

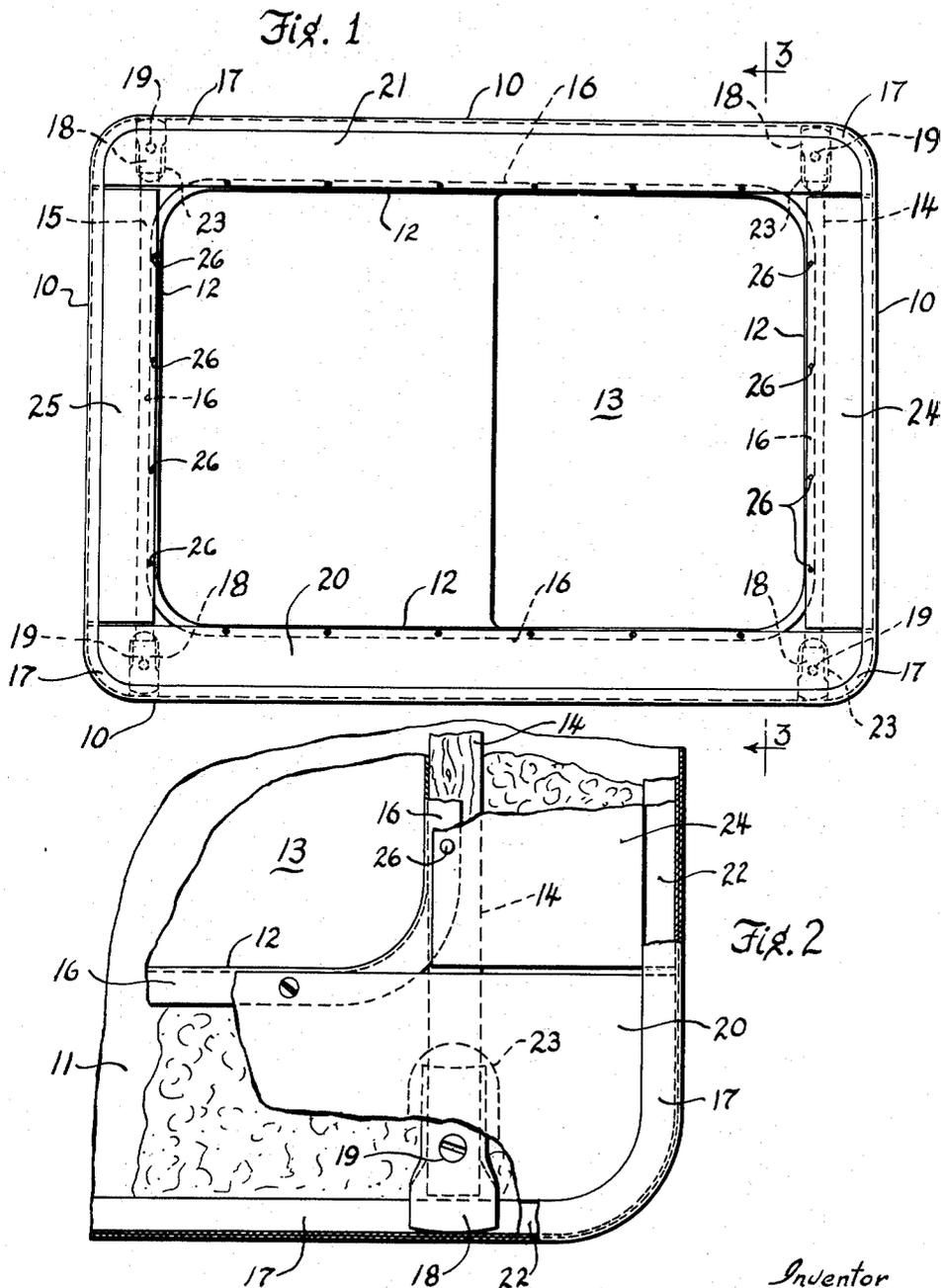
Oct. 11, 1955

R. E. MOORE
CHEST LINER SUPPORT

2,720,335

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2 Sheets-Sheet 1



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2 Sheets-Sheet 2

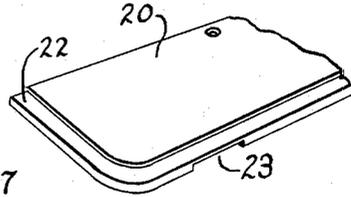
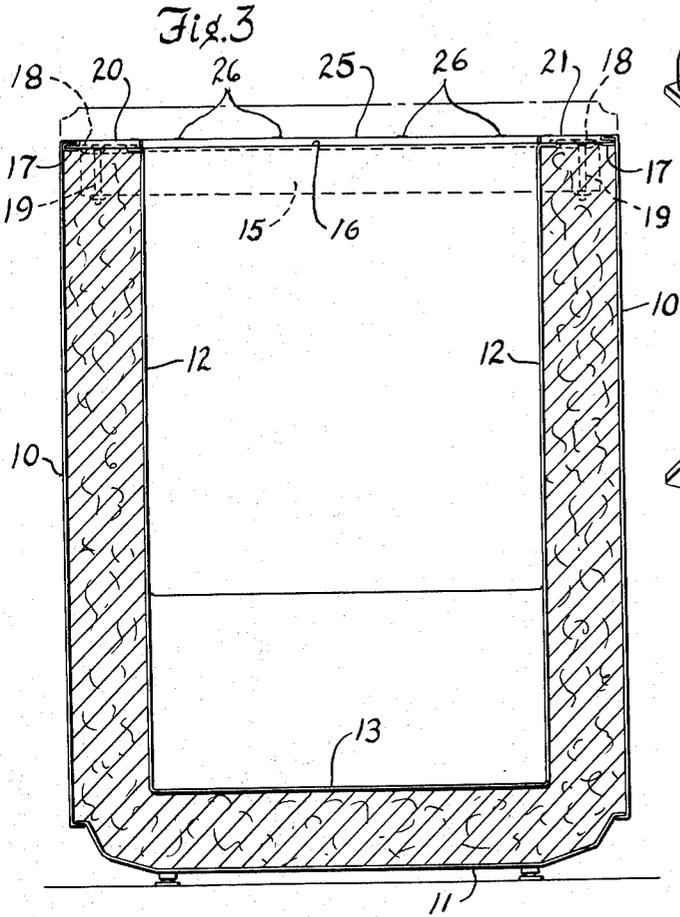


Fig. 5

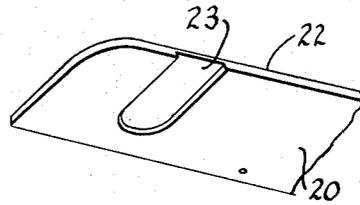


Fig. 6

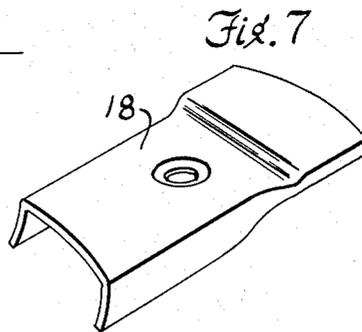
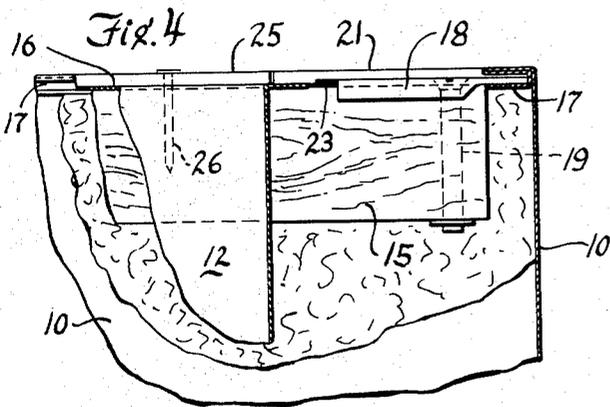


Fig. 7

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2,720,335

CHEST LINER SUPPORT

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8 Claims. (Cl. 220—15)

The present invention relates to an improvement in supporting means for a chest liner, and more particularly to such means for supporting a liner in a top-opening freezer and the like.

