Aug. 11, 1959 L. E. JOHNSON, JR 2,898,623

DOOR GUIDES

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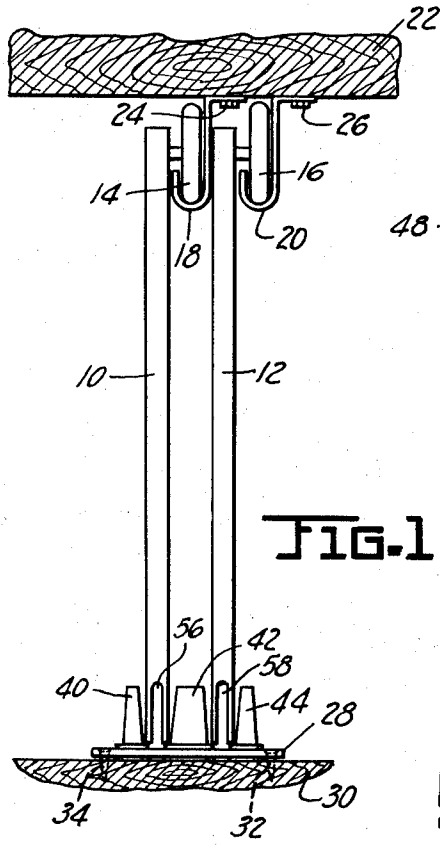


FIG. 1

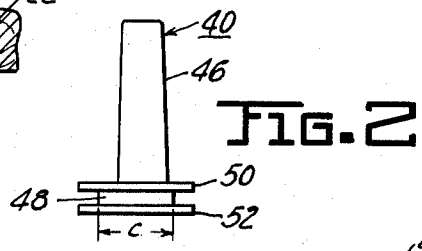


FIG. 2

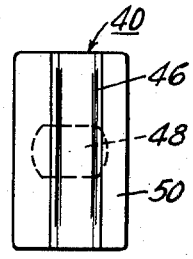


FIG. 3

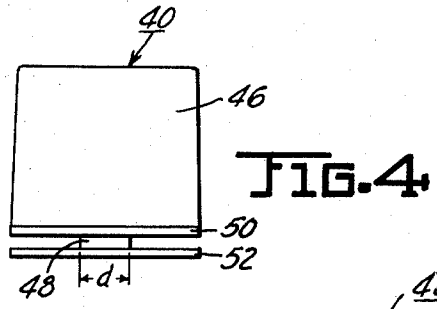


FIG. 4

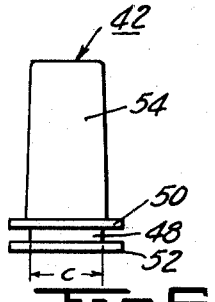


FIG. 5

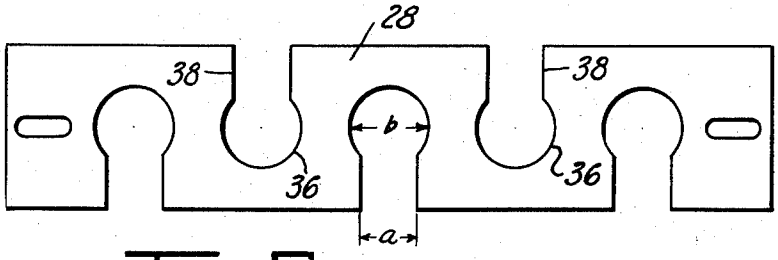


FIG. 6

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DOOR GUIDES

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2 Claims. (Cl. 16—90)

The present invention relates to an improvement in door guides for sliding and folding doors.

It is customary practice to secure the top of a sliding door to a plurality of rollers disposed in a track so arranged that the door may be moved back and forth adjacent other doors or into and from a wall recess. Guide members are usually fixed to the floor on either side of the lower portion of the door to prevent the door from swinging out of a vertical plane into engagement with adjacent doors or walls. If the width of the door should vary from its nominal size or if the door should warp or otherwise change its shape or position, the fixed guide members of the prior art tend to bind the bottom of the door thereby causing the door to stick and creating damage to the finish of the door should it be moved through the guide members.

It is an object of my invention to provide a simple, easily installed door guide for a sliding or folding door having means to accommodate for changes in the shape or location of the door after it is installed.

It is a further object of my invention to provide a door guide for sliding or folding doors to accommodate for manufacturing tolerances or variations in widths of doors of the same nominal size.

Other objects and advantages of my invention will become readily apparent from the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a view of a pair of sliding doors with guide members embodying my invention shown in their operative position; Figure 2 is an end view of a guide member shown in Figure 1; Figure 3 is a top view of the guide member shown in Figure 2; Figure 4 is a side view of the guide member shown in Figure 2; Figure 5 is an end view of the central guide member shown in Figure 1; and Figure 6 is a top view of the base plate shown in Figure 1.

Referring now to the drawing and more particularly to Figure 1, numerals 10 and 12 designate sliding doors the tops of which are respectively secured to rollers 14 and 16 disposed in parallel tracks 18 and 20 which are fastened to a beam 22 by screws 24 and 26.

