March 6, 1951 G. K. IWASHITA 2,544,321

REFRIGERATOR CABINET BREAKER STRIP

Filed May 7, 1948 2 Sheets-Sheet 1

Fig. 1.

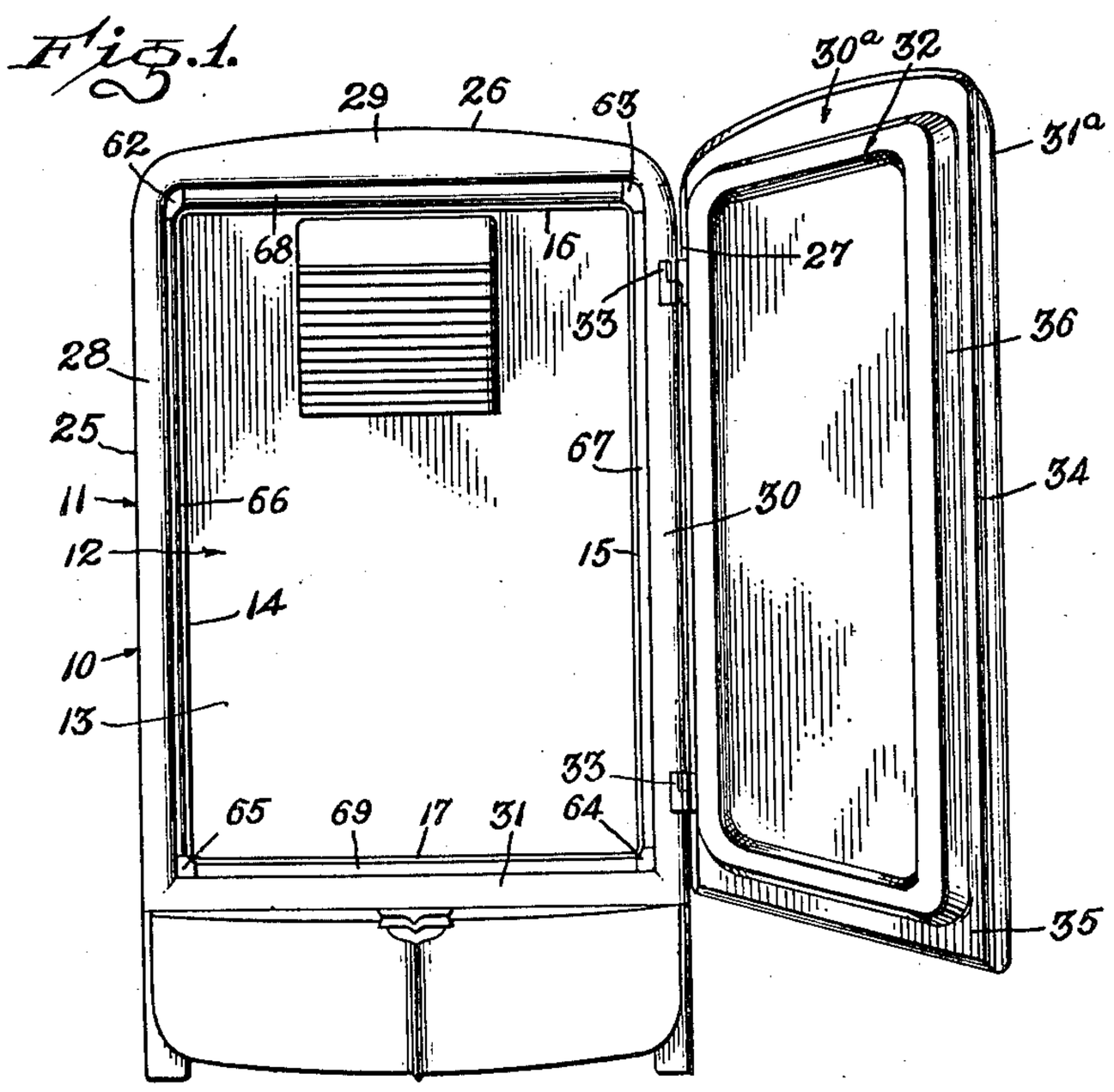


Fig. 2.

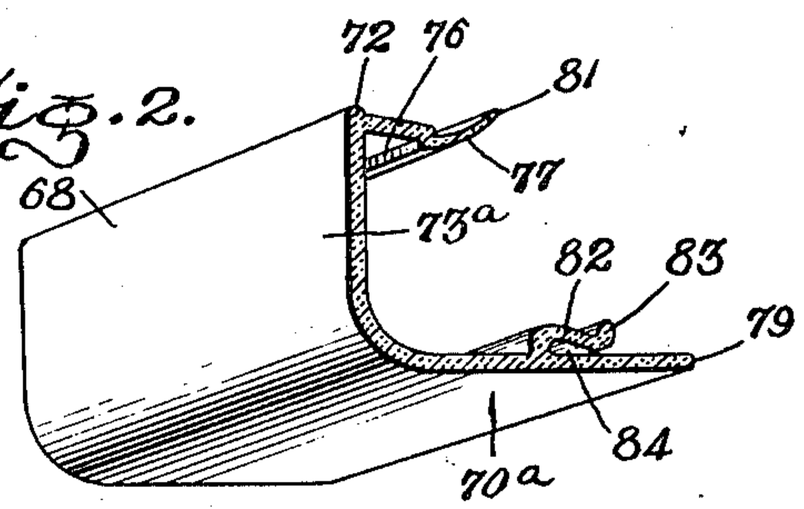


Fig. 4.

