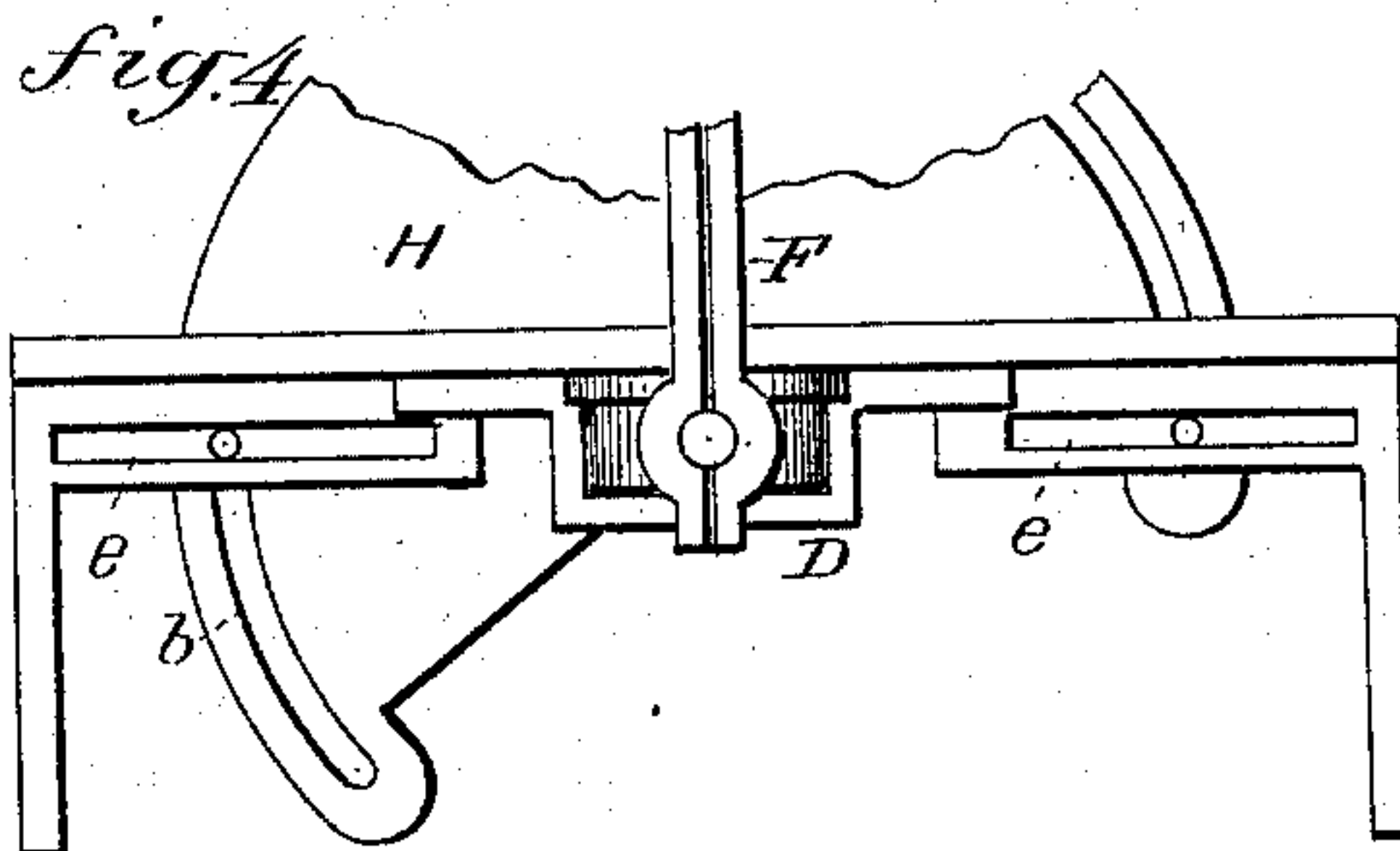
