(No Model.) 2 Sheets—Sheet 1.

W. F. JOHNSTON.

DOOR HANGER.

No. 528,435. Patented Oct. 30, 1894.

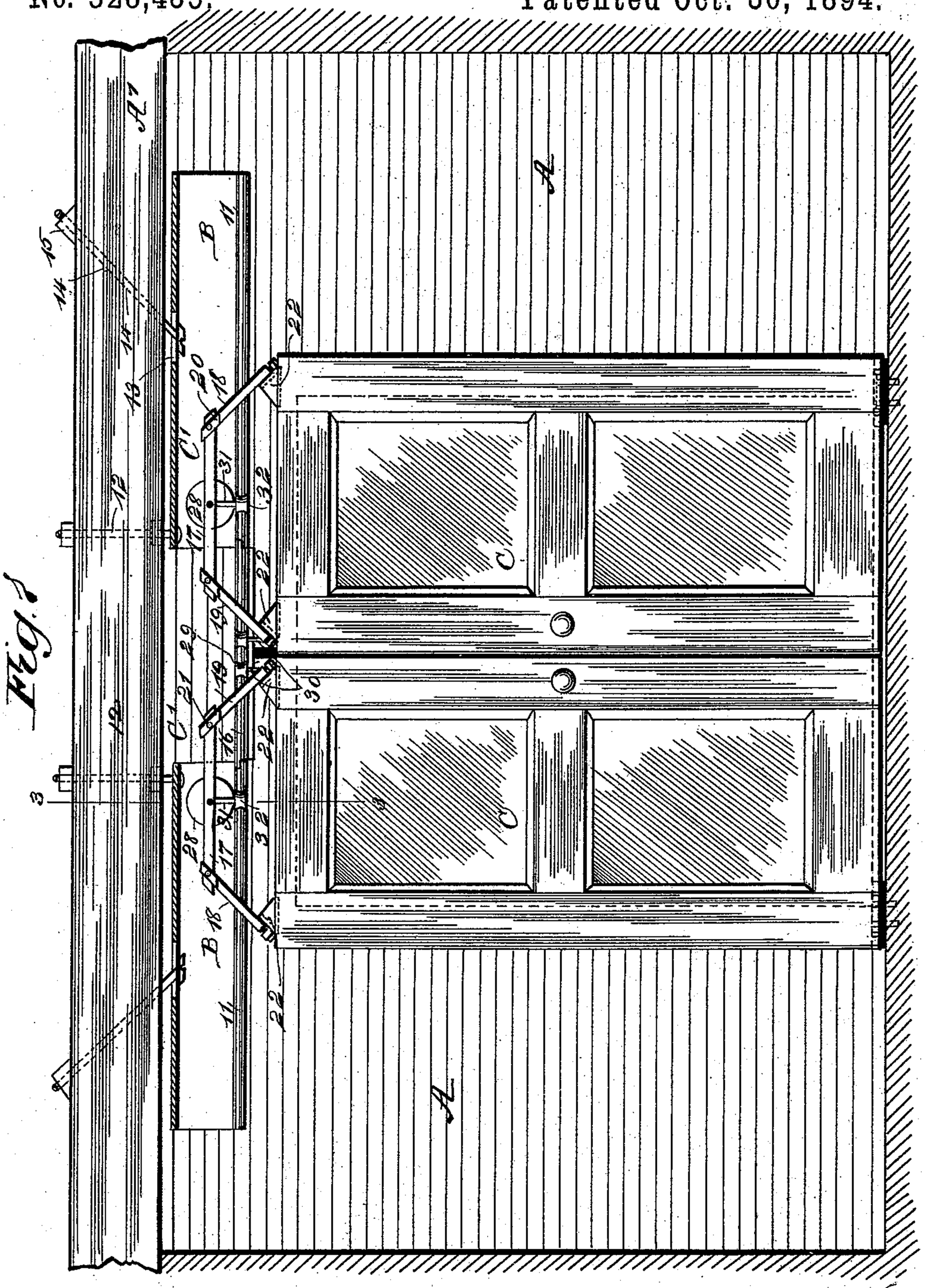

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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DOOR HANGER.

No. 528,435. Patented Oct. 30, 1894.

