

(No Model.)

2 Sheets—Sheet 2.

C. BRINTON.
DOOR HANGER.

No. 289,885.

Patented Dec. 11, 1883.

Fig. 3,

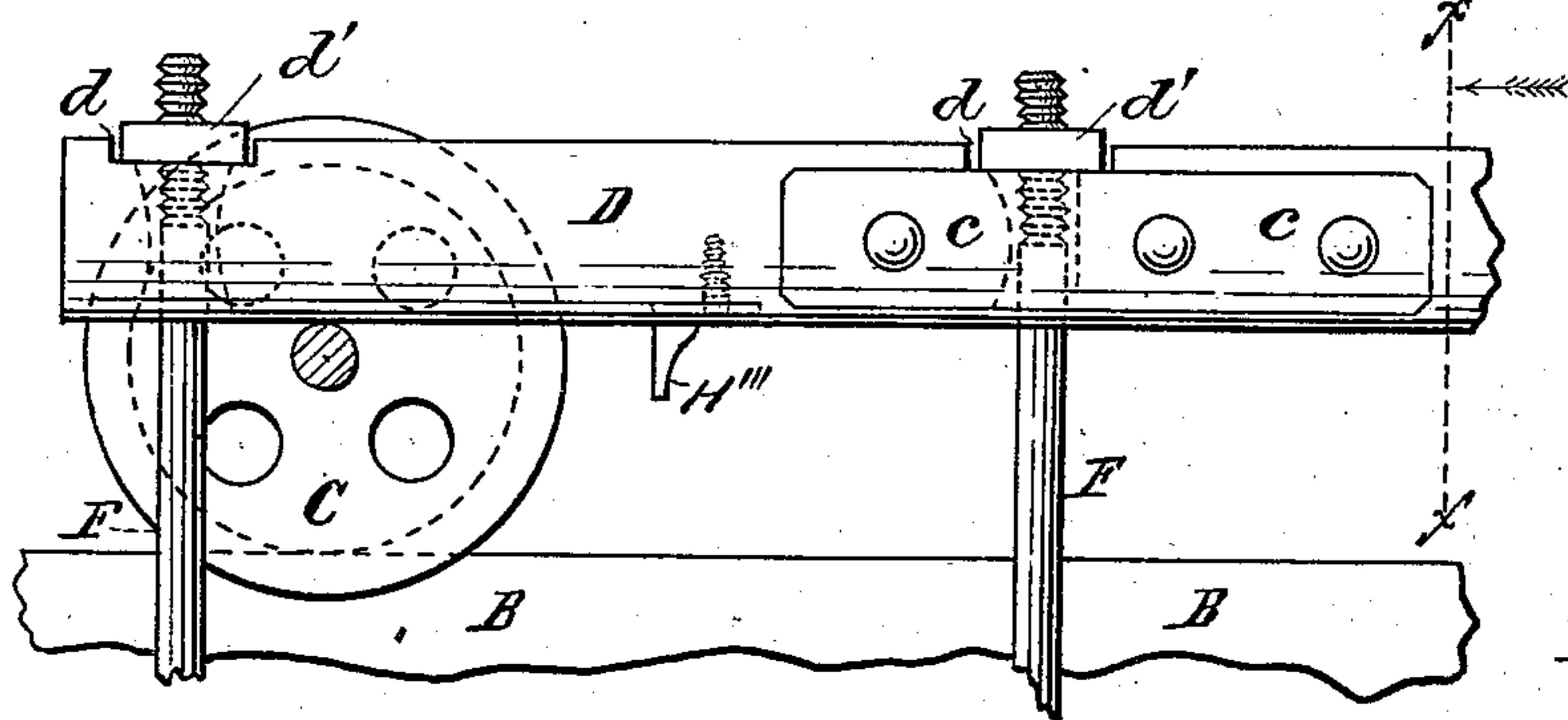


Fig. 4,

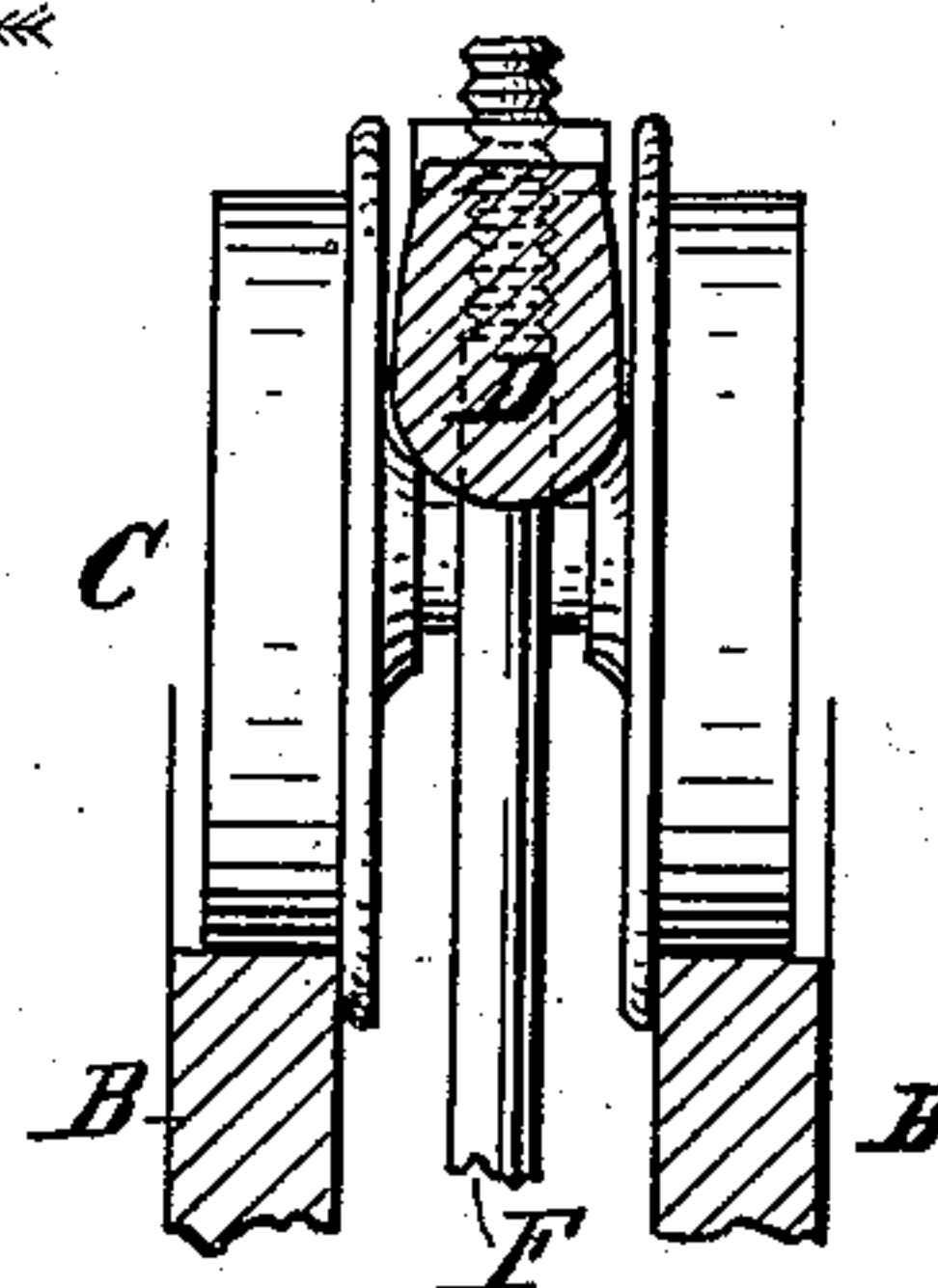


