

Nov. 28, 1944.

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2,363,591

REFRIGERATOR CABINET CONSTRUCTION

Filed June 17, 1940

2 Sheets-Sheet 1

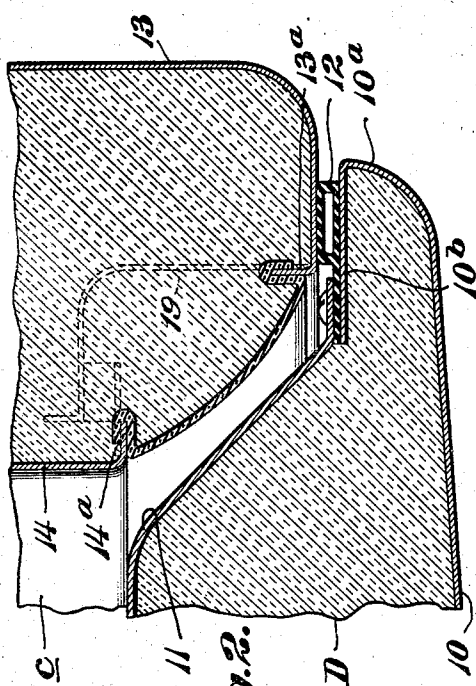


Fig. 1.

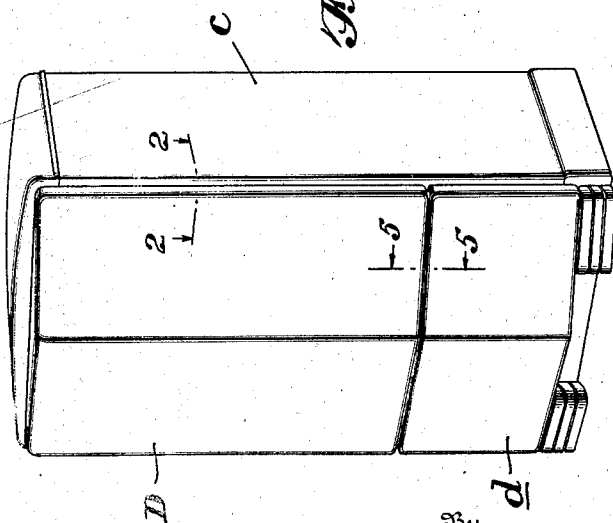


Fig. 2.

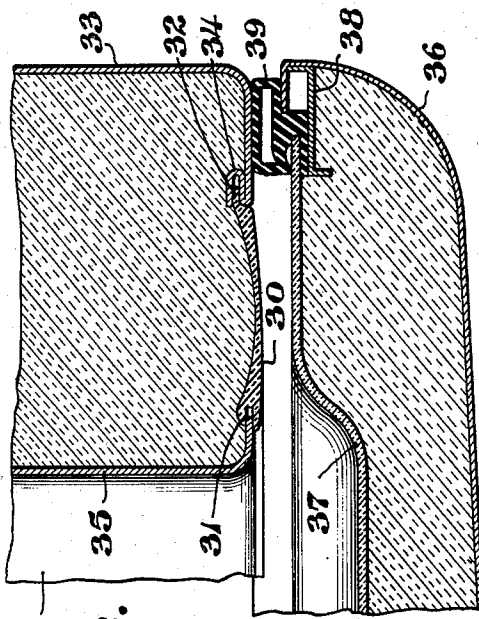


Fig. 3.

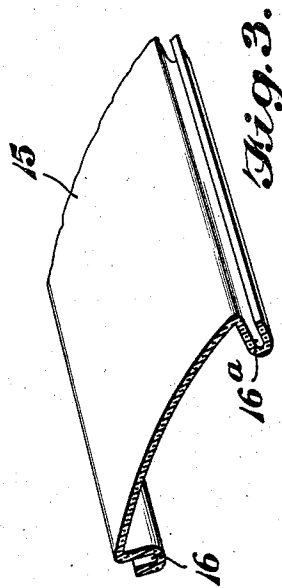


Fig. 4.

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2 Sheets-Sheet 2

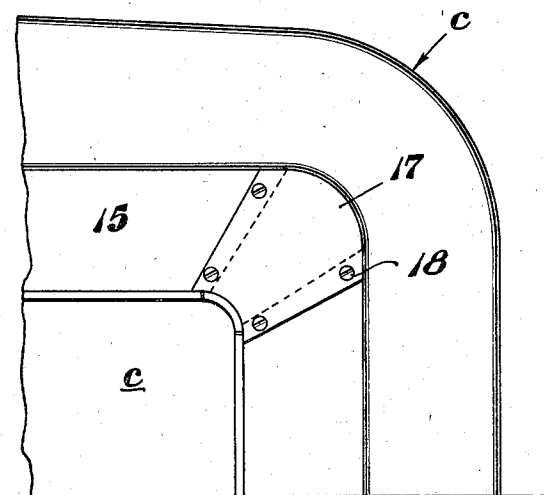


Fig. 4.

