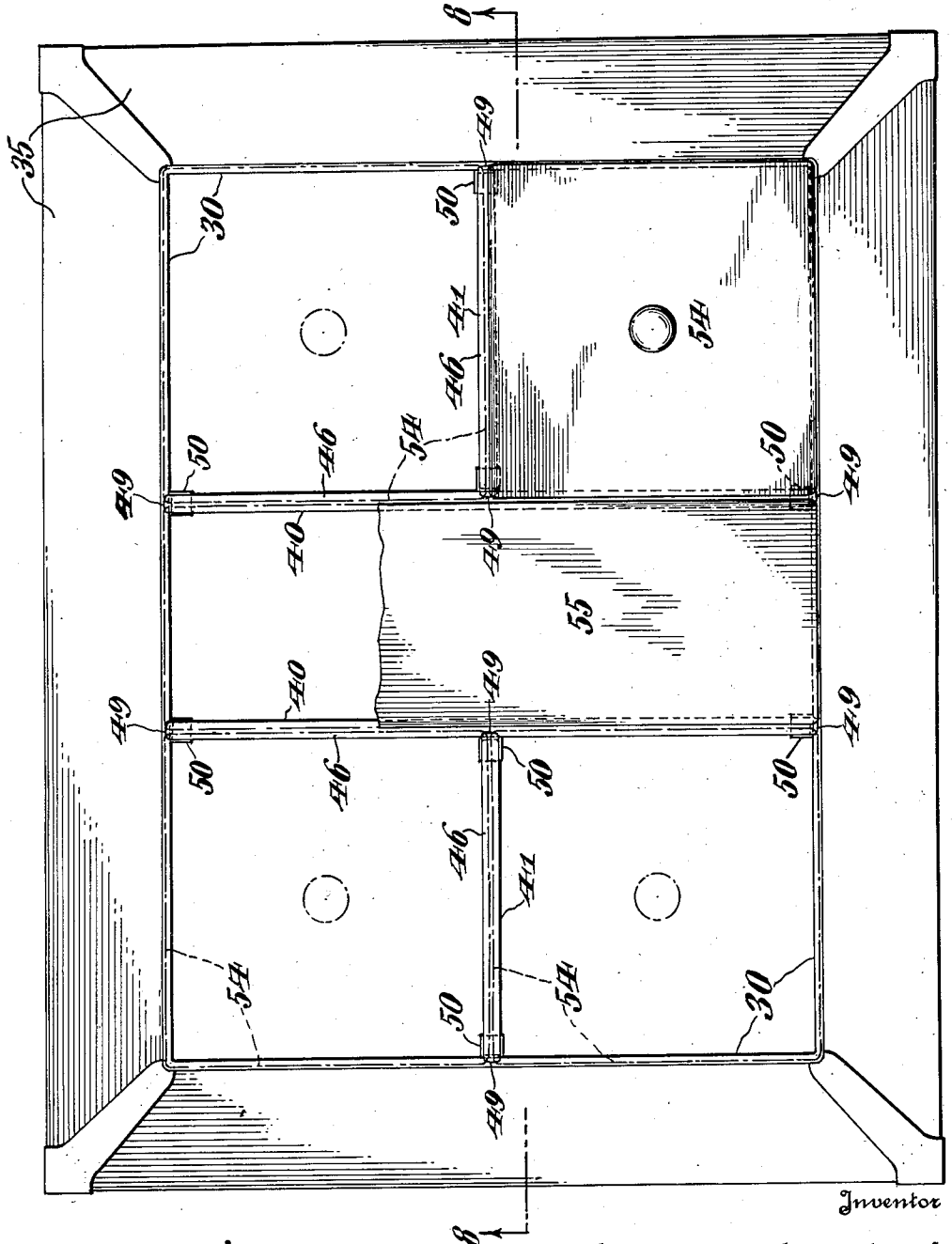
Nov. 13, 1934. A. L. LAMBERT 1,980,807

REFRIGERATOR CABINET

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Fig. 1.

