I. JOHNSON.

DOOR HANGER.

APPLICATION FILED APR. 14, 1908.

923,272. Patented June 1, 1909.

Fig. 1.

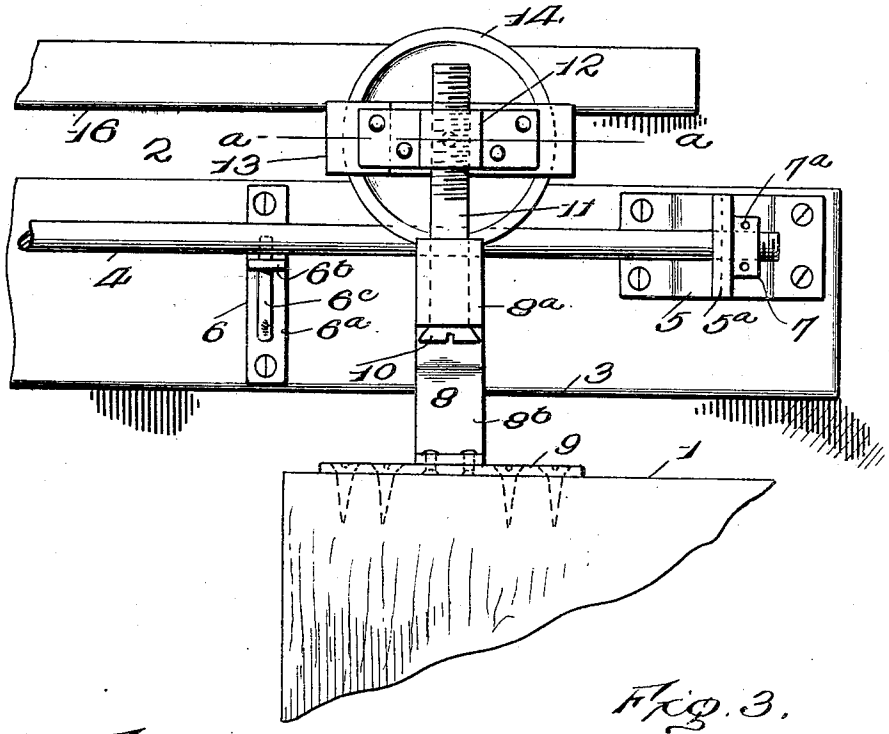


Fig. 2.

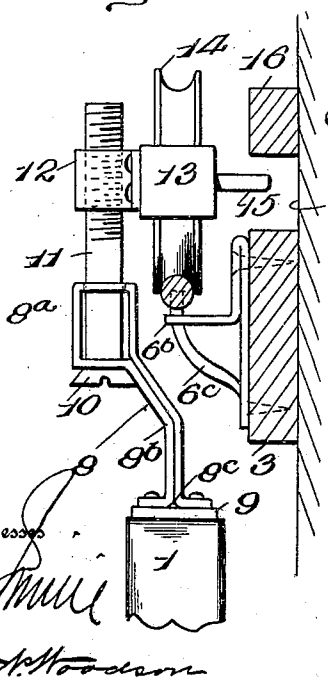


Fig. 3.

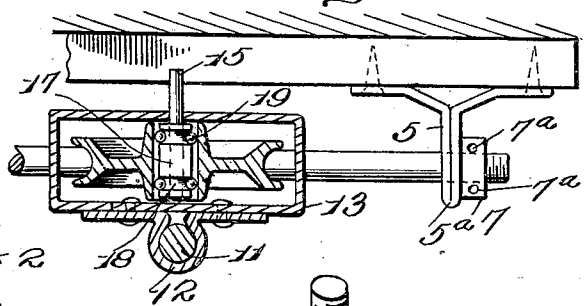
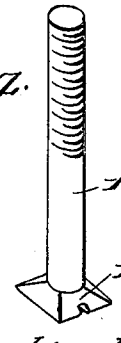


Fig. 4.



Witnesses

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DOOR-HANGER.

No. 923,272. Specification of Letters Patent. Patented June 1, 1909.

Application filed April 14, 1908. Serial No. 427,038.

To all whom it may concern:

Be it known that I, IVER JOHNSON, citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Door-Hangers, of which the following is a specification.

The present invention relates to means for mounting sliding doors and more particularly to an improved door hanger embodying a novel construction which admits of the door being adjusted as required and prevents accidental disengagement of the wheel from the track.

The invention further contemplates a door hanger which is simple and inexpensive in its construction and can be readily applied to a door of the conventional type.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation showing the door hanger applied. Fig. 2 is an end view of the door hanger. Fig. 3 is a horizontal sectional view through the door hanger. Fig. 4 is a detail view of the threaded stem for connecting the wheel frame to the hanger bracket which is secured to the door.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates a door which is suspended from a support 2 by means of the improved door hanger so as to have the usual sliding or edgewise movement. Secured to the support 2 is a horizontal strip 3 which carries a track 4, the said track being supported by means of the end brackets 5 and the intermediate brackets 6.

