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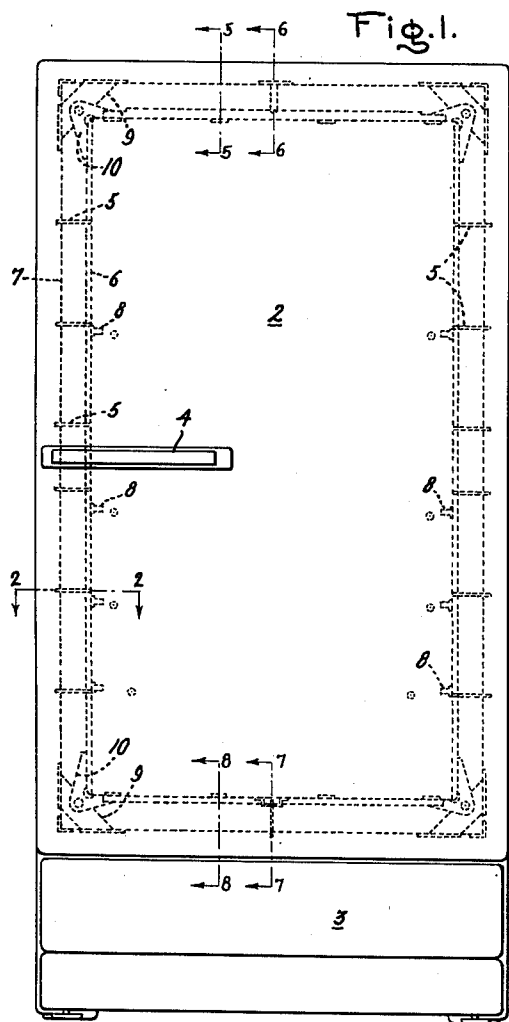
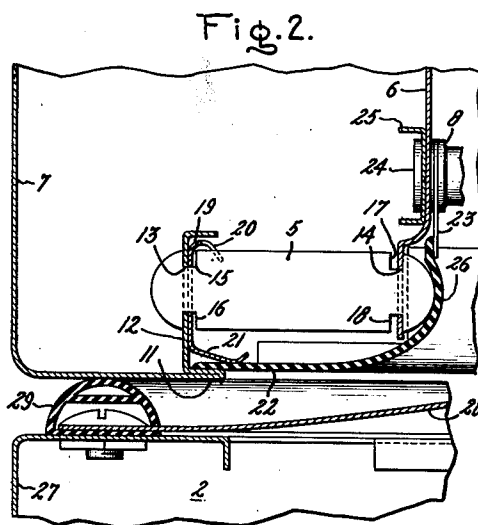
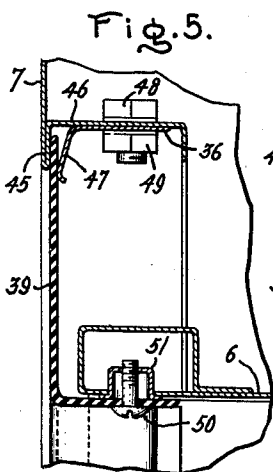
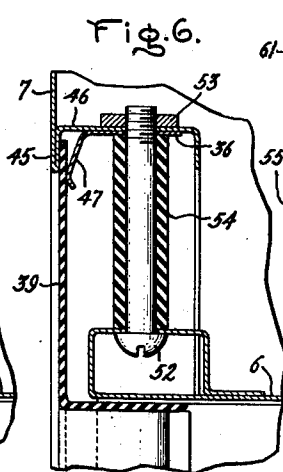
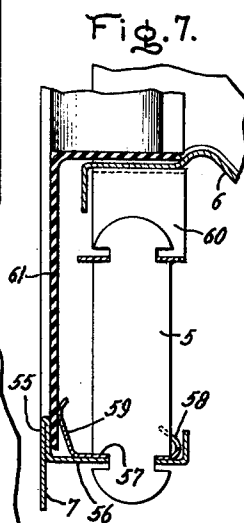
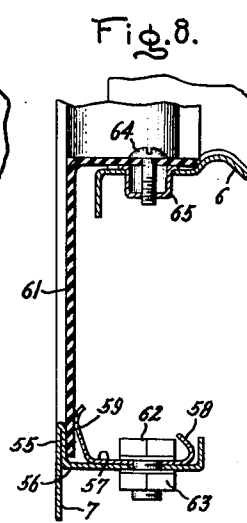
E. H. BODDY

