

C. FRIBERG.

DOOR BRACE.

APPLICATION FILED MAY 19, 1909.

943,673.

Patented Dec. 21, 1909.

Fig. 1.

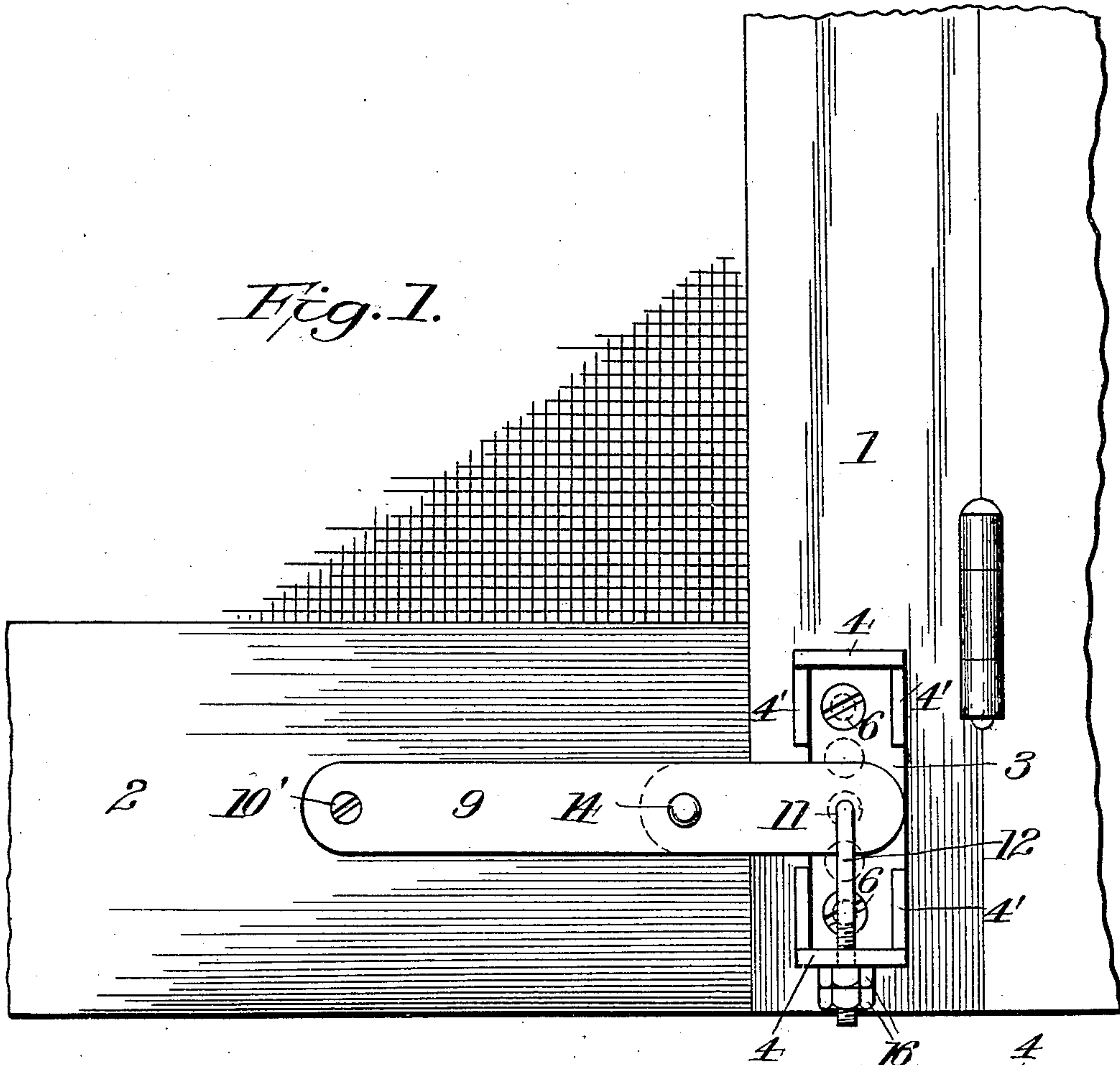


Fig. 2.

