(No Model.)

O. BARTEL.

CLOCK PENDULUM.

No. 515,855. Patented Mar. 6, 1894.

Fig: 1.

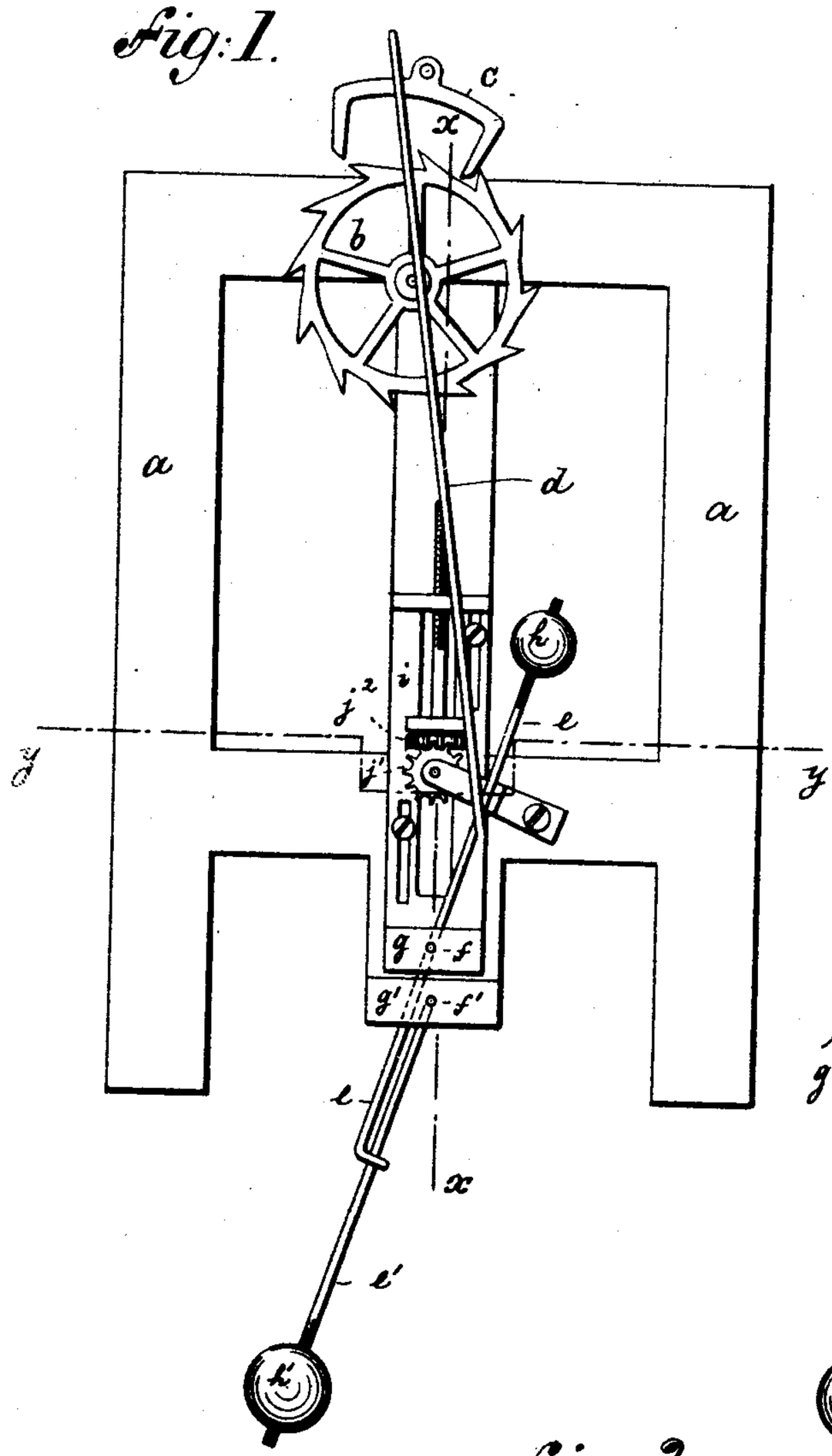


Fig: 2.