2,601,241

REFRIGERATOR CABINET

Filed Oct. 3, 1946

2 SHEETS—SHEET 1



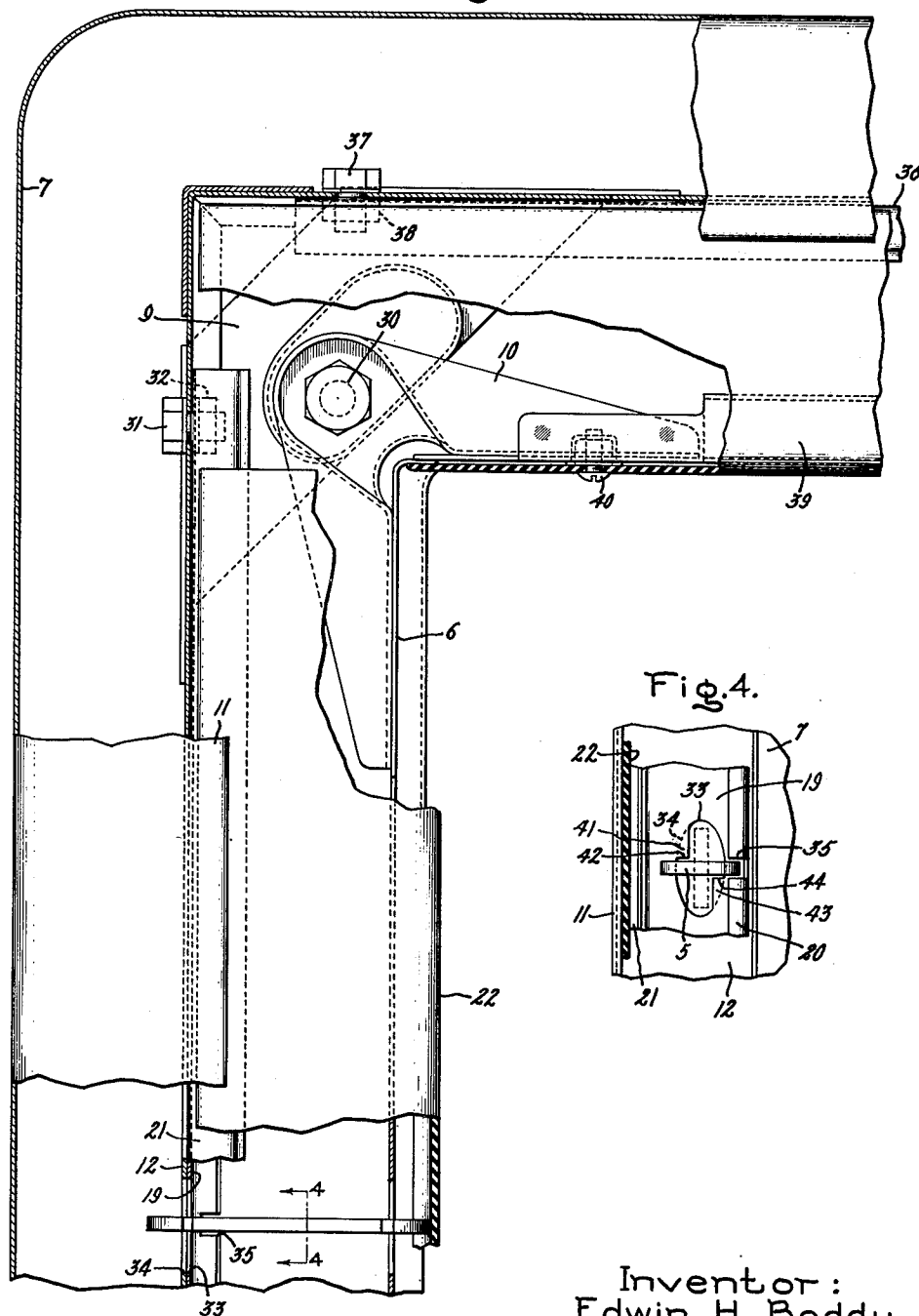
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Edwin H. Boddy,
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His Attorney.