Fig. 5,

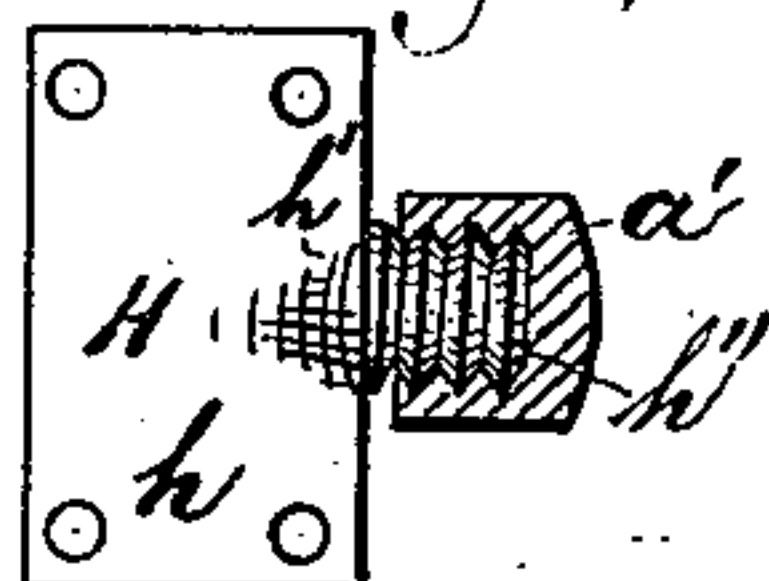


Fig. 6,