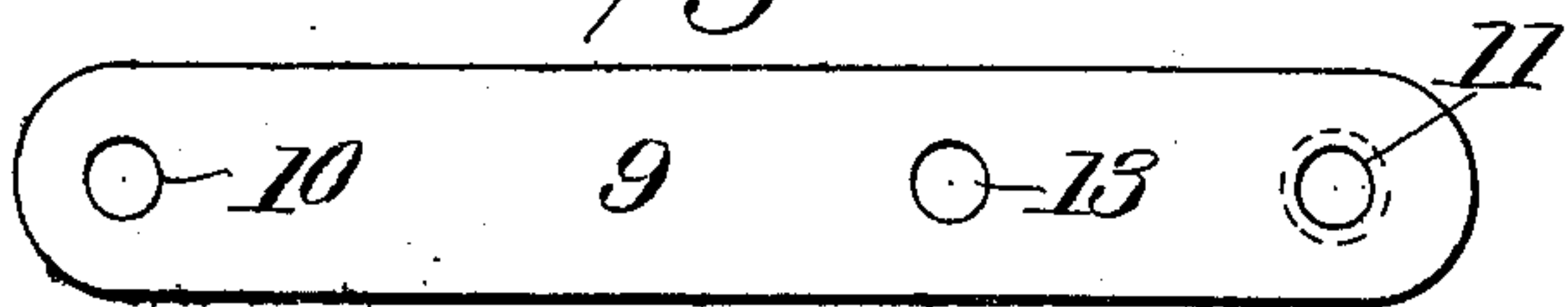


Fig. 3.

