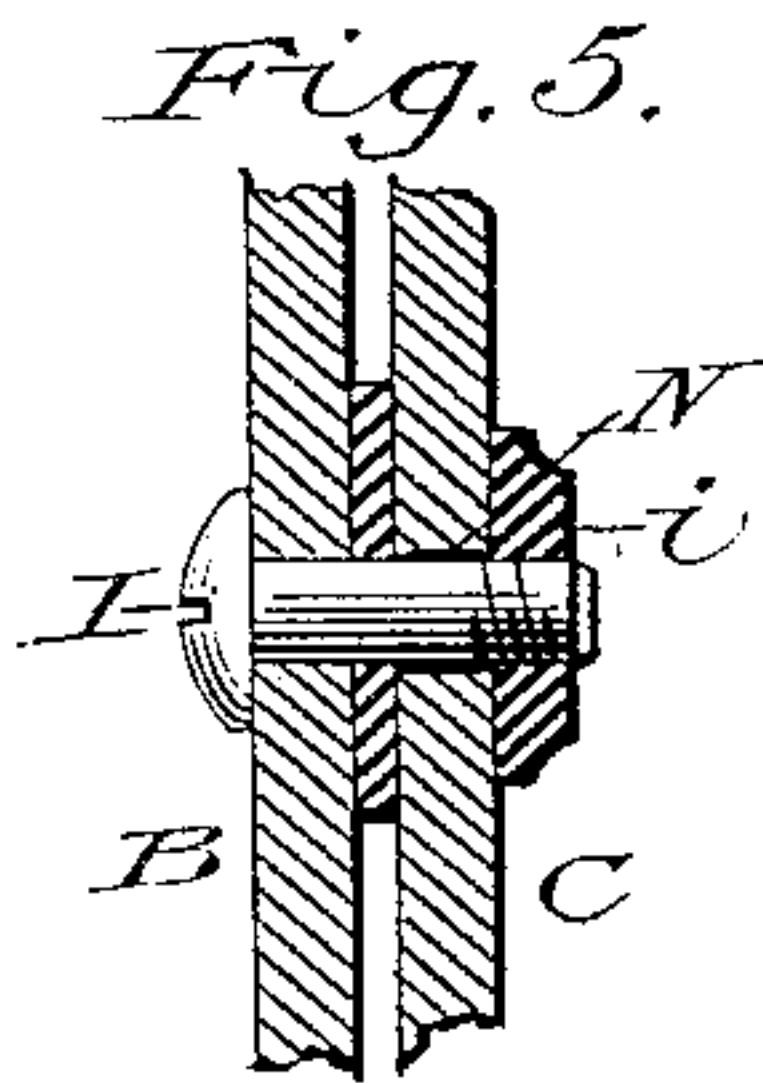
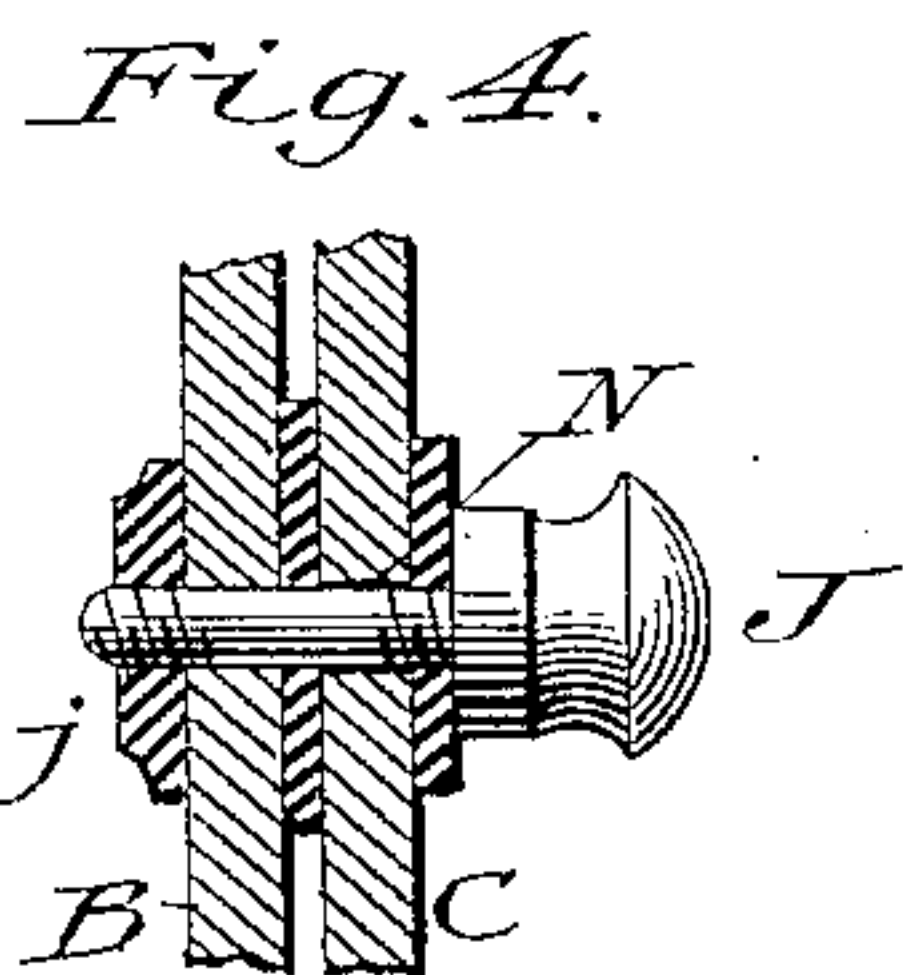
