May 20, 1941. O. H. YOXSIMER 2,242,335

CABINET CONSTRUCTION

Original Filed Jan. 28, 1937

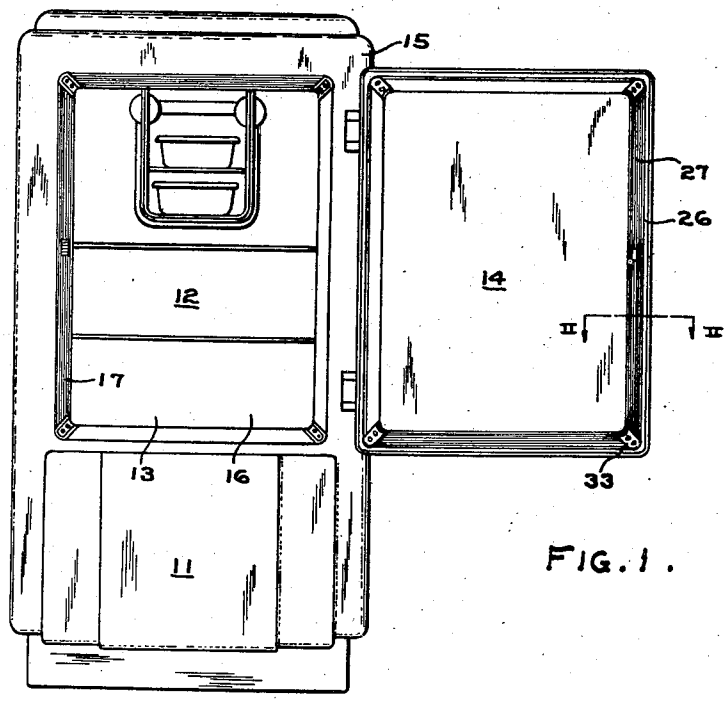


FIG. 1.

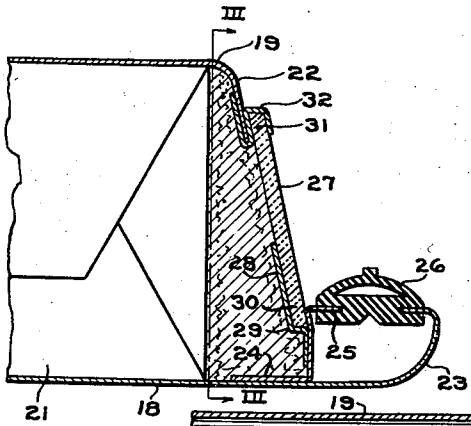


FIG. 2.

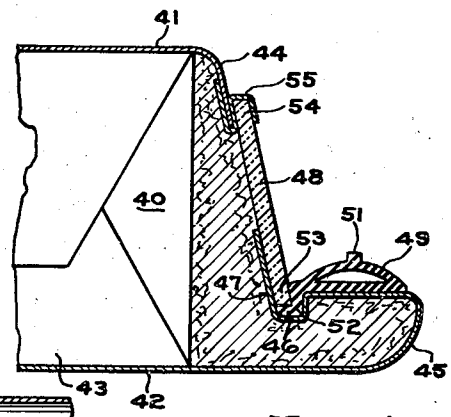


FIG. 4.

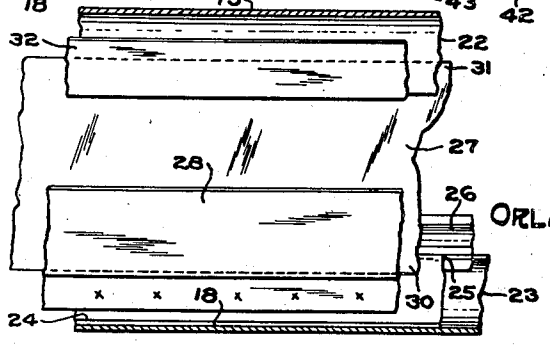


FIG. 3.

