Jan. 30, 1945. R. M. HALL 2,368,542

REFRIGERATION APPARATUS

Filed Aug. 11, 1942

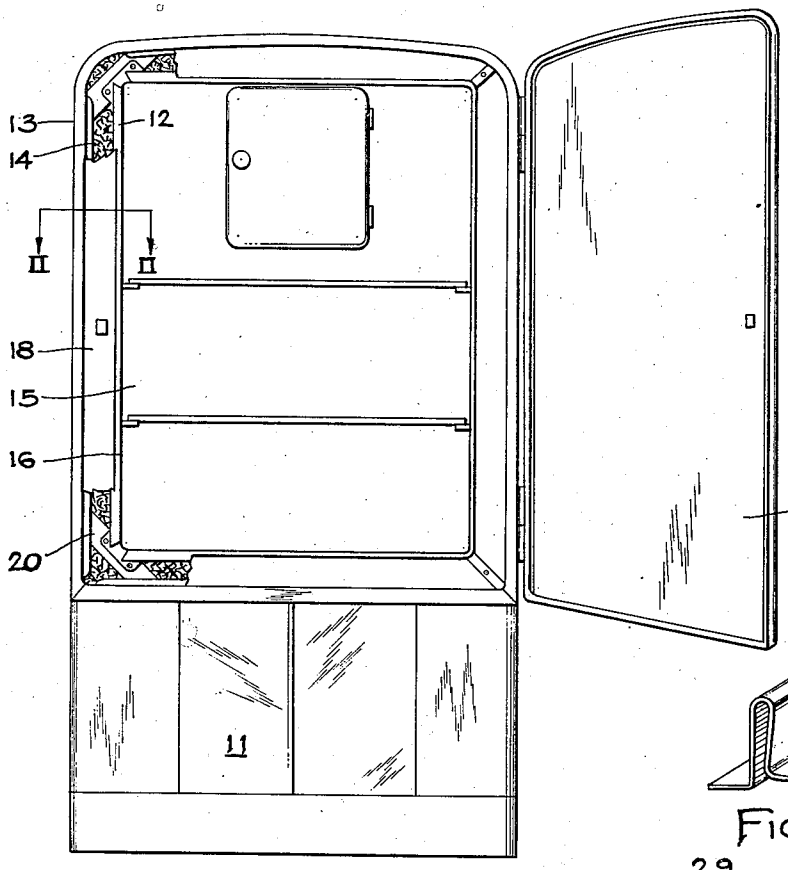


FIG. 1.

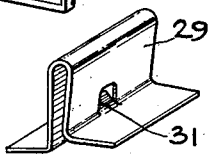


FIG. 4.

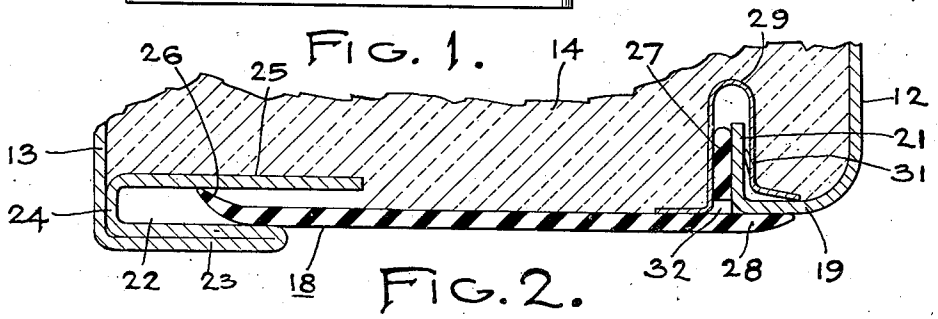


FIG. 2.

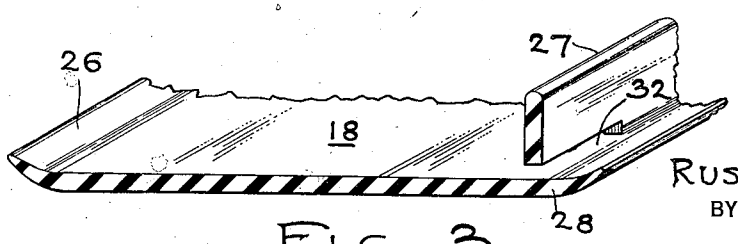


FIG. 3.

INVENTOR
RUSSELL M. HALL.
BY Masteigh
ATTORNEY

Patented Jan. 30, 1945 2,368,542

UNITED STATES PATENT OFFICE

2,368,542

REFRIGERATION APPARATUS

Russell M. Hall, Philadelphia, Pa., assignor to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 11, 1942, Serial No. 454,380

2 Claims. (Cl. 220—9)

My invention relates to refrigerator cabinet construction and particularly to a heat breaker strip and its assembly on refrigerator cabinets.

It is an object of my invention to provide a breaker strip assembly which is attached to a refrigerator cabinet without the use of nails, screws or the like, and particularly to provide such a breaker strip assembly wherein the breaker strip is formed of thin, relatively hard and flexible plastic material.

It is another object of my invention to attach a thin flexible breaker strip to a refrigerator cabinet wherein one edge of the breaker strip extends into a groove provided on the cabinet and to retain the breaker strip in position without the use of biasing springs disposed in the groove.

It is still another object of my invention to attach a thin flexible breaker strip to a refrigerator cabinet in such a manner that it is readily assembled and detached from the cabinet.

It is a further object of my invention to provide a novel and inexpensive assembly for a thin extruded plastic heat breaker strip on a refrigerator cabinet.

