

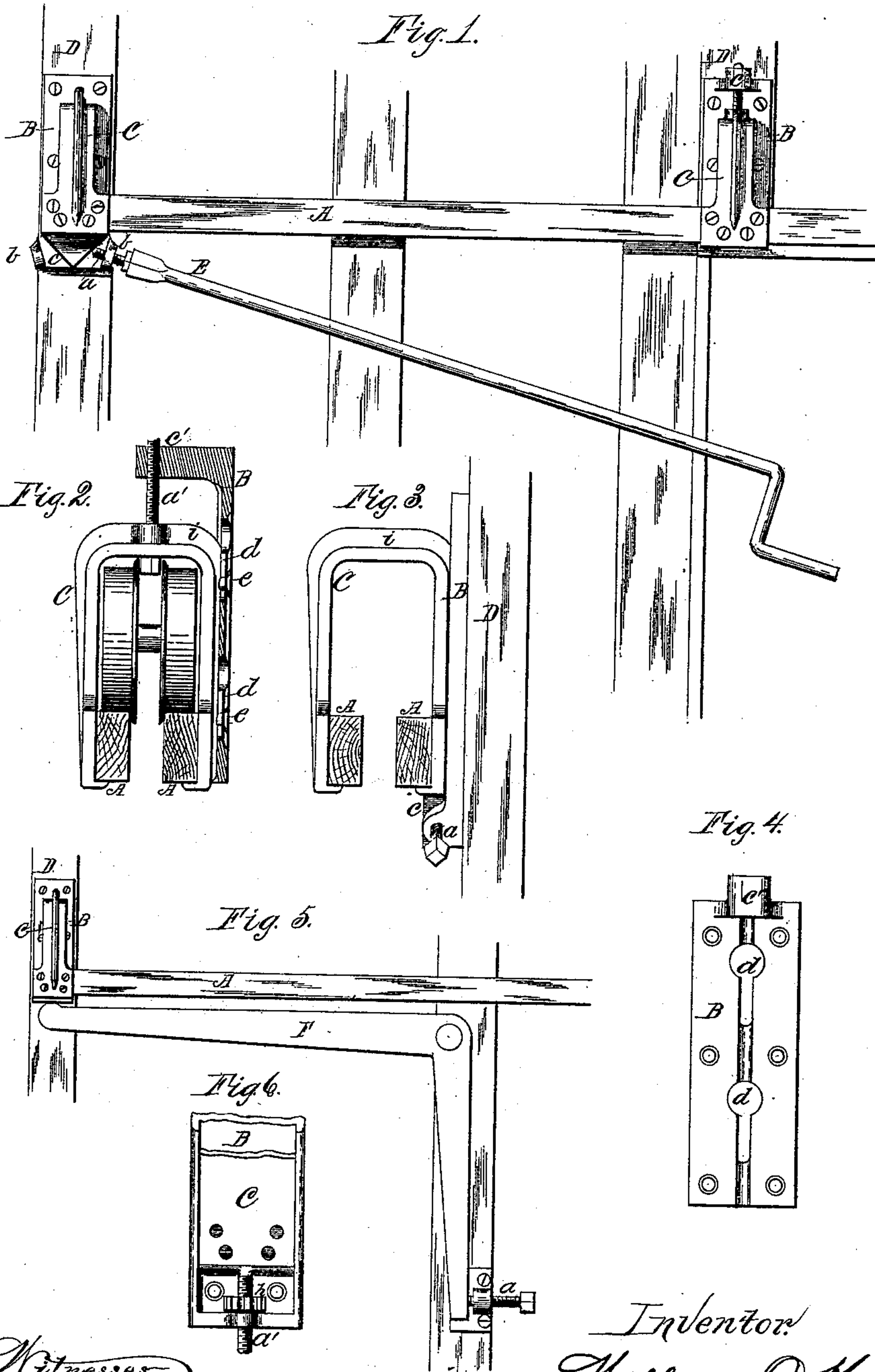
(No Model.)

W. O. KASSON.

DOOR HANGER.

No. 348,976.

Patented Sept. 14, 1886.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM O. KASSON, OF CEDAR RAPIDS, IOWA.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 348,976, dated September 14, 1886.

Application filed February 23, 1886. Serial No. 192,774. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM O. KASSON, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Door - Hangers, of which the following is a specification.

The object of my invention is to facilitate the attachment and provide for the easy adjustment of sliding doors; and the invention consists, essentially, in a novel construction of the means for attaching the track to its supports, as will be hereinafter fully set forth and described.

In the accompanying drawings, forming a part of this application, Figure 1 represents a sectional elevation of the invention as applied to one end of the track; Fig. 2, an end view of one of the intermediate hangers with the track attached; Fig. 3, a similar view of a terminal hanger; Fig. 4, one of the plates to which the hanger is attached, and Figs. 5 and 6 modifications in the device for adjusting the track.

Similar letters of reference indicate corresponding parts.

In the construction of sliding doors one of the most difficult and particular operations is the proper attachment of the track to the timbers of the partition. This is specially the case where the track is a double one, and unless the workman is a very skillful one the track is apt to be out of level laterally or longitudinally, or both, and the result is, that the doors do not operate easily and smoothly, as they should, though by an adjustment of their hangers they hang true and match evenly; but even after the doors may have been properly hung there is a liability of the track getting out of level by wear or otherwise, and as at present constructed there is no easy way of correcting the defect. It is to remove these common difficulties that this invention has been devised.