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UNITED STATES PATENT OFFICE

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CABINET CONSTRUCTION

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Continuation of application Serial No. 122,748, January 28, 1937. This application May 24, 1940, Serial No. 336,911

3 Claims. (Cl. 20—35)

This application is a continuation of my copending application, Serial No. 122,748, filed January 28, 1937. My invention relates to refrigerator cabinets and has for an object to provide an improved breaker strip and cabinet construction for retaining or fastening the breaker strip to the cabinet.

It is a further object of my invention to provide a cabinet construction wherein the use of nails, screws, and the like for fastening the breaker strip to the cabinet are dispensed with.

It is still another object of my invention to utilize a portion of a refrigerator cabinet construction for retaining the heat breaker in place, and to thereby reduce the number of parts and the cost of construction of such cabinets.

It is still a further object of my invention to provide an improved construction for retaining the sealing gasket and the breaker strip of a refrigerator cabinet in place.

It is another object of my invention to provide an improved door construction for refrigerator cabinets.

These and other objects are effected by my invention as will be apparent from the following description and claims taken in connection with the accompanying drawing forming a part of this application, in which:

Fig. 1 is a front view of a refrigerator cabinet provided with a door embodying one form of my invention;

Fig. 2 is an enlarged sectional view of a portion of the door taken on line II—II of Fig. 1;

Fig. 3 is an enlarged sectional view of the edge of the door shown in Fig. 1 taken on line III—III of Fig. 2; and,

Fig. 4 is an enlarged sectional view of a portion of a door constructed in accordance with a second embodiment of my invention.

Referring specifically to the drawing for a detailed description of the first embodiment of my invention shown in Figs. 1 to 3, numeral 11 designates generally a refrigerator cabinet embodying a food storage compartment 12 having an access opening 13 and a door for closing the access opening, generally indicated at 14. The cabinet is formed in the usual manner from an outer metallic shell 15 and an inner metallic shell 16 with a breaker strip 17 extending therebetween peripherally of the access opening 13.

The door 14 is formed from an outer metallic shell 18 and an inner metallic shell or door pan 19, with heat insulation 21 disposed therebetween. The door pan 19 is provided with a flange 22 peripherally of the edge of the door 14, which flange extends toward the outer shell 18 but is spaced therefrom. The outer shell 18 is provided with a portion 23 which is bent back upon itself to overlap the front marginal portions of the cabinet 11 peripherally of the access opening 13. A flange member 24 is fastened to the inner side of the outer shell 18 peripherally of the door preferably by welding and a portion 25 thereof extends toward but is spaced from the edge of portion 23 of the outer shell which overlaps the front of the cabinet 11. A sealing gasket 26, preferably made of soft rubber in the form shown, is retained between the edge of the portion 23 of the outer shell and the edge of the portion 25 of the flange 24 and extends completely around the edge of the door. The gasket 26 contacts the front marginal portions of the cabinet 11 when the door is closed and seals the food storage compartment 12.

A breaker strip 27 is provided to close the space between the inner and outer shells, and to provide a heat break therebetween, and is preferably formed of a non-metallic, non-hygroscopic relatively rigid material such as, for example, molded cellulose material impregnated with a resinous condensate product. As shown in Figs. 2 and 3, the outer edge 30 of the breaker strip 27 is retained in place on the door by providing a strip of metal 28 which is preferably spot-welded to the flange 24 and which forms therewith a groove or depression 29 in which the edge 30 of the breaker strip is received or retained. Obviously, the member 28 may extend completely around the door, or separate pieces may be provided to form, with the flanges 24, a plurality of pockets to receive the edge 30 of the breaker strip. The inner edge 31 of the breaker strip 27 is retained in place with respect to the inner door pan 19 by a piece of strip metal 32 bent to engage the edge of the breaker strip and the edge of the flange 22, in the manner completely described and claimed in the copending application of G. F. Forsthoefel, Serial No. 103,074, filed September 29, 1936, for Cabinet construction, and also assigned to the Westinghouse Electric & Manufacturing Company. The inner and outer shells are retained in the proper relation and the breaker strip 27 is clamped between them by a plurality of corner pieces 33, shown in Fig. 1.