Witnesses

C. H. Walker.
B. H. Fuller

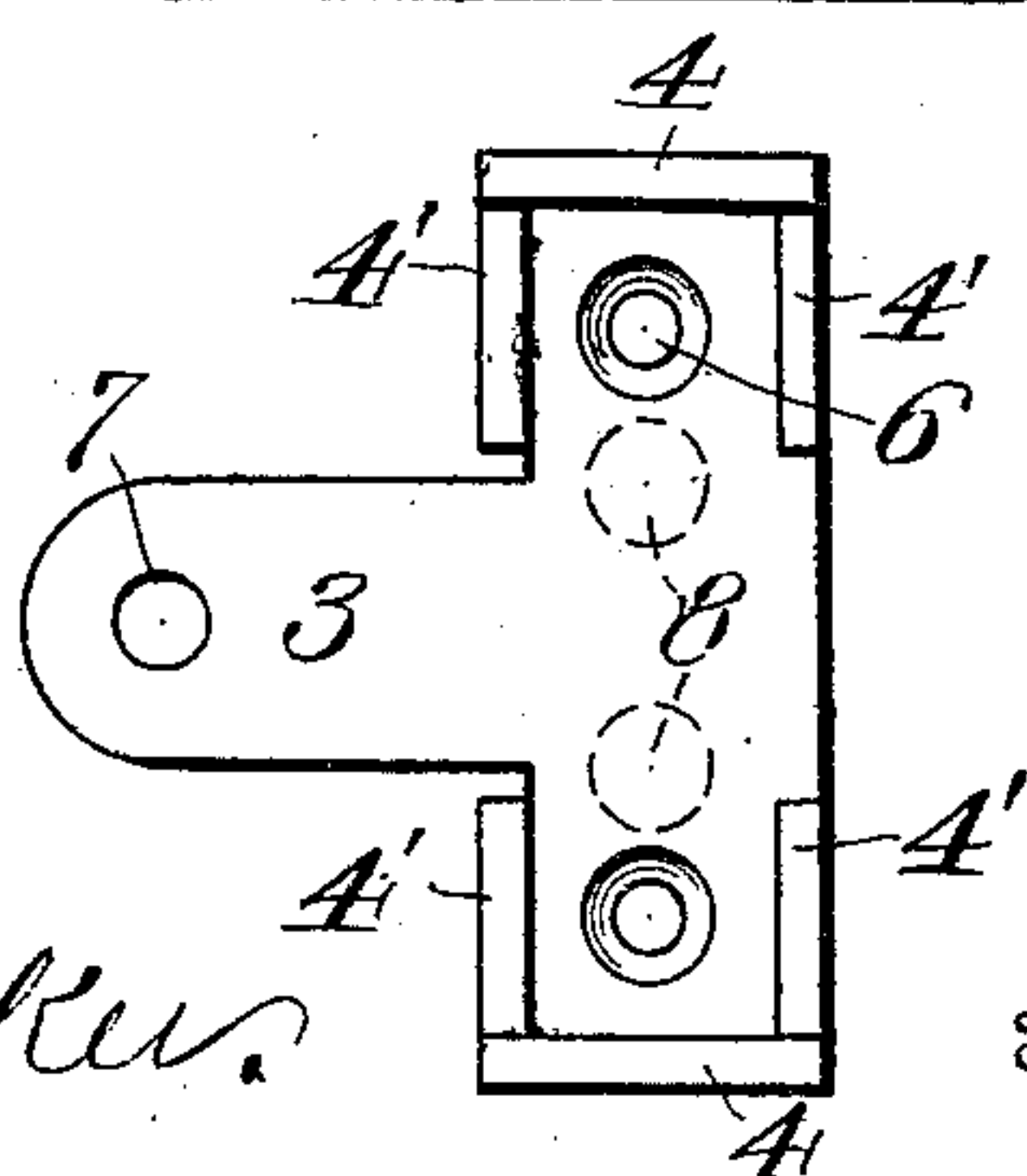


Fig. 4.