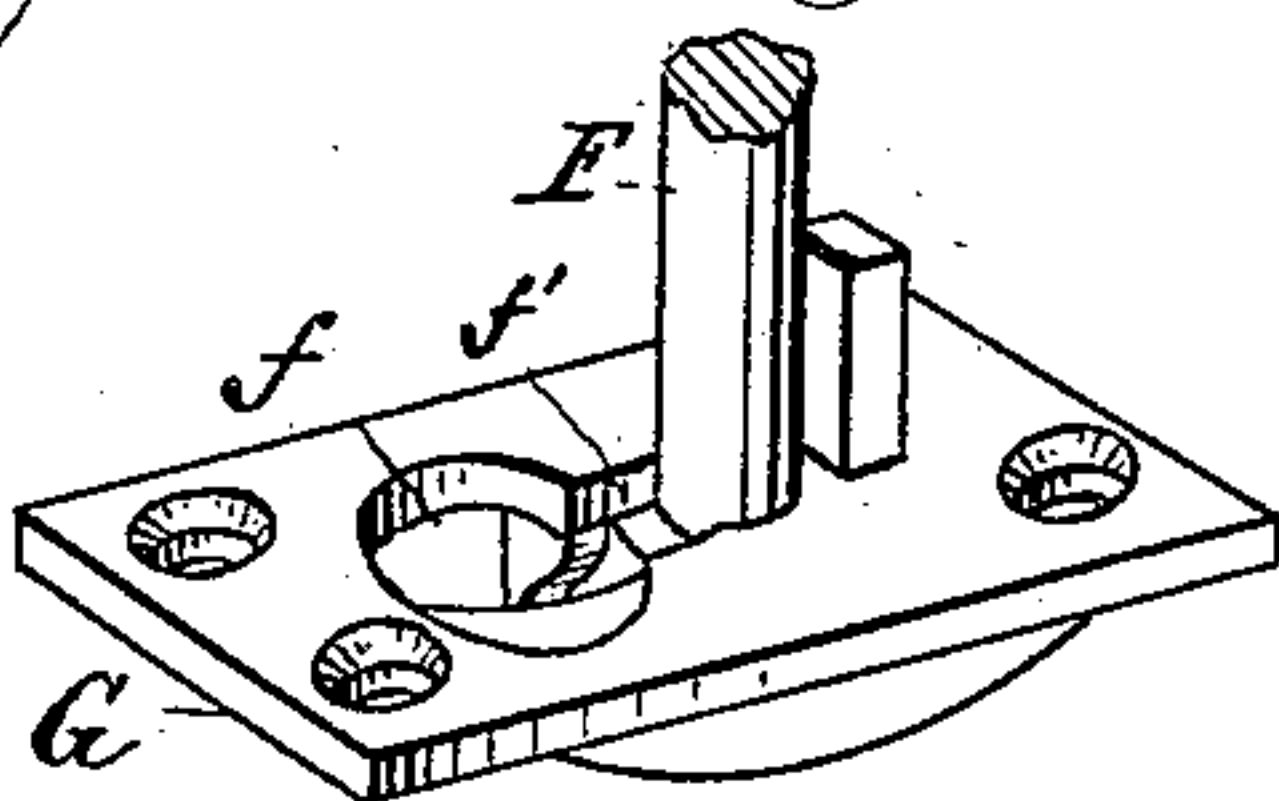


Fig. 7,

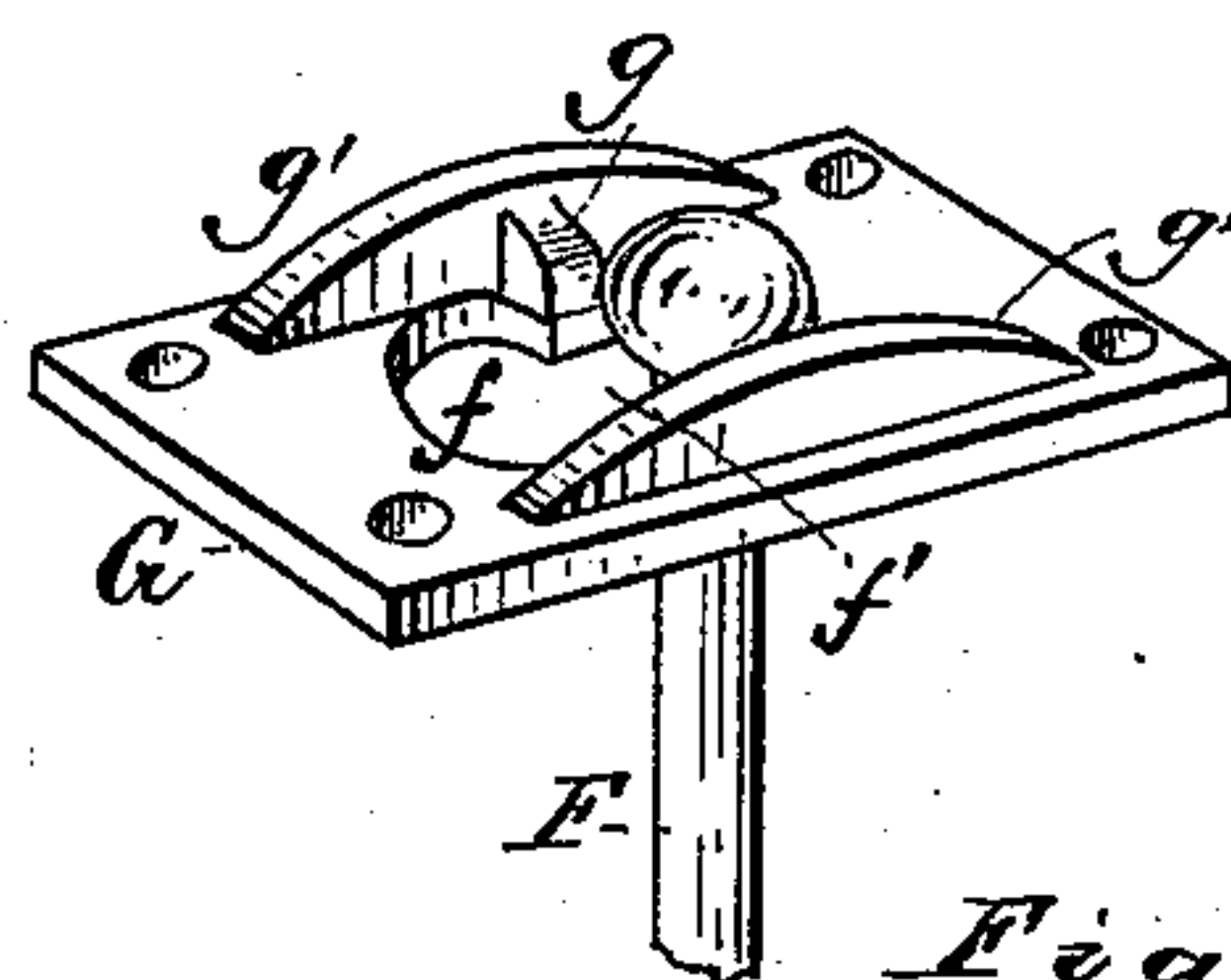