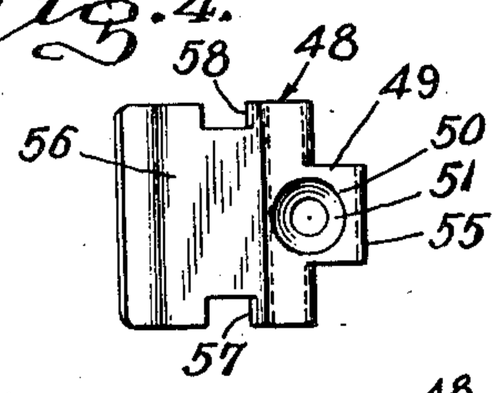


Fig. 5.

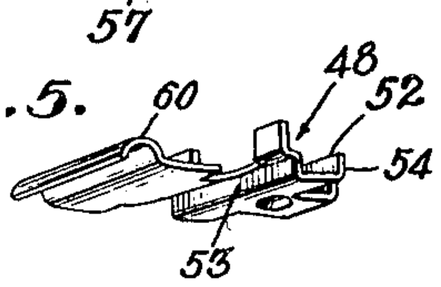


Fig. 9.

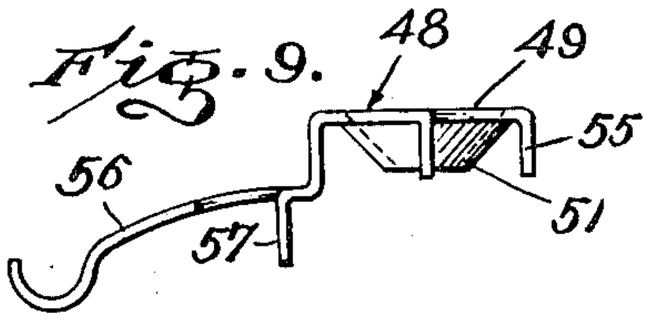
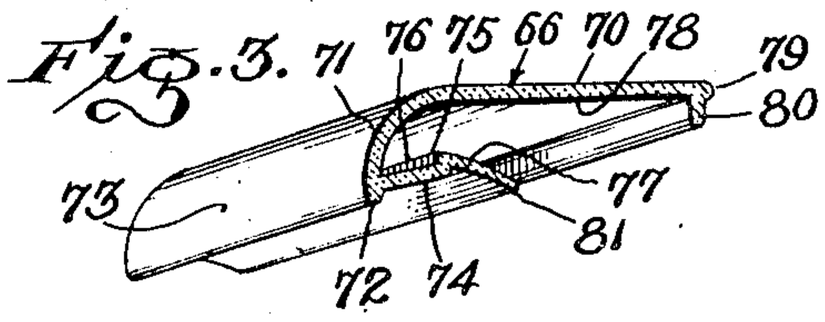


Fig. 3.



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REFRIGERATOR CABINET BREAKER STRIP

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Fig. 6.