Such freezers have long been constructed with an outer casing having a bottom and vertical side walls, and an inner liner, having a bottom and side walls, and disposed within the outer casing. Between the inner and outer casings there is sufficient space to provide thermal insulation. This space has commonly been filled with a heat insulating material. A hinged cover has been provided over the top of the chest body, formed by the inner and outer casings, for access to the inner food compartment. In such a conventional freezer as heretofore made, the inner liner, adapted to carry a heavy food load, has been supported in a number of ways, usually by blocks or other supports underneath the liner.

Experience has shown that when any means of supporting the liner at its bottom is employed, variations in the heights of the liner and the outer casing result. With the top edges of the vertical walls of the liner and outer casing in different planes, and uneven with respect to each other, it is exceedingly difficult or impossible to so position breaker strips over the space between the tops of the inner and outer casings whereby a tight fit with the hinged covering of the chest can be obtained. It is, of course, essential for efficient operation of a freezer chest to have a tight fit between the chest body and the cover.

By employing supporting means for the inner liner only at the top edges of the liner and casing, I have found that the top edges of both the casing and the liner can be secured and held at the same height, and maintained in alignment. The breaker strips, with their gasket, can then be evenly fitted into position between the top edges of the vertical walls of the casing and liner. The breaker strips and their gasket covering then present a level, even, smooth surface, and a snug, tight fit with a chest cover can be effected and maintained.

It is an object of the present invention to provide a novel and improved supporting means for the inner liner, whereby the liner is suspended from and supported only at the top vertical walls thereof, and the top edges of the vertical walls are maintained and held at the same height as the top vertical walls of the outer casing, with a resulting tight fit between the chest body and the covering or top. This tight fit between the chest body and top, of course, greatly increases the efficiency of the operation of the freezer, and insures that the proper and desired temperatures are maintained within the food compartment.

It is a further object of the present invention to provide a support for the inner casing of a freezer chest which is simple, practical, and economical, and can be installed at a minimum of cost and expense. My support assembly can be slid into place on the main assembly line of a freezer manufacturing plant, with no bolts to be placed, and yet it provides a highly efficient and simple

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means of supporting the inner chest liner and the heavy food load which it is required to carry.

My present invention is capable of being utilized in various forms and with various modifications. A preferred form is shown in the drawings, in which:

Figure 1 is a top plan view of a freezer chest showing the outer casing and inner liner, and the combination of elements employed to support the inner liner.

Figure 2 is a top plan view, partly in section, of one end of my liner-supporting beam.

Figure 3 is a cross-section along the line 3—3 of Figure 1.

Figure 4 is a cross-section of one end of the liner-supporting beam.

Figure 5 is an elevational view of one end of a breaker strip, placed at the front and rear of the chest.

Figure 6 is an underside elevational view of the breaker strip shown in Fig. 5.

Figure 7 is a top elevational view of the tongue positioned at each end of the liner-supporting beam.

Referring more particularly to the drawing, Figs. 1 and 3 show the outer casing comprising four vertical side walls 10 and a bottom 11. The inner lining, disposed within the outer casing, has four side walls 12 and a bottom 13.

Extending between the front and rear vertical walls of the outer casing, and adjacent the top thereof, are two parallel beams 14 and 15, preferably of wood. These beams are supported in the vertical walls 10 of the outer casing, as will be hereinafter more fully described.

The inner liner is adapted to be placed between beams 14 and 15, and supported thereby. A flange 16 extends outwardly from the top of each of the vertical walls 12 of the inner-liner. This flange rests on the top of the two wooden beams 14 and 15, on opposite sides of the inner-liner, and the beams thus support the liner. The wood acts as a thermal insulation and at the same time provides mechanical strength.

The liner-supporting beams 14 and 15 are supported on the outer casing as follows: As best shown in Figures 3 and 4, a longitudinal supporting groove 17 extends inwardly from the top of the vertical walls 10 of the outer casing, and is formed integral therewith. This integral supporting groove is adapted to receive a metal tongue 18 (shown in Figure 7) of the supporting beams 14 and 15. One of the metal tongues 18 is bolted to each end of the liner-supporting beams 14 and 15 by means of bolt 19. When the beams 14 and 15 have their tongue-ends 18 inserted in the supporting grooves 17, the beams are slidably supported on the outer casing.

