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SLIDING DOOR HANGER

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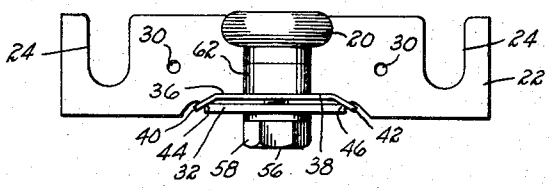


FIG. 1.

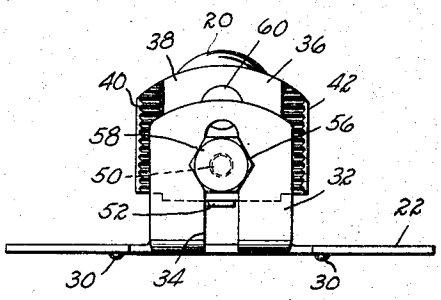


FIG. 2.

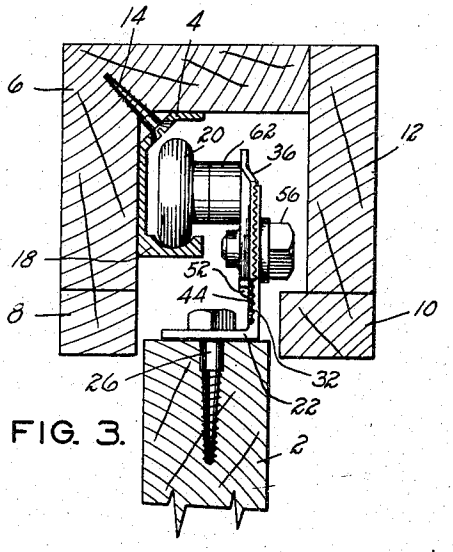


FIG. 3.

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SLIDING DOOR HANGER

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2 Claims. (Cl. 16—105)

This invention relates to door hangers and particularly to an improved hanger fixture for suspending sliding doors of closets, cupboards and the like.

The principal objects of the invention are to provide a sliding door hanger of simplified and durable construction, particularly suited for use in a door pocket of limited headroom, which can be easily installed and readily adjusted for proper suspension of the door, and which by the tightening of but a single fastening device can be secured in adjusted position with a resilient self-locking clamp which precludes loosening and misalignment of the hanger during use.

Other objects will be in part obvious, and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application of which will be indicated in the appended claims.

In the drawing:

Figure 1 is a top view of a sliding door hanger constructed in accordance with the present invention;

Figure 2 is a front view of the hanger shown in Figure 1; and

Figure 3 is an end view of the hanger shown in Figures 1 and 2, illustrating the manner in which a door is suspended from the door frame thereby.

Referring to the drawing, a sliding door hanger constructed in accordance with the present invention is employed, as shown in Figure 3, to suspend a door 2 for sliding movement relative to a track 4 fastened to a header member 6, the header being in turn supported from the door frame, not shown. To one side of the header 6 is preferably fastened a stop member 8 which may be removed during installation of the door and hanger, to permit ready access for adjustment of the hanger, as will hereinafter be explained. Another removable stop 10 is provided on the opposite side of the door 2, supported for example from an apron strip 12 which may also be removable from the header 6 if desired. Also supported from the header 6 by means of screws 14 is the longitudinal track 4, which is of generally C-shaped cross section, and has a bottom flange 18 within which rolls a wheel 20 of the hanger.

Turning now to the description of the hanger itself, in accordance with the present invention the hanger includes a longitudinal base plate 22 provided adjacent its ends with a pair of laterally disposed slots 24 open at one end to receive the shanks of lag screws 26. The lag screws 26 are adapted to be inserted into the top of the door 2 along its center line, and secure the base plate 22 to door 2 in any desired laterally adjusted position. The underside of the base plate is provided with depending lugs 30 struck down therefrom, which bite into the top of door 2 and further insure against lateral movement of base plate 22 relative to the door when lag screws 26 are tightened down.

The base plate 22 is provided midway along one of its

longitudinal edges with an integral upstanding flange 32. At the center of the flange is disposed a vertical slot 34 which extends from near the top of the flange to the base plate 22. Supported from the inner side of the flange is a wheel bracket 36. The wheel bracket is of slightly greater width than flange 32, and consists of a flat central panel 38 and side panels 40, 42, which are obliquely bent toward flange 32. The side panels 40, 42 engage the side edges of flange 32, which are beveled as at 44 and 46, in substantially line contact along vertical lines. Side panels 40, 42 extend slightly beyond the sides of the flange to assist in camming the wheel bracket 36 into alignment with the side edges 44, 46 of the flange. By reason of this line contact of its obliquely bent side panels 40, 42 with the beveled side edges 44, 46 of flange 32, wheel bracket 36 is thus disposed that its central panel 38 is spaced slightly from the flange 32. The side panels of wheel bracket 36 and the beveled side edges 44, 46 of flange 32 are provided with complementary horizontal serrations which permit the wheel bracket to be adjusted to any desired vertical position relative to the flange.

