June 21, 1960 C. J. DARGENE 2,941,847

DRAWER GUIDE

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Fig. 1

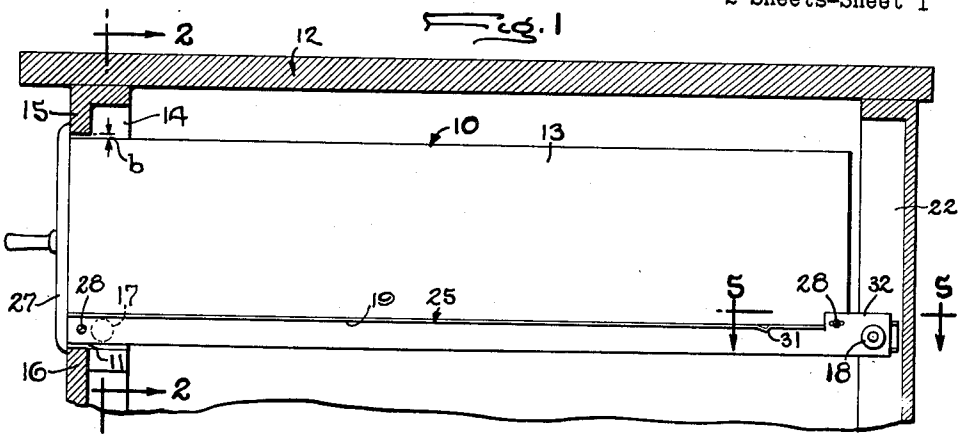


Fig. 2

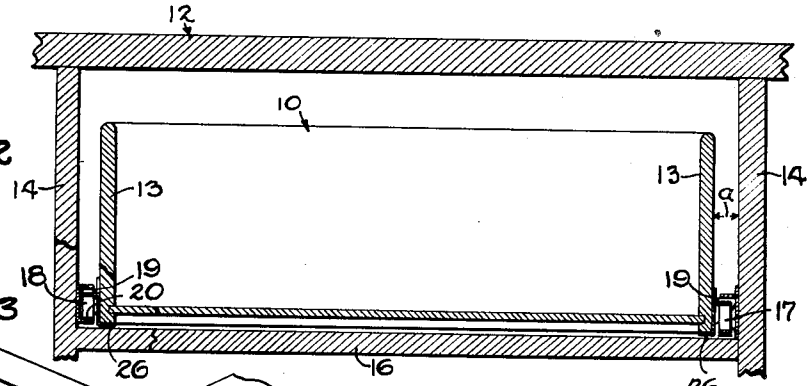
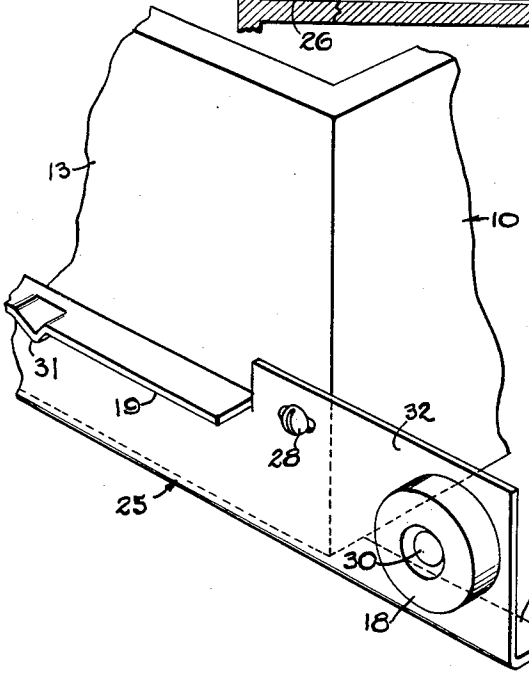


