

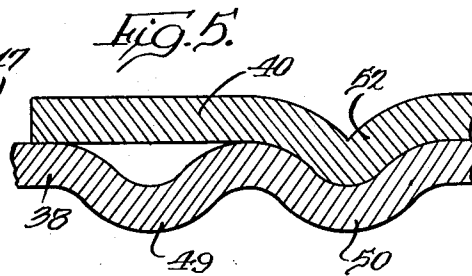
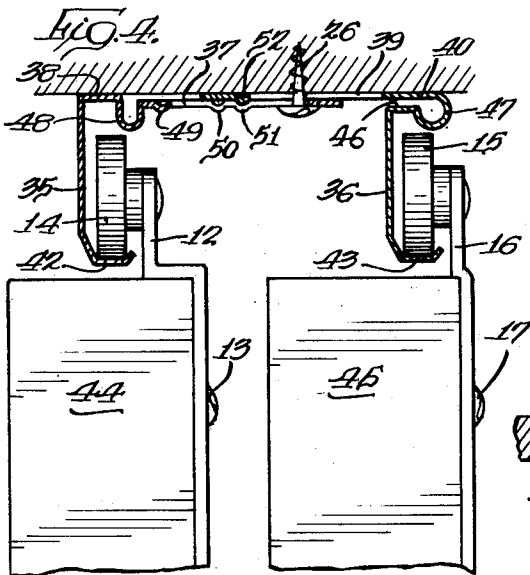
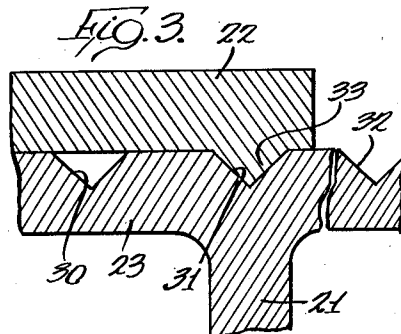
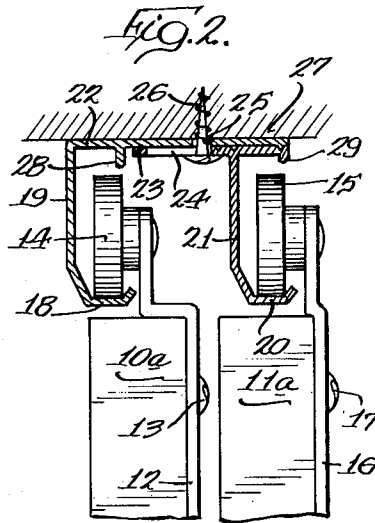
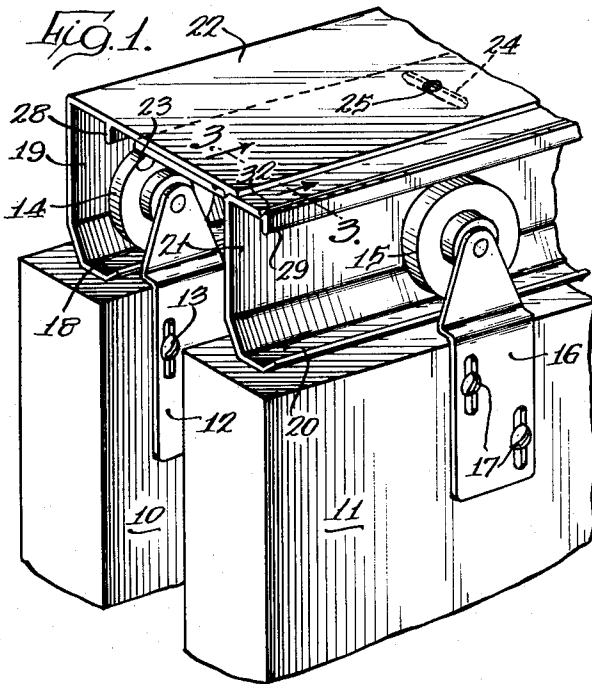
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SLIDING DOOR TRACK ASSEMBLY

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SLIDING DOOR TRACK ASSEMBLY

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3 Claims. (Cl. 16-94)

This invention relates to a double track assembly for sliding closure installations wherein one of a pair of closures is suspended for sliding movement in a first overhead track by means of a roller type hanger secured along the top edge of the closure, and the other closure is suitably suspended for sliding movement in a second overhead track into a position in overlapping relation to the closure which slides on the first track when the closures are in fully open position.

