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DRAWER TRAY INSTALLATION

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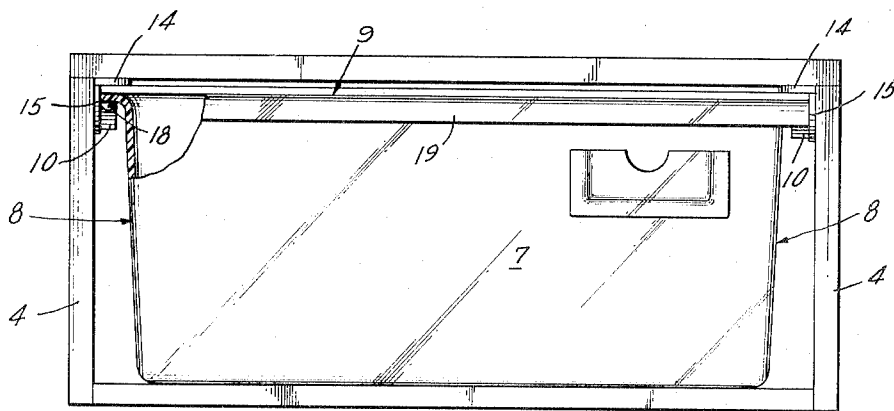


Fig. 1

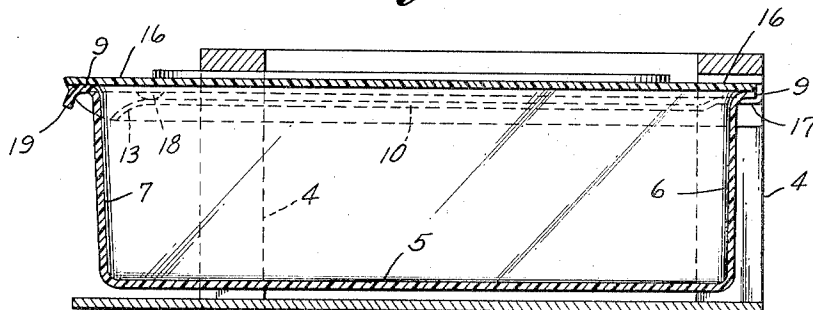


Fig. 2

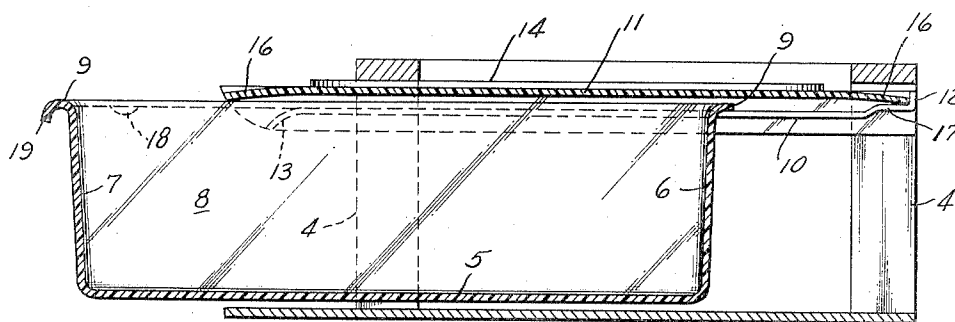


Fig. 3

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DRAWER TRAY INSTALLATION

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3 Claims. (Cl. 312—270)

This invention is a drawer tray installation designed particularly for the accommodation of a perishable or delicate merchandise or materials to maintain the same normally sealed against the inflow of outside air or dust and at the same time in such manner as to be readily accessible when desired.

The invention pertains particularly to that type of drawer installation where frequent access to the drawer contents is requisite and involves structure of such character as to permit ready withdrawal of the drawer tray from its cabinet as well as the reapplication of the same thereto, in the latter instance insuring a tight sealing of the drawer contents when the drawer has been properly reapplied to the supporting or cabinet structure.