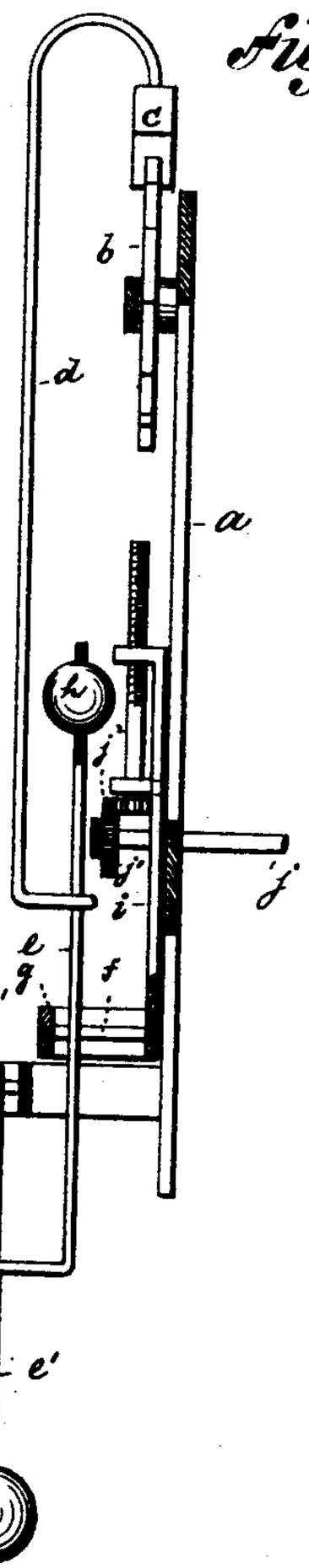
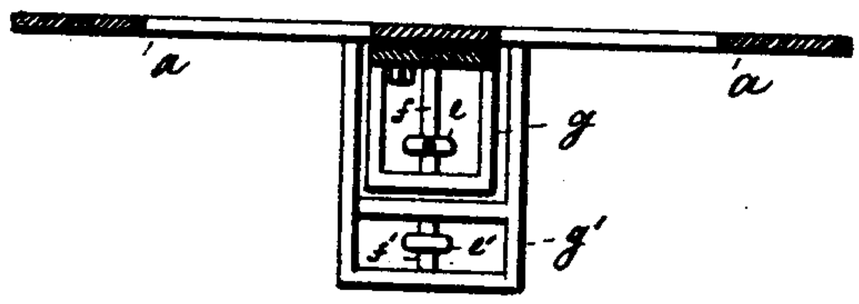


Fig: 3.



WITNESSES:

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CLOCK-PENDULUM.

SPECIFICATION forming part of Letters Patent No. 515,855, dated March 6, 1894.

Application filed February 28, 1893. Serial No. 464,059. (No model.)

To all whom it may concern:

Be it known that I, OTTO BARTEL, of New York city, New York, have invented an Improved Clock-Pendulum, of which the following is a specification.

This invention relates to a pivoted pendulum having a ball on the bottom and a counterweight on the top. The advantages are, that this pendulum need not be detached, that it will not come out of order when moved or during transportation, that I am enabled by its construction and combination of the two balls, to use a lighter ball than heretofore and a shorter rod, consequently consuming less room. I furthermore dispense with the thin spring used on top of ordinary pendulums, which is liable to be bent, causing stoppage of the movement.

In the accompanying drawings: Figure 1 is a rear elevation of my improved clock pendulum; Fig. 2 a longitudinal section on line x, x, Fig. 1, and Fig. 3 a cross section on line y, y, Fig. 1.

The letter a, represents the frame of the clock movement.

b, is the escape wheel, c the verge or anchor and d, the crutch wire attached to the verge and operating the pendulum.

e, e', represent two pendulum rods secured to the pivoted staffs f, f', that turn in the bearings g, g'. The upper pendulum rod e, carries a ball or weight h, above its staff and the lower pendulum rod e', carries a ball or weight h', below its staff. The two pendulum rods e, e', are connected and oscillate as one rod, the connection being shown to be made by the lower end of the upper rod that is looped around the lower rod, but any other suitable connection can be formed.

Motion is imparted to the pendulum rods by means of the crutch wire which engages one of said rods as shown. The pendulum rods are hung vertically, *i. e.* when the clock goes, they cross the vertical line at each oscillation, and when the clock stops, they assume a vertical position. In order to make the pendulum go faster or slower, one of the bearings g, g', is made vertically adjustable. I have shown the upper bearing g, secured to a bent plate i, which may be moved up or down by revolving arbor j, that transmits motion by means of gear wheels j', j^2, or otherwise.

It is immaterial whether the crutch wire is attached to the upper rod or to the lower rod and if desired the crutch wire may be made to engage both of the rods thus forming the connection between them.

Though I have shown the upper bearing g, to be made adjustable, it is of course, to be understood that either the upper or the lower bearing may be so constructed.

What I claim is—

The combination of a pair of connected and independently adjustable pendulum rods hung on separate pivots, with a movable bearing to which one of the rods is pivoted, substantially as specified.

OTTO BARTEL.

Witnesses:
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