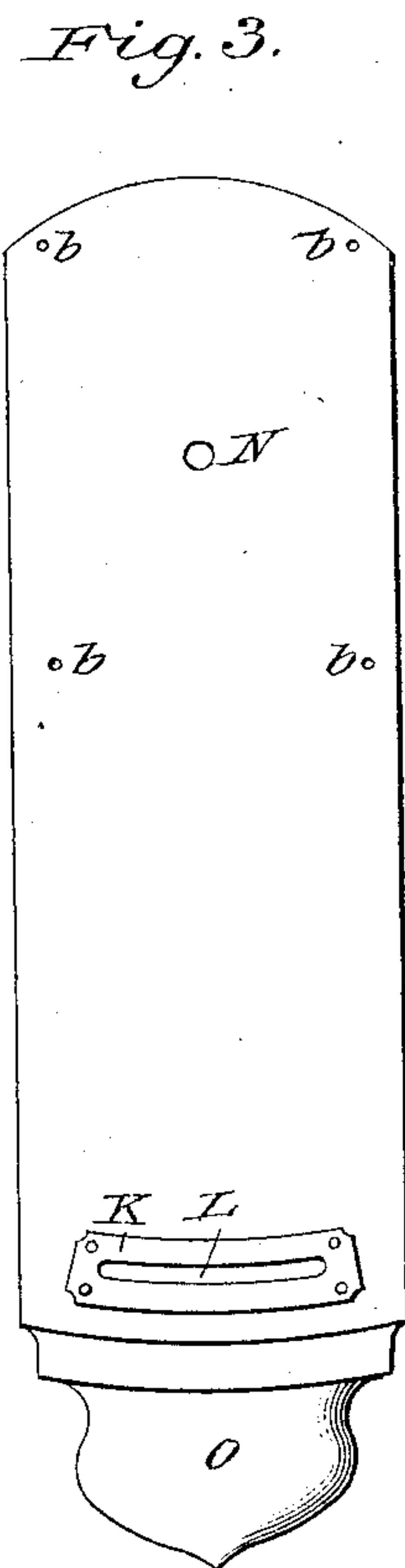