Fig. 3



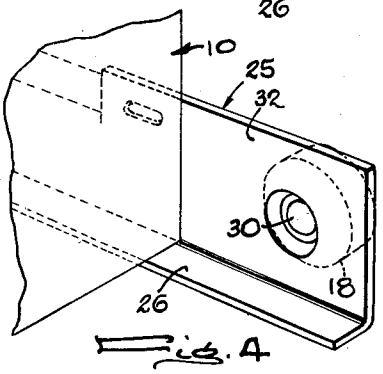


Fig. 4

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Fig. 5

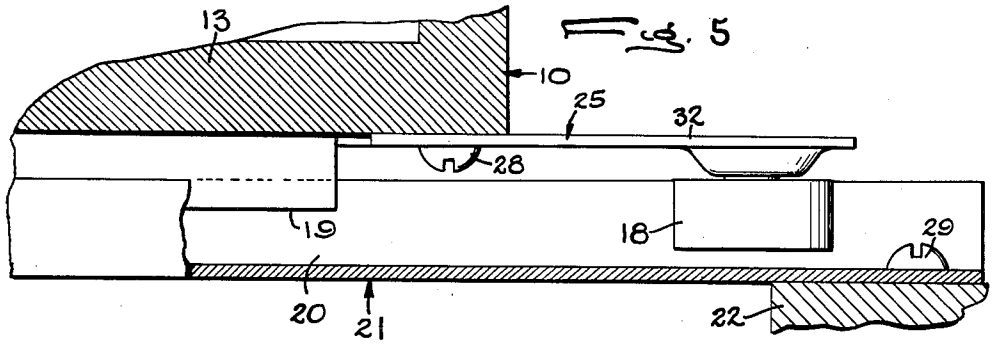


Fig. 6

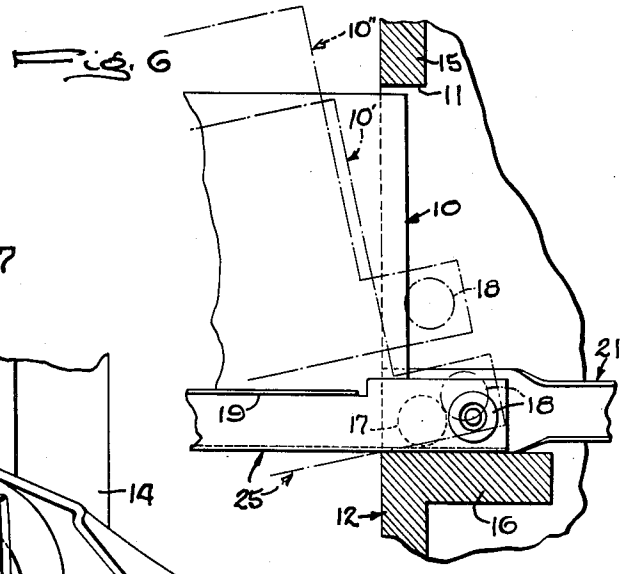
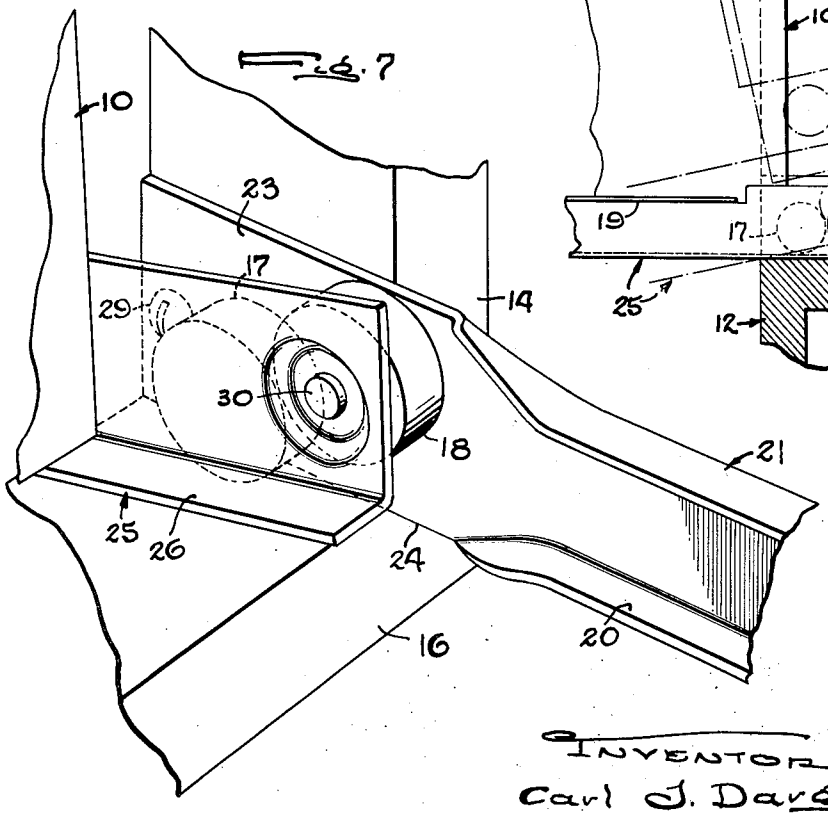