Since standard type closures, such as windows and doors, will vary in thickness in a range as great as $\frac{3}{4}$ " to $1\frac{3}{4}$ ", allowance must be made for such variation in order to maintain proper clearance between the path of each closure relative to the other. To meet this condition, it has been necessary for manufacturers of sliding door accessories to provide roller type hangers having the roller equipped end in a variety of offset positions to the section of the hanger which is fastened to the door. Thus as many as four styles of hangers were supplied as extra parts to accommodate such variation in door dimensions.

The present invention contemplates a track assembly wherein the track defining the path of one door is adjustable toward and away from the track defining the path of the other door in increments of distance which makes it possible to accommodate the full range of variation in standard door thicknesses with aid of only two styles of hangers.

It is, therefore, an object of this invention to provide a track assembly which can be adjusted to establish the necessary clearance for by-passing sliding doors within limits utilizing only a minimum variety of hangers.

Another object of this invention is to provide a track assembly of the character indicated which is relatively simple in construction and which incorporates features of design and assembly to facilitate its installation, maintenance and use.

Other objects of the present invention are to provide an improved sliding door track assembly as indicated that is easily and economically produced and which is highly efficient on operation.

With the above and other objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawings, in which:

FIG. 1 is a broken perspective view of a sliding closure installation including a track assembly incorporating the features of this invention.

FIG. 2 is a vertical sectional view with parts in elevation showing track members in closer adjusted position than in FIG. 1 and using hangers of two styles.

FIG. 3 is an enlarged detail sectional view taken along line 3-3 of FIG. 1.

FIG. 4 is a vertical sectional view, with parts in elevation, illustrating a track assembly in accordance with this invention, with slight modification in the form of the track members, and using hangers similar to those shown in FIG. 2.

FIG. 5 is an enlarged detail sectional view taken along line 5-5 of FIG. 4.

Referring to the drawings, and particularly to FIGS. 1-3 thereof, one embodiment of a track assembly in accordance with the present invention is shown in a slid-

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ing door installation including a first door 10 and a second door 11. Reference numeral 12 designates a hanger secured by screws 13 to the door 10. A roller 14 is supported by the hanger for rotation in a path in upwardly spaced relation to the door 10. A roller 15 is mounted on similar hangers 16 secured to the door 11 by means of screws 17. A second roller hanger assembly (not shown) secured to the door 10 cooperates with the roller 14 and hanger 12 to provide a pair of roller hanger assemblies. Likewise, a second roller hanger assembly (not shown) secured to the door 11 cooperates with the roller 15 and hanger 16 to provide a pair of roller hanger assemblies. In FIG. 2, the doors 10^a and 11^a are of lesser thickness than the doors 10 and 11 shown in FIG. 1. Hanger 12 secured to door 10^a is accordingly offset a greater distance than the corresponding offset in hanger 16 on door 11^a to establish the rollers 14 and 15 nearer than said rollers are spaced as to doors 10 and 11 in FIG. 1.

In accordance with the present invention, the roller 14 of each roller hanger assembly secured to door 10 rides in a channel 18 along the lower edge of a track member 19 while the roller 15 of each hanger assembly secured to door 11 rides in a channel 20 along the lower edge of a second track member 21. The track member 19 is provided along its upper edge with a horizontal web 22 extending in the direction of the track member 21. Track member 21 is similarly provided along its upper edge with a horizontal web 23 extending in the direction of the track member 19. As shown in the drawings, the web 22 of track member 19 and the web 23 of track member 21 are of such horizontal dimension as to have overlapping engagement along a major portion of the area between said track members so as to allow said webs to maintain an overlapped relationship while allowing the space between the channels 18 and 20 of the respective track members 19 and 21 to be varied along lines parallel to said channels in accordance with the space required for proper clearance between doors of different thickness. The adaptability of the webs 22 and 23 to so maintain this overlapped relationship under varying conditions of spacing of the rollers on door 10 relative to the rollers on door 11 is illustrated in FIGS. 1 and 2.

