

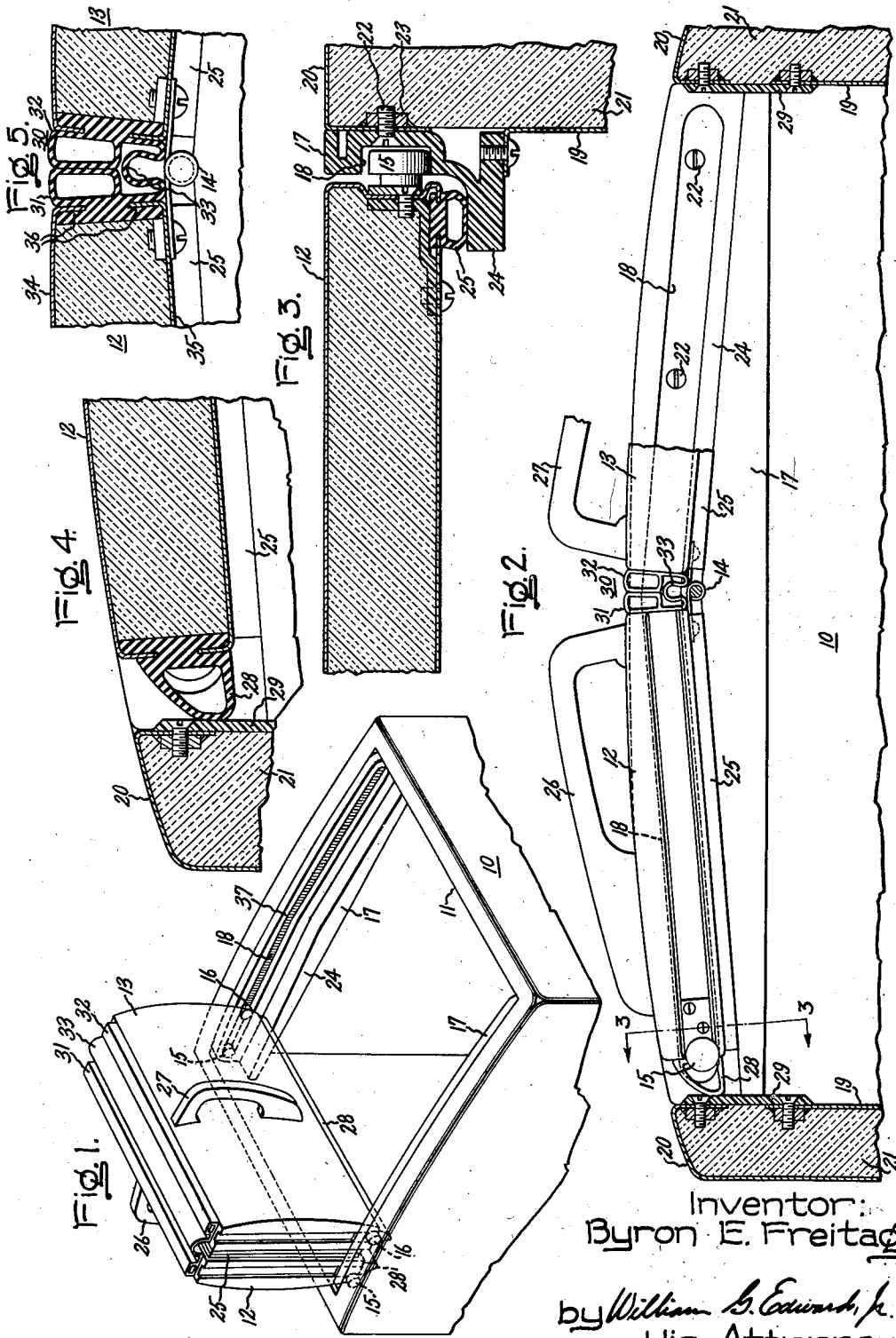
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FOLDING LID FOR OPEN TOPPED CABINETS

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FOLDING LID FOR OPEN TOPPED CABINETS

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1 Claim. (Cl. 160-206)

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My invention relates to folding lid assemblies for open top cabinets and particularly those for thermally insulated refrigerator cabinets.

