Nov. 7, 1939. P. T. SYWERT 2,179,307

REFRIGERATOR CABINET

Filed Feb. 24, 1937

Fig. 1.

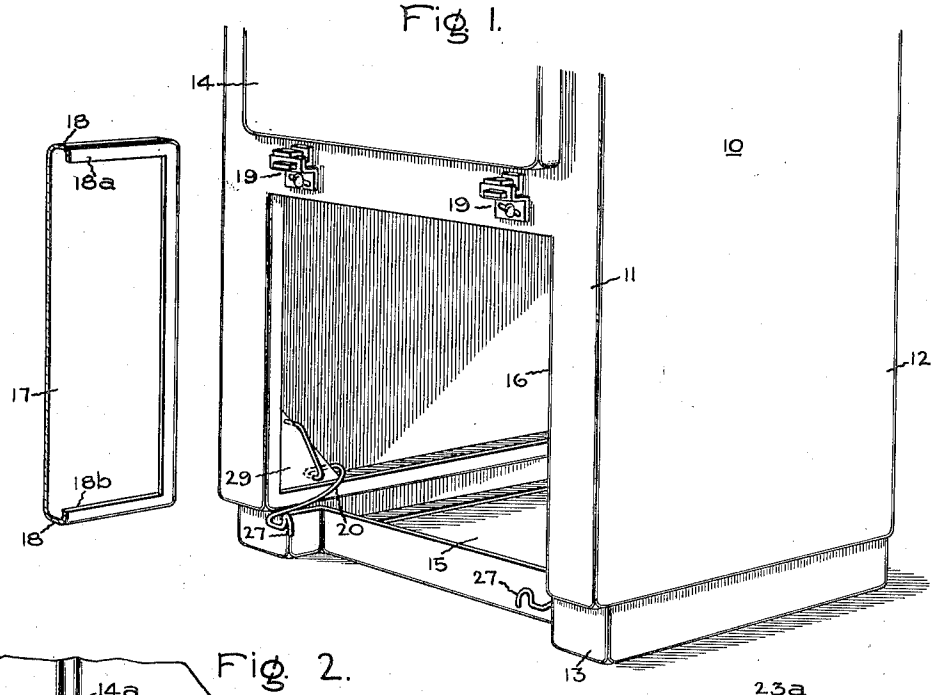


Fig. 2.

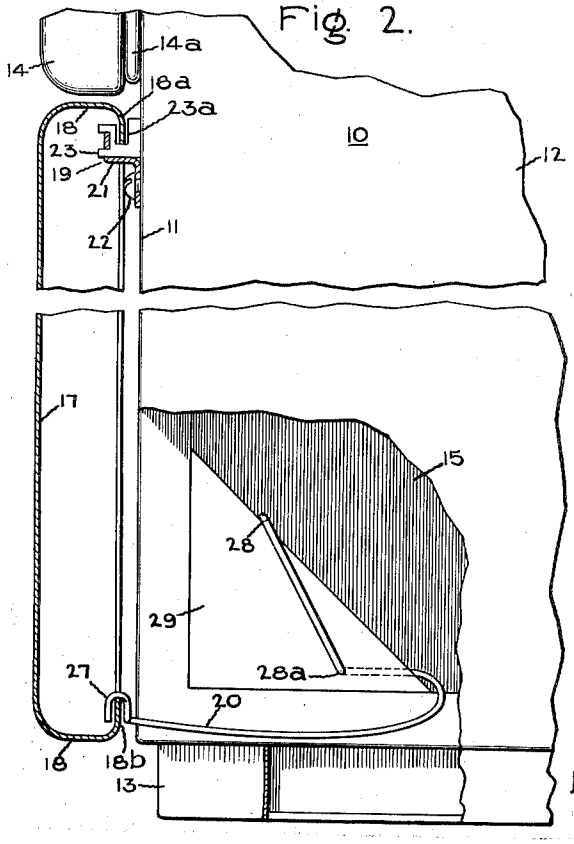


Fig. 3.

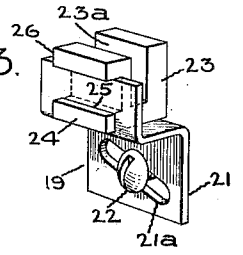
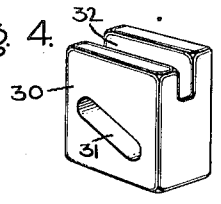


Fig. 4.



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2,179,307

REFRIGERATOR CABINET

Philip T. Sywert, Wesleyville, Pa., assignor to General Electric Company, a corporation of New York

Application February 24, 1937, Serial No. 127,416

6 Claims. (Cl. 220—55)

My invention relates to refrigerator cabinets.

It is an object of my invention to provide a refrigerator cabinet having an improved arrangement for removably supporting a closure member over an opening in a wall of the cabinet.

Another object of my invention is to provide an improved arrangement for removably supporting a closure member over an opening in a wall of a cabinet, which provides for horizontal and vertical adjustments of the closure member with respect to the opening.