Fig. 8,

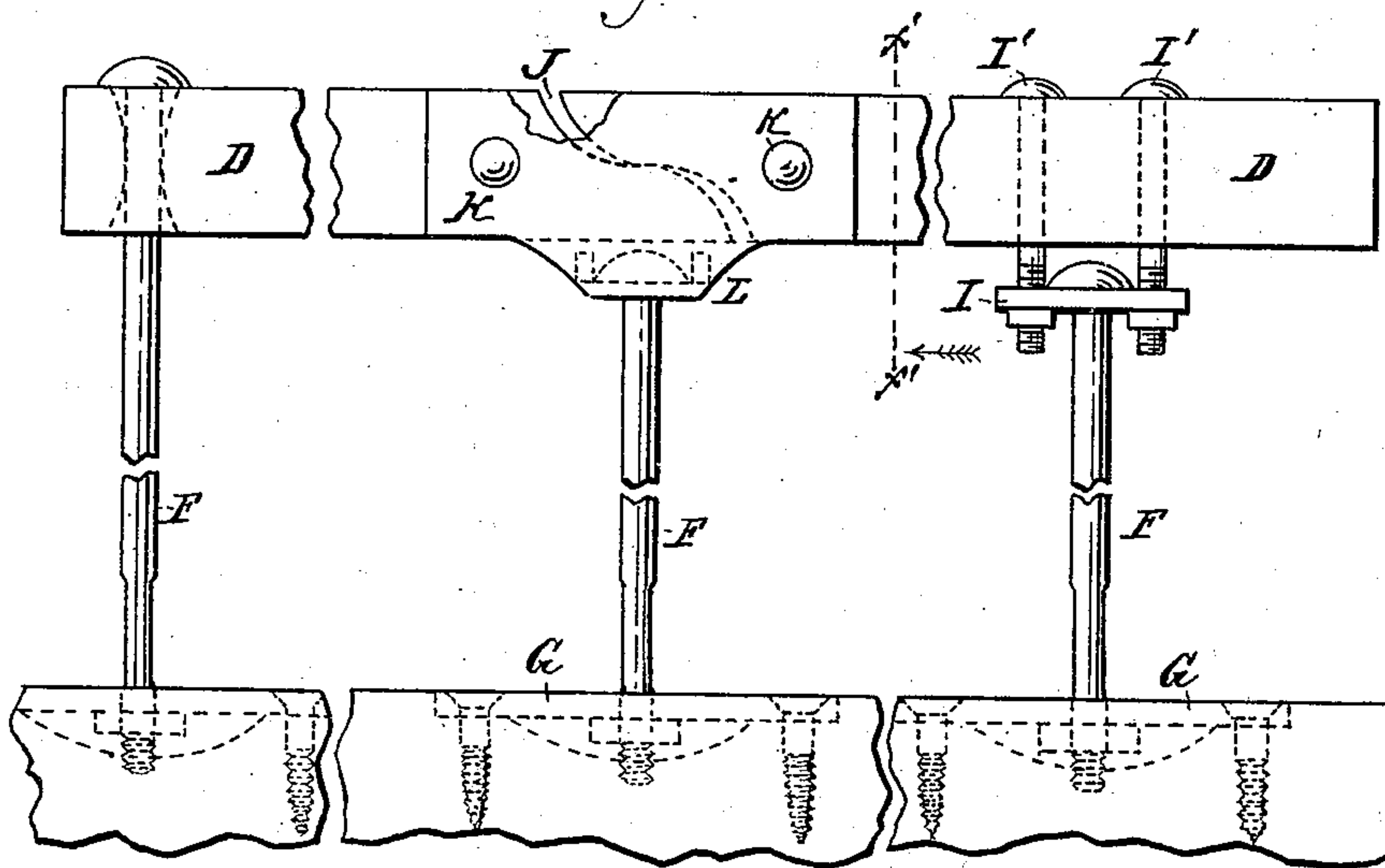
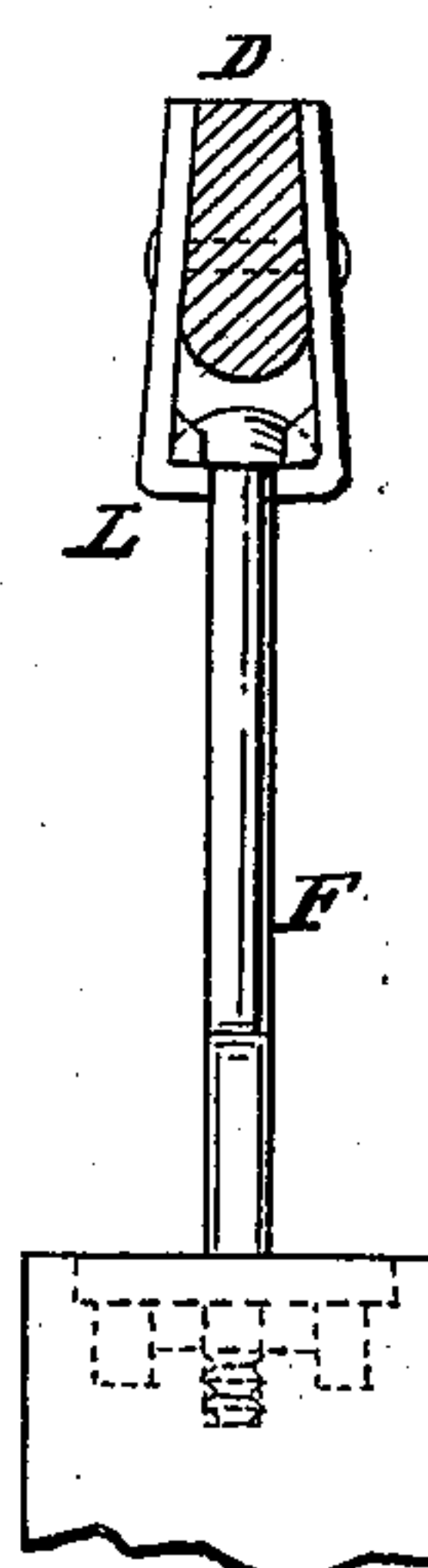