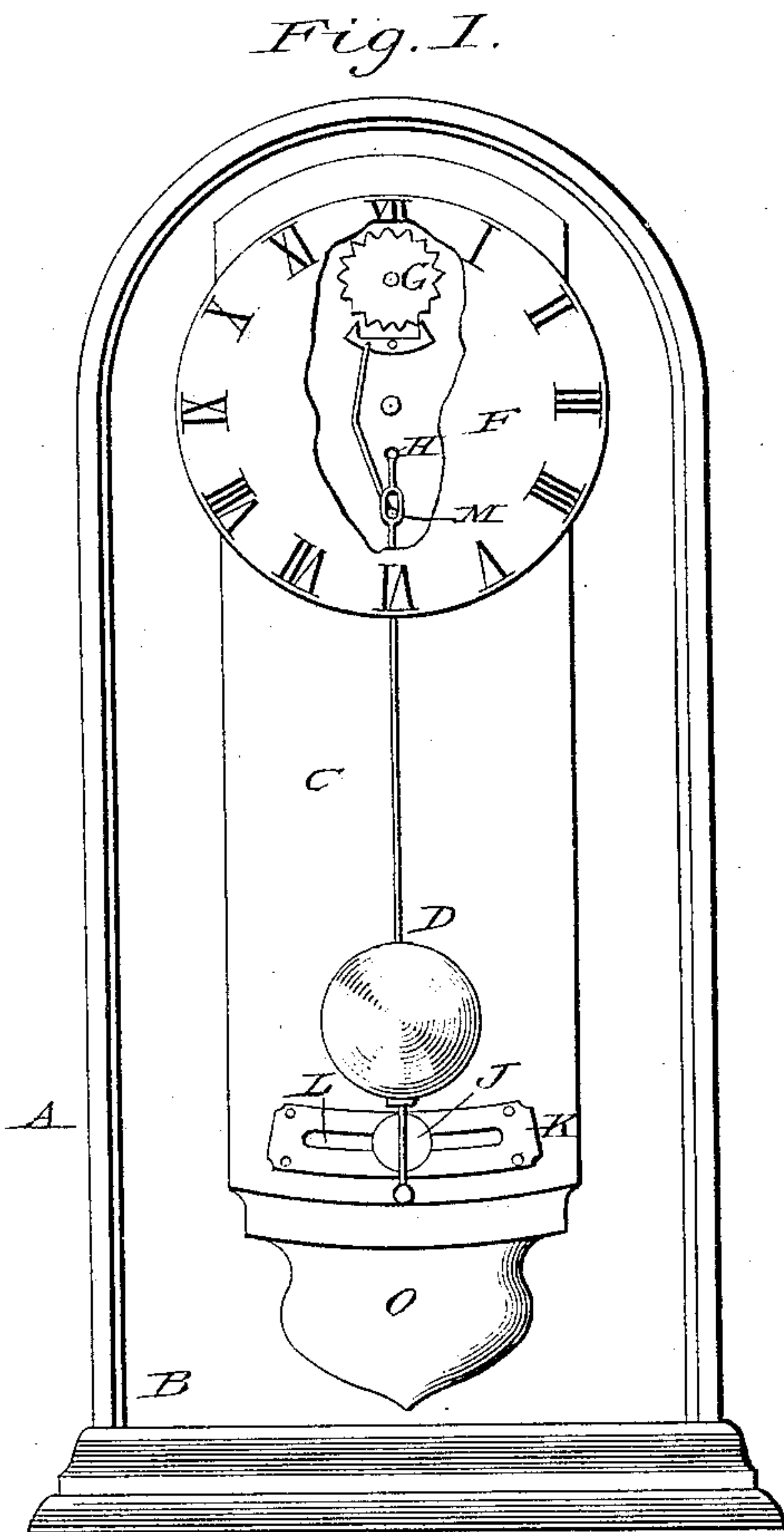
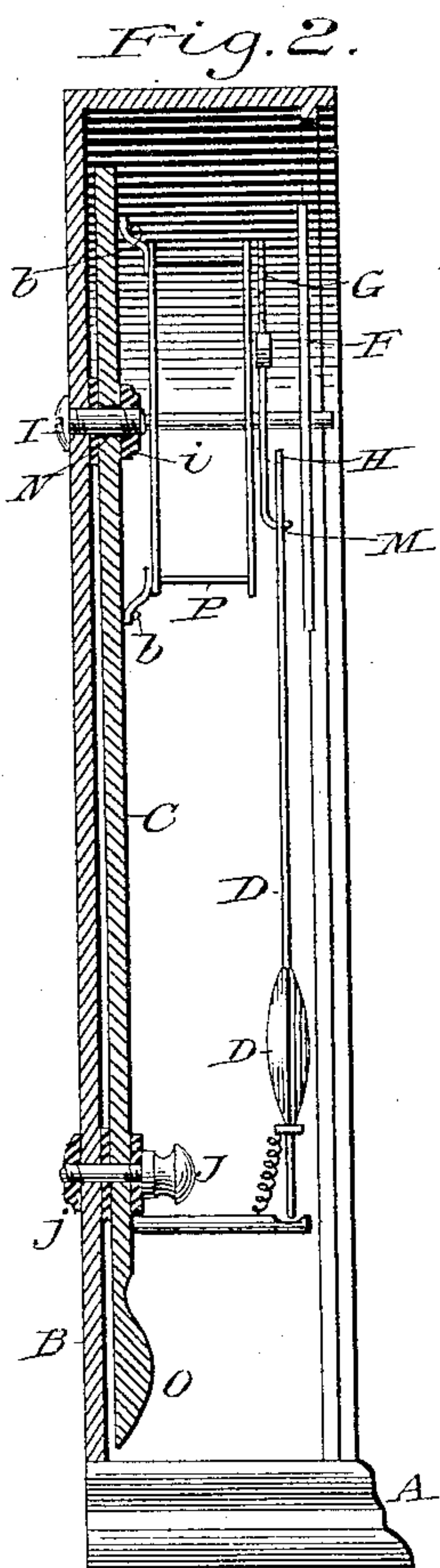