Fig. 7



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DRAWER GUIDE

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2 Claims. (Cl. 308—3.8)

This invention relates to drawer guides and particularly to the type in which rollers journaled on the sides of the drawers ride in tracks on the sides of the cabinet frame while tracks on the sides of the drawers engage similar rollers on the frame.

The general object of the invention is to provide a new and improved guide of the above character which requires minimum clearances between the drawer and the frame so that the use of the guide does not materially reduce the size of the drawer.

A more detailed object is to mount the rollers on the drawer in a novel manner so that they may be in the same vertical planes as the rollers on the frame, thereby minimizing the horizontal clearance between the drawer and the frame, while at the same time permitting the drawer to be removed from the frame without requiring any substantial vertical clearance for this purpose.

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

Figure 1 is a fragmentary longitudinal sectional view of a drawer assembly utilizing guides constructed in accordance with the present invention.

Fig. 2 is a fragmentary sectional view taken along the line 2—2 in Fig. 1.

Fig. 3 is an enlarged fragmentary perspective view of a portion of the guide.

Fig. 4 is a fragmentary perspective view.

Fig. 5 is an enlarged sectional view taken along the line 5—5 in Fig. 1.

Fig. 6 is an enlarged view similar to Fig. 1 but showing the parts in different positions.

Fig. 7 is an enlarged fragmentary perspective view showing the manner in which the drawer is removed from the frame.

As shown in the drawings for purposes of illustration, the invention is embodied in a drawer 10 sliding in an opening 11 in a cabinet frame 12. The general arrangement of these elements is fairly conventional, the drawer being smaller than the opening to provide clearance *a* (Fig. 2) between the sides 13 of the drawer and the side posts 14 at the front of the frame and a small clearance *b* (Fig. 1) between the drawer sides and the upper front crossrail 15 of the frame while there is a very small clearance between the bottom of the drawer and the lower front crossrail 16.

In order to facilitate sliding of the drawer 10 in the opening 11, rollers 17 and 18 roll on tracks 19 and 20 (see Fig. 2) secured to the drawer and the frame 12 respectively. The track 20 on the frame is part of an elongated channel 21 which is disposed horizontally and which, as shown in Figs. 1 and 7, extends from the front faces of the posts 14 to posts 22 at the rear of the cabinet. For a purpose to be explained later, the forward portions 23 of the channels are flattened and the bottom eges 24 of these portions rest on the crossrail 16.

The rollers 18 project into the channels 21 and normally ride on the lower sides thereof whereby these sides constitute the tracks 20.

An elongated bar 25 of Z-shaped cross section is secured to each side 13 of the drawer 10 along the lower edge thereof with the upper flange projecting laterally outwardly from the drawer to constitute the track 19. The lower flange 26 of the bar projects in under the drawer and seats against the underside of the latter and this together with the location of the edge 24 of the flattened portion 23 of the channel 21 on the crossrail 16 accurately orients the bar with respect to the associated channel. The bars 25 are arranged with their outer ends abutting against the inner side of the front panel 27 (Fig. 1) of the drawer and are secured to the drawer sides by screws 28 while the channels 21 are fastened to the posts 14 and 22 by screws 29.