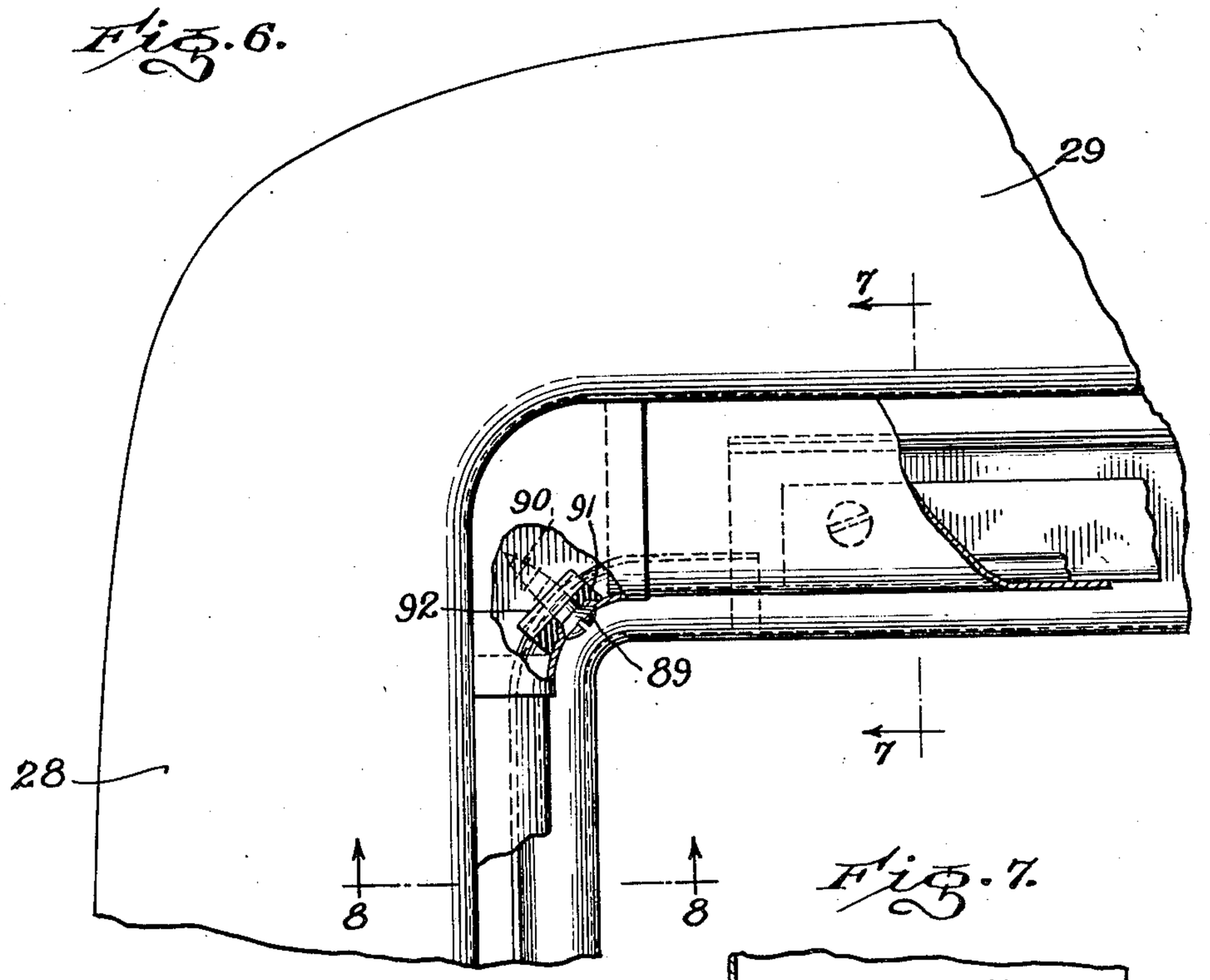


Fig. 7.

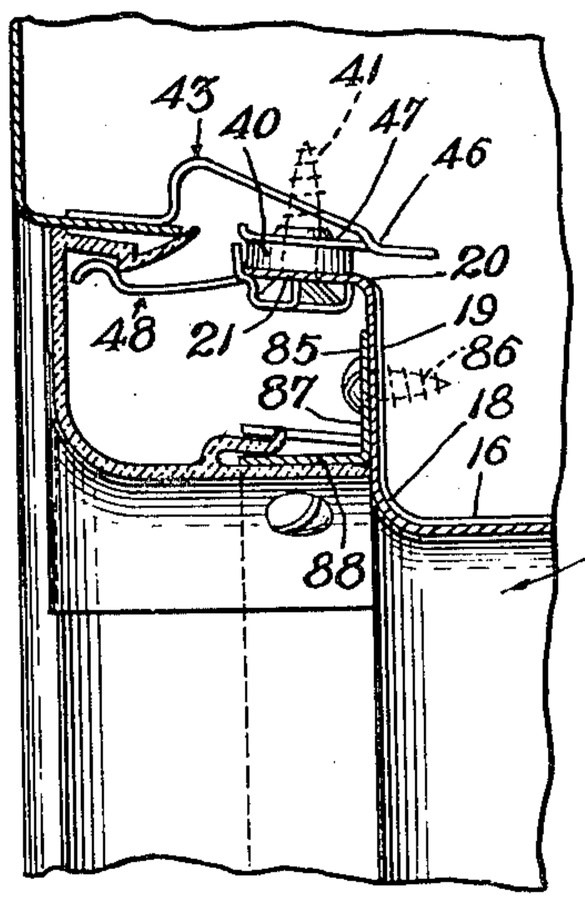
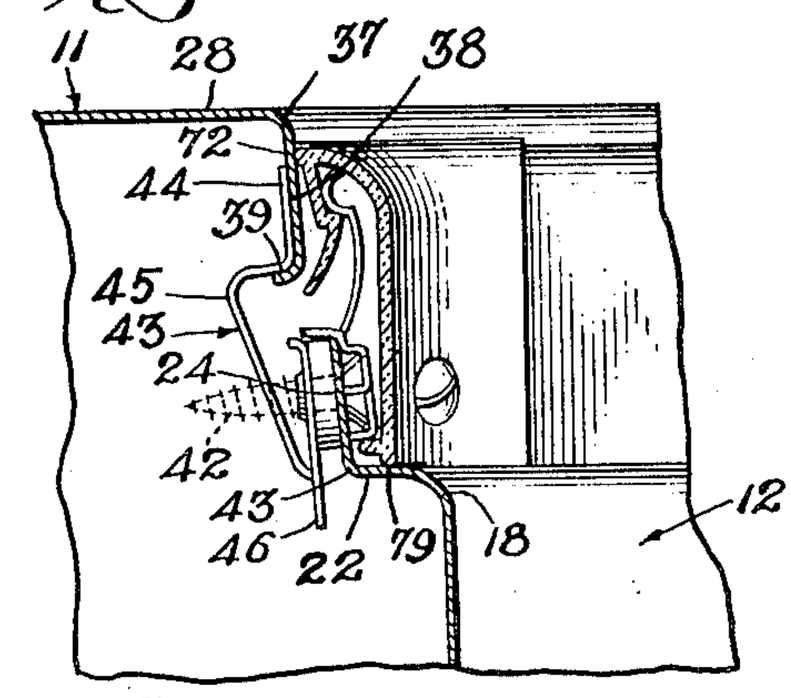


Fig. 8.