In open topped cabinets, particularly those employed in stores for dispensing merchandise, it is desirable that a large area of the cabinet interior be readily accessible, and various types of lid or closure assemblies have been provided for this purpose. Among the various types of lid assemblies those employing so-called folding lids have made it possible to open substantially the entire cabinet top; however, difficulty has been encountered in providing suitable arrangements for moving the lids and for retaining them in their desired open position. Accordingly it is an object of my invention to provide a lid assembly for open topped cabinets including an improved arrangement for moving the lids to and retaining them in their open position.

It is another object of my invention to provide a folding lid assembly for open topped cabinets including an improved arrangement for securing an effective seal between the lids and the cabinet in the closed position of the lids.

It is a further object of my invention to provide an improved folding lid assembly for open topped cabinets which shall be easy and safe to manipulate and which shall provide ready access to the entire cabinet.

Further objects and advantages of my invention will become apparent as the following description proceeds, and the features of novelty which characterize my invention will be pointed out with particularity in the claim annexed to and forming a part of this specification.

In carrying out the objects of my invention, I provide a folding lid assembly comprising two rectangular lids hinged together along one side lying centrally of an open top cabinet, the hinge axis being at the bottom so that the lids may be lifted and folded together. The lids are mounted in guiding and supporting members extending along the side of the cabinet top, and rollers or other mounting elements at the corners of the lids remote from the hinge engage guide tracks provided on these members. The guide tracks are sloped upwardly from both ends toward the center and thus when the lids are folded together they may be moved to one side of the center so that the force of gravity will help to hold them in their open position. Gaskets along the ends of the lids are compressed by the toggle action of the lids when they are moved to their closed position and provide effective sealing.

For a better understanding of my invention ref-

erence may be had to the accompanying drawing in which Fig. 1 is a perspective view of a portion of a refrigerated cabinet provided with a lid assembly embodying my invention; Fig. 2 is an enlarged longitudinal elevation view, partly in section, of the cabinet of Fig. 1; Fig. 3 is an enlarged sectional view on the line 3-3 of Fig. 2; Fig. 4 is an enlarged sectional end view of the lid assembly; and Fig. 5 is an enlarged sectional view of the hinge construction.

Referring now to the drawing, as shown in Fig. 1, a thermally insulated cabinet 10 is provided with a rectangular top opening 11 which may be closed by a pair of lids 12 and 13 shown in their open position. The lids 12 and 13 are hinged together along their adjacent abutting edges, the hinge being positioned generally in the plane of the lower faces of the lids, as indicated at 14 in Fig. 2. The lid 12 is provided with suitable mounting elements such as rollers 15 at its corners remote from the hinge 14 and the lid 13 is provided with similar elements or rollers 16. The rollers 15 and 16 engage guide members 17 secured to the cabinet 10 along the tops of the inner walls on two sides thereof. The rollers fit in channel-shaped portions of the members 17, one of which is indicated at 18 in Fig. 1. The rollers are thus confined to the channel-shaped sections which act as guide tracks. The manner in which the rollers engage the tracks is clearly shown in Fig. 3, which shows a cross section of the guide members 17 with the rollers 15 in position on the channel track 18. As clearly shown in this figure, the cabinet comprises an inner wall or tank 19 and an outer metal wall 20 separated by thermal insulation 21. The guide member 17 is constructed of a material of low thermal conductivity, such as a suitable plastic, and forms a connecting link or thermal breaker strip between the metal of the outer wall 20 and that of the inner wall 19. Member 17 is secured in position by a plurality of machine screws 22 engaging nuts 23 welded or otherwise suitably secured to the inner side of the outer wall 20. The guide member 17 is formed to provide a shelf or shoulder 24, and the closed position of the lid assembly is determined by the shoulder 24, the lids resting on the top surface thereof. For purposes of sealing the opening between the lid and the shoulder, each lid is provided with a suitable sealing gasket indicated at 25. The rollers 15 and 16 are mounted on fixed pivots near the corners of the lid, and the lids are provided with handles 26 and 27 so that they may be lifted into their folded position, rollers 15 and 16 moving along the

tracks 18 and being prevented from being lifted from the tracks by the channeled form of the track. It will be apparent that when the lids have been moved to their open or folded position, as shown in Fig. 1. The lid assembly may be removed by folding the lids together and then rotating them about a vertical axis, the rollers being spaced sufficiently from the sides of the number 17 to permit removal in this manner.