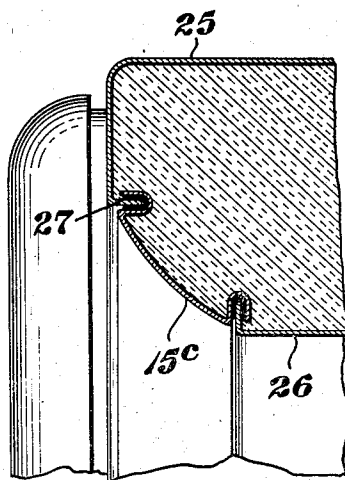


Fig. 7.

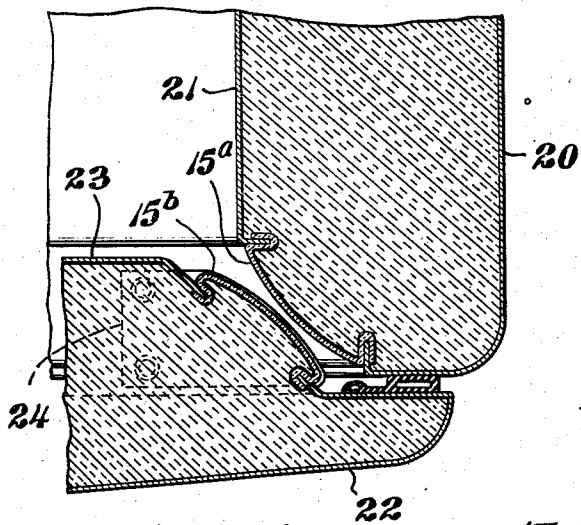


Fig. 6.

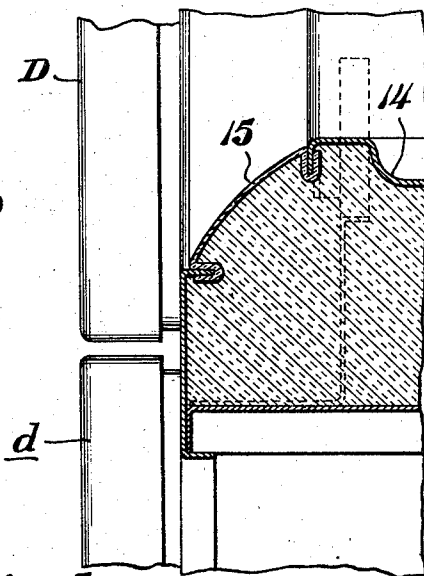


Fig. 5.

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UNITED STATES PATENT OFFICE

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REFRIGERATOR CABINET CONSTRUCTION

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Application June 17, 1940, Serial No. 341,040

1 Claim. (Cl. 220—9)

This invention relates to refrigerator cabinets, particularly to that portion of a cabinet where the spaced outer and inner walls have their marginal edges joined or connected in non-heat-conducting relation and which is generally around the food compartment and the outer edge or boundary of the door.

An object of the invention is to provide an improved combined breaker and trim or finish strip and coacting wall construction, applicable to both the cabinet and door, which materially contributes to simplicity and economy in cabinet manufacture while at the same time maintaining durability and a high degree of thermal efficiency.

Another object of the invention is to provide an improved type of breaker strip also functioning as a trim or finish strip, which may be easily and quickly applied to the spaced marginal edges of the outer and inner walls of the cabinet and which results in favor and simpler parts and consequently less expense in manufacture of the cabinet.

Another object of the invention is to provide a breaker strip of the "snap-on" type so constructed as to facilitate its manufacture from certain desirable materials, particularly material capable of being extruded through a die to obtain the desired shape.

The foregoing and other objects and advantages will become apparent in view of the following description taken in conjunction with the drawings, wherein:

Fig. 1 is a view in perspective of a refrigerator cabinet constructed in accordance with the features of the present invention;

Fig. 2 is a transverse section taken substantially on the line 2—2 of Fig. 1;

Fig. 3 is a detailed perspective view of the improved combined breaker and trim strip or member;

Fig. 4 is a view in face elevation of one of the upper corner portions of the cabinet;

Fig. 5 is a section taken substantially on the line 5—5 of Fig. 1;

Fig. 6 is a view similar to Fig. 2 showing the improved combined trim and breaker strip applied to both the door and the cabinet; and

Figs. 7 and 8 are sectional views showing modifications in structure.

Referring to the drawings in detail, a refrigerator cabinet is generally indicated at C in Fig. 1 and has a door D affording access to the food compartment c and another door d affording access to the machinery department.