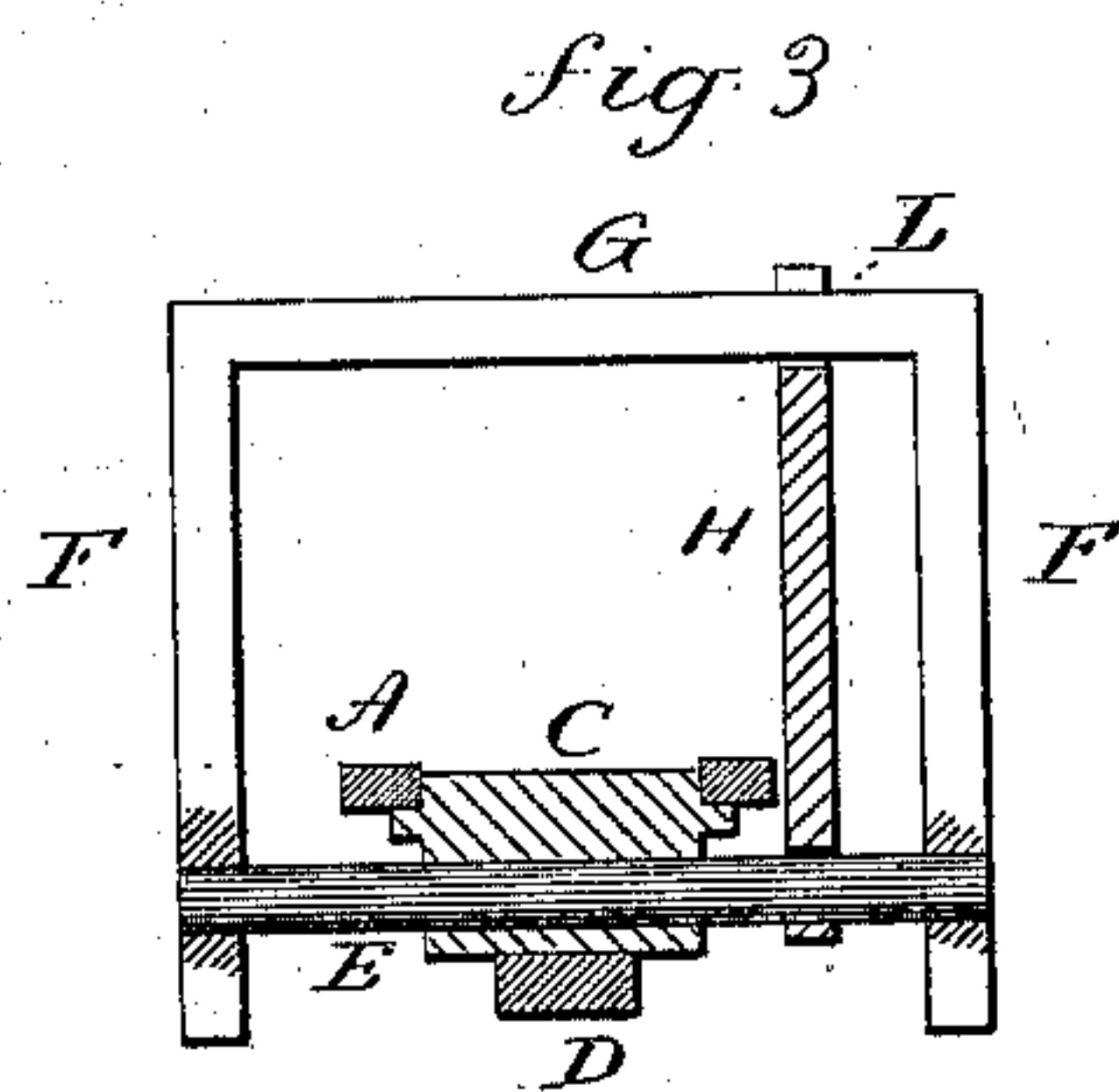