One of the principal objects of the invention is to provide a drawer tray installation constructed of transparent material to enable the contents of the drawer to be readily viewed from the exterior and without removing the drawer, featured by means for automatically sealing the drawer tray against the ingress of air or dust when the tray has been moved to its "closed" position in the supporting structure, and yet which permits ready removal of the drawer when desired for further inspection or handling of its contents.

A further object of the invention is to provide a drawer tray installation or supporting device which is of extremely simple construction, which may be manufactured and distributed at low cost, which may be readily applied to ordinary cabinet structure without change or alteration of the latter and by simple and inexpensive means, and which when properly installed assures the drawer or tray contents being effectively sealed from outside atmosphere.

With the foregoing objects in view, together with others which will appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts, all as will be described more fully hereinafter, illustrated in the drawing and particularly pointed out in the claims.

In the drawings:

Fig. 1 is a front end elevation, parts broken away, of a drawer structure and assembly involving the invention.

Fig. 2 is a central sectional view, on a reduced scale, taken longitudinally through the drawer when the latter is in "closed" position, and

Fig. 3 is a view similar to Fig. 2, showing the drawer tray partly removed from the supporting structure.

The invention comprehends a cabinet structure of the slide drawer type, including a cover plate for each drawer affixed within the cabinet in such manner as to support the drawer for sliding movement, and which cooperates with the drawer in such manner as to bring about a tight sealing of the upper end of the drawer against outside atmosphere when the drawer has been applied and moved to its limit in closed position. In the attainment of this end, the cover plate for the slide drawer is affixed in the supporting cabinet in such position as to entirely overlie the sliding drawer or tray when the latter is in "closed"

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position and to engage with the upper edges of the drawer in snug or airtight relationship when the drawer is moved to its limit in one direction. The cover plate and drawer are preferably formed of Plexiglas or other synthetic transparent material, although thin metal, enameled or otherwise, or glass, may be employed, and the structure includes flexible portions at critical positions in the cover plate to insure proper sealing at the front and rear portions of the tray when the latter has been moved to closed position.

Referring now more particularly to the drawing, 4 represents spaced parallel upstanding cabinet or support members formed of any desirable material for the support of the trays or drawers. In the present instance, only a single drawer and its cover plate is shown, but it will be understood that the assembly will usually include a series of stacks of drawers or trays for the accommodation of perishable goods requiring sealing against outside air. The tray or drawer, here represented as of transparent material, such as glass or Plexiglas, is of substantially rectangular formation open at its upper end, having a bottom 5, an inner upstanding wall or end 6, a front wall 7, and the usual side walls indicated at 8. The upper ends of the side and end walls are provided with an outwardly directed flange 9, the flanges at the upper ends of the side walls constituting runners to slide upon the horizontally disposed track 10 secured at the upper ends of the support members 4 and upon the inner surfaces thereof. These tracks, as will be clearly observed from Figs. 2 and 3, extend the full depth of the cabinet structure and are spaced below the cover member 11 disposed transversely in each of the cabinet openings at the top thereof. The track 10 is provided at its inner end with a stop 12 against which the flange 9 of the rear end 6 of the drawer engages to limit the rearward sliding movement of the drawer or tray. The forward end of each track 10 is provided with a downwardly deflected guide portion 13 to enable the flange 9 to be easily engaged with the track.