E. H. BODDY
REFRIGERATOR CABINET

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2 SHEETS--SHEET 2

Fig. 3.



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UNITED STATES PATENT OFFICE

2,601,241

REFRIGERATOR CABINET

Edwin H. Boddy, Erie, Pa., assignor to General Electric Company, a corporation of New York

Application October 3, 1946, Serial No. 700,901

15 Claims. (Cl. 220-15)

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My invention relates to refrigerator cabinets of the type including a metal inner liner secured in spaced relation to the outer cabinet shell and more particularly to arrangements for maintaining the required spacing between the shell and liner and for closing the space therebetween.

It is an object of my invention to provide a refrigerator cabinet having an outer shell and an inner liner secured in spaced relationship and including an improved arrangement for maintaining the sides of the outer shell and the inner liner in their required alignment with a minimum of heat transfer between the outer shell and the inner liner.

It is another object of my invention to provide an arrangement for holding the outer shell and the inner liner in the desired relationship including improved spacing members which can be easily assembled and which can be firmly locked in position.

Further objects and advantages of my invention will become apparent as the following description proceeds and the features of novelty which characterize my invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of my invention reference may be had to the accompanying drawings in which Fig. 1 is a front elevation view of a refrigerator cabinet incorporating my invention; Fig. 2 is an enlarged sectional view taken along the line 2-2 of Fig. 1; Fig. 3 is an enlarged view of the upper lefthand corner of the cabinet with portions broken away to illustrate the various elements; Fig. 4 is a sectional view taken along the line 4-4 of Fig. 3 showing the positioning and locking arrangement for the spacer members; Fig. 5 is a sectional view taken along the lines 5-5 of Fig. 1 showing one portion of the mounting of the upper breaker strip; Fig. 6 is a sectional view taken along the lines 6-6 of Fig. 1 showing another portion of the mounting of the upper breaker strip; Fig. 7 is a sectional view taken along the lines 7-7 of Fig. 1 showing one portion of the mounting of the lower breaker strip; and Fig. 8 is a sectional view taken along the line 8-8 of Fig. 1 showing another portion of the mounting of the lower breaker strip.

Referring to Fig. 1, I have shown a refrigerator cabinet 1 including a door 2 and a machinery compartment cover 3. A handle 4 is provided for the door 2. In dotted lines in Fig. 1, I have shown a general outline of the various elements included in my arrangement for maintaining alignment of the outer shell and inner liner and

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for completing the door frame of the refrigerator cabinet. Referring to these dotted portions, I have indicated a number of spacer members or spacers 5 which connect the inner liner 6 and the outer shell 7 in a manner which will be described in detail in connection with the succeeding figures. I have also illustrated in Fig. 1 a number of shelf supports 8 which also will be described in further detail later in this specification. To support the inner liner in spaced relation to the outer shell, corner braces 9 are provided at each corner of the outer shell, and corner pieces 10 are connected to the corner braces and are welded or otherwise secured to the corners of the inner liner 6.

Referring now to Fig. 2, the outer shell 7 is bent back on itself at 11 and is provided with an inwardly extending portion 12 which forms one attaching portion of the complete assembly. A series of openings, the purpose of which will be described later, is provided in the inwardly extending portion 12, one of these openings being indicated at 13 in Fig. 2. Although the openings are shown in an integral portion of the outer shell, they obviously may be provided in other suitable parts of the structure, for example in a separate member secured to the shell, or in a number of individual members fastened to the shell at intervals.