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

Fig. 1 is a front elevation view of a refrigerator cabinet embodying my invention, with parts thereof broken away for clarity;

Fig. 2 is a partial sectional view of the refrigerator cabinet taken on line II—II of Fig. 1;

Fig. 3 is a perspective view of the breaker strip; and,

Fig. 4 is a perspective view of a spring-retaining clip used for holding the breaker strip in position.

Referring specifically to the drawing for a detailed description of my invention, numeral 11 designates a refrigerator cabinet comprising an inner shell 12 and an outer shell 13 with heat insulation 14 therebetween. The inner shell 12 encloses a food-storage compartment 15 having an access opening 16 and a door 17 for closing the access opening. The inner and outer shells 12 and 13 are spaced apart peripherally of the access opening and a breaker strip generally indicated at 18, formed in four pieces which meet at the corners of the shells, closes the space between the shells. A plurality of corner-supporting struts 20 provide the major support of the inner shell 12 from the outer shell 13.

The edge of the inner shell 12 extending peripherally of the access opening 16 is provided with a flange 19 extending toward the outer shell 13 and with a second flange 21 extending at right angles to the flange 19. A channeled edge is thereby formed which is exceptionally rigid and prevents distortion of the inner shell so that chipping or cracking of the usual vitreous enamel coating on the inner shell is minimized.

A pocket or groove 22 is provided on the outer shell 13 and opens toward the inner shell 12. The pocket 22 is preferably formed by providing a double flange 23 extending toward the inner shell 12, a flange 24 extending at right angles to the double flange 23 and a flange 25 extending toward the inner shell 12 and parallel to the double flange 23.

The breaker strip 18 is preferably formed of an extruded plastic material such as "Vinylite." This material has a relatively hard surface, is flexible and sufficiently strong structurally to be self-sustaining. A breaker strip of this type is fully disclosed and claimed in the copending application of Orland H. Yoxsimer, Serial No. 448,065, filed June 23, 1942, for Refrigeration apparatus, and also assigned to the Westinghouse Electric & Manufacturing Company.

In accordance with my invention, one marginal edge 26 of the breaker strip 18 is curved, as shown in Figs. 2 and 3, and extends into the pocket 22. The curved edge 26 biases the breaker strip toward the double flange 23 and forms a tight fit therewith. Obviously, edge 26 may be shaped in various ways to effect this biasing action. A leg member 27 is extruded adjacent a marginal edge 28 of the breaker strip 18. A plurality of spring clips 29 bent to hair-pin shape are placed on the flange 21 peripherally of the access opening. A sharp tab 31 is punched in the clips 29 and bites into the flange 21 to retain the spring clip 29 in position. The legs of the spring clips 29 clamp the leg member 27 of the breaker strip 18 and flange 21 of the outer shell 12 together, thus frictionally retaining the breaker strip in position. A plurality of slots 32 are cut in the leg member 27 of the breaker strip opposite each spring clip 29 to render the leg member 27 flexible. Variations in the shape of the inner shell 12 and flange 21 are thereby allowed for since the leg member 27 is sufficiently deformable to be drawn tightly to the flange 21 by the spring clips 29.

In order to assemble the breaker strip 18 on the cabinet 11, the spring clips 29 are first disposed on the flange 21. The curved edge 26 of breaker strip 18 is then inserted in the pocket 22

and leg member 27 of the breaker strip is forced between flange 21 and spring clips 29. The breaker strip 18 is removable by inserting a knife blade or a screw driver under edge 28 of the breaker strip 18 and lifting the breaker strip free of the frictional engagement of clips 29.

From the foregoing it will be apparent that I have provided an improved breaker strip and attachment therefor which dispenses with nails, screws and the like and with biasing springs in the pocket 22. Furthermore, the breaker strip is very easy to apply to or remove from the cabinet.

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

What I claim is:

1. In a refrigerator cabinet having insulated walls comprising first and second shells with thermal insulation therebetween, said walls having an access opening, the edge portions of said first and second shells at said access opening terminating in spaced-apart relation, the edge portion of said first shell having an inner and an outer flange forming a groove which lies parallel to the edge portion of said first shell, the combination with said cabinet of a breaker strip formed of hard, non-metallic material, said breaker strip having two longitudinal edge portions, one of said edge portions being thinner than the body of the breaker strip to render said edge portion more flexible, said one edge portion lying in said groove and being curved to form an obtuse angle with the portion of the breaker strip adjacent thereto, said breaker strip being so positioned on said cabinet that the extreme edge of the curved edge portion is biased against the inner flange of said groove and the portion of the breaker strip at the mouth of said groove is biased against the outer flange thereof.

2. In a refrigerator cabinet, the combination of inner and outer shells having heat insulation therebetween, said shells surrounding a food-storage compartment having an access opening therein, said shells being spaced apart peripherally of the access opening, inner and outer flanges on one of said shells forming a groove opening towards the other shell, a flange on said other shell having a first portion extending towards said one shell and a second portion extending substantially at right angles to said first portion and joined to the edge of said first portion, a flat heat breaker strip of hard plastic material for closing the space between said shells, said heat breaker strip having edges, one edge of said breaker strip being positioned in said groove and bent at an obtuse angle to the plane of said breaker strip to engage the inner flange only at an area remote from the mouth of said groove and press said breaker strip against the outer flange only at an area adjacent the mouth of said groove, the portion of said breaker strip lying in said groove being of a thinness to render said portion flexible, the other edge of said breaker strip lying adjacent the first portion of the flange of said other shell, an extension on said breaker strip lying adjacent said second portion of the flange of said other shell, and a spring bearing against said extension to press the same against said second portion.

RUSSELL M. HALL.