Two breaker strips 20 and 21 are placed transversely across the ends of the beams 14 and 15. These breaker strips are of such width as to cover the opening between the inner-liner and the outer casing. The breaker strips 20 and 21 as shown in Fig. 5 have a recessed portion 22 adapted to fit within the triple flange 17 on the outer casing. Screws are driven through the inner edge of the breaker strips 20 and 21 to attach said strips to the flange 16 of the inner-liner.

As best shown in Fig. 6, the underside of each of the breaker strips 20 and 21 are milled out adjacent each end thereof to form a groove 23, adapted to receive the metal tongue 18 on the supporting beams. When the breaker strips are placed transversely across the ends of the beams 14 and 15, the tongues 18 are recessed in the grooves 23, and the beam 14 and 15 are thereby held and firmly locked against horizontal sliding movement along the flange 17 of the outer casing wall. Breaker strips 24 and 25 extend between the breaker strips 20 and 21, and cover the space between the remaining walls of the inner and outer casing. Nails 26 are driven through

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the breaker strips 24 and 25, through the inner-liner flange 16, and into the wooden liner beams 14 and 15.

The assembly of the herein disclosed chest liner support is simple and economical. After the outer casing has been insulated, the two liner-supporting beams 14 and 15, with their attached end-tongues 18, are slid into the outer casing triple flange 17. The beams are then slid apart a sufficient distance to receive the inner-liner between them. The inner-liner is dropped into place between the beams 14 and 15. The beams are then slidably moved together by hand until they are under the liner flange 16. With the liner flange 16 resting on the two beams 14 and 15, the beams support the liner. Breaker strips 20 and 21 are next put in place transversely of the beams 14 and 15, so that the grooves 23 on the underside of the breaker strips receive the tongues 18, thus locking the beams 14 and 15 against horizontal sliding movement. Breaker strips 24 and 25 are then placed in position and nails driven through these strips, through the liner flange 16, and into the wooden beams 14 and 15.

A rubber outer casing gasket (not shown) may be cemented to the breaker strips and the outer casing triple flange 17, to provide an even, level surface for engagement with the chest top.

From the foregoing, it will be seen that my improved means for supporting the freezer liner produces an even, level upper surface for the outer casing gasket. The vertical walls of the inner-liner are held and maintained at the same height as the vertical walls of the outer casing. This alignment makes possible an even, smooth, level upper gasket surface for the chest body, and provides a tight, efficient fit between the chest body and its top. The support for the inner-liner is strong and sturdy, and will adequately carry the heavy food load, and yet provides heat insulation between the inner-liner and the outer-casing. In addition, the combination of elements for supporting the inner-liner is simple, economical and extremely easy to assemble.

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

1. In a freezer chest, having a top adapted to open and a chest body comprising an outer casing with a bottom and side walls, and a liner disposed within said outer casing, the combination of spaced-apart beams extending substantially horizontally between opposite side walls of said outer casing and supported by said walls adjacent the top thereof for lateral slidability only, said beams being adapted to support said inner liner, breaker strips extending transversely over the ends of said beams and means fixedly securing said breaker strips relative to said outer casing, said breaker strips having notched portions therein to receive said beams and lock them against lateral horizontal sliding movement relative to said outer casing.

2. In a top-opening freezer chest, having an outer casing and an inner-liner disposed within said outer casing, the combination of a beam extending substantially horizontally between opposite side walls of said outer casing and laterally slidably supported by said outer casing adjacent the top thereof, a second beam extending substantially parallel to said first beam and laterally slidably supported by said outer casing, said beams being adapted to support between them the inner liner of said chest, and breaker strips adapted to cover the top opening between said outer casing and inner-liner, at least two of said breaker strips having recesses therein adapted to cooperate with associated projection on said beams to lock said beams against all horizontal movement.