Fig. 9,



Witnesses.
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UNITED STATES PATENT OFFICE.

CALEB BRINTON, OF CHICAGO, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 289,885, dated December 11, 1883.

Application filed February 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, CALEB BRINTON, a citizen of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Hangers, of which the following, in connection with the accompanying drawings, is a specification.

The invention consists in the devices hereinafter described, and pointed out in the claims.

In the drawings, Figure 1, Sheet 1, is a side view of a door-hanger embodying my invention. Fig. 2, Sheet 1, is a section of the same in the plane of the line $x x$. Fig. 3, Sheet 2, is a side representation of a part of the hanger enlarged. Fig. 4, Sheet 2, is an enlarged end view of the same. Fig. 5, Sheet 2, is a detail of the buffer or stop. Figs. 6 and 7, Sheet 2, are details in perspective of the door-plate. Fig. 8, Sheet 2, is a side view of the hanger, showing a modification thereof; and Fig. 9, Sheet 2, is a section in the plane of the line $x' x'$.

Like letters of reference indicate like parts.

A A represent the studding, and B B are the rails which constitute the track.

C C are the trucks, the wheels of which are flanged to lap the inner sides of the track-rails, as shown. The truck-axes have tapering hub-like enlargements $a a$, slightly convex by preference.

D is a rider bar or rail bearing freely on the truck-axes, and the lower edge of this rail is rounded off, and its sides are tapered off toward its upper edge, as is clearly indicated in Fig. 2. The rail D at its widest or thickest part fills or nearly fills the space between the truck-wheels, but is not thick or wide enough to be cramped or crowded between them. By this means an oscillating movement of the trucks and doors is permitted when the track is uneven without interference with the proper working of the parts, and the trucks are prevented from a swiveling movement on the track, as will hereinafter more fully appear.

The rails D D are jointed, as indicated at b , being made in two sections connected by means of side plates, $c c$, bolted rigidly to one section and pivotally to the other, the ends of the section being formed to permit the sections to be tilted or rocked vertically to some extent on their joint.

E is a bolt passing freely through the rear or inner section of the rail D, and suspended therefrom by means of a nut, d , resting in a pocket, d' , in the upper edge of the said section, the upper end of the said bolt being screw-threaded, as shown, to receive the said nut, which is prevented, by resting in the said pocket, from being turned on its bolt accidentally. The inner or rear upper corner of the door is suspended on the bolt E, being there provided with an edge-plate, E' , through which the said bolt passes freely. The lower part of the said bolt is square or thin, so formed that it may be turned with facility by means of a wrench. By this means, as will hereinafter more fully appear, the rear section of the rail D may be tilted or so set or adjusted that the rear part of the door will be either raised or lowered, as may be necessary by the movement or travel of the truck, thereby causing the door to hang plumb, both when open and closed, in case the bending of the track-rails by uneven settling of the building would otherwise tend to throw the door out of plumb. Any other suitable means, however, may be employed for adjusting the jointed rail.

The rails D D, instead of being jointed together by means of the plates $c c$ in the manner shown and described, may be knuckle-jointed—that is, a tongue may extend from the end of one section into a slit in the adjacent end of the other section—and a bolt should in such case pass through the said tongue and through the section hinged or jointed thereto, as is usual in knuckle-joints. I mention this modification without showing such a joint, as the construction and operation of knuckle-joints are well known, and for the reason that I do not here intend to restrict myself to the plates $c c$ as a means of jointing the sections of the rails D D together.

