(Model.)

C. BRINTON.

DOOR HANGER.

No. 246,286. Patented Aug. 30, 1881.

Fig. 1.

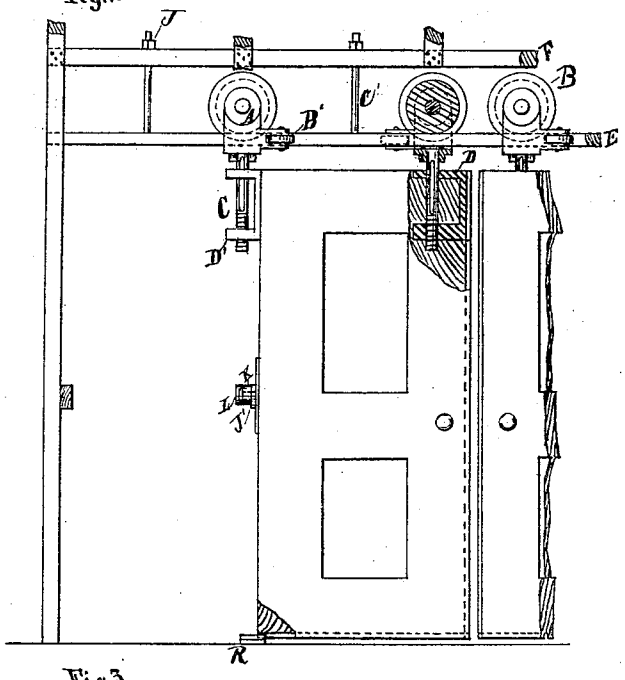


Fig. 2.

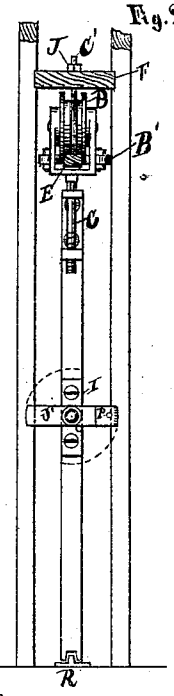


Fig. 3.

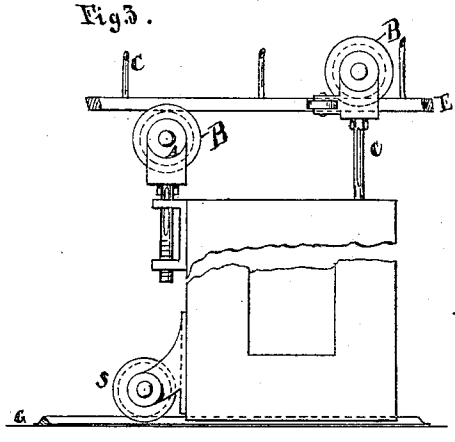


Fig. 4.

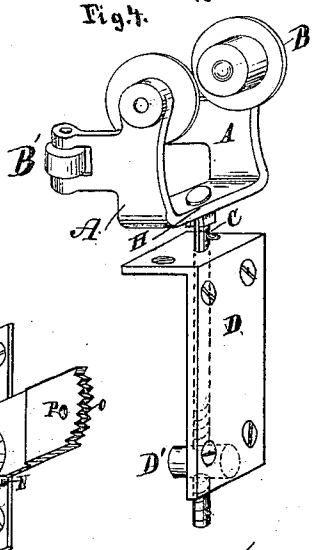
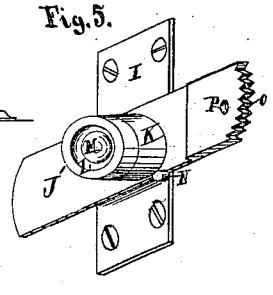


Fig. 5.



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UNITED STATES PATENT OFFICE.

CALEB BRINTON, OF CHICAGO, ILLINOIS.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 246,286, dated August 30, 1881.

Application filed October 2, 1880. (Model.)

To all whom it may concern:

Be it known that I, CALEB BRINTON, of Chicago, Illinois, have invented new and useful Improvements in Sliding-Door Hangers, of which the following is a specification.

My invention relates to improvements in hangers which are attached to the doors by means of rods and travel upon a track. The objects of my improvements are to provide a noiseless and free-moving carriage, that cannot be thrown from the track, and also to simplify the construction of hangers, and thus reduce the expense of the same. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the hangers attached to double doors. Fig. 2 is an end view, showing the door, track, and rollers. Fig. 3 is a front view, showing a modification in the arrangement of the hangers upon the door. Fig. 4 is a detail view in perspective, showing the hanger. Fig. 5 is a detail view in perspective, showing a door-buffer.

Similar letters indicate the several parts of the drawings.