The top 11, which is of sufficient size to entirely cover the upper open end of the tray or drawer when slid to its innermost position, is preferably formed of plastic material and is securely fastened within the cabinet structure 4 either to the tops thereof or to the upstanding supports as shown. In the present instance, the longitudinal edges of the top plate or cover 11 are reenforced with the rib 14 which has a downwardly extending leg portion 15 to enable the same to be affixed to the upstanding members 4 of the cabinet and also integrally supports the track 10. It will be noted, particularly in Figs. 2 and 3, that the rib 14 terminates at its ends inwardly from the ends of the cover plate 11, thus providing in the cover plate deflected or flexible end portions thereof indicated at 16. It will also be observed that the main portion of the top plate or cover 11 is spaced a substantial distance above the track 10 to enable the tray or drawer to have free sliding movement within the cabinet structure. However, the rear end of each track 10 is provided with a rise 17 to force the rear or inner end of the drawer or tray in an upward direction when it is moved to its limit inwardly of the cabinet to engage the undersurface of the downwardly deflected end portion 16, whereby to move said portion upwardly into substantially true horizontal position and at the same time to frictionally engage throughout the entire width of the said portion with the end flange 9 to provide a tight seal for said flange, as shown more particularly in Fig. 2 of the drawing. Each of the flanges 9 at the sides of the tray or drawer is provided with a detent 18, near the forward end of the tray or drawer, to engage and ride upon the track end, being of sufficient depth to cause the forward edge of the tray or drawer

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to move upwardly and to bring the forward upper edge of the tray into frictional and sealing contact with the forward deflected portion 16 of the cover, as shown particularly in Fig. 2 of the drawings.

The arrangement above described enables the drawers or trays to be freely moved inwardly as well as outwardly of the supporting structure as desired, the forward end of the drawer or tray having its flange 9 downturned as at 19 to provide a drawer pull to facilitate removal of the drawer. It is obvious that when the drawer or tray is moved to its limit inwardly of the cabinet structure, the side flanges 9 riding upon the track 10 and upwardly upon the rise portion 17 will force the sides of the tray flange into tight sealing engagement with the sides of the cover 11, while the rear end of the drawer flange will move into frictional contact with the downwardly flexed end portion 16 at the rear of the cabinet structure to insure sealing across the rear end of the drawer. Similarly, engagement of the detents 18 of the drawer tray with the track 10 will force the forward end of the tray or drawer upwardly into frictional contact and sealing engagement with the forward downwardly deflected end of the cover 11.

From this construction it is apparent that I have provided a simple and yet very effective means for not only suitably supporting the drawers or trays, but at the same time assuring the sealing action between the cover and the drawer when the latter has been properly applied and moved to its limit in closing direction. The drawer or tray as well as the cover may be constructed of comparatively simple inexpensive materials and in simple manner, and the construction is such that the several combined covers and tray tracks may be easily and quickly applied to standard shelving structures without material modification of the latter or the exercise of special skill or tools.

I claim:

1. In a drawer tray installation, a supporting frame, spaced parallel tracks secured to said frame, a cover plate of substantially rectangular shape rigidly secured in said frame and disposed between said tracks with its side edges overlying and spaced from said tracks, the front and rear

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end portions of said cover plate normally flexed downwardly out of the plane of said cover plate, a tray, flanges at the sides of said tray resting upon said tracks, and cooperating means on said tracks and tray forcing said flanges upwardly in engagement with said cover when the tray has reached a predetermined position on said tracks.

2. In a drawer tray installation, a supporting frame, spaced parallel tracks secured to said frame, a cover plate of substantially rectangular shape rigidly secured in said frame and disposed between said tracks with its side edges overlying and spaced from said tracks, the front and rear end portions of said cover plate normally flexed downwardly out of the plane of said cover plate, a tray, flanges at the sides of said tray resting upon said tracks, and cooperating means upon said tracks and said flanges at the ends thereof for moving said flanges upwardly in engagement with said cover and with said end portions when said tray has reached a predetermined position on said tracks.

3. In a drawer tray installation, a supporting frame, spaced parallel tracks secured to said frame, a cover plate of substantially rectangular shape disposed between said tracks with its side edges overlying and spaced from said tracks, rib members at the side edges of said cover plate and terminating inwardly from the ends thereof, the portions of said cover plate beyond the ends of said rib members deflected out of the plane of said cover plate, a tray, flanges at the sides of said tray resting upon said tracks, and cooperating means at the ends of said tray flanges and said tracks to move said tray into engagement with said cover plate and with said deflected portions when said tray has reached a predetermined position on said tracks.

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