F F are door-suspending bolts, which support a greater part of the weight of the door. These bolts pass freely through the rail D, being suspended therefrom by means of nuts $e e'$, also run upon their upper ends and resting in pockets in the upper edge of the said rail in like manner and for the like purpose as the nut d . The plates $c c$ also serve as a bearing for the nut e . The bolts F F are also adapted, near their lower ends, to be received by a

wrench, so that they may be turned with facility. These bolts, as will be perceived, can be set or turned to aid in adjusting the door to its frame.

5 G G are door-plates in the upper edge of the door. The construction of these plates will readily be understood on referring to Figs. 6 and 7. In Fig. 6 this plate is represented as viewed from above, and in Fig. 7 as seen from
10 below or in a reversed position. In these plates are holes or openings *ff*, of such a size as to permit the heads of the bolts F F to pass freely through them, and *f' f'* are notches setting back from the openings *ff*, and of such
15 width as to receive the bolt-stem, but not the heads.

On the under side of each plate G is a lug or stop, *g*, and *g' g'* are re-enforcing ribs or webs to give strength to the plates where they
20 are weakened by the openings *f* and *f'*.

To apply the bolts F F, I pass their heads down through the openings *ff*, then slip the plates along until the heads pass back and up behind the lugs *g g*; or, as the plates may be
25 first applied to the doors, I raise the doors sufficiently to let the heads of the bolts pass down through the openings *ff*, then move the doors along until the bolt-heads pass behind the said lugs, then lower the doors, the upper
30 edges of the doors being cut away sufficiently for that purpose. By this means the bolts may be applied to and disconnected from the doors with facility.

H is a stop or buffer, the construction of which may be perceived by referring to Fig. 5. It consists of a flat plate, *h*, from one edge of which projects a screw-threaded extension, *h'*, on which I place a rubber cushion, *h''*. This stop I place across the door-soffit H', but not
40 on the removable part or pocket H'', in such a position that either the door-bolt nearest thereto or a pin or stud projecting up from the plates G G will strike it and stop the movement of the door at the proper time.
45 This attachment may be made in various ways, the chief feature of this part of my invention being the location of the stop in the place referred to. H''' H''' are stops on the bar D.

The modifications of construction and arrangement shown in Figs. 8 and 9 are intended to adapt the hanger to use in places
50 where the bars or rails D D must be so nar-

row that they would be too much weakened by ordinary bolt-holes. In such cases I reverse the position of the bolts and suspend
55 them from plates I I, secured to the bar D by means of slender bolts, as shown at I'.

The hinged ends of the bar D overlap each other, and are adapted to rock one upon the other, as shown at J, so that the jointed ends
60 will be held together by the weight of the door, and too great strain upon the hinge-plates prevented. The hinge-plates are simply pivoted to both sections of the said bar, as shown at K K, and are turned underneath
65 the bar, as shown at L, to suspend a door-bolt, which in this case, as the screw-threaded ends are downward, are flattened above their ends or just above the door, as before.

In this modification the plates *c c*, while
70 turned underneath the rails D D, do not meet thereunder, but leave a sufficient space for the reception of the bolts, as shown in Fig. 9.

Having thus described my invention, what I claim as new, and desire to secure by Letters
75 Patent, is—

1. In a door-hanger, the rider bar or rail D, bearing freely on the truck-axle, and having its bearing-edge rounded off and its sides tapering or inclining toward each other as
80 they extend upward, to permit a tilting or rocking movement of the truck, the said rail also bearing at its widest part against the inner sides of the truck-wheels, to prevent the truck from swiveling on the track, substan-
85 tially as specified.

2. The combination, in a door-hanger, of a rider bar or rail made in sections hinged together, the said sections being capable of being tilted vertically on their hinge or joint,
90 the truck-axles serving as a bearing or support for the said bar, and an adjusting device for adjusting the said bar and for varying the position of the door vertically, substantially as and for the purposes specified. 95

3. In combination with the door and door-suspending bolts of a door-hanger, the door-plates G G, having thereon the lug *g*, and in which are the openings *f* and *f'*, substantially as and for the purposes specified.

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Witnesses:

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