The bracket A, having vertical and horizontal arms, with wheels B and rolls B′, suspension-rod C, with the angular attaching-plates D, having lug D′, Fig. 4, constitute the hanger. The square-sided single track E is secured to header F by means of bolts C′, as shown in Figs. 1 and 2, said header being secured rigidly to and forming a part of the building. The said track E can be raised or lowered, as may be desired, by means of the nuts J. The suspension-rods C, which are slightly flattened to facilitate turning with a wrench, are fitted loosely within the recessed projections or lugs H of the bracket A, and are threaded upon the lower end, so as to be turned into corresponding threads in part D′ of plate D, by which the doors are suspended and adjusted to conform to their connecting edges and to the floor. The recess in the lug or projection H on the under side of the bracket A is elliptical in form, which admits of an oscillating motion of the bracket A on a line with the axles of wheels B, thus allowing adaptation of said wheels to any irregularity of the carriage or track. The rolls B′ serve to keep the axles of the flanged wheels B at right angles to a longitudinal line of the track E. The angular plates D are secured to the top and front edges of the doors, to which the suspension-rods C are adjusted, as explained. The said angular plates may be made separate, and the perforation in the horizontal part threaded to receive the threaded bolt C′, in which construction the horizontal or vertical part of the plate may be omitted.

Fig. 3 represents the hangers adjusted to a single door, with the guide-rolls B′ of the rear hanger omitted and the flanged wheels B of said hanger placed under and against the track. The guide R at bottom of doors, Figs. 1 and 2, is substituted by the roller S and the track G. The door is suspended and moved by the front top and bottom rollers, the rear top roller serving as a guide, and preventing the lower roller from being thrown from the track, which track is within the recess between the walls.

A single wheel, with or without flanges, may be used in lieu of wheels B. If the flanges are omitted, the wheel can travel upon a way or within a groove upon the under side of said track.

Fig. 5 represents an elastic buffer for attaching to the back edges of doors, which resists a violent shock in opening or closing them and prevents them being drawn too far into the doorway. The buffer is composed of the plates I and J′, rubber K, and the cylindrical head L, which parts are connected together by the rivet M, which is secured rigidly to or forms a part of plate I, which plate is secured to the rear edge of door. The plate J′ has an excess of weight on the perforated end, which weight keeps it in a horizontal position against the projection N. The ends of plate J′ project beyond the sides of doors, intercepting projections provided in the walls of the building, thereby preventing the door from running too far into the opening, as heretofore explained. When the door is placed in position between the walls the plate J′ can be moved to a horizontal position by inserting a knife between the side of the door and the edge of the jamb, into the nicks O, or by means of a string fastened in the perforation P. The stop J′ can be turned into a vertical position by simlar means, when the door can be moved from the

recess. The guide R at bottom of door, Figs. 1 and 2, is secured to floor even with side of door-jamb, which guide fits into the groove in bottom of door and prevents swaying of the same.

In the construction of the hangers I prefer to use hard-wood track and iron wheels, with their axle-bearings bushed with anti-friction metal.

It will be observed from the foregoing that the carriages act independent of each other, and that I use a single track made with the least waste of material, and that the elements constituting the hangers are constructed with a view to perfect working and economy of expense. The doorway is clear of obstructions and the appendages out of sight. The door can be readily adjusted at any time to conform to any irregularity of the frame or floor. In view of these facts, my invention possesses important advantages over other hangers.

Having explained my invention, what I claim is—

1. A pair of brackets, A A, united at their lower ends, as described, and provided with vertical and horizontal arms, the latter having suitable guides or rolls acting on the opposite outer vertical faces of a single track, a pair of wheels, B B, having their bearings in said brackets and traversing the opposite sides of the top of the track, a suspension-rod, and a means of connecting it with the sliding door, when these various elements are combined, constructed, and arranged to operate as and for the purpose described.

2. The brackets A A, united at their lower ends by an arm having a central vertical perforation and a transversely-recessed lug or projection on its under side, in combination with and for the passage of a suspension-rod, whereby the latter is free to swivel within said arm, the wheels B B allowed a lateral play, and the longitudinal tipping of the door prevented, substantially as set forth.

3. The screw-threaded angular attaching-plate D, the threaded suspension-rod, made to swivel as described, the pair of united brackets A A, with their vertical and horizontal arms, and guide-rolls B′ B′, and the wheels B B, all combined and arranged as specified.

4. A sliding door having an angular threaded attaching-plate, D, sunk therein and secured to the top thereof, in combination with a threaded suspension-rod, made to swivel as described, and a pair of united brackets, A A, the connecting-arm of which is perforated and provided with a laterally-recessed lug on its under side, constructed to operate for the purpose set forth.

CALEB BRINTON.

Witnesses:
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