Referring now to Fig. 4 for a description of the second embodiment of my invention, a door generally indicated by the numeral 40 is formed of an inner shell 41 and an outer shell 42 with heat insulation 43 disposed therebetween. The

inner shell 41 is provided with a flange 44 peripherally of the edge of the door 40, which flange extends toward, but is spaced from the outer shell 42. The outer shell 42 is bent back upon itself to form a portion 45, which overlaps the front marginal portions of the cabinet 11 and which is then bent to form a depression or groove 46 and a flange 47 extending toward the flange 44 in spaced relation thereto.

A breaker strip 48, formed of the same material and in the same shape as the breaker strip 27 shown in Figs. 1 and 2, and a sealing gasket 49 are attached to the door 40 in the following manner. The sealing gasket 49 is provided with a sealing portion 51 which is supported by the overlapping portion 45 of the outer shell 42, and with a retaining portion 52 which conforms with the shape of the depression 46 of the outer shell 42. The outer edge 53 of the breaker strip 48 is inserted in the depression 46 and is retained therein. The other edge 54 of the breaker strip is retained in place by a metal strip 55 in the same manner as set forth with respect to the embodiment shown in Fig. 2, and corner clips, similar to those shown at 33 in Fig. 1, clamp the inner and outer shells 41 and 42 together with the breaker strip 48 and retaining portion 52 of the sealing gasket therebetween, thus retaining the breaker strip and sealing gasket in place on the door 40.

From the foregoing, it will be apparent that I have provided an improved breaker strip and cabinet construction in which the use of nails, screws, and the like are eliminated and in which the number of parts and the cost of manufacture are reduced. It will also be apparent that, although the improved construction is illustrated as applied to a door construction alone, it is equally applicable to the body of the refrigerator without departing from the spirit and scope of the invention. The words "cabinet construction" and the like in the claims are, therefore, intended to apply either to the cabinet body or to the access door.

While I have shown my invention in several forms, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are imposed by the prior art or as are specifically set forth in the appended claims.

What I claim is:

1. In refrigerator cabinet construction, the combination of inner and outer metallic shells, a flange associated with one of the shells, extending towards the other shell and spaced therefrom, a breaker strip for closing the space between the shells, said flange having a groove formed therein, which groove provides the sole means for retaining one edge of said breaker strip in place and a gasket member held in position at least partially by said flange.

2. A refrigerator cabinet construction, the combination of inner and outer metallic shells spaced from each other, a breaker strip closing the space between the shells, one of said shells being provided with a depression, which depression provides the sole means for retaining one edge of the breaker strip in position and a gasket member, said depression also being formed to retain said gasket in place.

3. In cabinet construction, the combination of spaced-apart inner and outer sheet metal shells, a flange on each of said shells, said flanges being spaced apart and extending towards one another, said outer shell having a groove formed thereon and adjacent the flange thereof, a heat breaker of thin non-metallic material secured adjacent said spaced-apart flanges to bridge the space therebetween, one edge of said breaker being positioned in said groove, a preformed strip of substantially S-shaped section having two oppositely-facing grooves therein, one of the grooves of said strip engaging the edge of the heat breaker opposite the edge engaged by the groove on the outer shell and the other groove of said strip engaging the edge of the flange on said inner shell in such a manner that said S-shaped strip may be slid onto said flange during assembly and is retained thereon without the use of nails, screws, or the like, said strip being substantially undeformed during and after the assembly of the refrigerator structure, widely spaced apart members adjacent the heat breaker for holding said inner and outer shells in spaced relationship, said members being the sole means adjacent the breaker strip for so holding said shells to minimize the flow of heat from one of said shells to the other through said members, and heat insulation between said shells.

ORLAND H. YOXSIMER.