(No Model.)

H. P. PRUIM.
ADJUSTING BEAT OF CLOCKS.

No. 325,111.

Patented Aug. 25, 1885.



Witnesses:

Frank J. Parsons
L. J. Mulder

Inventor:
Hiram P. Pruim

UNITED STATES PATENT OFFICE.

HIRAM P. PRUIM, OF GRAND HAVEN, MICHIGAN, ASSIGNOR OF ONE-HALF
TO THOMAS CAIRUS, OF SAME PLACE.

ADJUSTING BEAT OF CLOCKS.

SPECIFICATION forming part of Letters Patent No. 325,111, dated August 25, 1885.

Application filed August 23 1884. (No model.)

To all whom it may concern:

Be it known that I, HIRAM P. PRUIM, a citizen of the United States, residing at Grand Haven, in the county of Ottawa and State of Michigan, have invented a new and useful Improvement for Adjusting or Plumbing Clock-Movements, of which the following is a specification.

My invention relates to improvements in that class of clocks in which the movements are governed or regulated by means of a swinging pendulum; and the objects of my improvements are, first, to provide a means of leveling or plumbing the movements in pendulum clocks, and, second, to facilitate the taking of the movements out of the frame of a clock. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a face view of a clock, showing the movements of a pendulum-clock with my invention attached. Fig. 2 is a side view of the same, with the side of the frame removed to show the movements of a clock attached to an adjustable back. Fig. 3 is a face view of an adjustable back detached from the frame of a clock and movements removed. Fig. 4 is a sectional view showing the relative positions of the back of the clock-frame, and the adjustable back, and the application of the set-screw; and Fig. 5 is a sectional view of the same, showing the application of the pivoting-screw.

Similar letters refer to similar parts throughout the several views.

The frame A, the movements P, and the pendulum D constitute the general outline of the class of clocks to which my invention may be attached, and the adjustable back C, the pivoting-screw I, the set-screw J, and the center arm or index, E, constitute the main features of my invention.

