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REFRIGERATING APPARATUS

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3 Claims. (Cl. 220—9)

The present invention relates to refrigerating apparatus and more particularly to refrigerator cabinet construction.

It is an object of the present invention to provide an improved arrangement for securing a breaker strip to the metal walls of a refrigerator cabinet.

It is another object of the present invention to provide a breaker strip for joining the inner and outer metal walls of a refrigerator cabinet formed of relatively thin metal and attached by use of resilient members.

It is still another object of the present invention to form the resilient member so as to reinforce the breaker strip against flexure and hold the edges of the breaker strip in snug engagement with the metal walls of the cabinet.

The invention itself, however both as to its organization, and its operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in conjunction with the accompanying drawing, in which;

In the drawing:

Fig. 1 is a front view of a refrigerator cabinet embodying features of my invention;

Fig. 2 is an enlarged cross-sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a fragmentary cross-sectional view taken on line 3—3 of Fig. 2; and

Fig. 4 is a perspective view of a clip used in the present invention.

Shown in the drawing is a refrigerator cabinet 20 having a food storage compartment 22. A door 25 is mounted to the cabinet and is provided with a gasket 26 for closing and sealing the opening to the food storage compartment to prevent warm air entering the compartment. The compartment is refrigerated by a suitable refrigerating apparatus (not shown).

The cabinet 20 is constructed with an outer metal shell or casing 30 and an inner metal shell or liner 32. The walls of the casing 30 and liner 32 are in spaced apart relation between which is interposed suitable heat insulation material 34. The liner 32 forms the walls of the food storage compartment.

The outer shell or casing 30 is formed to provide the top and side walls of the cabinet, and also is provided with a portion 36 which is bent around the front of the cabinet to provide the front wall thereof. The portion 36 is provided with a continuation 37 bent back upon the portion 36 to reinforce the front wall forming it of

double thickness. The metal also continues with portions 39 and 40, with the portion 39 being bent in engagement with the sides of the shell or casing 30 to add additional reinforcement for the front wall. The portion 40 extends inwardly into the cabinet and cooperates with the portion 36 to form a pocket 42.

The liner 32 is of box-like construction, open at the front, and is provided with a front wall portion 45 having its marginal edge bent to form a flange 47 extending rearwardly into the cabinet. The flange 47 is spaced from the sides of the liner.

Extending between the outer casing 30 and the inner liner 32 is a breaker strip 50 joining the front wall portions 36 and 45. The breaker strip is formed of relatively thin metal not greater than .010 inch thick, and preferably formed from stainless steel or other like material having relatively low heat conductivity. The breaker strip is preferably formed arcuate extending in a convex curve from within the pocket 42 to front wall 45 and is reinforced by pad 52 of heat insulation material, cemented to the back or concave side of the breaker strip.

The breaker strip is attached by clip members 55 which are first affixed to the breaker strip. The clip members are set in spaced relation along the back of the breaker strip, and extend laterally thereacross. The clip members are each formed of relatively thin resilient metal, such as spring steel or the like, and formed of strip 57 extending across the breaker strip having ends 60 and 61 formed by the reversely bent end portions 62 and 63 respectively. The end 60 is adapted to engage the marginal edge portion 65 of the breaker strip, and the opposed end 61 is receivable in the pocket 42 formed in the breaker strip by bending the marginal edge 69. The end portion 62 continues from the end 60 in a semi-circular loop to an upwardly extended portion 71 whose end is bent to form hook 72 for engagement over the edge of the flange 47. The opposite end portion 63 extends reversely to strip 57 formed to extend angularly upwardly to point 75, then angularly downwardly to terminate in a semi-circular loop 76 adapted to engage around the edge of the wall portion 31 of the outer shell.

The breaker strip with the clip members affixed at spaced intervals is readily attached to the cabinet by first inserting one edge into pocket 42 until the hook 76 engages the edge of the wall 40, then moving the opposite edge towards wall 45 for locking the hook 72 over end of the

flange 47. The breaker strip may be easily removed by inserting a tool between wall 45 and edge of the breaker strip for pressing against the loop 70 until the hook 72 is disengaged from the end of flange 47.

In the present arrangement of the clip member the breaker strip is in snug engagement against the edge of front wall 36, and against the wall 45. The end portion 63 of the clip is tensioned against the wall portion 46 so as to move the end 60 towards the opposite wall of the pocket 42, the tendency of the portion 63 being to spread apart, or move away from the section 57. The opposite end portion 62 is bent so that the plane of portion 71 intersecting with the section 57 forms an angle less than the angle formed by the flange 47 with wall 45 so that the flush engagement of portion 71 against flange 47 tends to bend the end 60 towards the wall 45 holding the edge 65 of the breaker strip in tight engagement thereto.

The clip is attached to the spaced apart walls so as to radius the section 57 outwardly against the back of the breaker strip for reinforcement of the breaker strip against flexure, and serves to maintain the face of the breaker strip in a smooth arc. It will be obvious that the section 57 need not contact the breaker strip to provide an effective securement of the breaker strip where a different contour is desired for the breaker strip. The engagement of the ends 60 and 61 in the pockets formed along the longitudinal edges of the breaker strip is effective in holding the edges towards the adjacent walls as well as prevent any lateral shifting or moving of the breaker strip.

While I have shown and described the preferred form of my invention, I do not wish to limit myself to the precise detail as shown and described, but wish to avail myself of such variations and modifications as may come within the scope of the appended claims:

I claim:

1. A refrigerator cabinet construction comprising an inner casing having a flange and an outer casing having a flange, said casings being arranged in spaced apart relationship, a resilient member bridging the space between said flanges with one end thereof clampingly engaging one of said flanges and the opposite end thereof clampingly engaging the other flange, a breaker strip extending between said casings with one

side thereof engaging one side of said resilient member and a relatively thin covering member extending across the front of said breaker strip with the terminating edges of said covering member extending beyond the edges of said breaker strip and bent rearwardly and extending over the outer end portions of said resilient member to lock said breaker strip to said resilient member.

2. A refrigerator cabinet construction comprising an inner casing having a flange and an outer casing having a flange, said casings being arranged in spaced apart relationship, a resilient member bridging the space between said flanges and provided with resilient clamping means at the ends thereof, said resilient clamping means engaging the flanges of the inner and outer casings and causing the resilient member to be flexed into engagement with said casings, a breaker strip extending between said casings with one side thereof engaging one side of said resilient member and a relatively thin metal covering member extending across the front of said breaker strip with the terminating edges of said covering member extending beyond the edges of said breaker strip and bent rearwardly and extending over the outer end portions of said resilient member to lock said breaker strip to said resilient member.

3. A refrigerator cabinet construction comprising an inner casing having a flange and an outer casing having a flange, said casings being arranged in spaced-apart relationship, a resilient member bridging the space between said flanges and provided with resilient clamping means at the ends thereof the normal distance between the clamping means being greater than the distance between the flanges between the edges of the flanges of the casing, said resilient clamping means engaging the flanges of the inner and outer casings and causing the resilient member to be flexed into engagement with said casings, a breaker strip extending between said casings with one side thereof engaging one side of said resilient member and a relatively thin metal covering member extending across the front of said breaker strip with the terminating edges of said covering member extending beyond the edges of said breaker strip and bent rearwardly and extending over the outer end portions of said resilient member to lock said breaker strip to said resilient member.

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