Fig. 4

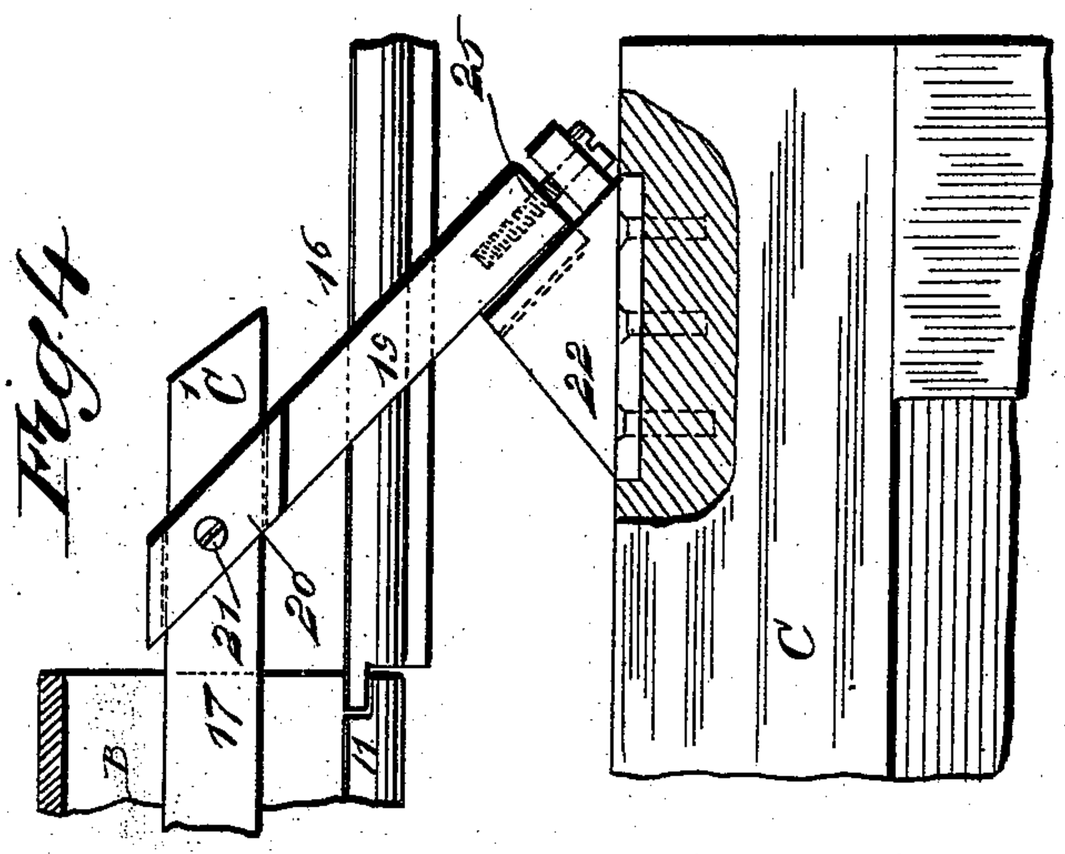


Fig. 3

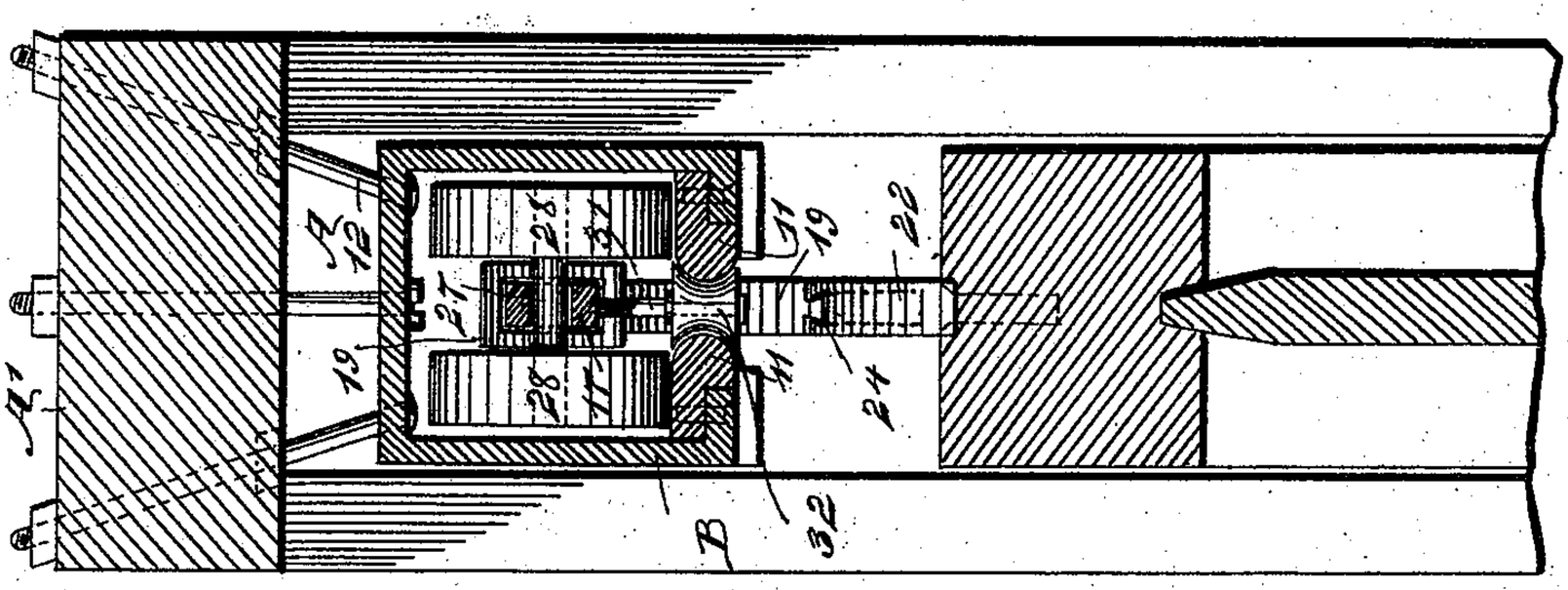
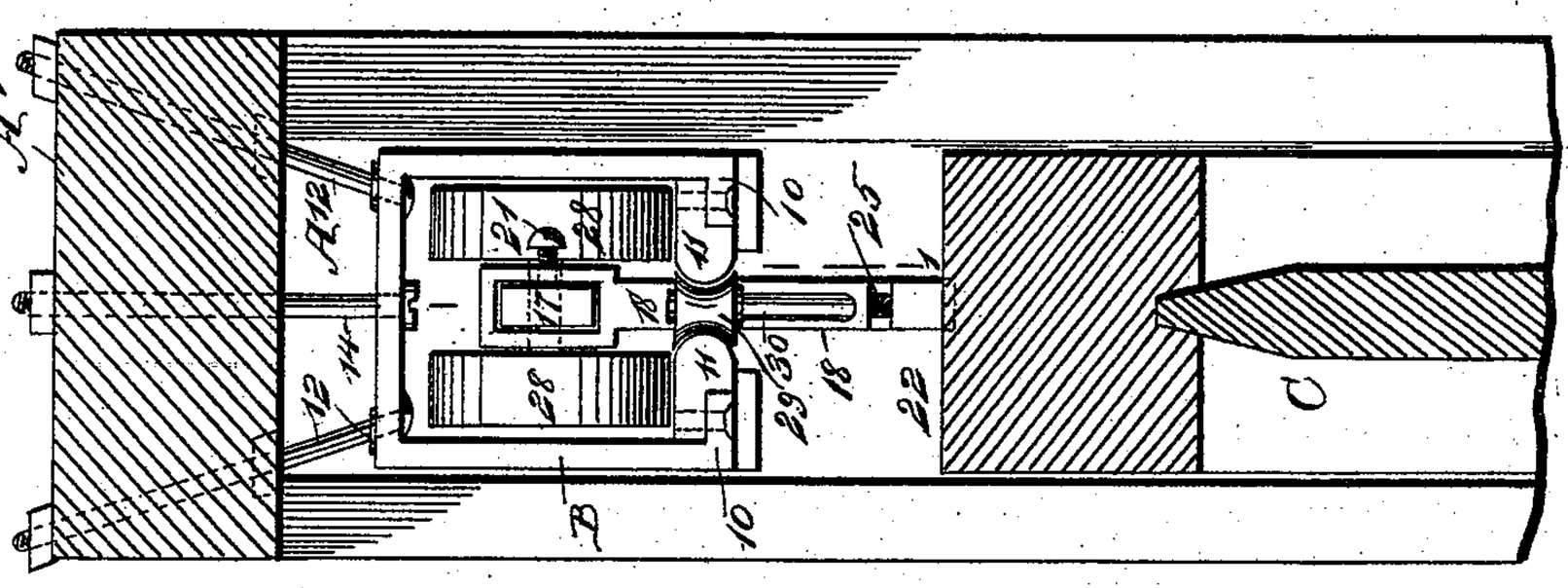


Fig. 2



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UNITED STATES PATENT OFFICE.

WILLIAM F. JOHNSTON, OF SACKETT'S HARBOR, NEW YORK.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 528,435, dated October 30, 1894.

Application filed April 11, 1894. Serial No. 507,120. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FRED JOHNSTON, of Sackett's Harbor, in the county of Jefferson and State of New York, have invented a new and Improved Door-Hanger, of which the following is a full, clear, and exact description.

The invention is an improvement in the class of wheeled door-hangers which are adapted for adjustment to "true" the doors to which they are attached, and are also provided with means for preventing lateral movement.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of two sliding doors in closed position, having the improved hanger applied thereto, the said view being likewise a section through the supporting track of the hangers, and a section through the pocket in which the doors have movement, the section being taken essentially on the line 1—1 of Fig. 2. Fig. 2 is essentially an end view of the door pocket, and likewise an end view of the hanger, the door being shown in vertical section and likewise the supporting beam for the hanger tracks. Fig. 3 is a vertical section, taken essentially on the line 3—3 of Fig. 1. Fig. 4 is an enlarged detail view, illustrating the manner in which the hanger truss or frame is adjustably connected with the door.