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Patented Mar. 6, 1951 2,544,321

UNITED STATES PATENT OFFICE

2,544,321

REFRIGERATOR CABINET BREAKER STRIP

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Application May 7, 1948, Serial No. 25,747

5 Claims. (Cl. 220—9)

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The present invention relates to refrigerator cabinet breaker strips, and is particularly concerned with an improved construction and assembly of insulating breaker strips with the inner and outer shells of a refrigerator cabinet for closing the gap between the inner and outer shells, while still effecting heat insulation between the inner and outer shells.

One of the objects of the invention is the provision of an improved breaker strip assembly, which permits the attachment or detachment of the breaker strip parts without the necessity for using securing devices such as screws or bolts, and to provide for an assembly which is easily and quickly assembled with the cabinet and when assembled is securely held against moving or rattling during the ordinary use of the refrigerator.

Another object of the invention is the provision of an improved breaker strip construction and assembly in which the advantage is taken of the resilient characteristics of the breaker strip material, as well as the resilient action of spring clips which are preferably provided at regularly spaced points, and also in which provision is made to permit the expansion and contraction of the breaker strips without any possibility of damage to the breaker strips or cabinet, and without loosening the securing devices which hold the breaker strips in place.

A further object of the invention is the provision of an improved breaker strip assembly, which effectively closes all open crevices that may serve as traps for food particles or which may cause difficulty in cleaning, and in which the breaker strip has an improved appearance and may correspond in shape to the contour of the inner door panel which is attached to the door.

Another object of the invention is the provision of an improved extruded breaker strip, which is capable of economical manufacture, which is sturdy and durable, which is easy to clean and maintain in a clean condition, which requires a minimum number of other parts to secure it in its proper position, which conceals all of the securing devices for the breaker strips and for supporting the inner liner from the outer shell, and which is adapted to give long service without necessity for repair or replacement of any of its parts.

Another object of the invention is the provision of an improved refrigerator cabinet assembly, including an inner and outer shell and breaker strip elements for closing the space between said shells at the door opening, in which provision is made for positively latching the breaker strip elements in place so that no dependence need be placed upon corner clips for holding the individual breaker strips.

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Other objects of the invention will be apparent from the following description and the accompanying drawings, in which similar characters of reference indicate similar parts throughout the several views.

Referring to the two sheets of drawings accompanying this specification:

Fig. 1 is a front elevational view of a refrigerator cabinet embodying the invention, shown with its door open;

Fig. 2 is a fragmentary view in perspective, showing the cross-sectional shape of the breaker strip members which are used at the top of the door opening:

Fig. 3 is a fragmentary view in perspective, also showing a cross-section of the breaker strip elements which are employed on the sides and bottom of the door opening;

Fig. 4 is a plan view of one of the spring clips which is used for securing the breaker strip elements in place;

Fig. 5 is a view in perspective of the spring clip of Figure 4;

Fig. 6 is a fragmentary front elevational view in partial section of the upper left corner of the cabinet at the front door opening, showing the details of construction and assembly of the parts;

Fig. 7 is a fragmentary vertical sectional view taken on the plane of the line 7—7 of Figure 6, looking in the direction of the arrows;

Fig. 8 is a similar sectional view taken on the plane of the line 8—8 of Figure 6, looking in the direction of the arrows, showing the details of construction of the breaker strip at the side of the door opening;

Fig. 9 is an end elevational view of the spring clips used to secure the breaker strips.

Referring to Figure 1, 10 indicates in its entirety the refrigerator cabinet, which preferably includes an outer shell 11 and an inner shell 12, the back of which is visible in Figure 1. The inner shell comprises a box-like metal receptacle having a back 13, side walls 14, 15, top wall 16 and bottom wall 17, the liner 12 being open in front and provided on the forward edge of its side walls, top and bottom with flanged construction shown in Figures 7 and 8.

For example, at the top of the liner 12, Figure 7, the top wall 16 is bent upward with an

easy bend at 18 and provided with the vertically extending face flange 19, which is again bent forwardly at an angle slightly larger than a right angle at 20, and provided with an attaching flange portion 21 that extends toward the adjacent parts of the outer shell.

The easy bend 18, at the forward edges of the liner 12, extends all around the door opening as may be seen also in Figure 8, which is a cross-section through the side breaker strip construction. The outwardly extending flange 22, Figure 8, which is carried by the easy bend 18 at the sides and bottom of the liner, is narrower than the flange 19 because the present construction contemplates a narrower breaker strip element on the sides and bottom of the door opening.

Referring again to Figure 8, the liner is bent forwardly at substantially right angles at 23, and is provided with an attaching flange portion 24 which extends toward the adjacent parts of the outer shell.

Thus the inner lining for the cabinet is provided all around the door opening with the particular construction and arrangement of flanges, as shown and described, for the purpose of providing a finished appearance and providing also for the attachment of breaker strips, and for the attachment of the liner to the shell.

The outer shell 11 preferably has its side wall 25, top wall 26 and other side wall 27, all formed of a single piece of metal bent to the substantially U-shape, as shown and provided around the door opening with the inwardly extending face flanges 28, 29, 30 and 31.

The door opening is provided with a suitable door 30*a*, which may consist of an outer metal panel 31*a* and an inner preformed insulating panel 32, suitably secured together and provided with a filler of fibrous insulation.