Specifically describing the end brackets 5 it will be observed that the same comprise plates which are secured to the strip 3, intermediate portions of the plates being crimped outwardly at 5^a and perforated to receive the ends of the track which are threaded to receive the nuts 7, the said nuts being shown as formed with the lateral openings 7^a designed to receive a key for turning the nuts to tighten or loosen the same. The intermediate track supporting brackets 6 comprise a plate or vertically disposed strip 6^a which is secured to the horizontal strip 3, the upper end of the plate being returned upon itself and then extended outwardly to form the lateral arm 6^b. A brace member 6^c connects the lower portion of the plate 6^a to the lateral arm 6^b and the upper end of the brace extends through the lateral arm and terminates in a prong designed to enter the lower side of the track.

The hanger brackets 8 which are secured to the upper edge of the door 1 comprise a head 8^a and a shank or standard 8^b, the head being offset from the shank and the lower end of the shank being provided with means for attachment to the door. In the present instance the head and shank are shown as formed from a single strip of material, an intermediate portion of which is looped to form the head and the ends of which are brought together at one of the lower corners of the loop and extended downwardly to form the shank, the extremities of the strip being extended outwardly in opposite directions at 8^c and secured by rivets or similar means to a base plate 9 which is adapted to be secured to the upper edge of the door by screws or similar fastening devices. Attention is also directed to the fact that the upper portion of the shank 8^b is inclined outwardly and normally has an interlocking engagement with the angular head 10 of a threaded stem 11 which passes loosely through the head 8^a and has a threaded engagement with a socket 12 upon one side of a casing 13 within which the supporting wheel 14 which engages the track 4 is journaled. As shown on the drawing the socket 12 is preferably formed by suitably crimping the intermediate portion of a strip which is secured to the casing 13, the said crimped portion of the strip being threaded for engagement with the stem 11. It will thus be obvious that by slightly elevating the door 1 the head 8^a of the hanger bracket will be moved upwardly on the threaded stem 11 and the inclined upper portion of the shank 8^b thrown out of engagement with the angular head 10 of the stem. The said stem can then be turned so as to raise or lower the door as may be required and as soon as the door is permitted to drop into normal position the head 10 of the stem is again engaged by the inclined portion of the shank 8^b of the hanger bracket and the stem thereby locked against accidental turning.

Extending between opposite sides of the

casing 13 is an axle 15 one end of which projects beyond the casing and is received between the horizontal strip 3 and a guard strip 16 located immediately over the said strip so as to prevent disengagement of the grooved periphery of the wheel from the track. Fitted loosely upon the axle 15 within the casing 13 is a hub 17 having opposite end portions thereof grooved at 18 to receive the anti-friction balls. The opening through the hub of the wheel 14 is somewhat larger than the hub 17 fitted upon the axle and the said hub of the wheel normally engages the balls 19 so as to hold the same against displacement. It will be obvious however, that by removing the axle or rod 15 the wheel 14 together with the hub 17 can be slipped from the casing and the hub 17 then taken from the wheel. From the foregoing description it will be readily apparent that the improved door hanger will permit a free movement of the door without any binding action or undue friction and also provides means for raising or lowering the door as required and for preventing the supporting wheel from jumping or otherwise becoming disengaged from the track.

Having thus described the invention, what is claimed as new is:

1. In a door hanger, the combination of a track, a hanger bracket for the door, the said hanger bracket being formed with a head and a shank, a wheel supporting member, a stem having a threaded engagement with the wheel supporting member and passing loosely through the head of the bracket, said stem being constructed to engage the head of the hanger bracket whereby it is normally held against turning therein, and a wheel journaled upon the wheel supporting member and adapted to travel upon the track.

2. In a door hanger, the combination of a track, a hanger bracket for the door, the said hanger bracket being formed with a head and a shank, a wheel supporting member, a stem having a threaded engagement with the wheel supporting member and passing loosely through the head of the bracket, the said stem formed with a head adapted to normally engage the head of the hanger bracket to hold said stem against turning, said stem being otherwise adapted for vertical movement through said head, and a wheel mounted upon the wheel supporting member and adapted to travel upon the track.

3. In a door hanger, the combination of a track supporting bracket comprising a base, a lateral arm projecting from the base, and a brace connecting the base and the lateral arm and extending upwardly beyond the latter and terminating in a prong, a track supported by the bracket engaged by the prong, and a wheel carried by the door and adapted to travel upon the track.

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

IVER JOHNSON. [L. S.]

Witnesses:

HOWARD A. HANSON,

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