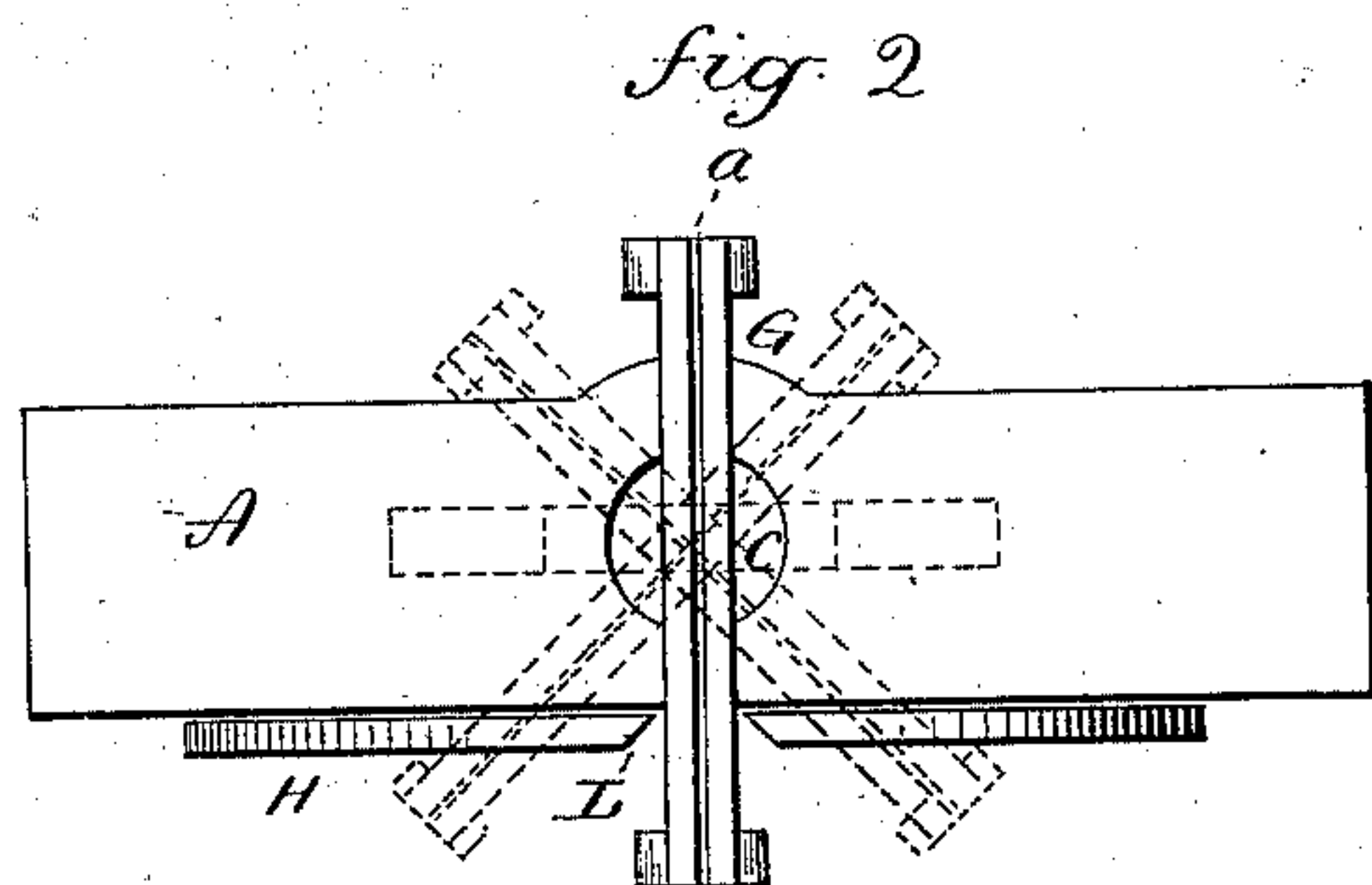