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 claims annexed to and forming a part of this specification.

For a better understanding of my invention, reference may be had to the accompanying drawing in which Fig. 1 is a fragmentary perspective view of a refrigerator cabinet embodying my invention, the closure member being removed to show more clearly the construction; Fig. 2 is a fragmentary side elevation, partly in section, of the refrigerator cabinet shown in Fig. 1; Fig. 3 is a perspective view of the supporting bracket shown in Figs. 1 and 2; and Fig. 4 is a perspective view of a modified form of the supporting bracket shown in Fig. 3.

Referring to the drawing, in Fig. 1 I have shown the lower portion of a refrigerator cabinet 10 of the household type having a substantially vertically disposed front wall 11 and a plurality of spaced-apart side walls 12 formed by a sheet metal outer shell, the lower portions of the walls having inwardly disposed flanges providing a supporting base 13 for the cabinet. A heat insulated food storage compartment is arranged in the upper portion of the cabinet and a rectangular opening is formed in the front wall 11 to afford access thereto, the opening being closed by heat-insulated door 14 having a marginal sealing gasket 14a and hinged adjacent the opening. A machinery compartment 15 is arranged in the cabinet below the food storage compartment and a rectangular opening 16 is formed in the front wall 11 to afford access thereto. In order to give the refrigerator cabinet a smooth finished appearance, a closure member 17 is removably supported over the opening 16 by an arrangement including a pair of spaced-apart brackets 19 secured to the front wall of the cabinet adjacent the upper edge of the rectangular opening 16 and a pair of spaced-apart springs 20 carried by the lower portion of the frame of the cabinet. The closure member 17 is of sheet metal construction and is provided with a marginal flange 18 extending thereabout, at least the upper and lower portions of the flange 18 being provided with inturned edges 18a and 18b, respectively. Preferably, the side portions of the marginal flange 18 are also provided with inturned edges to avoid the presentation of any sharp edges to the finished surface of the front wall 11 of the cabinet.

As best shown in Figs. 2 and 3, each of the brackets 19 include a substantially Z-shaped body 21 having an angularly disposed slot 21a in the lower vertical portion thereof through which a bolt 22 is passed to secure the bracket in place upon the front wall 11 of the cabinet and to provide for vertical adjustment of the bracket with respect to the opening 16. A block 23 formed of resilient material such, for example, as rubber is supported on the horizontal portion of the body 21 and is provided with an integral tab 24 which extends through an opening 25 formed in the upper vertical portion of the body 21. Another integral tab 26 on the block 23 extends over the upper edge of the vertical portion of the body 21. The integral tabs 24 and 26 securely fasten the block 23 in place between the body 21 of the bracket and the front wall 11 of the cabinet. A groove 23a is formed in the upper edge of the block 23 and provides a resilient seat for the inturned edge 18a of the marginal flange 18 of the closure member 17.

The springs 20 have hooked ends 27 which engage the inturned edge 18b of the marginal flange 18 and resiliently urge the same downwardly, causing the inturned edge 18a of the marginal flange 18 to be firmly seated in the grooves 23a in the blocks 23 of the brackets 19. The opposite ends 28 of the springs 20 engage the edges of spaced-apart gusset plates 29 forming part of the frame of the cabinet, and the intermediate portions of the springs are bent about and extend through openings 28a in the gusset plates.

In placing the closure member 17 on the front wall 11 of the cabinet to close the opening 16, the heat insulated door 14 for the food storage compartment is first swung to an open position. The inturned edge 18b on the lower portion of the marginal flange 18 is then engaged with the hooked ends 27 of the springs 20. The closure member 17 is lifted upwardly until the inturned edge 18a on the upper portion of the marginal flange 18 clears the upper edges of the blocks 23 of the brackets 19, the springs 20 being placed

under stress during this movement of the closure member. The closure member 17 is then moved toward the front wall 11 of the cabinet until the inturned edge 18a is in registry with the grooves 23a in the blocks 23 of the brackets 19. The closure member is then released and the inturned edge 18a on the marginal flange 18 falls into the grooves 23a in the resilient blocks 23 and is seated therein under the action of the springs 20 resiliently urging the inturned edge 18b downwardly. The closure member is thus securely fastened in place upon the front wall of the cabinet free from vibratory movement. In removing the closure member 17 from the front wall 11 of the cabinet, the heat insulated door 14 is first swung to an open position. The closure member is then lifted upwardly until the inturned edge 18a on the marginal flange 18 is disengaged from the grooves 23a in the blocks 23 of the brackets 19. The closure member is then moved outwardly and downwardly until it is free of the hooked ends 27 of the springs 20.

