

(No Model.)

E. HORTON.
Clock Pendulum.

No. 238,392.

Patented March 1, 1881.

fig. 1.

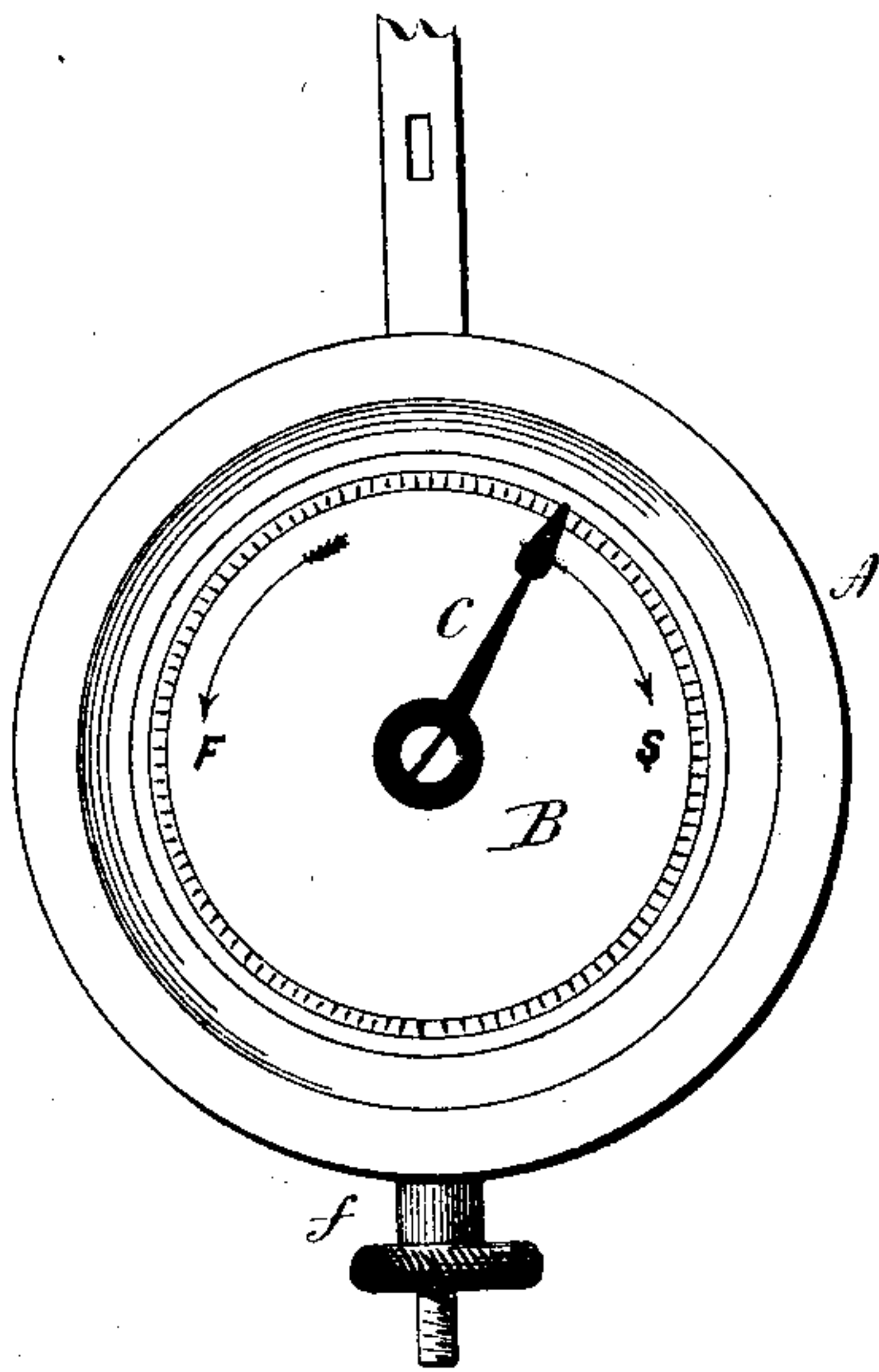


fig. 2.

