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2,463,238

CABINET FRONT FRAME

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Fig. 1

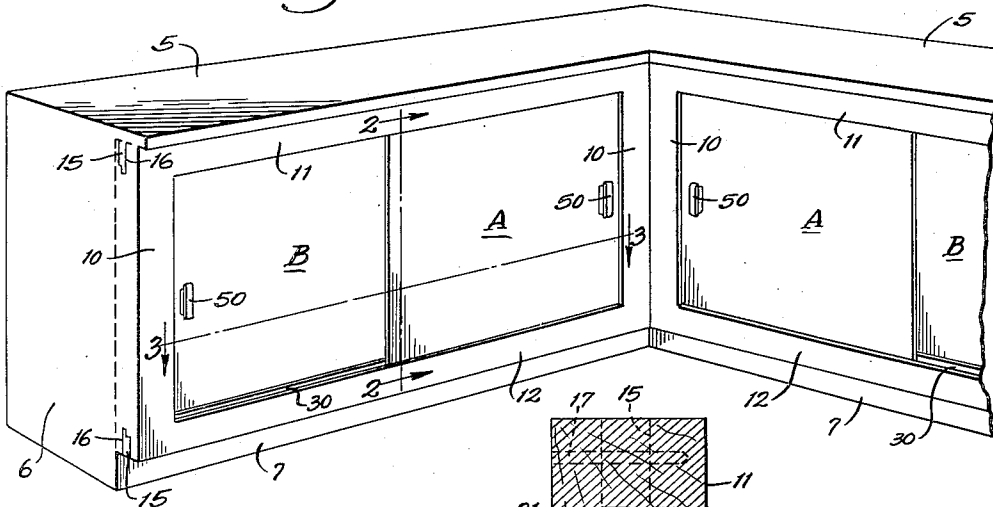


Fig. 2

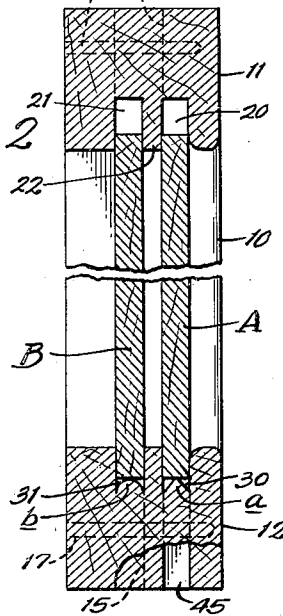
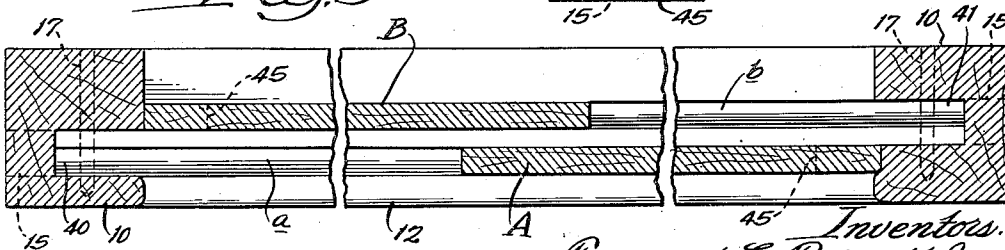


Fig. 3



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CABINET FRONT FRAME

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1 Claim. (Cl. 20—19)

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Our invention here relates to a cabinet front frame mounting two or more sliding door panels which are adapted to close or open the frame opening. The present frame with assembled panels may be used advantageously with cabinets of various kinds, an example thereof being a kitchen floor cabinet or wall cabinet.

It is an object of our invention to provide a cabinet front frame which may be fitted to a cabinet to form a unitary part thereof; which may receive two or more sliding door panels initially or at any subsequent stage; which provides for easy sliding movement of each panel regardless of how affected by atmospheric conditions; and which includes means whereby dirt and small particles accumulating on the lower frame rail will tend to become dislodged and discharged with repeated operation of the panel doors.

These and other objects of our invention, as will more clearly hereinafter appear, may be realized from a frame-door construction of which an exemplification is set forth in the accompanying drawing wherein:

Figure 1 is a perspective view of a kitchen floor cabinet equipped with the present front frame; and

Figs. 2 and 3 are enlarged sectional views through the front frame taken, respectively, on lines 2—2 and 3—3 of Fig. 1.

