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BREAKER STRIP CONSTRUCTION

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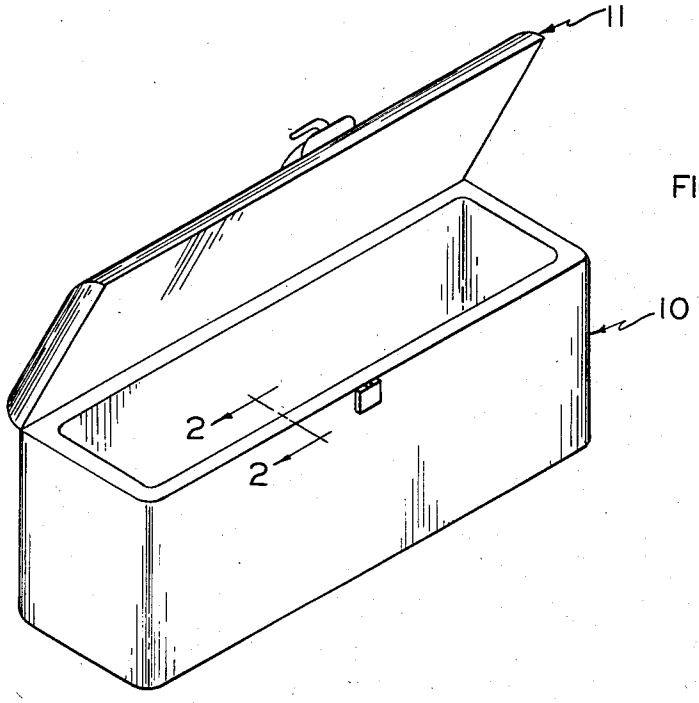


FIG.1.

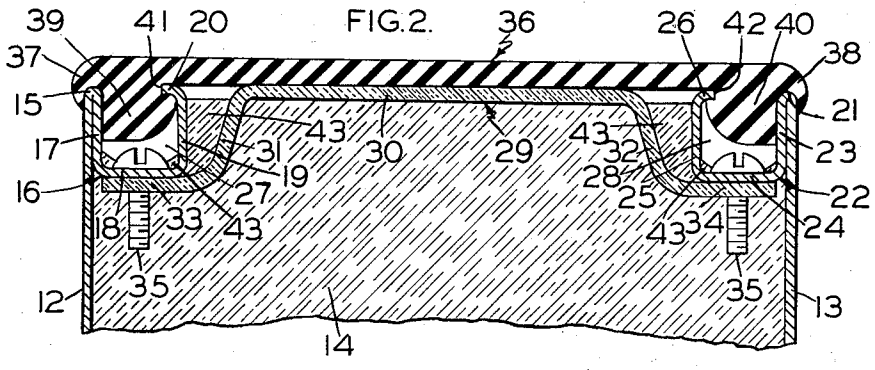


FIG.2.

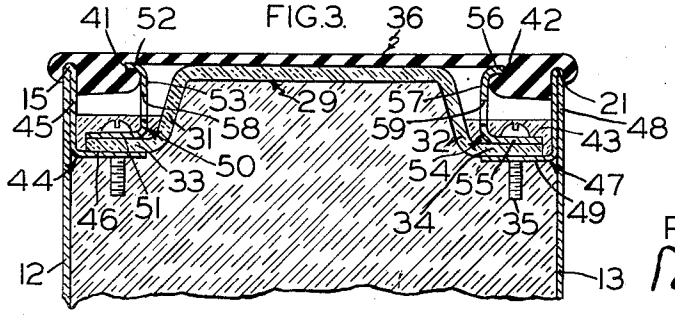


FIG.3.

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BREAKER STRIP CONSTRUCTION

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9 Claims. (Cl. 220—15)

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This invention relates to a refrigerator cabinet construction and particularly to a breaker strip construction for bridging the space between the inner and outer walls of such a cabinet construction.

The principal object of the present invention is to provide a novel breaker strip construction for a refrigerator cabinet which is of simplified design, may be easily and quickly applied, is strong, effective and expedites assembly.

Another object is to provide a breaker strip construction which will effectively seal the space between the inner and outer wall members of a refrigerator cabinet.

A further object is to provide a breaker strip construction in which an inner breaker-strip member will retain the inner and outer walls of a refrigerator cabinet in spaced apart relationship and an outer breaker strip will provide a finishing trim between the inner and outer wall edges.

A still further object is to provide a breaker strip construction which will act as a good heat break member between the inner and outer walls of a refrigerator cabinet and will sacrifice only a small amount of the insulating space between said walls.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing, in which:

Fig. 1 is a top view of a top opening type of refrigeration cabinet or chest having the food storage compartment door in open position.