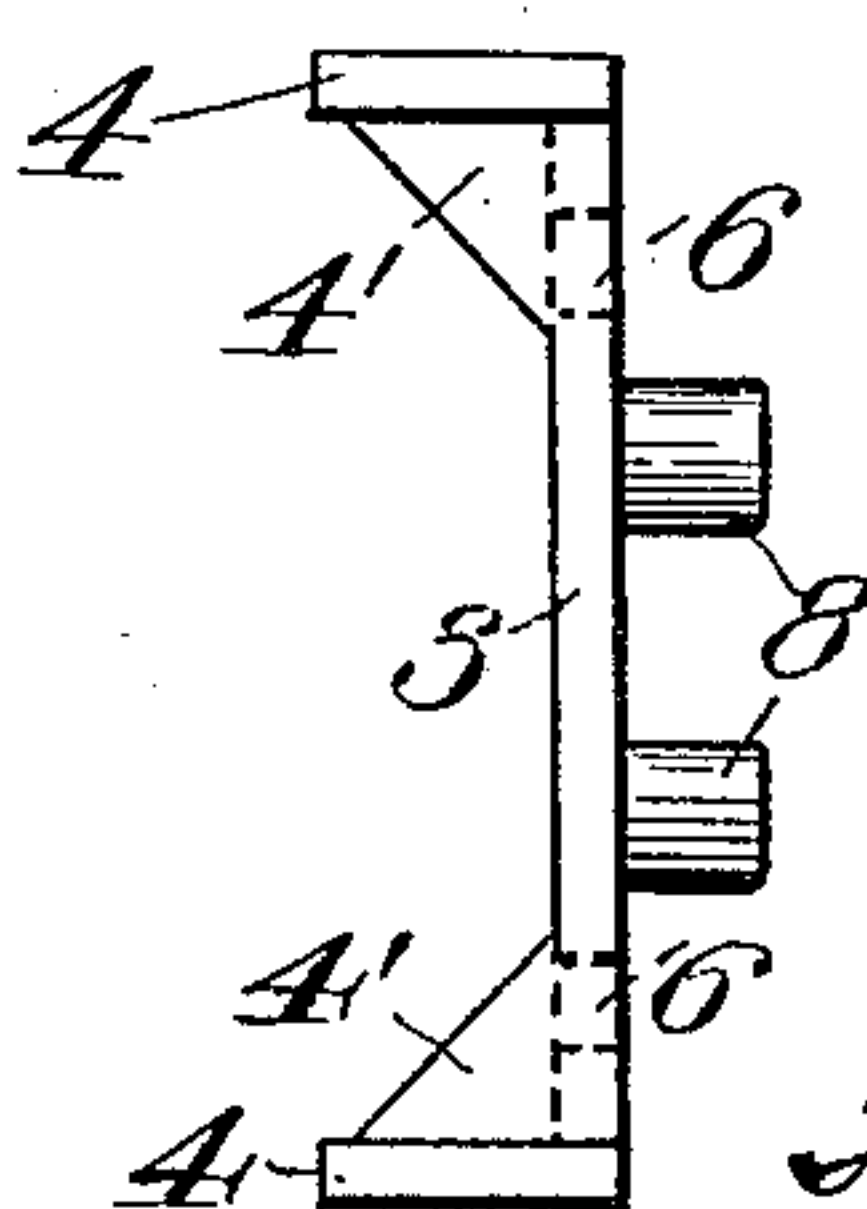
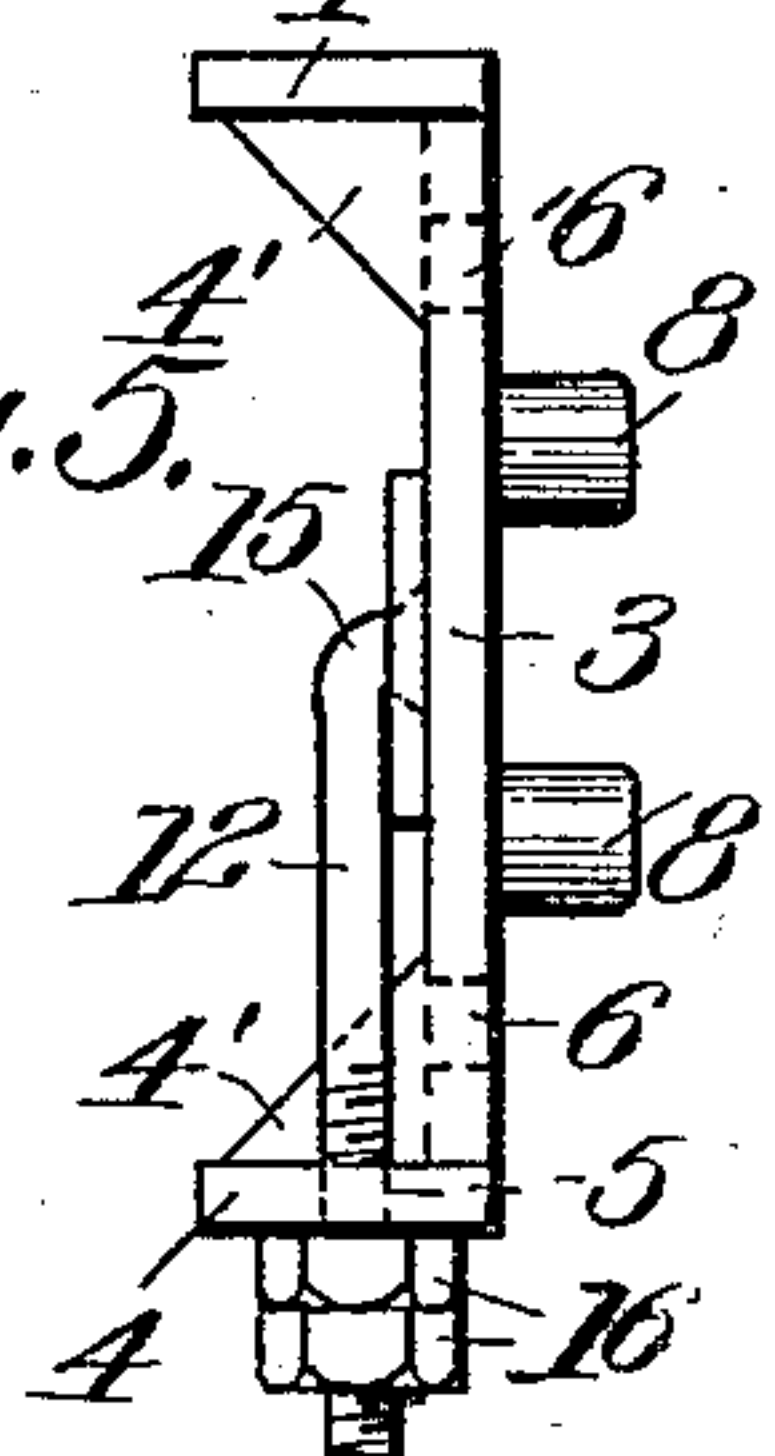