The door 30*a* is hinged to the outer shell 11 by hinges 33, preferably disposed inwardly of the outer edges of the face flange 30, so that the air-tight seal strip 34, carried by the rear face flange 35 of the inner door panel 32, may engage the face flanges 28—31 of the outer shell around the door opening and exteriorly of the hinges.

The inner door panel 32 may have a face flange 35, which supports the molded inwardly dished central panel portion 36, thus giving the door greater thickness and room for more insulation at the part which is opposite the door opening. Any suitable type of latch is provided on the free edge of the door (not shown).

In addition to having the inwardly extending face flanges 28—31, the outer shell 11 is bent inwardly with an easy bend at 37, Figure 8, at an angle slightly larger than 90 degrees, and is provided with the inwardly turned supporting flange 38 which extends all around the door opening, and which terminates in a backwardly turned curved lip 39.

The attaching flange 38 on the outer shell 11 extends toward the attaching flange 24 on the inner liner, these flanges being almost in the same plane in Figure 7 and in Figure 8. The difference between the planes of the flanges 38 and 24 may amount to the thickness of the grommets or spacers 40 of insulating material, which are carried by the securing screws 41 and 43, Figure 7, Figure 8.

The outer shell and inner liner may be secured together at the door opening at regularly spaced points by a plurality of brackets 43, such as are shown in Figures 7 and 8. These brackets may consist of thin strips of iron or steel of limited

cross-sectional area to reduce, as far as possible, the transmission of heat by the bracket 43.

Each bracket has a flat attaching flange 44, which may be welded to the inside of the flange 38 carried by the outer shell. One of the brackets 43 is preferably located in a substantially radial position at each corner of the door opening, and other brackets are preferably located adjacent the hinges for the door and adjacent the latch for the door, for the reason that these are points which require a maximum amount of strength and rigidity in the cabinet.

Other brackets 43 may be located adjacent the ends of each breaker strip element, that is, near and adjacent to each corner in position to be engaged by spring clips which in turn engage the breaker strip elements near their ends. Between these key points the brackets are preferably regularly spaced and sufficient in number to provide a firm support for the liner on the outer shell, but having a minimum cross-sectional area and a minimum tendency to conduct heat from the outer shell to the liner.

Each bracket 43, in addition to the attaching flange 44, has a central bowed portion 45 which is narrow and, therefore, of minimum cross section, and which by its increased length provides for the resilient support for the liner on the shell and provides a longer and more difficult path for such heat leakage as occurs.

At its end opposite to the attaching flange 44 the bracket has another attaching flange 46, the body of which is formed by slitting the bowed portion 45, and bending the attaching flange 46 downward into parallelism with the attaching flange 44. Attaching flange 46 has a punched and preformed aperture 47 which is adapted to to be engaged by the thread-forming screw bolts 41 and 42.

Referring to Figure 4 and Figure 5, these are views showing the springs by means of which the breaker strips are secured in place. Each such spring 48 has an attaching flange portion 49, with an aperture 50 and a countersunk portion 51 surrounding the punched aperture 50. The countersunk portion is adapted to receive the screw bolts 41 or 42 and to house the head of the particular screw bolt.

Each attaching flange portion is preferably formed like a small channeled member, the yoke of which is indicated at 52, and the two side flanges at 53, 54. The channel portion 52—54 of the attaching flange 49 is, however, too narrow to support the screw and, therefore, the body has an enlargement about the screw aperture 50 which itself is also provided with a side flange 55.

The edges of the flanges 53, 54 and 55 are adapted to engage the outer face of the attaching flange 23, Figure 8, of the liner, and this channeled construction provides a very stiff and secure attachment for the spring on the liner.

A single self-tapping screw 42 may pass through the aperture 50 and through an aperture in the liner flange 23, through the insulating grommet 40 and may be threaded into the attaching flange 46 of the brackets 43. The right-hand face, Figure 4, of the flange 55 also serves the purpose of a shoulder for engaging a lip on the breaker strip, as shown in Figure 8.

The springs 48 are preferably provided with a narrow central portion 56, which is formed by cutting out and bending backward a pair of flanges 57, 58. These flanges 57, 58 engage the extreme edge, that is, the upper edge of the liner attaching flange 23, Figure 8, and prevent the

spring from rotating although it is secured by a single screw.

The narrower cross-section of the portion **56** also makes the springs more flexible at the point. From the stop flanges **57**, **58** the spring is curved downwardly in Figure 9, this portion being indicated by **59**; and at its right end, in Figure 9, the spring is formed with a partially cylindrical portion **60**, the part **61** of which serves as a stop shoulder for retaining the breaker strip in engagement with the spring.

The rounded portion **60** of each spring serves as a point of pivotal engagement between the spring and each breaker strip or corner piece, and permits the utilization of the spring for urging the breaker strip into engagement with the outer shell and also for drawing the inner portion of the breaker strip into engagement with the inner liner, as will be described in greater detail.

The rounded portion **60** of the spring also serves as a camming surface, by means of which the breaker strip urges the spring away from the shell attachment flange **38** momentarily as a breaker strip is pushed into place.