The door in the type of cabinet illustrated in

Figs. 1 to 5 inclusive, comprises an outer wall or shell 10 having its outer marginal portion shaped to provide an overlapping edge 10a and then turned inwardly at 10b, and an inner wall or door panel 11 having its marginal edge overlapping the edge 10b of the outer wall and connected to the latter by means of screws or the like with a door gasket 12 interposed therebetween.

The cabinet proper comprises an outer wall or shell 13 having an intumed marginal edge 13a, and an inner wall or food compartment liner 14 having an intumed marginal edge or flange 14a complementary to the flange 13a of the outer wall 13.

The improved combined breaker and trim strip is generally indicated at 15, note particularly Fig. 3, and comprises a strip of relatively thin sheet material having its opposite edges shaped to provide longitudinal hook-shaped channels or grooves 16 and 16a, the body portion of the strip preferably being bowed outwardly to facilitate mounting of the strip. This strip may be made of sheet material of relatively thin cross section to reduce heat conductivity. The material should also have a good insulation value. In actual practice, cellulose acetate material such as that sold under the trade name of "Tenite" has proved highly satisfactory. Since the strip has a uniform cross section throughout its length, it may be readily extruded. The material should embody a certain amount of spring or resiliency so that when the strip is applied, it may be deformed to cause the edges or channels 16 and 16a to engage the coacting flanges 13a and 14a of the outer and inner walls of the cabinet, and when released will snugly engage said edges.

There are preferably four strips 15 used to connect the outer and inner walls around the door opening, each strip being substantially straight throughout its length. The contiguous end edges of the strips may be joined by corner plates or brackets 17, note Fig. 4, the edges of the strip being connected to said bracket by means of screws or analogous fastenings 18. In this manner, the strips 15 constitute a complete connected framework or trim around the door opening.

To lend rigidity to the outer and inner walls, the latter may be connected at each corner of the food compartment by means of brackets 19, one of which is shown in dotted lines in Fig. 2.

It will be noted that this type of breaker strip and trim member obviates the use of wood or analogous framework. The outer and inner walls 13 and 14 may be of the usual sheet metal construction, or the outer wall of sheet metal and

the food compartment liner 14 of moldable material having a high insulating value.

Fig. 6 shows the combined breaker and trim strip applied to both the door and the cabinet. In this instance, the outer wall of the cabinet is indicated at 20, the inner wall or food compartment liner at 21 and the trim strip connecting these liners at 15a. The door outer wall or shell is indicated at 22, the inner wall or door pan at 23 and the combined trim and breaker strip connecting these walls at 15b. The strips 15a and 15b may be similar to the strip 15 in Fig. 3 and applied in a like manner. The outer and inner walls of the door are shown connected and reinforced at the corners by brackets, one of which is shown in dotted lines at 24.

In Fig. 7 the same shape of combined trim and breaker strip may be used as in the previous installations, the strip being indicated at 15c. However, in this instance the outer and inner walls, indicated at 25 and 26, are insulated from the channels of the strip 15c by means of gaskets or gasket material 27 permitting the strip to be made of sheet metal.

In Fig. 8 a modified type of breaker strip and trim member is shown and generally indicated at 30. In this instance, the strip is formed with an outwardly facing longitudinal channel or groove 31 at its opposite edge. The outer wall or shell of the cabinet, indicated at 33, has its marginal edge doubled back upon itself providing an inwardly facing channel 34 in which the tongue 32 engages, while the inner wall or food compartment liner 35 is formed with an intumed flange which engages in the groove 31 of the

strip. It will be noted that this strip is non-uniform in transverse cross section and is therefore better adapted for fabrication from Bakelite, phenolic condensate or like material capable of being molded in contradistinction to extrusion, rolling or pressing to obtain the desired shape. The door at Fig. 8 comprises an outer wall or shell 36 and an inner wall or door pan 37 which are connected at their marginal edges by means of bracket 38 with a door gasket 39 interposed therebetween. However, the door may be of any desired construction and a strip 30 also applied to the door as in Fig. 6.

It will be understood that certain changes in construction and design of the improved breaker strip and trim member as well as the coacting walls of the cabinet and door may be adopted to obtain the desired results without departing from the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

A cabinet construction comprising spaced apart walls having their marginal edges flanged to extend toward each other and converging inwardly with respect to each other, means for supporting said walls in fixed position and a breaker strip having a flexible main body portion provided with slots along the longitudinal edges thereof, said breaker strip being tensioned in an arc to permit the edges of the flanges to be inserted into the slots of said breaker strip and said breaker strip when so attached to the flanges remaining in a state of tension in an arc and projecting outwardly from said flanges.

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