In carrying out the invention the door pocket A may be of any approved construction, being capped by the ordinary cap beam A′. At each side of the door opening, preferably the same distance from the center of said opening the track supports, B, for the doors, C, are located. Such track supports B, as shown in Figs. 2 and 3, are preferably made of box iron, being open at the bottom and provided at that point with inwardly extending side flanges 10, which flanges are adapted as supports for the rails proper 11 of the track, which rails are preferably constructed of wood, and are provided with cylindrical inner faces, as is best shown in Fig. 3. The track supports B, are suspended at their inner ends, or ends adjacent to the door opening, by means of bolts 12, which are passed through the upper portions of said supports, one near each side, and upwardly and diagonally in opposite directions through the cap beam A′.

Between the center and outer ends of the track supports, an opening 13 is made about centrally between the sides in each support, and a bolt 14, is passed through this opening, the head of the bolt being upon the inner side of the track support, diagonally upward and outward through the cap beam A′, and through a nut 15, located at the top of said beam. The bolt 14, is properly an adjusting bolt, since the tracks hang somewhat loosely upon the front bolts 12, and the rear portion of the tracks may be given any desired inclination, even when the doors are hung, since the heads of the bolts 14 may be reached by a person standing in the door opening when the doors have been slid back in the pocket.

The two track supports B are preferably connected by wooden bridge rails 16, which have a mortise connection with the tread rails 11 of the track supports; and when these bridge rails are in position they form continuations of the said tread rails. These bridge rails are employed in order that the hangers of the doors to be hung may be readily introduced into the boxes, or track supports B, even when the pocket has been completely finished, and with the same facility as if the pocket were open.

The hanger of each door consists of a truss frame C′, and this truss frame comprises a top bar 17 and two end bars 18 and 19. The end bars at their upper extremities are provided with eyes or sockets 20, through which the extremities of the top bar are passed; and the side and top bars are adjustably connected through the medium of set screws 21, whereby the truss or hanger frame may be adjusted to doors of different widths.

The side bars of the truss hanger frame are attached to the top of the door in a vertically adjustable manner, and this is accomplished by securing to the top of the door at its front

and rear edges a block 22, which may be of metal, and is preferably of somewhat triangular shape, being provided in its outer face with a dove-tail groove 24, as shown in Fig. 3. The end bars of the truss hanger frame are provided with a dove-tail rib upon their inner edges at the bottom portions to enter said grooves. The adjustment is made through the medium of an adjusting screw 25, which is usually held to turn in a socket in the base wall of the recess 23 of the supporting block 22, and the threaded end of the screw is made to enter a corresponding aperture in the bottom of the end bars. The screw is preferably manipulated by a screw-driver or equivalent tool applied to its head, or by similar means. In this manner when a door is supported by the hanger it may be raised or lowered at the front or at the rear, independently of the adjustment of the tracks B, through the medium of the adjustment of the hanger frame.

The top or cross bar 17 of the hanger frame is provided about centrally between its ends with a spindle 27 held to turn therein, as shown in Fig. 3, and this spindle carries at each end a wheel 28, which wheels are adapted to travel upon the upper straight or flat surfaces of the tread rails 11 of the box tracks and the bridge rails 16. In order to preserve the hanger frame against lateral movement, and to guide it properly in its end movement, a friction roller 29, is loosely mounted upon a spindle 30, the spindle being secured to the outer face of the lower portion of one end bar of the hanger frame, preferably the front end bar. These friction pulleys or wheels are provided with a grooved periphery, and are adapted for engagement with the cylindrical surfaces of opposing tread rails, as shown in Figs. 2 and 3; and a spindle 31 is projected downward from about the central portion of the upper bar 17 of the hanger frame, which spindle carries at its lower end a similar friction roller or wheel 32. Thus two of said wheels are employed in a hanger frame, being in horizontal alignment. The blocks 22 of opposing doors are adapted to meet a buffer of yielding material, as shown in Fig. 1.

Under such a construction the door may be hung in such manner that it will be thoroughly balanced, and ample means are provided for adjusting the door to keep it plumb, no matter in what direction it may warp, or in what direction the building may settle.

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

The improved door-hanger; consisting of blocks, adapted for attachment to a door, and having inclined faces provided with longitudinal grooves; two end bars inclined toward each other and having loops at their upper ends and projections on their lower ends that work in said grooves; set-screws for adjusting said bars lengthwise; the horizontal top bar, whose extremities are adjustable in the aforesaid loops; and wheels, carried centrally on said top bar; as shown and described.

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Witnesses:
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