The spring members **48** are preferably made of spring steel suitably treated to eliminate corrosion. The springs **48** are preferably employed at the same points as the brackets **43**, and are used in sufficient number to hold the breaker strips and corner pieces tightly in place. It may be desirable to employ more brackets than springs, but each spring must have a bracket for its point of attachment.

Referring to Figure 1, the breaker strip assembly preferably includes four corner pieces, such as are indicated at **62**, **63**, **64** and **65**, and four side and end pieces at **66**, **67** for the sides and **68**, **69** for the top and bottom or ends of the door opening. In some embodiments of the invention only a single form of extruded breaker strip section may be employed, but I prefer to make the top breaker strip element **68** wider in a vertical direction in order to provide space for control devices.

Figure 2 is exemplary of the top breaker strip element **68**, while Figure 3 is exemplary of the side and bottom breaker strip elements **66**, **67**, **69**. The breaker strip elements and corner strips of the breaker strips are preferably made of a suitable initially plastic composition, which is inert to chemical action of acids and solvents, which is of high insulating value, flexible and resilient in characteristics and nonhygroscopic. For example, the breaker strip may be made of a plastic such as ethyl cellulose or polystyrene in the form of an extruded nonmetallic strip, cut to predetermined lengths.

These strips **66**, for example, Figure 3, Figure 8, have a substantially plane body portion **70** which extends forwardly from the transverse flange **22**, Figure 8, on the liner **12** over the springs and over the open space between the liner and outer shell, and overlapping the attaching flange **38** on the shell.

At its forward edge the breaker strip body is provided with a substantially cylindrical curvature, or an easy curvature **71**, extending from the plane of the body **70** until its adjacent edge **72** engages the attaching flange **38** on the shell. This provides a face flange portion **73** forwardly of the curved portion **71**, and the face flange portion **73** is at substantially right angles to the body **70**.

The face flange portion **73** supports on its rear side a rearwardly extending supporting flange **74**, which is provided with an abrupt shoulder **75** extending toward the body flange **70**, and providing a recess **76** for receiving the rounded portion **60** of the spring. From the abrupt shoulder **75** the supporting flange **74** carries a rearwardly extending camming flange **77**, which may decrease in thickness toward its edge and which extends diagonally away from the body flange **70**.

The camming flange **77**, with the rear side **78** of the body flange **70**, provides an opening of increased width for receiving the rounded portions **60** of the springs and for gradually guiding the springs into the recess **76**.

The camming surface **77** cams the spring toward the right in Figure 8 and places a tension on the spring, the rounded portion **60** of which is thus brought into substantially the same plane as the attaching flange **49** of the spring.

The rear face **78** of the body of the breaker strip **66**, Figure 3, has adjacent its edge **79** a rearwardly extending retaining flange **80** which extends substantialy at right angles to the body **70**. The action and operation of such a breaker strip is as follows:

In addition to the resiliency of the springs, the breaker strips themselves have resilient characteristics which tend to cause them, when urged in the right direction, to bend longitudinally if necessary to close up every crack between the breaker strip and the attaching flanges **38** of the outer shell and **22** of the liner.

The liner and shell having been provided with their suitable allotment of springs, regularly spaced and sufficient in number to pull the breaker strip tightly into place throughout its full length, a breaker strip such as the strip **66** may be so manipulated that the lip **81** of the camming flange **77** is forced behind the rounded portion **60** of the springs, in between the springs and the attaching flange **38** of the shell.

At this time the retaining flange **80** is at the leading end of the breaker strip at its movement into the door opening, but the retaining flange **80** is pivoted into the door opening until it passes the channeled body portion **49** of the springs.

As the breaker strip progresses with its camming flange **77** between the springs and the attaching flange **38** of the shell, the springs, Figure 8, are forced toward the right until the rounded portion **60** of the spring passes over the shoulder **75** into the recess **76**, which is its final position.

The edge **72** of the breaker strip, which is preferably rounded, has a line-contact with the shell attaching flange **38**, about which the breaker strip may be caused to pivot by the force of the spring which engages in the recess **76** below the edge **72**. Thus the spring not only pushes the edge **72** against the adjacent shell flange, but the spring also tends to cause the breaker strip to rotate to bring the edge of the flange **80** behind the channeled body **49** of each spring and to bring the edge **79** into engagement with the liner flange **22**. Similar breaker strips **67** and **69** are then slid into proper position to be retained along the side of the door opening at the bottom of the door opening.

The top breaker strip **68** is substantially similar in construction, but the face flange **73***a* is much wider and the plane body flange **70***a* does not have the right angle retaining flange **80**. Instead it has on its rear side a rearwardly extending retaining flange **82** of resilient characteristics, which is curved outwardly at **83** at the opening to a narrow slot **84**.

As seen in Figure 7, a suitable number of

angle brackets 85 are secured by screw bolts 86 to the attaching flange 19 of the liner at the top of the liner. These angle brackets have a vertical flange 87 and a horizontal flange 88, and the latter is adapted to slide into the slot 84 in the breaker strip 68. In this case, the spring 48, Figure 7, serves as a latching means for engagement in the recess 76 in the breaker strip 68, to hold the breaker strip in its place.

While the spring may also urge the rear edge 79 into engagement with the liner attaching flange 19, no pivotal movement of the breaker strip is brought about by the fact that the plane body 70*a* is held in place by the angle brackets 85 engaged in slot 84. Care must be taken to see that the slot 84 receives the flange 88 of the angle brackets as the breaker strip 68 is pushed into place.