3. In a top-opening freezer chest, the combination of an outer casing having a bottom and side walls, an inner-casing having a bottom and side walls, and disposed within said outer casing, with space between said

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casings, an inwardly extending, receiving and supporting groove adjacent the top of each of two opposite walls of said outer casing and integrally formed therewith, spaced-apart beams having a tongue at each end thereof, and extending between said opposite walls of the outer casing, said tongues being adapted to rest in said grooves and be slidably supported thereby, outwardly extending flanges on opposite walls of said inner casing, said flanges being adapted to rest on said beams, whereby said inner casing is supported by said beams, breaker strips adapted to cover the space between the said inner and outer casings, and extending transversely over the tongues on said beams, said breaker strips having grooved portions to receive said tongues and lock said beams against horizontal sliding movement.

4. In a top-opening freezer chest, the combination of an outer casing having a bottom and side walls, an inner-casing having a bottom and side walls, and disposed within said outer casing, with space between said casings, an inwardly extending flange adjacent the top of each of two opposite walls of said outer casing, spaced-apart beams having a tongue at each end thereof, and extending between said opposite walls of the outer casing, said tongues being adapted to rest on said flanges and be slidably supported thereby for lateral slidability, outwardly extending flanges on opposite walls of said inner casing, said flanges being adapted to rest on said beams, whereby said inner casing is supported by said beams, breaker strips adapted to cover the space between the said inner and outer casings, and extending transversely over the tongues on said beams, said breaker strips having grooved portions to receive said tongues and lock said beams against horizontal sliding movement.

5. In a top-opening freezer chest, having an outer shell comprising a bottom and side walls, an inner-liner disposed within said outer shell and having a bottom and side walls, said inner-liner being disposed at a distance from said outer shell to provide space for thermal insulation, the combination of two spaced-apart horizontal beams extending between opposite walls of the outer casing and adjacent the top thereof, a flange on said opposite walls of said outer casing for supporting said beams for lateral sliding movement but preventing longitudinal sliding thereof, an outwardly extending flange adjacent the top of opposite vertical walls of said inner casing, said flanges being adapted to rest on said beams whereby the inner casing is supported between said beams, and breaker strips with grooved portions therein adapted to be positioned transversely of said beams and cover the space between the inner and outer casing, said groove portions being adapted to receive said beams and lock them against horizontal lateral sliding motion on said outer casing flange.

6. In a top-opening freezer chest, having an outer casing and an inner-liner disposed within said outer casing, the combination of a beam extending substantially horizontally between opposite side walls of said outer casing and supported on said outer casing adjacent the top thereof for transverse slidability only, a second beam extending substantially parallel to said first beam and similarly slidably supported on said outer casing, said beams being adapted to support between them the inner liner of said chest, and breaker strips adapted to cover the top opening between said outer casing and inner-liner at least two of said strips having recesses cooperating with a portion of the beam associated therewith to prevent transverse sliding of said beams thereby locking said beams in fixed position.

7. In a freezer chest having one open wall, comprising an outer casing having five enclosing walls and an inner casing having five enclosing walls disposed within said outer casing to provide a double walled rectangular container having one open wall, the combination of spaced-apart beams extending between opposite side walls of

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said outer casing and supported against longitudinally reciprocating motion relative thereto, means associated with said beams and said inner casing for supporting said inner casing, breaker strips extending transversely over the ends of said beams and in contact with said flange, and means fixing said breaker strip relative to said outer housing, said breaker strips having notched portions therein for cooperation with the ends of said beams to receive said ends and thereby lock the beams against transverse sliding movement thus fixing said inner casing both longitudinally and laterally relative to said outer casing.

8. In a freezer chest having a top adapted to open and a chest body comprising an outer casing with a bottom and side walls and a liner disposed within said outer casing and having bottom and side walls, the combination of means for supporting said liner relative to said outer casing, said means including spaced-apart beams extending substantially horizontally and lying in a substantially horizontal plane between opposite side walls of said outer casing and means securing said beams to said outer casing side walls comprising a flange on each of said outer side walls for supporting the ends of the

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beams, breaker strips extending transversely over the ends of said beams and in contact with said flange, means fixedly securing said breaker strip relative to said outer casing, said breaker strips having recesses therein for confining the ends of the beams between said breaker strip and said flange to prevent lateral movement of said beams thereby locking said beam ends in position against said flanges, and means securing said beams to said inner liner.

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