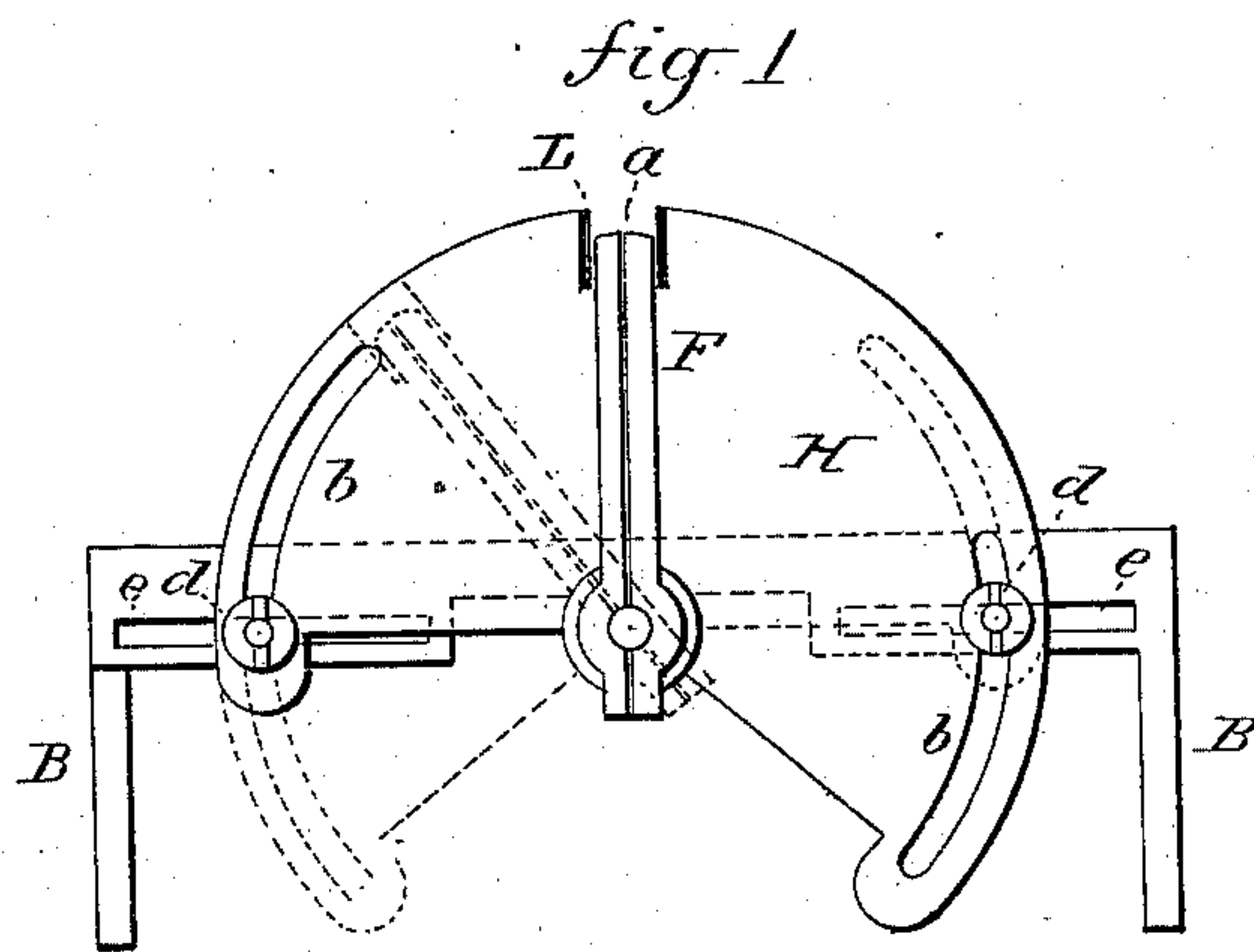