This covers all of the elongated spaces at the sides, top and bottom of the door opening between the outer shell and inner liner, but leaves openings at the four corners, and these openings are closed by the corner pieces 62—65. These corner pieces 64 and 65 are of the same width as the face flange 73 on breaker strips 66, 67 and 69.

In effect, each corner piece 64, 65 is a short curved portion of the same breaker strip 66, Figure 3, without the supporting flange 74, camming flange 77 and retaining flange 80, as these would interfere with the overlapping of the corner piece with the adjacent ends of the breaker strips 66, 69, for example. Therefore, an additional means must be provided for securing each corner piece in place, and each corner piece has an aperture such as the aperture 89, Figure 7, for the self-tapping screw 90.

This screw preferably is of the finishing type, having its head substantial.y flush with the outside of the corner piece, and it passes through the aperture 89, through an insulating spacer 91 and into a suitable flange of a bracket 92 like the brackets 43. Each corner piece overlaps the ends of the adjacent breaker strip elements, and each corner piece is, therefore, formed of a size and proportion so that its inner surface corresponds to the outer surface of the adjacent breaker strips.

Special corner pieces 62, 63 are provided for the upper corners of the breaker strip assembly, because here the corner pieces must join a narrow breaker strip of the type of Figure 3, with a wide breaker strip of the type of Figure 2.

Thus the upper corner pieces 62, 63 have a wider upper portion complementary in size and shape to the outside of the breaker strip 68, which they overlap and engage. Each of these upper corner pieces 62, 63 then taper down and curve at right angles until their lower portion is complementary in size and shape to the outside of the breaker strip members 66 and 67, which they overlap and engage, being secured by a screw bolt 90.

The space between the liner and the outer shell on all sides, top, back and bottom of the cabinet is filled with fibrous insulation which is maintained in a dry condition by the fact that the evaporator, shown diagrammatically in Figure 1 at the top, is below freezing temperature, tending to condense and freeze the moisture in the air, and moisture between the two shells is likewise drawn past the edges of the breaker strip and abstracted from the insulation, since the breaker strip does not have air-tight contact with the shells.

It will thus be observed that the present breaker strip assembly is secured and held in place by means of concealed springs which urge the one edge of the breaker strip into tight engagement with the liner, and the other edge into tight engagement with the shell, and at the same time the springs retain the breaker strip in position. No screws are exposed except at the corner pieces, and the present breaker strip assembly may be assembled in a minimum amount of time with a minimum amount of labor.

Due to the flexibility of the elongated breaker strip elements the edges of the breaker strip can be drawn into tight contact with the liner and shell at all points, the breaker strips being held positively and securely without rattling and without showing any deformation, yet they are flexible enough to permit manufacturing variations; and the securing means permits the necessary expansion and contraction of the materials which comprise the assembly.

The construction is easily assembled, is neat in appearance, easy to keep clean, and it provides an efficient heat breaker strip between the liner and the shell of the cabinet.

While I have illustrated a preferred embodiment of my invention, many modifications may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of construction set forth, but desire to avail myself of all changes within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. In a refrigerator cabinet construction, an outer shell having a door opening and an inwardly extending shell flange about said opening, a liner supported on said shell and forming a refrigeration compartment, said liner having a door opening bordered by a first outwardly extending liner flange, said first liner flange carrying a second forwardly extending line flange spaced from said shell flange, a plurality of resilient spring securing members carried by the second liner flange, each of said spring members having an attaching body with an aperture for receiving a threaded member, and with a lug engaging the edge of the second liner flange to prevent rotation of the spring members, said spring members each having a spring finger projecting forwardly and resiliently engaging said shell flange, said fingers terminating in a partially cylindrical camming and retaining end formation, and a preformed breaker strip of resilient, flexible and nonhygroscopic material, the said strip being of substantially uniform cross section and having a smooth body extending from the first liner flange forwardly in the door opening, and curving outwardly about the ends of said spring fingers into engagement with said shell flange, the strip having a backwardly turned securing flange interposed between said fingers and the shell flange, said securing flange having a shoulder facing toward said spring fingers and engaging them inwardly of their ends, the fingers drawing the outermost part of said breaker strip into tight engagement with the shell flange, and the breaker strip tending to pivot due to the tension of said spring fingers to cause its inner edge to engage the first liner flange, the said breaker strip being installed by pushing its backwardly turned flange in between the fingers and the shell flange.

2. In a refrigerator cabinet construction, an outer shell having a door opening and an inward-

ly extending shell flange about said opening, a liner supported on said shell and forming a refrigeration compartment, said liner having a door opening bordered by a first outwardly extending liner flange, said first liner flange carrying a second forwardly extending liner flange spaced from said shell flange, a plurality of resilient spring securing members carried by the second liner flange, each of said spring members having an attaching body with an aperture for receiving a threaded member, and with a lug engaging the edge of the second liner flange to prevent rotation of the spring members, said spring members each having a spring finger projecting forwardly and resiliently engaging said shell flange, said fingers terminating in a partially cylindrical camming and retaining end formation, and a preformed breaker strip of resilient, flexible and nonhygroscopic material, the said strip being of substantially uniform cross section and having a smooth body extending from the first liner flange forwardly in the door opening, and curving outwardly about the ends of said spring fingers into engagement with said shell flange, the strip having a backwardly turned securing flange interposed between said fingers and the shell flange, said securing flange having a shoulder facing toward said spring fingers and engaging them inwardly of their ends, the fingers drawing the outermost part of said breaker strip into tight engagement with the shell flange, and the breaker strip tending to pivot due to the tension of said spring fingers to cause its inner edge to engage the first liner flange, the said breaker strip being installed by pushing its backwardly turned flange in between the fingers and the shell flange, the said breaker strip also having on its backwardly turned flange an outwardly curved camming portion, the edge of which is located to engage between the fingers and the shell flange, to cam the spring fingers away from the shell as the breaker strip is installed.