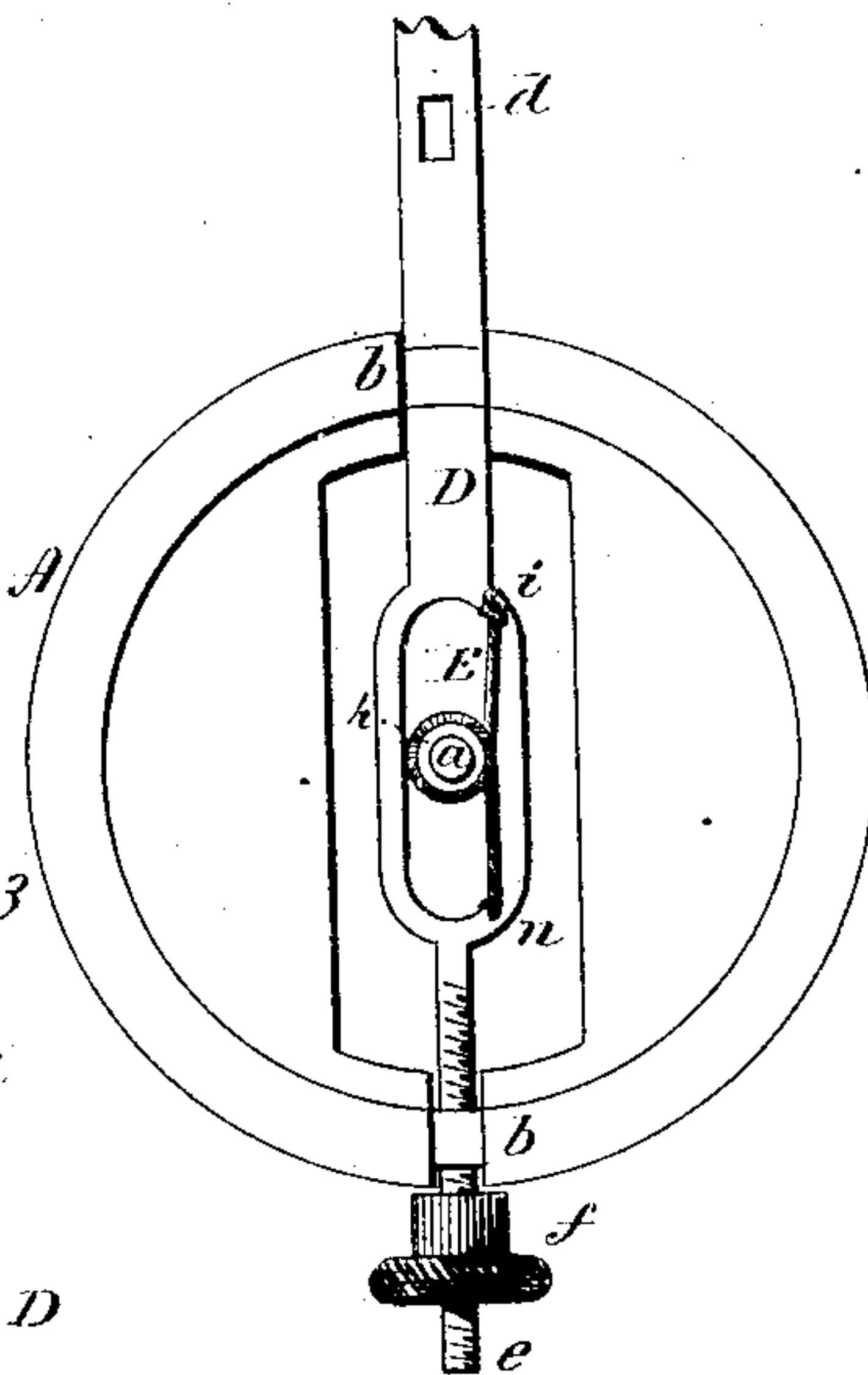


fig. 3.

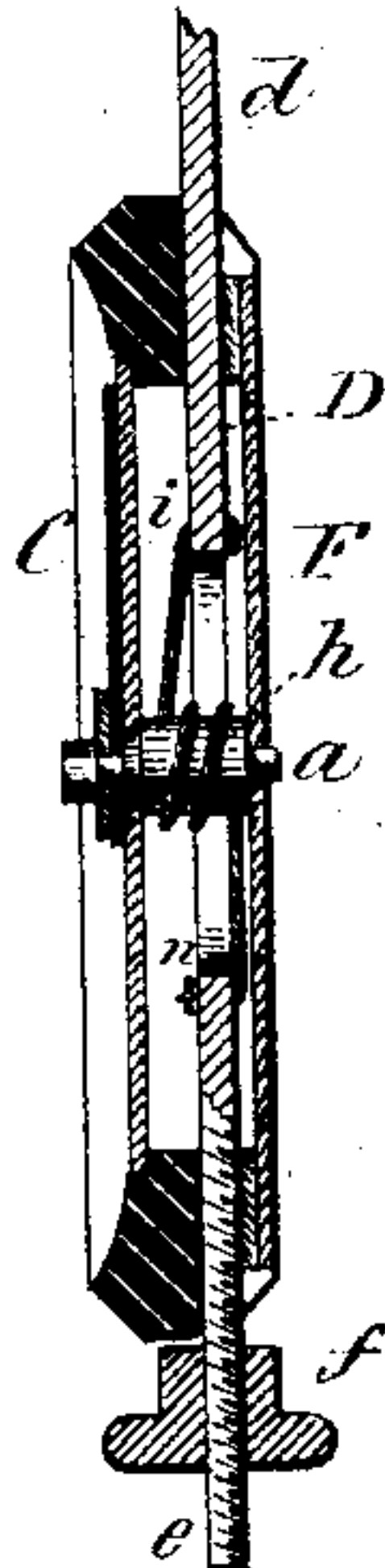
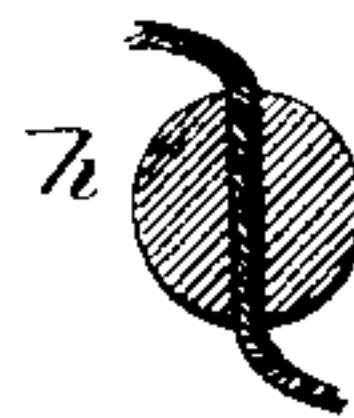


fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

EVERETT HORTON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE NEW HAVEN CLOCK COMPANY, OF SAME PLACE.

CLOCK-PENDULUM.

SPECIFICATION forming part of Letters Patent No. 238,392, dated March 1, 1881.

Application filed January 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, EVERETT HORTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Clock-Pendulums; 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 front view; Fig. 2, a rear view with covering-plate removed; Fig. 3, a vertical section; Fig. 4, a detached view enlarged.

This invention relates to an improvement in that part of a clock-pendulum commonly called the "bob," with special reference to the adjustment of the pendulum, and is an improvement on the device for which Letters Patent were granted to the assignees in this application, as assignees of Hiram Camp, dated November 4, 1879, No. 221,213.

In the Camp device a pinion is attached to the pointer-shaft and a corresponding toothed rack arranged to work therein. It is impossible, or practically so, in the class of work to which this invention is adapted, to make the teeth of the rack and pinion so that there will not be more or less play between the teeth of the rack and pinion. Again, the cutting of the teeth in the rack is expensive, because, unlike the pinion, they can be cut only one at a time.

The object of this invention is to overcome these difficulties; and it consists in the construction as hereinafter described, and particularly recited in the claim.

A represents the body of the bob, and may be of any desirable shape or design. On the face is a dial, B, graduated or divided so as to show regular divisions, and on a shaft, *a*, in the center is a pointer, C, arranged so as to revolve upon the dial.

On the back of the pendulum is a vertical slide, D, arranged in a recess in the back in suitable guides, *b*, and is covered by a plate, F, which forms the rear bearing for the shaft *a*, so as to be moved diametrically across the bob, and the upper end of the slide D is pro-

vided with any suitable means for attachment to the pendulum-rod, as by a loop, *d*. At the lower end the slide terminates in a screw, *e*, extending below the bob, and there fitted with a nut, *f*. The slide D has a slot at its center, through which the shaft *a* extends; or it may be simply bent out of its central line, so as to move vertically at one side the shaft. On the shaft is a drum, *h*; or the shaft may be made as a drum. Around this drum or shaft a flexible cord is wound, first running it through the drum, as seen enlarged, Fig. 4, and secured therein, one end wound in one direction and the other in the opposite direction, as seen in Fig. 3. One end, *i*, is attached to the slide D above, the other, *n*, attached to the slide D below, as seen in Figs. 2 and 3, the cord drawn tightly up and down; hence, as the slide is moved either up or down, the cord around the shaft drawn by the slide causes the shaft to revolve and turn the pointer accordingly.

By turning the nut *f* either up or down the bob is accordingly raised or lowered, as in the usual construction. Because of the connection between the slide D and the pointer, made by the cord around the shaft of the pointer, the pointer turns on the dial to the extent that the shaft is turned, and thus, by the graduation of the dial, shows what the movement has been, enabling the accurate adjustment of the pendulum, or rather permitting the person making the adjustment to know the extent that the pendulum has been moved, to aid him in making subsequent adjustments; because, knowing the extent of the movement of the pointer at one adjustment and its results, he can make the next adjustment accordingly.

The cord may be a fine soft wire or "catgut," or any material which will not materially stretch, so that when in place or drawn taut the slightest movement of the slide will correspondingly affect the shaft, and thus avoid the play which necessarily attends the use of the toothed rack and pinion.

From the foregoing it will be understood that I am aware of the Patent No. 221,213, before referred to, and do not claim anything there shown or described; but

What I do claim is—

The combination of the bob, with dial and pointer arranged thereon, with a vertical slide connected to the shaft of the pointer by a cord
5 around said shaft, the ends of said cord attached, respectively, above and below the pointer-shaft, and an adjusting-nut on which the bob

rests, substantially as and for the purpose described.

EVERETT HORTON.

Witnesses:

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