

(No Model.)

O. C. RETSLOFF.

PENDULUM.

No. 272,978.

Patented Feb. 27, 1883.

Fig. 1

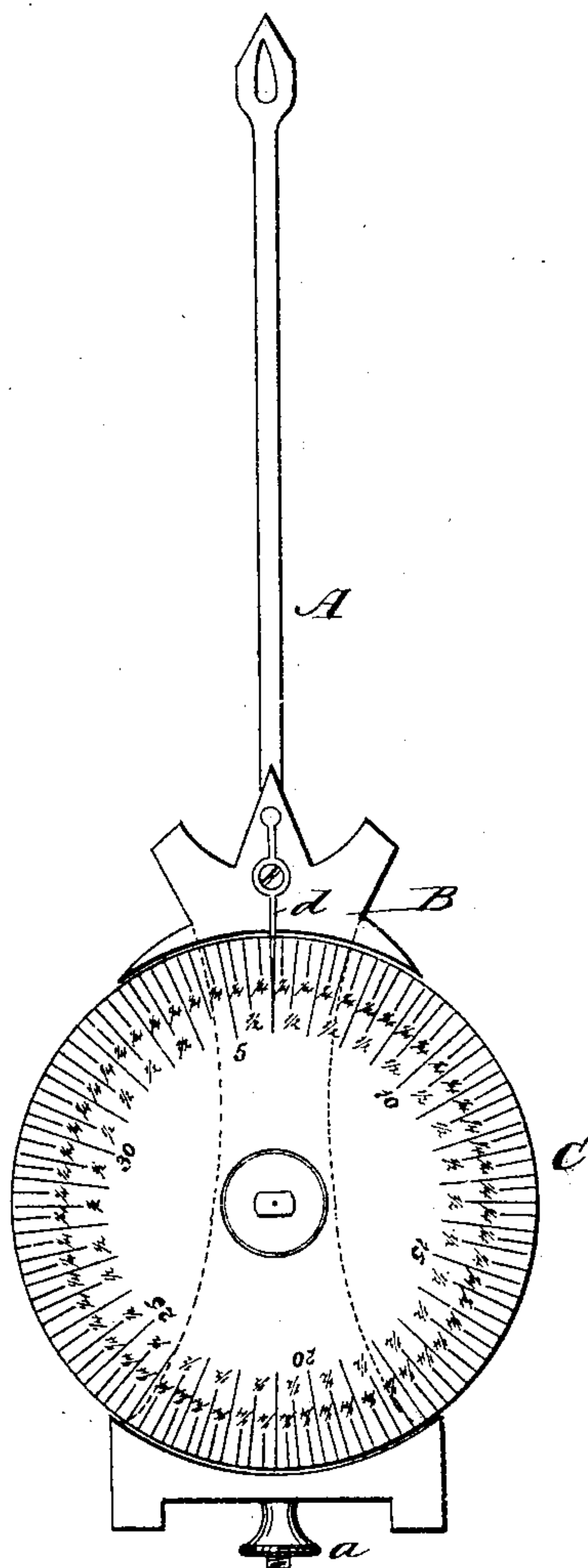
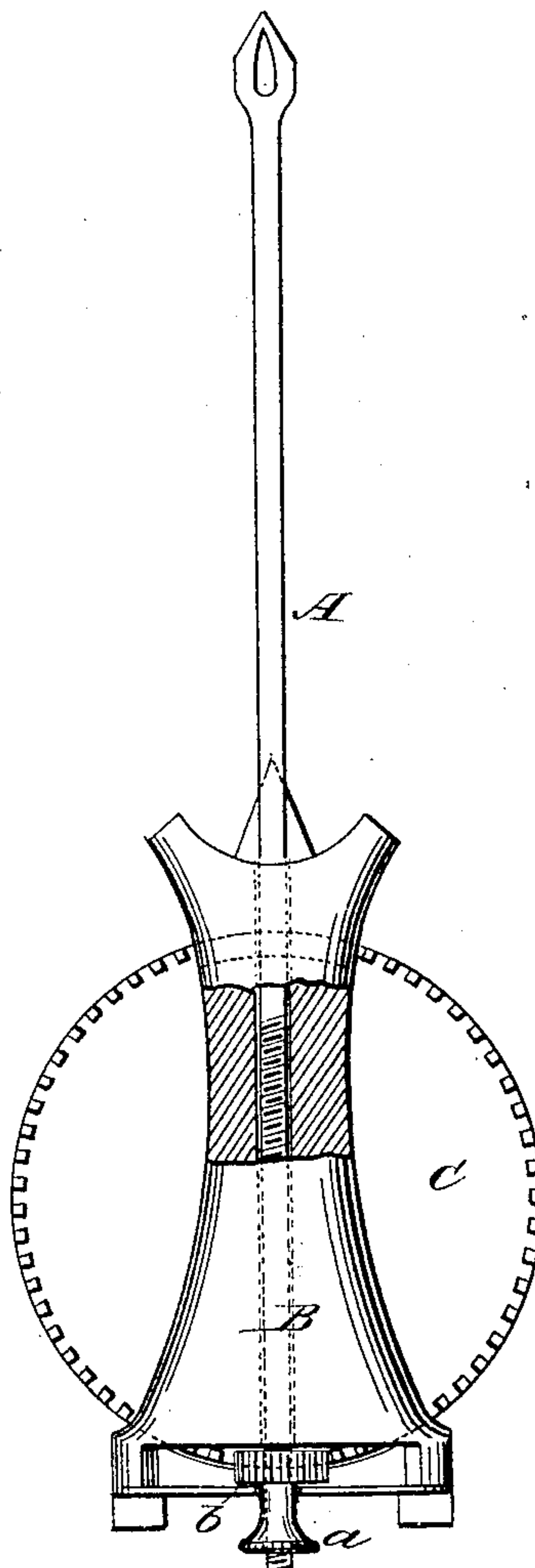