Fig. 5.



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DOOR-BRACE.

943,673.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES FRIBERG, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented certain new and useful Improvements in Door-Braces, of which the following is a specification.

My invention relates to new and useful improvements in door braces.

The objects of my invention are to provide an adjustable brace to strengthen and reinforce the frames of doors, gates and the like, and at the same time prevent and remedy their sagging or striking either the frame or door-sill, or dragging on the floor, and which can be used on solid, skeleton or screen doors, and on either the right or left side of the same.

With these objects in view, and others which will appear from the specifications and claims, my invention consists of the several details of construction and combination of parts hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings, which are made a part of these specifications, Figure 1, is a front elevation of a door with a sectional view of the brace attached thereto. Fig. 2, is a detail view of the bar member. Fig. 3, is a front elevation of the base plate. Fig. 4, is a side elevation of the same plate. Fig. 5, is a sectional side view of the base plate and adjusting bolt, adapted to each other.

Referring specifically to the drawings, 1, is a longitudinal section of an ordinary door, to which the hinges are attached, and at its junction point with the lower transverse section, 2, of the same.

3 is substantially a T shaped base plate, provided with lateral flanges, 4—4, extending outwardly at right angles to the main body of the plate, and reinforced by braces or brackets, 4'—4'. Each flange is provided with a central opening, 5, adapted to the passage of an adjusting bolt, as hereinafter detailed. The base plate has suitable openings, 6—6, for the passage of screws by which it is attached to the longitudinal section of a door, or gate; and also an opening, 7, at the extremity of the T arm, adapted to pivotally engage a bar attached to the transverse section of the door. On the rear surface of base plate 3, are provided small projections or lugs, 8—8 which penetrate the surface of the door as the screws 6—6, are

forced into the wood. These lugs are designed to give stability to the base plate, but are not essential to the successful operation of the brace, and can be abandoned when attached to hardwood doors, as the screws, 6—6, are sufficient to solidly retain the base plate under these conditions.

9 is a bar provided with an opening at one end, at 10, through which a screw, 10', may be inserted attaching it to the transverse section, 2, of the door; its other end is provided with a like opening, 11, adapted to engage the curved end of an adjusting bolt 12, in the operation of the device. Approximately in the center, longitudinally of this bar, 9, is a third opening, 13, where it is pivoted at 14 to the base plate 3 at the opening 7 in the same.

12 is a bolt sufficiently curved at one end, 15, to permit its entrance and engagement in opening 11 in bar 9 as the bolt is vertically inserted in opening 5 in flange 4 of the base plate 3. The other end of the bolt 12 is threaded and adapted to a nut 16, provided for the purpose of raising or lowering the bolt in adjusting the mechanism of the brace.

Each flange, 4—4, of the base plate 3, is provided with an opening, as at 5, to receive bolt 12, thus suiting the plate to either the right or left side of the door, thereby producing a reversible brace.

From this description it is obvious that the operation of the several parts of my invention in combination, is as follows:—The base plate 3, being attached to the longitudinal section 1, of the door, where the hinges are fitted, and preferably near the bottom, at the intersection with the transverse section of the door, 2, by means of screws 6—6, the flanges 4—4, extending outwardly, and the arm so located as to extend over on the transverse section of the door. Bar 9 is pivoted at 14, to base plate 3 through the opening 7, and extends horizontally along the transverse section where its outer end is attached by screw 10', its other end passes centrally over base plate 3, in such manner that opening 11, is vertically above opening 5 in flange 4 of the base plate. The threaded end of bolt 12 is passed through opening 5 of flange 4, and its curved end, 15, adjusted to opening 11 in bar 9; nut 16 is then screwed on the threaded end of bolt 12, as it extends through opening 5 sufficiently to permit the use of the nut.

By the manipulation of nut 16, bolt 12 is

raised or lowered as desired, and this reciprocating motion of the bolt, operating in and engaging opening 11 in the bar 9, elevates or lowers the bar, causing the opposite end attached by screw 10' to the transverse section 2, of the door, to respond to the action, and as bar 9 operates pivotally at 14, as the end over base plate 3 is elevated the other end lowers, or if it is lowered the other end is raised, thereby causing the entire front portion of the door to coact with the transverse section to which bar 9 is securely attached. This manipulation removes the door sag and prevents contact with the frame or sill, and at the same time closes disconnected joints and loose connections. In the same manner the brace may be used on new doors to prevent warping and sagging, and also to reinforce and strengthen the various parts.

Having described my invention, what I claim, and desire to secure by Letters Patent, is:—

1. In an adjustable brace, a base plate adapted to be secured to a door or the like, having lateral flanges bent outwardly at right angles to the main body and reinforced by braces, each flange provided with a central opening, in combination with a bar with approximately central and end openings,

one end adapted to be secured to a door the other end engaging an adjusting bolt, and centrally pivoted to the base plate; an adjusting bolt, curved at one end to enter and engage an opening in the bar, the other end being threaded and adapted to be inserted in an opening in the flange, and provided with a movable nut, substantially as and for the purposes described.

2. The combination with a door of a reversible brace, adjustable in its parts, comprising a base plate adapted to be secured to a door and having lateral outwardly extending flanges provided with central openings, and lugs on the rear of the base plate; a bar with approximately central and end openings, and adapted to pivotal attachment to the base plate; an adjusting bolt curved at one end and threaded at the other adapted to vertically engage said bar and an opening in a flange on the base plate, and a movable nut on the threaded end of the bolt abutting the lower surface of a flange on the base plate, substantially for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES FRIBERG.

Witnesses:

J. W. KEILL,
S. W. SHIVE.