As shown in Figs. 3 and 4, the rollers 18, which may conveniently be made of molded nylon, are journaled on the inner or rear end portions of the bars 25 by rivets 30 and the rollers 17 (Fig. 6) similarly are journaled on the forward flattened portions 23 of the channels 21. An ear 31 is struck down from each track 19 (Fig. 3) near the inner end thereof to engage the associated roller 17 as the drawer is pulled open and constitutes a stop for preventing the drawer from accidentally being pulled out too far.

The present invention contemplates the provision of a novel arrangement of the rollers 17 and 18 with respect to each other and to the bars 25 so as to minimize the amount of the clearances *a* and *b* and thereby permit the use of a relatively large drawer 10 as compared to the size of the opening 11. This arrangement permits the rollers 18 to be in the same vertical plane as the rollers 17, thereby keeping the horizontal clearance *a* at a minimum, and also permits the drawer to be substantially completely removed from the opening 11 before it is necessary to lift the rollers 18 over the rollers 17. As a result, the vertical clearance *b* need not be increased to allow such lifting.

To achieve the foregoing ends, the bars 25 are made longer than the drawer 10 to provide extensions 32 behind the drawer and the rollers 18 are journaled on these extensions. With this arrangement, the drawer 10 may be removed by pulling it open until the stops 31 strike the rollers 17. Then, the drawer is lifted slightly to allow the stops to pass over these rollers and the outward pulling of the drawer is continued until the rollers 18 abut the rollers 17 as shown in full lines in Fig. 6. In this position, the drawer is almost completely removed from the opening 11.

Next, the drawer 10 is tilted downwardly about the front edge of the crossrail 16 to the position illustrated in Fig. 7 and shown at 10′ in Fig. 6. At this time, the top of the drawer is clear of the upper crossrail 15 of the cabinet frame 12 and the rollers 18 are out of the tracks 20 and alongside the flattened portions 23 of the channels 21. The drawer then is lifted upwardly as shown at 10″ in Fig. 6 so that the rollers 18 are above the rollers 17 and this frees the drawer from the frame.

It will be observed that, with drawer guides constructed as described above, it is unnecessary to lift the drawer 10 any substantial amount until the drawer is, for all practical purposes, out of the opening 11. As a result, only a small clearance *b* is required between the drawer and the top crossrail 15 so that the drawer may be made of maximum height relative to the opening. At the same time, the rollers 18 may be in the same vertical planes as the rollers 17 to keep the lateral clearance *a* at a minimum. Thus, the use of the guides do not materially reduce the size of the drawer.

I claim as my invention:

1. For use with a drawer sliding in an opening in a frame, the combination of, two elongated channels secured horizontally to said frame along opposite sides of said opening and disposed at the bottom of the opening, said channels facing inwardly toward each other with the legs of the channels terminating short of the front ends of the channels to provide flat front end portions, first rollers journaled on said channels intermediate the ends of said flat portions, two elongated bars, one secured horizontally to each side of said drawer and each extending along the bottom edge of the drawer to be level with the associated channel, said bars being longer than the drawer to provide extensions beyond the rear of the drawer, longitudinal flanges rigid with said bars and projecting laterally therefrom to ride on said first rollers, and second rollers journaled on said extensions closely adjacent the rear ends thereof and disposed in the same vertical planes as said first rollers to roll in said channels whereby the second rollers may be lifted out of the channels and over said first rollers after the drawer has been pulled substantially out of said opening.

2. For use with a drawer sliding in an opening in a frame, the combination of, two elongated channels secured horizontally to said frame along opposite sides of said opening and facing inwardly toward each other, two elongated bars, one secured horizontally to each side of said drawer level with the associated channel and each being longer than the drawer to provide extensions beyond the rear of the drawer, first rollers journaled on said channels adjacent the front end thereof, longitudinal flanges rigid with said bars and riding on said rollers, and second rollers journaled on the outsides of said extensions and disposed in the same vertical planes as said first rollers to roll in said channels, at least the upper legs of said channels terminating short of said first rollers to provide a space between the first rollers and the upper legs through which space said second rollers may be lifted out of the channels and over the first rollers after the drawer has been pulled substantially out of said opening.

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