3. In a refrigerator cabinet construction, an outer shell having a door opening and an inwardly extending shell flange about said opening, a liner supported on said shell and forming a refrigeration compartment, said liner having a door opening bordered by a first outwardly extending liner flange, said first liner flange carrying a second forwardly extending liner flange spaced from said shell flange, a plurality of resilient spring securing members carried by the second liner flange, each of said spring members having an attaching body with an aperture for receiving a threaded member, and with a lug engaging the edge of the second liner flange to prevent rotation of the spring members, said spring members each having a spring finger projecting forwardly and resiliently engaging said shell flange, said fingers terminating in a partially cylindrical camming and retaining end formation, and a preformed breaker strip of resilient, flexible and nonhygroscopic material, the said strip being of substantially uniform cross section and having a smooth body extending from the first liner flange forwardly in the door opening, and curving outwardly about the ends of said spring fingers into engagement with said shell flange, the strip having a backwardly turned securing flange interposed between said fingers and the shell flange, said securing flange having a shoulder facing toward said spring fingers and engaging them inwardly of their ends, the fingers drawing the outermost part of said breaker strip into tight engagement with the shell flange, and the breaker strip tending to pivot due to the tension of said spring fingers to cause its inner edge to engage the first liner flange, the said breaker strip being installed by pushing its backwardly turned flange in between the fingers and the shell flange, the said breaker strip being provided with an outwardly projecting engaging rib facing toward the outwardly extending flange on the liner and another such rib facing toward the inwardly extending flange on the shell.

4. In a refrigerator cabinet construction, an outer shell having a door opening and an inwardly extending shell flange about said opening, a liner supported on said shell and forming a refrigeration compartment, said liner having a door opening bordered by a first outwardly extending liner flange, said first liner flange carrying a second forwardly extending liner flange spaced from said shell flange, a plurality of resilient spring securing members carried by the second liner flange, each of said spring members having an attaching body with an aperture for receiving a threaded member, and with a lug engaging the edge of the second liner flange to prevent rotation of the spring members, said spring members each having a spring finger projecting forwardly and resiliently engaging said shell flange, said fingers terminating in a partially cylindrical camming and retaining end formation, and a preformed breaker strip of resilient, flexible and nonhygroscopic material, the said strip being of substantially uniform cross section and having a smooth body extending from the first liner flange forwardly in the door opening, and curving outwardly about the ends of said spring fingers into engagement with said shell flange, the strip having a backwardly turned securing flange interposed between said fingers and the shell flange, said securing flange having a shoulder facing toward said spring fingers and engaging them inwardly of their ends, the fingers drawing the outermost part of said breaker strip into tight engagement with the shell flange, and the breaker strip tending to pivot due to the tension of said spring fingers to cause its inner edge to engage the first liner flange, the said breaker strip being installed by pushing its backwardly turned flange in between the fingers and the shell flange, the said breaker strip also having on the back side of its body an inwardly extending flange separated from the body by a slot, and a plurality of angle brackets carried by the second liner flange and projecting toward the front of the door opening for engaging in said latter slot.

5. In a refrigerator cabinet construction, an outer shell having a door opening and an inwardly extending shell flange about said opening, a liner supported on said shell and forming a refrigeration compartment, said liner having a door opening bordered by a first outwardly extending liner flange, said first liner flange carrying a second forwardly extending liner flange spaced from said shell flange, a plurality of resilient spring securing members carried by the second liner flange, each of said spring members having an attaching body with an aperture for receiving a threaded member, and with a lug engaging the edge of the second liner flange to prevent rotation of the spring members, said spring members each having a spring finger projecting forwardly and resiliently engaging said shell flange, said fingers terminating in a partially cylindrical camming and retaining end formation, and a preformed breaker strip of resilient, flexible and nonhygroscopic material, the said strip

being of substantially uniform cross section and having a smooth body extending from the first liner flange forwardly in the door opening, and curving outwardly about the ends of said spring fingers into engagement with said shell flange, the strip having a backwardly turned securing flange interposed between said fingers and the shell flange, said securing flange having a shoulder facing toward said spring fingers and engaging them inwardly of their ends, the fingers drawing the outermost part of said breaker strip into tight engagement with the shell flange, and the breaker strip tending to pivot due to the tension of said spring fingers to cause its inner edge to engage the first liner flange, the said breaker strip being installed by pushing its backwardly turned flange in between the fingers and the shell flange, a plurality of similar springs similarly located on the other three sides of the door

opening, similar breaker strips held by said latter springs and spaced from each other at the corners, and corner plates overlapping the breaker strips and covering them at the corners of the door opening.

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