In the central panel 38 of wheel bracket 36 a threaded aperture 50 is aligned with slot 34 in flange 32. The threaded aperture 50 in wheel bracket 36 is adapted to receive a bolt 56 which extends through the aligned slot 34 in flange 32 and has a head 58 which bears against the outer side of flange 32. Vertically spaced from threaded aperture 50, and preferably outwardly bent from the bottom edge of wheel bracket 36, is a depending lug 52 which fits into sliding engagement with slot 34 in flange 32. Slot 34 may if desired be extended into base plate 22 to accommodate lug 52 when wheel bracket 36 is adjusted to its lowermost position. Thus bolt 56 and lug 52 vertically spaced therefrom coact with slot 34 to prevent wheel bracket 36 from becoming canted relative to flange 32, and maintain it in a vertical position so that its side panels 40, 42 remain aligned and in contact with the beveled side edges 44, 46 of the flange.

The fact that the obliquely bent side panels 40, 42 of bracket 36 maintain the central panel 38 of the bracket slightly spaced apart from flange 32 permits a resilient deflection of central panel 38 when bolt 56 is tightened. The inherent resilience of the central panel maintains a constant strain on bolt 56 which insures against its being worked loose by vibration during operation of the door. Thus the wheel bracket 36 may be vertically adjusted to any desired position relative to the upstanding flange 32, as dictated by the desired clearance of the door at its top or bottom, and then the two may be securely clamped merely by the tightening of the single bolt 56.

Adjacent the top of wheel bracket 36 there is connected, as by means of a rivet 60, a horizontal shaft 62 which extends transversely over the base plate 22. At the outer end of shaft 62 is supported, preferably by a ball bearing, the wheel 20 by which the hanger and door 2 are suspended from the track 4.

It will be apparent that a sliding door hanger constructed as above described is simple to install and easy to adjust. In installation of the hanger, with the track 4 first secured to the header member 6, the lag screws 26 are inserted into the top of door 2 and backed off sufficiently to permit the base plate 22 to be slid into place beneath their heads. With the door stops 8, 10 removed, the wheel 20 of the hanger is placed in the track 16, the base plate 22 is then properly laterally adjusted beneath the heads of lag screws 26, and the lag screws are tightened down to secure base plate 22 firmly to the door. Thereupon the wheel bracket 36 is adjusted to any desired vertical position relative to the upstanding flange 32, so as to suspend the door in proper relation to the door frame, the single bolt 56 is tightened down, and the door stops are replaced.

As many changes could be made in the above con-

struction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim:

1. In a hanger for sliding doors, a longitudinal base plate laterally slotted for laterally adjustably securing the same to the top of the door, an upstanding flange on said base plate having beveled side edges, a vertical slot in said flange extending from near its top to its bottom, a wheel supporting bracket closely spaced from said flange having obliquely bent side panels engaging said beveled side edges in substantially line contact and a lug slidably engaging said slot, said side panels and beveled side edges being provided with interengaging transverse serrations, a threaded aperture in said wheel bracket aligned with said slot, a bolt extending through said slot and threaded into said aperture and having a head bearing against the outer side of said flange to clamp said bracket and flange in vertical adjustment, a shaft extending from said bracket transversely over said base plate, and a wheel on said shaft.

2. In a hanger for sliding doors, a longitudinal base plate having open-ended lateral slots for adjustably securing the same to the top of the door, an upstanding flange integral with said base plate having beveled side edges, a vertical slot in said flange extending from near its top to its bottom, a wheel bracket having a central panel spaced from said flange and obliquely bent side panels resiliently engaging said beveled side edges of said flange and extending outwardly beyond said side edges to form a seat for said bracket, complementary horizontal serrations on said engaging side panels and side edges for interengaging the bracket and flange in relative vertically adjusted positions thereof, said central panel having a threaded aperture aligned with said slot and a spaced lug slidably engaging said slot, a bolt extending through said slot into said aperture and having a head bearing against the outer side of said flange to clamp said bracket and flange in vertical adjustment, a horizontal shaft extending from said bracket transversely over said base plate, and a wheel on said shaft adapted to roll in a supporting track.

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