In order to seal the ends of the lids remote from the hinge, gaskets 28 are provided on the lids in positions so that they extend beyond the edges of the lids and engage thermal breaker strips 29 which connect the inner and outer metal walls 19 and 20 along the end walls of the cabinet. As clearly shown in Figs. 3 and 4, the space along the hinged edges of the lids is sealed by a gasket 30 secured along the edges of the two lids. This gasket comprises two abutting cushioning portions 31 and 32, as clearly shown in Fig. 5, and a connecting web portion 33. The gasket 30 also acts as the thermal breaker strip at the inner ends of the lids between the top and bottom metal shells of the lids. The lid 12, for example, comprises an outer metal shell 34 and an inner shell 35, both shells being inwardly flanged and engaging grooves formed in the heavy base portion of the gasket indicated at 36. When the lids are moved to their closed position the cushioning portions 31 and 32 engage and are compressed between the edges; this closes the space between the lids to provide a pleasing appearance while maintaining sufficient spacing between the lid edges to prevent pinching of the operator's fingers on closing the lids. Also, on the closing movement the lids act as a toggle and compress the gaskets 28 laterally in a generally horizontal plane against the ends of the walls of the cabinet and provide an effective seal against the vertical breaker strips 29.

The channel-shaped track portions 18 of the guide member 17 are made to slope upwardly from their ends toward their center portions, so that the rollers 15 and 16 on moving from the end toward the center must move uphill. Thus, the roller 16 in Fig. 1 has been moved up the slope toward the center indicated at 37 and then has moved past the center toward the other end of the cabinet, until the lids have been folded together at that end. The rollers 16 must move back uphill toward the center in order to return to their closed position. Thus the force of gravity tends to hold the lids in their folded position at either end of the cabinet when they have been moved together, it being necessary for the rollers to move uphill in order to separate. Furthermore the lids when folded may be moved easily along the tracks from one end of the opening to the other.

I have found that a construction as illustrated and described above provides a lid assembly which

may be opened easily and without the necessity of moving the lids away from the cabinet and, further, without requiring that the operator hold the lids in their open position. Thus a large area of the cabinet is made accessible easily and without annoyance from the lid assembly. The construction may readily be adapted to cabinets having lids extending lengthwise of relatively long rectangular openings, it being understood that the proportions as indicated in the drawing have been selected merely by way of example and do not constitute a structural limitation.

From the foregoing it is readily apparent that I have provided a simple and effective arrangement for facilitating the movement and handling of folding lids for open top cabinets and that the lids constructed in accordance with my invention may be made to provide an effective seal when employed with refrigerated cabinets.

What I claim as new and desire to secure by Letters Patent of the United States is:

A thermally insulated cabinet having a substantially rectangular top opening, a closure assembly for said opening having its upper surface substantially flush with that of said cabinet and comprising a pair of substantially rectangular lids hinged together along adjacent edges to afford swinging movement of the lower faces of the lids toward one another, means including guide tracks of channel-shaped cross section secured to said cabinet within said opening and along two sides thereof and opening toward said lids on either side of said opening for supporting said lids on said cabinet, and mounting elements on said lids on fixed parallel axes near the outer edges thereof remote from said hinged edges and resting within said tracks for affording movement of said lids from a closing position to a folded position, said elements being retained in said tracks throughout movement of said lids and constraining said ends of said lids to move on said axes along said guides in alignment therewith, said lids in their folded position being freely movable along said guides, said guide tracks sloping upwardly from both ends toward the center whereby the hinged edges of said lids may be lifted and the lids moved together to a folded position at either end of said opening whereupon the force of gravity will tend to hold said lids in their folded position.

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