Referring to the accompanying drawings, A represents the track, which in the present case is a double one, such being generally regarded as the best. The track is composed of two straight pieces of wood, and does not differ essentially from those in common use; but, instead of being bolted to the studding D D in the customary manner, it is attached to

hangers or brackets C C, which are preferably provided with inwardly-projecting lugs to support the bottom of the track; as shown in Figs. 2 and 3. In the case of a double track the bracket is made in the form of a yoke to allow for the passage through it of the door-hanger and connective rollers. The seats for the tracks being at right angles to the rear face of the yoke insures a lateral level to the track, provided, of course, that the hanger is attached perpendicularly to the studding—a matter that can hardly be avoided. These yokes might be attached directly to the studding by one or both of their sides, preferably one side; but to secure the vertical adjustment desired, special means are provided therefor. This consists in a wall-plate, B, to which the yoke is attached, so as to have only a vertical movement, and which is secured to the studding by screws or bolts. A simple form of attachment of the two parts together is shown in Figs. 2 and 4. The rib *i*, which serves to strengthen the yoke, runs down the back thereof, and a corresponding groove is formed in the plate. In the back side of the plate is another groove, corresponding to the head of the studs *e e*, extending back from the rib of the yoke. Slots *d d* admit the heads of these studs, and allow a limited vertical movement below the point of insertion. By forming the slots in the yoke itself, and fixing the studs *e e* directly in the studding, the wall-plate might be dispensed with altogether; but in that case great nicety would be required in the placing of the studs, and I regard the use of the plate as preferable.

The vertical adjustment of the track may be effected in a great variety of ways, four different methods being shown in the drawings. For such of the hangers as are over the doorway and easily accessible a simple device is shown in Figs. 1 and 2. In this case the wall-plate is formed into a bracket, and the adjustment is made by a screw passing through the upper part of the yoke and into the projecting part of the bracket *c'*. The screw is turned by means of a suitable socket-wrench. A different device is necessarily provided for the terminal hangers, which are two or three feet from the doorway, and thus not so easily reached with a wrench. A device which I consider as simple and practical as any is that shown in

Figs. 1 and 3. In this the lower end of the inner arm of the yoke is extended down somewhat and beveled at an angle of about forty-five degrees. On the wall-plate adjacent is a lug, *b*, through which passes a screw, *a*, by turning which the yoke will be raised or lowered at will. This may be done from the doorway, as represented in the drawings, by means of a long socket-wrench. That the distance to this screw may be as short as possible, the screw is set at an angle of somewhat less than forty-five degrees to the face of the bevel, against which it bears, and the end of the screw should be correspondingly beveled, as shown. The arm of the yoke is shown with a double bevel and the plate with two lugs, to admit of the same casting being used for either side of the door, as it is the intention to suspend the track altogether from one side. A bell-crank adjusting device, so simple as to require no description, is shown in Fig. 5. Still another form is shown in Fig. 6, the screw being vertical and adjusted by means of a cogged nut, *h*, in connection with a suitable rack or a spanner driven back and forth from the doorway.

By the use of the invention above described the attachment of the track for sliding doors is rendered comparatively easy, simple, and expeditious. The track is first attached to the hangers, as many as may be required, and the wall-plates being connected with the hangers are fixed to the studding of the partition as nearly level as they can conveniently be set. The whole track may then be accurately adjusted by means of the screws, and, if desired, may be entirely removed and connected with the doors on the floor, and replaced at any time before the casing in of the opening.

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

1. In a track for sliding doors, the combination of a vertically-adjustable track, screws

adapted to be adjusted from a point horizontal or diagonal to the track, and an arm or lever engaging with said screw and extending from the end of the track to the side of the doorway, whereby the end of the track may be vertically adjusted from the doorway, substantially as specified.

2. In a track for sliding doors, the combination of the track, the hanger C, having a beveled foot, and the wall-plate B, having lug *b*, provided with adjusting-screw *a*, substantially as and for the purpose set forth.

3. The combination of the wall-plate having the adjusting-screw and vertical slots, the bracket or hanger having studs adapted to engage with said slots and retain the bracket in position while allowing a limited vertical movement thereof, and the track secured to the bracket, substantially as and for the purpose set forth.

4. The wall-plate having vertical slots *d d*, lugs *b b*, and screw *a*, in combination with the rail-supporting bracket or hanger C, having studs *e e*, adapted to engage with the slots in the wall-plate, and having the limb adjacent to the wall-plate beveled opposite the screw, whereby the hanger is capable of vertical adjustment by turning the screw, substantially as specified.

5. In combination with the terminal hanger described, the intermediate hanger composed of a wall-plate with an outwardly-extending arm provided with a screw, and a vertically-movable bracket or yoke connecting with said wall-plate and adjustable by means of said screw, both of said hangers being connected with the track of a sliding door, substantially as and for the purpose specified.

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

WILLIAM O. KASSON.

Witnesses:

FRANK G. CLARK,
P. W. REEDER.