A slot 24 is provided in the web 22 of track member 19, forming one of a series of slots (not shown) at selected distances apart along the length of the track member 19, and an opening 25 in the web 23 of the track member 21 forming one of a series of openings (not shown) at distances apart along the length of the track member in registry with the slots 24 in the track member 19, cooperate with a screw 26 projecting therethrough for securing said track members 19 and 21 in fixed relation to a header 27 of the upper limits of the opening in which the doors 10 and 11 operate. Each slot 24, having its longest dimension arranged crosswise of the distance between said track members, accordingly allows the web containing such slot to be moved toward and away from the track member having the web 23 within a range determined by the length of said slot 24, whereby the overlapping relation of said webs 22 and 23 may be selected in conformity with the desired spacing between the channels 18 and 20 of the respective track members, and locked in such selected overlapping relation by means of the screw 26 which likewise anchors the track members 19 and 21 to the header 27.

As shown in FIGS. 1 and 2, a lip 28 formed integrally with web 22 and extending therefrom in the direction of channel 18 provides an obstruction with which the roller 14 has engagement to trap the latter against accidental withdrawal from the channel 18 without interfering with smooth operation of the roller 14 in said channel. A

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similar lip 29 is formed integrally with and along the edge of an extension of the web 23 of track number 21 to prevent accidental withdrawal of the roller 15 from channel 20.

As further shown in FIG. 3, the web 23 of track member 21, and the extension of web 23, have recesses 30, 31 and 32 spaced apart along the line of adjustment of said track members 19 and 21 at locations in agreement with three selected adjusted positions of said track members for selective occupancy by a projection 33 on web 22 of track member 19. Accurate location of the web 22 in selected adjusted relation to web 23 at successive increments of distance between the channels 18 and 20 is accordingly facilitated by such interengagement of the projection 33 with a selected one of recesses 30, 31 and 32 while said track members 19 and 21 are in process of assembly in fixed relation in that the track members are thereby temporarily immobilized pending final installation on the header 27 via the screw 26.

The modified form of track members construction shown in FIGS. 4 and 5 includes track members 35 and 36 of stamped metal construction. A slot 37 formed in the web 38 of track member 35 and a slot 39 formed in the web 40 of track member 36 cooperate with a screw 41 secured to the header 27 to establish a fixed relationship of said track members 35 and 36 in which the channels 42 and 43 of said track members 35 and 36 respectively are at a selected distance apart compatible with the dimension of doors 44 and 45 and the desired clearance between the paths of said doors. It will be noted that in this modified form of construction, the web 40 of track member 36 is joined to the innermost wall of the channel 42 by a horizontal leg 46 and a downwardly offset bead 47 at the junction between the web 40 and the leg 46. Bead 47 presents a downwardly and inwardly facing obstruction with which the roller 15 in channel 43 has engagement to prevent accidental removal of the roller from said channel. A bead 48 likewise formed in the web 38 of track member 35 serves the same purpose in relation to roller 14 in channel 42 of track member 35. As shown in FIG. 4, the portion of web 38 extending from the bead 48 in the direction of track member 36 is offset downwardly so as to have entrance to the area or space defined by the interfacing surfaces of the web 40 and leg 46 of the track member 36, when such entry is needed to accommodate spacing of the track members at a minimum distance apart. As shown in FIG. 5, depressions 49 and 50 and 51 formed in the downwardly offset portion of web 38 and projection 52 formed in the web 40 of track member 36 cooperate to

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accurately maintain the track members 35 and 36 in temporarily immobilized relation in the same manner as such action is obtained via cooperating recesses 30, 31 and 32 and projection 33 as shown in the track assembly illustrated in FIGS. 1, 2 and 3.

While specific embodiments of the present invention have been shown and described in detail to illustrate the application thereof in various sliding door installations, it will be understood that the invention may be embodied otherwise without departing from the spirit of this invention commensurate with the appended claims.

What is claimed is:

1. A track assembly for sliding closure installations including a first track member and a second track member, each of said track members having an upwardly open channel along the lower edge thereof and interengaging means for securing said track members to an overhead support with the channels of said track members in fixed spaced parallel relation at a selected distance apart, including a horizontally extending web on said first track member in overhead relation to the area between said first and second track members, and a horizontally extending web on said second track member overlapping and resting upon an upwardly facing surface portion of the web on the first track member.

2. A track assembly for sliding door installations in accordance with claim 1, wherein said interengaging means includes a fastener extending through aligned openings in overlapping areas of said webs and anchored in said overhead support.

3. A track assembly for sliding door installations in accordance with claim 1, wherein said interengaging means includes first and second recesses provided in one of said webs in spaced apart relation along a line on which said track members are adjustable toward and away from each other, and projection is provided in the other of said webs for selective occupancy in said recesses in the other web to establish a selected distance of separation between said track members.

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