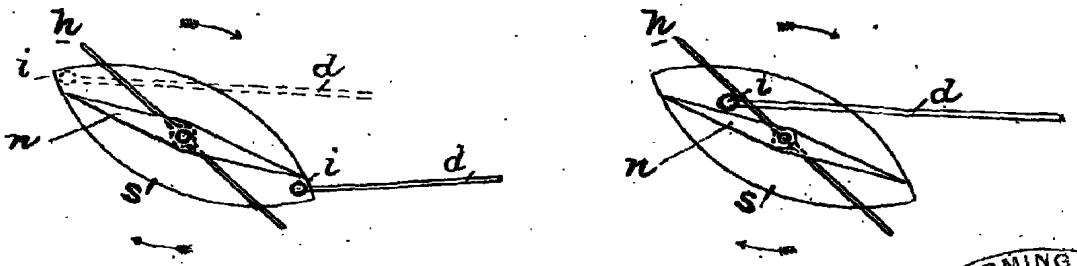

FIG: 2.

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