It will be observed that when the closure member 17 is in place upon the front wall 11 there is a small space between the inturned edges on the marginal flange 18 and the front wall 11, this space being substantially equal to the thickness of the sealing gasket 14a on the heat insulated door 14. This arrangement gives the cabinet a pleasing appearance as the outer wall of the closure member 17 lies in the same vertical plane as the outer wall of the heat insulated door 14, and prevents the closure member from marring the finished surface of the outer wall of the cabinet. Due to slight mechanical inaccuracies in the construction of refrigerator cabinets in large quantities and on a production basis, it is desirable that an arrangement be provided for adjusting the position of the closure member 17 on the front wall of the cabinet in order to insure proper alignment of the closure member 17 and the heat insulated door 14. The horizontal position of the closure member 17 is adjusted with respect to the opening 16 in the front wall 11 by sliding the closure member on the brackets 19, and the vertical position of the closure member is adjusted with respect to the opening 16 by adjusting the vertical positions of the brackets 19. The adjustment of the brackets 19 may be accomplished by loosening the bolts 22 and sliding the brackets to one side or the other, which causes adjustment of the vertical positions of the brackets due to the angular disposition of the slots 21a in the bodies 21 of the brackets 19. After the brackets have been adjusted to the desired positions the bolts 22 are again tightened and the closure member 17 is placed upon the front wall 11 of the cabinet in the manner described above.

In Fig. 4 I have shown a modified form of the bracket which includes a block 30 formed of resilient material such, for example, as rubber which is provided with an angularly disposed slot 31 therein through which the bolt 22 is passed to secure the bracket in place upon the front wall 11 of the cabinet and to provide for vertical adjustment of the bracket with respect to the opening 16. A groove 32 is formed in the upper edge of the block 30 to provide a resilient seat for the inturned edge 18a on the marginal flange 18 of the closure member 17. It will be understood that this modified form of the bracket provides for horizontal and vertical adjustment of the closure member 17 with respect to the opening 16 in front wall 11 of the cabinet in the same manner as that described in connection with Figs. 2 and 3.

It will be evident from the foregoing that I have provided a refrigerator cabinet having an improved arrangement for removably supporting a closure member over an opening in a wall of the cabinet, which securely fastens the closure member in place free from vibratory movement and which provides for horizontal and vertical adjustments of the closure member with respect to the opening.

While I have shown a particular embodiment of my invention in connection with a refrigerator cabinet of the household type, I do not desire my invention to be limited to the particular construction shown and described and I intend in the appended claims to cover all modifications within the true spirit and scope of my invention.

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

1. A cabinet having a wall provided with an opening therein, a closure member having a marginal flange, a portion of said marginal flange having an inturned edge, means including a bracket carried by said wall adjacent said opening for removably supporting said closure member over said opening, and means associated with a second portion of said marginal flange and said wall and resiliently urging said inturned edge of said marginal flange into engagement with said bracket for retaining said closure member in place, said resilient means being readily disengageable to provide for the removal of said closure member from said cabinet.

2. A cabinet having a wall provided with an opening therein, a closure member having a marginal flange, a portion of said marginal flange having an inturned edge, means including a bracket carried by said wall adjacent said opening having a resilient seat receiving the inturned edge of said marginal flange for removably supporting said closure member over said opening, and means resiliently urging the inturned edge of said marginal flange into engagement with said resilient seat for retaining said closure member in place, said last mentioned means being readily disengageable from said closure member to provide for removal of said closure member from said cabinet.

3. A cabinet having a wall provided with an opening therein, a closure member having a marginal flange, a portion of said marginal flange having an inturned edge, means including a bracket carried by said wall adjacent said opening for removably supporting said closure member over said opening, said bracket being slidably carried by said wall to provide for adjustment of said closure member with respect to said opening and having a resilient seat receiving the inturned edge of said marginal flange, and means resiliently urging the inturned edge of said marginal flange into engagement with said resilient seat for retaining said closure member in place.

4. A cabinet having a wall provided with an opening therein, a closure member having a marginal flange, a portion of said marginal flange having an inturned edge, means including a bracket carried by said wall adjacent said opening for removably supporting said closure member over said opening, said bracket including a block of resilient material having a slot therein to provide for adjustment of said closure member with respect to said opening and having a groove therein receiving the inturned edge of said marginal flange, and means resiliently urging the inturned edge of said marginal flange into en-

gagement with said groove for retaining said closure member in place.

5. A cabinet having a wall provided with an opening therein, a closure member having a marginal flange, a portion of said marginal flange having an inturned edge, means including a bracket carried by said wall adjacent said opening for removably supporting said closure member over said opening, said bracket including a body having a slot therein to provide for adjustment of said closure member with respect to said opening, a block of resilient material carried by said body having a groove therein receiving the inturned edge of said marginal flange, and means resiliently urging the inturned edge of said marginal flange into engagement with said groove for retaining said closure member in place.

6. A refrigerator cabinet having a substantially vertical wall provided with an opening therein, a closure member having a marginal flange, the upper and lower portions of said marginal flange having inturned edges, means including a bracket carried by said wall adjacent the upper edge of said opening for removably supporting said closure member over said opening, and means including a spring engaging the inturned edge on the lower portion of said marginal flange for resiliently urging the inturned edge on the upper portion of said marginal flange into engagement with said bracket to retain said closure member in place, said spring being disengageable with the lower inturned edge of said marginal flange to provide for removal of said closure member from said cabinet.

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