The inner liner 6 is provided with a portion 14 which forms another attaching portion of the complete assembly, and a series of openings are provided in the attaching portion 14. These openings are located opposite the corresponding openings provided in the portion 12 of the outer shell, and the shape of these openings is similar to the shape of the openings in the outer shell. The description of the openings in the outer shell, to be given in connection with Fig. 4, will apply equally well to the corresponding openings provided in the portion 14 of the inner liner. In order to maintain the required alignment between the outer shell and the inner liner, a number of spacer members, indicated at 5 in Fig. 1, are provided between the outer shell and the inner liner. One of these spacer members is shown in detail in Fig. 2. The spacer member 5 consists of a flat strip of heat insulating material, for example, any suitably impregnated laminated fibrous material. The spacer member is rounded at each end and is provided with recessed portions or notches 15 and 16 at one end thereof and with recessed portions or notches 17 and 18 at the other end thereof. The spacer member is designed to pass through the openings

in the outer shell and the inner liner and, when the spacer member is turned in making the assembly, portions of the outer shell and inner liner project into the recessed portions above described to maintain the various elements of the structure in the desired relationship. The exact method by which this is accomplished will be described in detail later in the specification.

In order to lock the spacer members in the assembled position a resilient locking element or member 19 which runs substantially the entire distance from the top of the cabinet to the bottom, is secured to the inwardly extending portion 12 of the outer liner. This member 19 is provided with openings which are in register with the openings in portion 12. The exact shape of these openings will be described later in this specification. In order to lock the spacer member 5 in its assembled position, one edge 20 of the member 19 extends inwardly and is provided with a notch adjacent the spacer member 5. The edge 20 is provided with a series of such notches, one notch being adjacent each of the spacer members 5 shown in Fig. 1. The other edge 21 of the member 19 extends upwardly and outwardly so as to bear against a breaker strip 22, and serves to hold one edge of the breaker strip in position against the return bent portion 11 of the outer shell. In order that edges 20 and 21 may properly perform their functions, the member 19 is made of a resilient material. Although member 19 has been shown as a continuous strip, individual elements, each having a suitable opening and notch, may be employed. The other edge of the breaker strip 22 is held in position by a clamp 23, one end of which extends over the edge of the breaker strip 22. The clamp 23 is held in position between the shelf support 8 and the inner liner 6 by a bolt 24 and a washer 25. Although I have illustrated only one clamp 23, it is to be understood that a similar clamp is provided with each of the shelf supports illustrated in Fig. 1. The clamp 23 presses the rounded portion 26 of the breaker strip firmly against the correspondingly rounded end of the spacer member 5. Although I have shown both ends of the spacer member rounded, it will be apparent that only the end which abuts the breaker strip need be rounded in order to accomplish the above purpose. The door 2, which includes an exterior section 27 and a liner 28, is provided with a sealing gasket 29. In the closed position of the door this gasket bears against the outer shell 7.

Referring now to Fig. 3, I have illustrated in an enlarged view the details of the construction of the upper left-hand corner of the door frame of the cabinet. This view has been chosen to show the general relationship of the various parts. The other corners have substantially the same construction. The outer shell is illustrated showing the return bent portion 11 and the inwardly extending portion 12. The corner brace 9 is secured to the outer shell, as by welding, and the corner piece 10 is secured to the corner brace 9 by any suitable fastener, such as a bolt 30. The corner piece 10 is in turn secured to the inner liner 6 by welding or any other suitable securing arrangement. The member 19 is connected to the portion 12 of the outer shell by any suitable devices, such as a bolt 31 and nut 32. One of the openings in the member 19 is illustrated at 33 in register with a corresponding opening 34 in the portion 12 of the outer shell. One edge 21 of the member 19 is shown in this figure pressing one edge of the breaker strip 22 against the re-

turn bent portion 11 of the outer shell. In order to lock the spacer members 5 in their assembled position, notches are provided in the edge 20 of the member 19 adjacent the various spacing members 5. One of these notches is shown at 35 in Fig. 3. In the assembled position spacer member 5 fits within the notch 35 and is thus prevented from movement, as will be more clearly described in discussing the assembling of the various elements following the description of Fig. 4.

A member 36 is secured to an inwardly extending portion of the outer shell along the top section of the cabinet by any suitable arrangement, for example, a bolt 37 and nut 38. This member 36 serves to retain a breaker strip 39 of right-angled cross section in position against a portion of the outer shell, as will be more clearly seen in the description of Fig. 5. The breaker strip is secured to the inner liner by screws, one of which is illustrated at 40 in Fig. 3. The exact arrangement for securing the breaker strip 39 is more clearly shown in Fig. 5 and will be described in detail in connection with that figure.