A base plate 28 is secured to the floor 30, in spaced relation thereto, by screws 32 and 34; and is provided with a plurality of longitudinally spaced circular openings or apertures 36 each of which is connected to the edge of the plate 28 by slots 38 having a width *a* smaller than the diameter *b* of the openings 36.

Guide members 40, 42 and 44 are mounted on the base plate 28 by means to be presently described. The end guide members 40 and 44 are identical. As best shown in Figures 2, 3 and 4, guide member 40 comprises a molded nylon tapered body portion 46 of substantially rectangular cross section, a cylindroidal stem 48 having a major diameter *c* and a minor diameter *d*, and a pair of spaced flanges or projections 50 and 52. The major diameter *c* of stem 48 is greater than width *a* of slots 38 and smaller than the diameter *b* of the openings 36 in base plate 28. The minor diameter *d* of stem 48 is

smaller than the width *a* of slots 38. The stem 48 is arranged with the major diameter *c* transverse the longitudinal plane through the body portion 46 and the minor diameter *d* parallel with said longitudinal plane.

Guide member 42 is identical to guide members 40 and 44 except that the body portion 54 is substantially thicker than the body portion 46. A detailed description of guide member 42 is omitted, like numerals have been used to designate the portions of guide member 42 that are similar to portions of guide members 40 and 44.

Guide members 40, 42 and 44 are positioned in the base plate 28 by aligning the minor diameter *d* of the stem 48 with a slot 38, moving stem 48 into an opening 36 and then rotating the member through substantially 90 degrees. The flanges 50 and 52 are disposed on opposite sides of the plate 28 and lap the openings 36 to prevent the member from being dislodged through the openings.

The base plate 28 is located to position the door 10 between end guide 40 and the central guide 42 and the door 12 between the central guide 42 and end guide 44. The base plate is secured to the floor by screws 32 and 34 and spaced from the floor by flanges 52.

The body portion 46 is offset from the stem 48 as best shown in Figures 2 and 3. The offset construction permits the guide members to be installed in either of two operative positions depending on the direction of rotation of the member upon insertion into the opening 36. In one direction of rotation the guide member assumes an operative position providing a predetermined clearance between adjacent guide members; and in the other direction of rotation the guide member assumes an operative position providing a clearance between adjacent guide members greater then said predetermined clearance. Manufacturing tolerances or variations in the widths of doors of the same nominal size may be easily accommodated by suitable positioning of the guide members to provide the desired clearance. The stem 48 permits the guide members to rotate in the openings 36 formed in the base plate 28. When the guide members are in their installed position the amount of rotation is limited by engagement of the body portions 46 and 54 with the doors whereby alignment of the minor diameter portion *d* of stem 48 with slot 38 is prevented. The major diameter *c* of stem 48 and the diameter *b* of openings 36 are proportioned to permit sliding or coplanar movement of the guide with respect to the base plate. By rotation and/or coplanar movement of the guide members in plate 28, means is provided to accommodate for changes in the shape or position of the doors whereby the doors may be freely moved without marring or damaging the finish thereof.

The doors 10 and 12 may be slotted or kerfed as at 56 and 58 respectively; and the guide members 40 and 44 located in the appropriate openings 36 so as to align the members with the slots 56 and 58. The base plate 28 is provided with an outer pair of openings 36 and an inner pair of openings 36 to respectively locate guide members 40 and 44 adjacent the door and in alignment with the slotted portion of the door.

While only one embodiment of my invention has been described in detail various modifications may be made without departing from the spirit thereof.

I claim:

1. A door guide for a sliding door comprising a base plate having a pair of spaced openings and connecting slots formed therein, first and second guide members substantially rectangular in cross section adapted to engage opposite sides of said door, first and second stems having major and minor diameters respectively connected to the bottom of said first and second members, the minor diameters of said stems being insertable through said slots into said openings wherein said stems are rotatable to first and second positions to bring the major diameters transverse

the ends of said slots, the major diameter of said first stem being transverse to and unsymmetrically intersected by a vertical longitudinal plane through the center of said first member whereby rotation of said first stem to said first position spaces said first member a predetermined distance from said second member and rotation of said first stem to said second position spaces said first member a distance greater than said predetermined distance from said second member.

2. A door guide having a base plate with an opening and a connecting slot formed therein for use with a sliding door comprising a guide member substantially rectangular in cross section adapted to engage said door along at least one of the longer sides of said member, a stem having major and minor diameters connected to the bottom of said member, the major diameter of said stem being transverse to and unsymmetrically intersected by a vertical longitudinal plane through the center of said member, the minor diameter of said stem being insertable through said slot into said opening wherein said stem is

rotatable to first and second positions to bring the major diameter transverse the end of said slot whereby when said stem is in said first position said said plane through said member is on one side of the center of said opening and when said stem is in said second position said plane is on the opposite side of the center of said opening, and a pair of spaced flanges operatively connected to said member and adapted to lap said opening on opposite sides of said plate.

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