Fig. 2 is an enlarged vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 illustrates a modification of the invention.

In the drawing, a refrigerator cabinet or chest 10 is provided with a door 11 which is hingedly connected to the cabinet wall. The illustrated cabinet wall comprises a vertical outer wall 12, a vertical inner wall 13 spaced inwardly from said outer wall and an insulating material 14 disposed therebetween.

The outer wall 12 is bent downwardly and inwardly at edge 15 to form a U-shaped channel 16 having one leg 17 adjacent to the outer wall, a bottom portion 18 perpendicular to the outer wall and a second leg 19 parallel to the outer wall. The top portion of leg 19 is bent inwardly to form a flange 20 which is disposed in approximately the same horizontal plane as edge 15. This flange is relatively short and terminates at a point spaced inwardly from edge 15.

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The inner wall 13 is bent downwardly and outwardly at edge 21 to form a U-shaped channel 22 having one leg 23 adjacent to the inner wall, a bottom 24 perpendicular to the inner wall and a second leg 25 parallel to the inner wall. The top portion of leg 25 is bent inwardly to form a flange 26 which is disposed in approximately the same horizontal plane as edge 21. This flange is relatively short and terminates at a point spaced inwardly from edge 21.

The channels 16 and 22 extend completely around the cabinet door opening and form upwardly opening grooves or pockets 27 and 28. In the illustrated embodiment, the channels are shown as bent in portions of the inner and outer walls, but if desired, they could be fabricated as separate parts and then positioned and secured to said walls.

An inner breaker strip member 29 of rigid material having low heat conducting properties and high mechanical strength, such as compressed fiber board, is positioned between the walls and extends completely around the cabinet door opening. This supporting member has a flat supporting portion 30 disposed in approximately the same horizontal plane as edges 15 and 21, portions 31 and 32 inclined from the horizontal plane extending down toward channel bottoms 18 and 24 but spaced from channel legs 19 and 25, and flat portions 33 and 34 which are parallel to supporting portion 30 and proximate channel bottoms 18 and 24. Sheet metal screws 35 are used to secure the inner breaker strip 29 to the channels. The inner breaker strip serves to hold the inner and outer walls in spaced apart relationship and to support an outer breaker strip as hereinafter described.

An outer breaker strip 36 of a rubber-like material is positioned between the inner and outer walls, said breaker strip having lips 37 and 38 extending over edges 15 and 21 respectively and downwardly depending portions 39 and 40. The portions 39 and 40 extend into channel grooves 27 and 28 respectively and have recesses 41 and 42 along one edge thereof into which flanges 20 and 26 fit, thereby securing said breaker strip securely in place. The under side of said outer breaker strip is proximate to the top surface of inner breaker strip 29 so that the inner breaker strip will brace the outer breaker strip against any downwardly applied force.

A bituminous-like sealing material 43 is disposed in the space between the channel leg 19 and inclined portion 31, in the space between leg 25 and inclined portion 32, and in the chan-

nel grooves 27 and 28 of sufficient quantity to seal around screws 35. This sealing material completely seals the space between the refrigerator cabinet walls and thus prevents entrance of any moisture or air.

In the modification of the invention illustrated in Fig. 3, the outer wall is bent downwardly and inwardly at edge 15 to form channel 44 having vertical leg 45 and horizontal leg 46. The inner wall is bent downwardly and outwardly at edge 21 to form channel 47 having vertical leg 48 and horizontal leg 49. The inner breaker strip 29 is positioned with flat portions 33 and 34 on top of legs 46 and 49. An L-shaped supporting member 50 having legs 51 and 53 is positioned over flat portion 33. Flange 52 is formed on the upper end of leg 53. A similar L-shaped supporting member 54 having legs 55 and 57 is positioned over flat portion 34. Flange 56 is formed on the upper end of leg 57. Supporting members 50 and 54 are provided with spaced apart holes 58 and 59 respectively. Sheet metal screws 35 secure the inner breaker strip 29 and the supporting members 50 and 54 to the channels 44 and 47 respectively. Outer breaker strip 36 is positioned across edges 15 and 21 and flanges 52 and 56 fit into recesses 41 and 42, thereby securing the outer breaker strip in place. Sealing material 43 while heated to the liquid state is poured around screw heads 35 and flows through holes 58 and 59 into engagement with the inner breaker strip. The sealing material solidifies at normal room temperature and seals the space between walls 12 and 13.

It will be apparent from the foregoing that this invention provides a novel breaker strip assembly which may be readily and quickly installed in a cabinet structure. The outer breaker strip member 36 blends in smoothly with the lines of the cabinet and can be easily removed. The breaker strip construction acts as a good heat-break member between the inner and outer wall and positively seals the space between said walls by the use of only a small amount of sealing material.