In Fig. 4 I have illustrated in detail the nature of the openings in the portion 12 of the outer shell and in the member 19. The openings provided in the portion 14 of the inner liner are similar to those provided in the portion 12 of the outer shell. In Fig. 4 I have shown the outer shell 7 including the return bent portion 11 thereof and the inwardly extending portion 12. Mounted on the portion 12 is the member 19 having an upwardly extending portion 21 which presses the breaker strip 22 against the return bent portion 11 of the outer shell. Through the portion 12 of the outer shell I provide an opening 34 which is of oval shape, as indicated by the dotted line portion in Fig. 4. The opening 33 through the member 19 is in register with the opening 34, as can be seen from Fig. 4, but is of a slightly different shape, as indicated by the solid lines in Fig. 4. The opening 33 is of generally oval shape, the longer dimension of the oval being disposed along the length of the door frame opening and the shorter dimension of the oval being disposed crosswise of the door frame opening. At the upper left-hand side of the oval a portion of the member 19 projects inwardly toward the center of the oval to form a roughly triangular-shaped section 41 having an edge 42. Similarly, at the lower right-hand side of the oval a portion of the member 19 projects inwardly toward the center of the oval to provide a second roughly triangular-shaped section 43 having an edge 44. The spacer member 5 is illustrated in solid lines in its assembled position and is illustrated by dotted lines in the position in which it is originally inserted through the openings 33 and 34 during assembly. The upwardly and inwardly extending edge 20 of the member 19 is illustrated in this figure and the notch 35 is also shown in this figure. It can be seen by reference to Fig. 4 that in the assembled position the spacer member 5 is locked within the notch 35. Further support is lent to the spacer member by the edges 42 and 44 against which opposite sides of the spacer member 5 rest when in the assembled position. These edges also act as stops to prevent turning of the spacer member more than about 90° during assembly. If desired, the openings in the portion 12 of the outer shell and in the portion 14 of the inner liner can be made of the same shape as the opening 33 described above. Also, if desired, the stops can be omitted from the openings in member 19 and provided only for the openings in

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portion 12 of the outer shell or portion 14 of the inner liner.

The method of assembly of the spacer members and of the breaker strips, as illustrated in Figs. 1 to 4, will now be described. The assembly to be described applies to the construction of the left-hand and right-hand vertical portions of the door frame; the upper and lower portions will be described later in the specification. During the initial sheet metal stamping operations the proper openings are made in the portion 12 of the outer shell, in the member 19, and in the portion 14 of the inner liner. The member 19 is secured to the outer shell with the various openings in proper register. In making the final assembly the spacer members are inserted through the openings in a direction perpendicular to the plane of the openings and in a plane extending longitudinally of the door frame, as shown by the dotted lines in Fig. 4, until the recessed portions 15 and 16 are aligned with the portion 12 of the outer shell and with the member 19, and the recessed portions 17 and 18 are aligned with the portion 14 of the inner liner. The spacer members are then turned through an angle of about 90 degrees. During this turning movement the edge of each spacer member comes in contact with the edge 20 of the member 19 and, since the member 19 is formed of a resilient material, the edge 20 is forced outwardly. At the end of the 90-degree turn the spacer member passes into the notch 35 and the resilient edge 20 snaps back to its original position thereby locking the spacer member in its assembled position. In its assembled position the spacer member lies in a plane crosswise of the door frame, as shown by the solid lines in Fig. 4. It can be seen that the spacer member cannot move back to its detachable position unless the edge 20 of the member 19 is forcibly moved outwardly. The edges 42 and 44, as previously mentioned, serve as stops for the spacer member, assisting in maintaining the spacer member in position and also preventing rotation of the spacer member more than about 90 degrees during assembly. After the several spacer members have been locked in position, one edge of the breaker strip 22 is inserted between the portion 11 of the outer shell and the edge 21 of the member 19. The breaker strip is pressed firmly against the rounded end of each spacer member by clamps, one of which is indicated by 23. The breaker strip 22 is of curved cross section, and the ends of the spacer members are rounded. When in the assembled position, the rounded end of each spacer member fits the contour of the abutting portion 26 of the breaker strip, so that the breaker strip fits firmly against the spacer members. As is most readily apparent from Fig. 2, the rounded end of the spacer member and the corresponding contour of the abutting portion 26 of the breaker strip 22 prevent the edge of the breaker strip from becoming detached from beneath the clamp 23. This broad feature, however, of preventing dislodgement of the breaker strip by the projection of a portion of the spacing assembly into the curved contour of the breaker strip is not my invention but is described and claimed in the copending application of Robert A. King, Serial No. 700,846, filed October 3, 1946, and assigned to the same assignee as the present application.