The adjustable back C is secured to the back of the clock-frame at the upper end by means of a pivoting-screw, I, which passes through the back B of the clock-frame and through a hole, N, in the adjustable back C, and screws into a nut, *i*, situated upon and attached to the front side of the adjustable back, and is so arranged that the adjustable back may be adjusted laterally, said screw I acting as a

pivot or center of motion, and the lower end of the adjustable back C is secured to the back B of the clock-frame by means of a set-screw, J, which passes through a slot, L, in the adjustable back and through the back of the clock-frame, and screws into a nut, *j*, situated upon and attached to the back side of the back B of the clock-frame; or the nut and bolt may be reversed and the bolt attached to the back of the clock-frame, and, passing through the slot L in the adjustable back, receive the nut front of the adjustable back. The set-screw J is provided with a shoulder or projecting head, which is brought to bear upon the slotted washer or guard K for the purpose of holding the adjustable back firmly in place when adjusted.

The slot L in the adjustable back is made of sufficient width to allow of a free lateral motion of the back over the set-screw J, and of sufficient length to allow the adjustable back to be carried round and adjust the movements of the clock "plumb" or in "beat," regardless of the position that the frame of the clock may accidentally assume when sitting upon a shelf or other device or when secured to the wall by means of a screw or otherwise, and is protected by means of the slotted washer or guard K, which is attached to the face of the adjustable back C. The arm or center E is secured to the lower end of the adjustable back and projects out to or beyond the point *d* of the pendulum-rod, for the purpose of indicating when the movements of the clock are brought to a position corresponding with the center of gravity of the pendulum-rod.

The movements P of the clock, instead of being attached to the back of the clock-frame, as usual, are attached to the adjustable back by means of the lugs and screws *bb*, in the same manner that they are usually attached to the back of the clock-frame.

If when placing a clock in position it is found to be "out of beat," or does not beat "squarely" or "regularly," allow the pendulum to hang free and motionless at its natural center of gravity, loosen the set-screw J, carry the lower end of the adjustable back over until the index or arm E comes directly under the point *d* of the pendulum-rod, and secure the

adjustable back in place by tightening the set-screw J.

The lower end of the adjustable back C may be provided with a weight, O, of any desired or convenient form, in which case the adjustable back may be allowed to swing freely upon the pivoting-screw I, and adjust itself and the movements of the clock to the proper center by the natural gravity of the weight. While this mode of adjustment is more convenient and expeditious than the use of the set-screw without the weight, I prefer the use of the set-screw as being more direct and positive, and less likely to be thrown out of position by reason of a sudden jar or transient motion.

I find by experiment that I cannot confine the pivoting-screw I to any one particular point in all clocks, but that while upon some clocks it may be situated upon a line with the center of the movements of the clock, in others it is necessary to place it upon a line with the extreme upper portion of the movements, and at other points according to the position of the scape-wheel and verge G.

To take the movements out of a clock-frame when my appliance is in use, unscrew the set-screw J and the pivoting-screw I and remove the adjustable back and movements.

The hole N in the adjustable back may be

protected by means of a collar or sleeve passing through the hole N over the screw I, for the purpose of facilitating the working of the pivot as well as protecting the back, or the sleeve may pass through both the adjustable back C and the back B of the clock-frame.

I am aware that prior to my invention clocks have been made having an adjustable back for the purpose of leveling or adjusting the movements. I therefore do not claim such a combination, broadly, but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a clock having an adjustable back, C, supported by a pivoting screw, I, with the slot L, the set-screw J, the guard K, and a center arm or index, E, substantially as and for the purpose set forth.

2. A clock having a pendulum, D, and movements P, in combination with the adjustable back G, the pivoting-screw I, the set-screw J, the slot L, the center arm or index, E, and the weight O, substantially as and for the purpose set forth.

HIRAM P. PRUIM.

Witnesses:

F. B. HARVEY,
I. J. CILLEY.