(No Model.)

C. L. DAYTON.
MITERING MACHINE.

No. 270,026.

Patented Jan. 2, 1883.



Witnesses

J. H. Shumway
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UNITED STATES PATENT OFFICE.

CHARLES L. DAYTON, OF MERIDEN, CONNECTICUT.

MITERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 270,026, dated January 2, 1883.

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

To all whom it may concern:

Be it known that I, CHARLES L. DAYTON, of Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Mitering-Machines; 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 rear view; Fig. 2, a top view; Fig. 3, a transverse central section; Fig. 4, a front view.

This invention relates to an improvement in apparatus for cutting miters, the object being to enable the machine to be adjusted to the cutting of angles or combined angles, and so simple in its construction that it may be readily adjusted to whatever angle it is desired to cut; and the invention consists in the construction of the machine, as hereinafter described, and more particularly recited in the claims.

A represents the bed of the machine, on which the work to be cut is placed, and is of a size corresponding to the work for which the machine may be adapted, and supported on legs B B or otherwise. At the center a hub, C, is arranged so as to freely revolve in a horizontal plane. It takes a bearing in the bed from the under side, and is supported by a yoke, D. Through the hub beneath the bed is a shaft, E, its axis in a plane parallel to the plane of the bed. To each end of the shaft E an upright, F, is attached, their upper ends connected by a bar, G. This frame F F G swings upon the shaft E as its center of motion. The frame F F G is split, as seen in Figs. 1 and 2, to form a recess, *a*, in which the saw will run. The divided frame may be made adjustable, so as to adapt it to different thicknesses of saws. As represented in Figs. 1 and 2, the frame stands vertical at right angles across the bed. Hence the saw run through the frame will cut at right angles to the bed. If the frame be turned to one side or the other, as indicated in broken lines, Fig. 1, it will cut at a corresponding angle to the plane of the bed.

On the back of the bed is a support or rest, H, against which the wood to be sawed bears. This rest consists of a plate of metal having

an opening through it for the passage of the shaft E, and through the plate segment-shaped slots B are made concentric with the shaft E, as seen in Fig. 1. Through these slots set-screws or bolts *d* extend, the bolts also extending through the horizontal slots in the bed, the set-screws serving to clamp the plate to the bed in the usual manner for clamping two slotted plates together. The plate H extends up, and on its upper edge is a notch or recess, L, in which the upper bar, G, of the frame stands, and by means of which notch the plate is connected to the frame, so that as the frame is turned to the right or left, as the case may be, the plate will correspondingly turn with it. When the frame has been turned to one side—say as in broken lines, Fig. 1—to the required position, the plate is clamped to the bed and holds the plate and frame in that inclined position. The rest therefore serves the double purpose of supporting the work and holding the guide or frame in any position to which it may be adjusted. This arrangement whereby the plate or rest turns on the same center with the frame permits the cut to be made at any desired angle to the bed of the machine. In order to permit the cut to be made at an angle across the bed, the frame turns upon the hub C as its center in either direction, as indicated in broken lines, Fig. 2; but as the frame is supported in the rest H, that must also move with the frame to the right or left. To enable such movement of the rest, the notch L is made to come to a sharp edge against the frame, as seen in Fig. 2. The hole in the frame through which the shaft E extends must also come to the same sharp edge as that shown for the notch L. It will be seen that were it not for thus bringing the openings in the plate through which the frame works to this sharp edge, it could not be moved to longitudinally bring the frame into an angle to the rest, as seen in broken lines, Fig. 2, and the set-screws which secure the rest to the bed work in slots *e* in the bed, and so that when released the plate may slide to the right or left, as the case may be. Hence, when the frame is turned to either the right or left, it will correspondingly move the rest H, so that in that position the rest will still stand as a support for the frame. If the angle to be cut is of a combined nature—

that is to say, a cut which is on an angle to the bed and on an angle to the rest—the frame must be turned to the right and left on the shaft E as the center, until the angle to the bed is attained, then turned on the hub as its center until the angle to the rest is attained. Thus it will be seen that my machine is adapted to cut angles of any character, and is therefore a universal mitering-machine, the term “mitering-machine” being practically understood to be a device by which angles may be cut.

Where only an ordinary miter-cutting is desired the hub may be dispensed with and the frame turned to the right and left with the rest H, or the hub may be retained, the frame made rigid as to its right and left turning, and thus constructed the frame will turn only to an angle across the bed or in relation to the rest H.

I claim—

1. The combination of the bed A, the hub C, arranged therein, the saw-guiding frame F G, supported in said hub and so as to turn with

the said hub as its center, and the rest H, in connection with the frame and attached to the bed, so as to slide as the frame is turned to an angle to the rest, substantially as described.

2. The combination of the bed, the transverse shaft E, saw-guiding frame F G, arranged to turn upon said shaft as its center, and the rest H, arranged to turn on the same center as the frame, and in connection with the frame secured to the bed to hold the frame in any position to which it may be turned—to the right or left—substantially as described.

3. The combination of the bed, the hub C, arranged therein to revolve in a plane parallel with the bed, the shaft E through said hub, the saw-guiding frame F G, attached to said shaft, and the adjustable rest H, arranged upon said shaft as its center of motion and secured to the bed, substantially as described.

CHAS. L. DAYTON.

Witnesses:

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