Referring now to Fig. 5, I have shown the outer shell 7 having a return bent portion 45 and

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an inwardly extending portion 46. A member 36 having a downwardly extending edge 47 is fastened to the inwardly extending portion of the outer shell by any suitable fastening arrangement, such as a bolt 48 and a nut 49. One edge of the breaker strip is held in position between the return bent portion 45 of the outer shell and the edge 47 of the member 36. The other edge of the breaker strip is fastened by a screw 50 to a cup-shaped member 51 which is secured to the inner liner 6.

In Fig. 6 I have illustrated an arrangement for maintaining the outer shell and the inner liner in properly spaced relationship along the upper edge of the door frame. The parts in Fig. 6 which correspond to those shown in Fig. 5 have been designated by the same numerals. The outer shell and inner liner are connected by a bolt 52 and nut 53 and are maintained in properly spaced relationship by a tubular spacer 54, formed of heat insulating material. The bolt 52 carries any downward load at the center of the top wall of the liner.

The construction of the lower horizontal edge of the door frame is illustrated in Figs. 7 and 8. In Fig. 7 I have illustrated the portion of the inner liner 6 which forms the bottom of the food storage compartment of the refrigerator. The outer shell 7 is provided with a return bent portion 55 and an inwardly extending portion 56. A member 57 having upwardly extending edges 58 and 59 is secured to the portion 56 of the outer shell. A U-shaped member 60, also shown in Fig. 1, is fastened in any suitable manner, as by welding, to the inner liner 6. Openings of the same shape as openings 34 are provided in the U-shaped member 60 and in the portion 56 of the outer shell. An opening of the same shape as opening 33 is provided in the member 57. A spacer member 5, which is of the same shape as the spacer members described in connection with Figs. 1 to 4, is provided for the construction shown in Fig. 7. This spacer member is inserted through the openings in the U-shaped member 60, portion 56 of the outer shell and the member 57, and is locked in position in the same manner as previously described in connection with Fig. 4. One edge of a breaker strip 61 is inserted between the return bent portion 55 of the outer shell and the edge 59 of the member 57, the other edge of the breaker strip overlying the inner liner 6.

As indicated in Fig. 8, the member 57 is secured to the inwardly extending portion 56 of the outer shell by a bolt 62 and a nut 63, or by any other suitable securing arrangement. The breaker strip 61 is fastened by a screw 64 to a cup-shaped member 65 which is secured to the inner liner 6.

It can be seen that I have provided an arrangement for securing a heat insulating breaker strip between the inner liner and outer shell of a refrigerator cabinet along the area of the door frame which affords easy assembly, and which will maintain spaced edges of the shell and liner in their required alignment. It can also be seen that I have provided an arrangement for holding the breaker strip in assembled position and for bracing it with the same elements used in maintaining the above alignment.

While I have illustrated and described my invention by reference to a specific construction, I do not desire my invention to be limited to the particular construction shown and described and I intend, by the appended claims, to cover all

modifications in the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. In a refrigerator cabinet, an outer shell having thereon an attaching portion, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion, means including a spacer member for maintaining alignment between said outer shell and said inner liner, said spacer member having integral means at each end thereof interlockingly engaging said attaching portions of said outer shell and said inner liner, and resilient means including a recess for receiving an edge of said spacer member to lock said spacer member in position.

2. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, said opening having one dimension greater than another, an inner liner disposed in spaced relation to said outer shell, means including a spacer member for maintaining alignment between said outer shell and said inner liner, said spacer member having a portion of greater width than the smaller dimension of said opening and having a recessed portion for engaging said attaching portion along the smaller dimension of said opening, and resilient means including a recess for receiving an edge of said spacer member to lock said spacer member in position.

3. In a refrigerator cabinet, an outer shell having an attaching portion thereon, an inner liner disposed in spaced relation to said outer shell and having an attaching portion thereon, means including a spacer member for maintaining alignment between said outer shell and said inner liner, one of said attaching portions having an opening therein, said opening having one dimension greater than another, one end of said spacer member having a cross section which includes one dimension smaller than the greater dimension of said opening and greater than the smaller dimension of said opening, said one end of said spacer member having a portion arranged to pass through said opening in a direction perpendicular to the plane of said opening with said one dimension of said one end in line with the larger dimension of said opening, said one end having a recessed portion arranged to engage said one attaching portion when said one dimension of said one end is in line with the smaller dimension of said opening whereby said spacer member may be inserted longitudinally through said opening in line with the larger dimension thereof and turned into engaging position in line with the smaller dimension of said opening, the other end of said spacer member engaging the other of said attaching portions, and resilient means engaging said spacer member for locking said spacer member in its engaging position.

4. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, and a spacer member having portions of elongated cross section adapted to pass through said openings when in line with the larger dimension thereof and having recessed portions whereby said spacer member may be inserted through said

openings in line with the larger dimension thereof and turned into line with the smaller dimension thereof so that said attaching portions project into said recessed portions to maintain said outer shell and said inner liner in alignment.

5. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, a spacer member arranged to maintain said outer shell and said inner liner in alignment, said spacer member having portions of elongated cross section adapted to pass through said openings when in line with the larger dimension thereof and having recessed portions whereby said spacer member may be inserted through said openings in line with the larger dimension thereof and turned into line with the smaller dimension thereof so that said attaching portions project into said recessed portions, and a breaker strip for closing the space between said outer shell and said inner liner, a portion of said spacer member being arranged to engage said breaker strip for limiting the movement thereof.

6. In a refrigerator cabinet, an outer shell having an attaching portion thereon, an inner liner disposed in spaced relation to said outer shell having an attaching portion thereon, one of said attaching portions having an opening therein, said opening having one dimension larger than another, and means including a spacer member for maintaining said outer shell and said inner liner in alignment, one end of said spacer member having a portion adapted to pass freely through said opening in a direction perpendicular to the plane of said opening and in line with the larger dimension thereof and having a recessed portion arranged to engage said one of said attaching portions in line with the smaller dimension of said opening whereby said spacer member may be inserted longitudinally through said opening in line with the larger dimension thereof and turned into engaging position in line with the smaller dimension of said opening, the other end of said spacer member engaging the other of said attaching portions, said opening being shaped to afford turning movement of said spacer member and being further shaped to provide a stop for limiting said turning movement of said spacer member.

7. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, a spacer member arranged to maintain said outer shell and said inner liner in alignment, said spacer member having portions of elongated cross section adapted to pass through said openings in line with the larger dimension thereof and having recessed portions whereby said spacer member may be inserted through said openings in line with the larger dimension thereof and turned so that said recessed portions engage said attaching portions in the assembled position of said spacer member, and means for lock-

ing said spacer member in its assembled position.

8. In a refrigerator cabinet, an outer shell having an attaching portion thereon, an inner liner disposed in spaced relation to said outer shell having an attaching portion thereon, one of said attaching portions having an opening therein, said opening having one dimension larger than another, means including a spacer member for maintaining said outer shell and said inner liner in alignment, one end of said spacer member having a portion adapted to pass through said opening in line with the larger dimension thereof and having a recessed portion arranged to engage said one of said attaching portions in line with the smaller dimension of said opening whereby said spacer member may be inserted longitudinally through said opening in line with the larger dimension thereof and turned into engaging position in line with the smaller dimension of said opening, the other end of said spacer member engaging the other of said attaching portions, a stop for limiting the turning movement of said spacer member, and a breaker strip for closing the space between said outer shell and said inner liner, a portion of said spacer member being arranged to engage said breaker strip for limiting the movement thereof.

9. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, a member mounted on one of said attaching portions and having an opening therein, each of said openings having one dimension greater than another, and a spacer adapted to maintain said outer shell and said inner liner in alignment, said spacer having portions of elongated cross section adapted to pass through said openings in line with the larger dimension thereof and having recessed portions for engaging said attaching elements along the smaller dimensions of said openings, said member including means for locking said spacer in position.

10. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, a member mounted on one of said attaching portions and having an opening therein, each of said openings having one dimension greater than another, a spacer adapted to maintain said outer shell and said inner liner in alignment, said spacer having portions of elongated cross section adapted to pass through said openings in line with the larger dimension thereof and having recessed portions for engaging said attaching portions along the smaller dimension of said openings, and a breaker strip for closing the space between said outer shell and said inner liner, said member including resilient means for locking said spacer in position and means for holding said breaker strip against said outer shell.

11. In a refrigerator cabinet, an outer shell having an attaching portion thereon, an inner liner disposed in spaced relation to said outer shell and having an attaching portion thereon, a spacer member for maintaining said outer shell and said inner liner in alignment, one of said attaching portions having an opening therein,

said opening having one dimension greater than another, said spacer member engaging one of said attaching portions and having a portion adapted to pass through the opening in the other attaching portion in line with the larger dimension of said opening and having a recessed portion arranged to engage said other attaching portion in line with the smaller dimension of said opening, a breaker strip for closing the space between said outer shell and said inner liner, means for locking said spacer member in position and for holding one portion of said breaker strip against said outer shell, and means for pressing another portion of said breaker strip against one end of said spacer member.

12. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relation to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, a spacer member having portions of elongated cross section adapted to pass through the larger dimension of said openings when in alignment with said larger dimension and having recessed portions adapted to engage said outer shell and said inner liner when said spacer member is turned out of alignment with said larger dimension of said openings for maintaining said shell and liner in alignment, and a locking element including means for limiting the turning movement of said spacer member, said locking element having a resilient portion arranged to be displaced by said spacer member during turning movement and to snap back for locking said spacer member in position.

13. In a refrigerator cabinet, an outer shell having thereon an attaching portion provided with an opening therein, an inner liner disposed in spaced relationship to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, a member mounted on one of said attaching portions and having an opening therein, said last-mentioned opening having one dimension greater than another, a stop formed on said member adjacent said last-mentioned opening, a spacer adapted to maintain said outer shell and said inner liner in alignment, said spacer having portions of elongated cross section adapted to pass through said openings in line with the larger dimension thereof and having recessed portions to permit turning of said spacer member against said stop for engaging said attaching portions.

14. In a refrigerator cabinet, a metal outer shell having thereon an attaching portion provided with an opening therein, a metal inner liner having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, means for securing said outer shell and said inner liner in spaced relationship, means for maintaining alignment of said outer shell and said inner liner in the area of the door frame, said last-mentioned means including a heat-insulating spacer member having portions of elongated cross section adapted to pass through said openings in line with the larger dimension thereof and having recessed portions adapted to engage said attaching portions when said spacer member is turned into line with the smaller dimension of said openings, and resilient means for locking said spacer member in position.

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15. In a refrigerator cabinet, a metal outer shell having thereon an attaching portion provided with an opening therein, a metal inner liner disposed in spaced relationship to said outer shell and having thereon an attaching portion provided with an opening therein, each of said openings having one dimension greater than another, a stop adjacent one of said openings, a thin flat spacer strip of heat-insulating material for maintaining said shell and liner in alignment, said spacer strip having a rounded end and notches in the sides near each end thereof, said spacer strip being adapted to pass through the larger dimension of said openings, said notches being adapted to engage said attaching portions when said strip is turned against said stop, means for locking said strip against further turning movement, a heat-insulating breaker strip for closing the space between said shell

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and said liner, and a clamp for engaging an edge of said breaker strip, said breaker strip being provided with a concave portion adjacent said rounded end of said spacer strip, said rounded end being adapted to engage said concave portion to prevent disengagement of said breaker strip from said clamp.

EDWIN H. BODDY.

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