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

OTTO C. RETSLOFF, OF WINNEBAGO CITY, MINNESOTA.

PENDULUM.

SPECIFICATION forming part of Letters Patent No. 272,978, dated February 27, 1883.

Application filed April 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, OTTO C. RETSLOFF, of Winnebago City, in the county of Faribault and State of Minnesota, have invented a new and useful Improvement in Pendulums, of which the following is a full, clear, and exact description.

The object of my invention is to provide for the accurate regulation of pendulum-clocks by adjustment of the length of the rod; and to that end my invention consists in a pendulum-bob fitted for rotation by its adjusting-nut, and provided with a pointer to indicate the extent of the movement, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a front elevation of my improved pendulum. Fig. 2 is a rear elevation, partly sectional.

A is the pendulum-rod, carrying a bob, B, which slides freely on the rod, and is adjustable by the nut *a* at the lower end of the rod.

Upon a stud at the middle of the bob is a disk or wheel, C, formed with cogs at its edge, which engage a pinion, *b*, fixed on the nut *a*. The face of the wheel C is marked with divisions arranged at regular intervals, and numbered in regular order.

Upon the bob, above the dial, is a fixed pointer, *d*, which indicates, in connection with the marks upon the dial, the extent of its rotation.

The bob is adjusted by turning the nut *a* to the right or left, as usual, and thereby raising and lowering the bob upon the rod. By the engagement of the pinion with the teeth of the dial, the dial is caused to rotate at the same time that the bob is raised and lowered, and the pointer *d* thus indicates both the rotation

of the dial and the extent of movement of the bob lengthwise of the rod.

The marks upon the dial will be arranged at proper intervals, so that the distance between them shall indicate a variation in the movement of the clock of a definite length of time in twenty-four hours, from a quarter of a minute upward. By this arrangement, when it is desired to have the clock gain or lose a certain length of time, the bob will be adjusted to correspond, and the pointer and revolving dial will serve as the guide by which this adjustment can be accurately made.

This device is simple, inexpensive, and reliable, and by its use clocks can be accurately regulated, instead of their regulation being left to guess-work, as is usually the case.

The dial will usually be arranged to effect a difference of thirty minutes in twenty-four hours and the rod fitted to allow four revolutions of the dial.

I am aware that pendulums have been patented having dials for registering the number of turns of the screw-nut used to adjust the same fast or slow, and I do not claim this, broadly, as my invention; but

What I claim, and wish to secure by Letters Patent, is—

In pendulums, the combination, with the bob B, screw-rod A, and nut *a*, of the spaced and figured dial-plate C, pivoted to the bob B, to revolve in a vertical plane by the action of the pinion-wheel *b*, of the nut *a* upon beveled gear-teeth on its periphery, and a hand or pointer, *d*, secured to the bob B, and pointing to the indices of the dial, as shown and described.

OTTO C. RETSLOFF.

Witnesses:

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C. H. FOX.