It will, of course, be understood that various changes in details of construction and arrangement of parts may be made by those skilled in the art without departing from the spirit of the invention as set forth in the appended claims.

What is claimed is:

1. In a refrigerator cabinet, the combination comprising a pair of spaced apart walls having marginal edges terminating substantially in a common plane; a pair of flanges carried by said walls, each of said flanges being associated with a respective wall and being spaced inwardly and disposed parallel thereto, said flanges having edges terminating in substantially the same plane as the marginal edges of said walls and extending outwardly toward a respective wall; means extending transversely between and secured to said walls for maintaining said walls in spaced apart relationship, said means including a channel-shaped inner breaker strip having a pair of leg portions interconnected by a web portion, each of said leg portions secured to the lower portion of one of said flanges, said web portion being spaced between said walls and lying in substantially the same plane as the marginal edges of said walls; and an outer breaker strip having a central portion abutting said web portion and having its edges overlapping the wall edges, said outer breaker strip having ribs depending therefrom insertable respectively into the spaces between the walls and the flanges associated therewith.

2. The combination as set forth in claim 1, in which said flanges associated with said walls and secured to the leg portions of said inner breaker strip define pockets, and a sealing material contained in said pockets.

3. In a refrigerator cabinet, the combination comprising a pair of spaced apart walls having marginal edges terminating substantially in a common-plane; a pair of flanges carried by said walls, each of said flanges being associated with a respective wall and being spaced inwardly and disposed parallel thereto, said flanges having edges terminating in substantially the same plane as the marginal edges of said walls and extending outwardly toward a respective wall; means extending transversely between said walls for maintaining said walls in spaced-apart relationship, said means including a channel-shaped inner breaker strip having a pair of leg portions interconnected by a web portion, the leg portions of said breaker strip each having a flange extending therefrom fastened to a respective wall, said web portion being spaced between said walls and lying in substantially the same plane as the marginal edges of said walls; and an outer breaker strip having a central portion abutting said web portion and having its edges overlapping the wall edges, said outer breaker strip having ribs depending therefrom insertable respectively into the spaces between the walls and the flanges associated therewith.

4. The combination as set forth in claim 3, in which said flanges associated with said walls and leg portions of said inner breaker strip define pockets; and a sealing material contained in said pockets.

5. In a refrigerator cabinet, the combination comprising, a pair of spaced walls having marginal edges terminating substantially in a common plane; a pair of channels integrally formed and associated with said walls respectively, each of said channels including an inwardly extending portion and a flange spaced inwardly and disposed parallel to its respective wall, said flanges having edges terminating in substantially the same plane as the marginal edges of said walls and extending outwardly toward a respective wall; means extending transversely between said walls for maintaining said walls in spaced apart relationship, said means including a channel-shaped inner breaker strip having a pair of leg portions interconnected by a web portion, the leg portions of said breaker strip having flanges extending outwardly therefrom fastened to the inwardly extending portions of said channels, respectively, said web portion being spaced between said walls and lying in substantially the same plane as the marginal edges of said walls; and an outer breaker strip having a central portion abutting said web portion and having its edges overlapping the wall edges, said outer breaker strip having ribs depending therefrom insertable respectively into the spaces between the wall and the flanges associated therewith.

6. The combination as set forth in claim 5, in which said flanges associated with said walls and the leg portions of said inner breaker strip define pockets; and a sealing material contained in said pockets.

7. In a refrigerator cabinet, the combination comprising, a pair of spaced walls having marginal edges terminating substantially in a common plane; a pair of supporting flanges inte-

grally formed and associated with said walls respectively, each of said flanges extending inwardly and being spaced from said common plane; an L-shaped bracket secured to each supporting flange having a section thereof spaced inwardly and disposed parallel to its respective wall, said sections having edges terminating in substantially the same plane as the marginal edges of walls; means extending transversely between said walls for maintaining said walls in spaced-apart relationship, said means including a channel-shaped inner breaker strip having a pair of leg portions interconnected by a web portion, the leg portions having flanges extending outwardly therefrom fastened to said supporting flanges, respectively, said web portion being spaced between said walls and lying in substantially the same plane as the marginal edges of said walls; and an outer breaker strip having a central portion abutting said web portion and having its edges overlapping the wall edges, said outer breaker strip having ribs depending therefrom insertable respectively into the spaces between the walls and the sections associated therewith.

8. The combination as set forth in claim 7, in which said sections and the leg portions of said inner breaker strip define pockets; and a sealing material contained in said pockets.

9. The combination as set forth in claim 8, in which said sections have openings therein to allow the passage of sealing material to the spaces between said walls and said sections.

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