The cabinet shown in Fig. 1 comprises a counter top 5 and ends 6, together with a front base-board 7. To the opening below the counter top is fitted the present door frame which comprises a pair of spaced stiles 10 interconnecting top and bottom rails 11 and 12. Each rail at its two ends may be formed with a tenon 15 which interfits with a slot 16 formed at the proximate stile end, a pin 17 or other locking means being used to secure the one to the other. The construction up to this point may be regarded as conventional. A frame of this character, when fitted to the open front of a cabinet, is securely affixed thereto in unitary relation and when finished therewith in any of the usual ways appears to be an integral part thereof.

The top rail is molded with a pair of grooves 20 and 21 separated as by a rib 22, the groove 20 lying forwardly of the other. In the lower rail are formed similar grooves 30 and 31 specially shaped to provide in effect a surface which will afford a line contact for panels A and B, one fitted into the forward grooves 20 and 30 and the other into the rearward grooves 21 and 31, each supported and guided thereby for sliding move-

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ments lengthwise thereof. As shown, the bottom of the groove 30 is formed with an angled contour to provide a ridged bead *a* which extends lengthwise of the groove substantially centrally thereof. A slightly different construction is suggested in groove 31 where we provide a bead *b* of convex contour. Each form of bead presents an angular or bowed top surface adapted to establish line contact with the bottom edge of the sliding panel that is supported thereon. It is optional whether to use one or both of these forms of beads.

Between the grooves 20 and 30 a connecting groove 40 is formed in one of the two stiles and between the grooves 21 and 31 a connecting groove 41 is formed in the other of the two stiles. This makes it possible for each panel to be slid to an extreme position in which one vertical edge thereof may enter slightly into the stile groove, thereby making for an improved closure and increasing the area of the opening vacated by that panel. At the end of the grooves 30 and 31, opposite the connecting grooves 40 and 41, we provide vertical openings 45 through the lower rail. These openings afford passages through which material collecting in the lower grooves may drop for discharge therefrom.

The depth of the upper grooves 20 and 21 is somewhat greater than that of the lower grooves 30 and 31 whereby to afford for each panel a head clearance sufficient to permit the panel to be raised with its lower edge disposed above the bottom rail. In such a raised position, either panel may be pulled out and removed from the frame. For replacement, a reverse operation is employed. The advantage of such facile removal and replacement of the panels is obvious, particularly in case of warping which interferes with movement of one past the other; in that event the two panels may be reversed or interchanged to obviate such a difficulty. For convenience and manipulation each panel may be provided with a handle means 50, as shown.

In preparing the panel frame for use, successive paint coats are usually applied, some of the paint entering into the grooves wherein the panels are to be slidably fitted. The presence of paint will ordinarily affect to some degree the clearance that is requisite for easy sliding movement of the panels. According to our construction, however, no such difficulty is encountered. This arises from the fact that any excessive paint entering into the lower grooves will settle into the deep corners thereof, far removed from the top surfaces of the beads where the panels are

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supported in line contact therewith. In use, small particles, such as food accumulations, may settle into the lower grooves, but always they will tend to slide down into the corners away from the panels so as not to interfere with their sliding movement. Whenever desired, a small brush may be applied to sweep all such loose particles endwise within each groove to the discharge opening at its end. In fact, continued sliding movements of the panels will have this same effect. The grooves are to some extent self-cleaning and act at all times to prevent interference with sliding movement of the panels which are guidingly supported therein.

We claim:

A cabinet having a door frame comprising a pair of spaced stiles, interconnecting top and bottom rails provided with oppositely facing pairs of longitudinal grooves extending lengthwise between the stiles, the bottoms of the grooves in the bottom rail being formed with integral upwardly extended beads of a width to extend from one side wall of the grooves to the other and shaped to provide a narrow surface at the topmost point having downwardly and outwardly extending surfaces at opposite sides of said top narrow surface to shed accumulation, said bottom rail being provided at the ends of the grooves with discharge openings extending entirely

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through the bottom rail, and a pair of panels one slidably mounted in each pair of opposed longitudinal grooves in the top and bottom rails and guided by the side walls of the grooves, each panel having a lower edge resting upon and in engagement with the narrow top surface of the upwardly extended bead of one groove in the bottom rail, whereby a substantially line contact with the panel is provided to minimize friction, the sliding movement of the doors tending to sweep accumulation to said discharge openings to provide a self cleaning structure.

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