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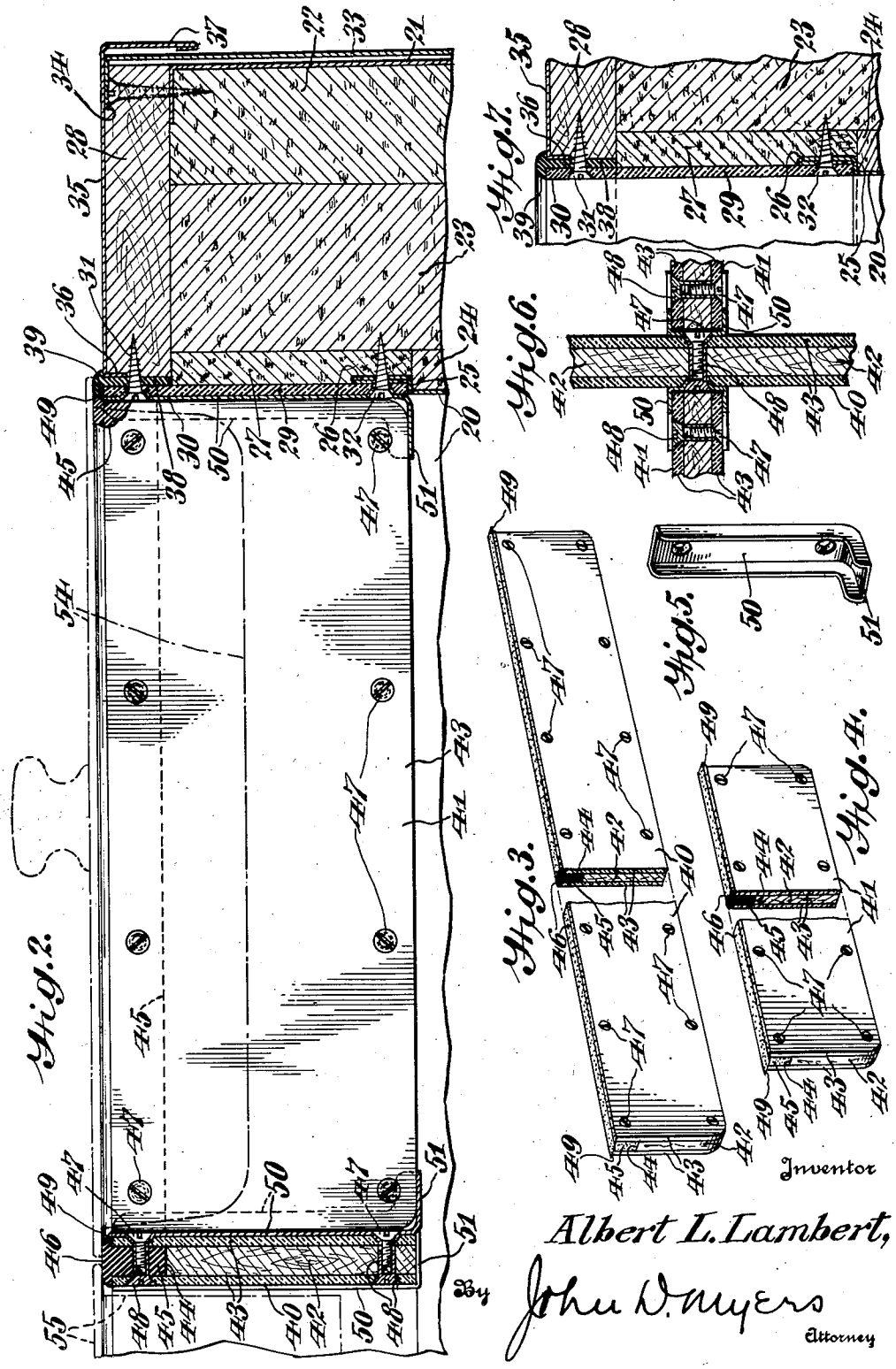


Fig. 2.

Fig. 7.

Fig. 6.

Fig. 5.

Fig. 3.

Fig. 4.

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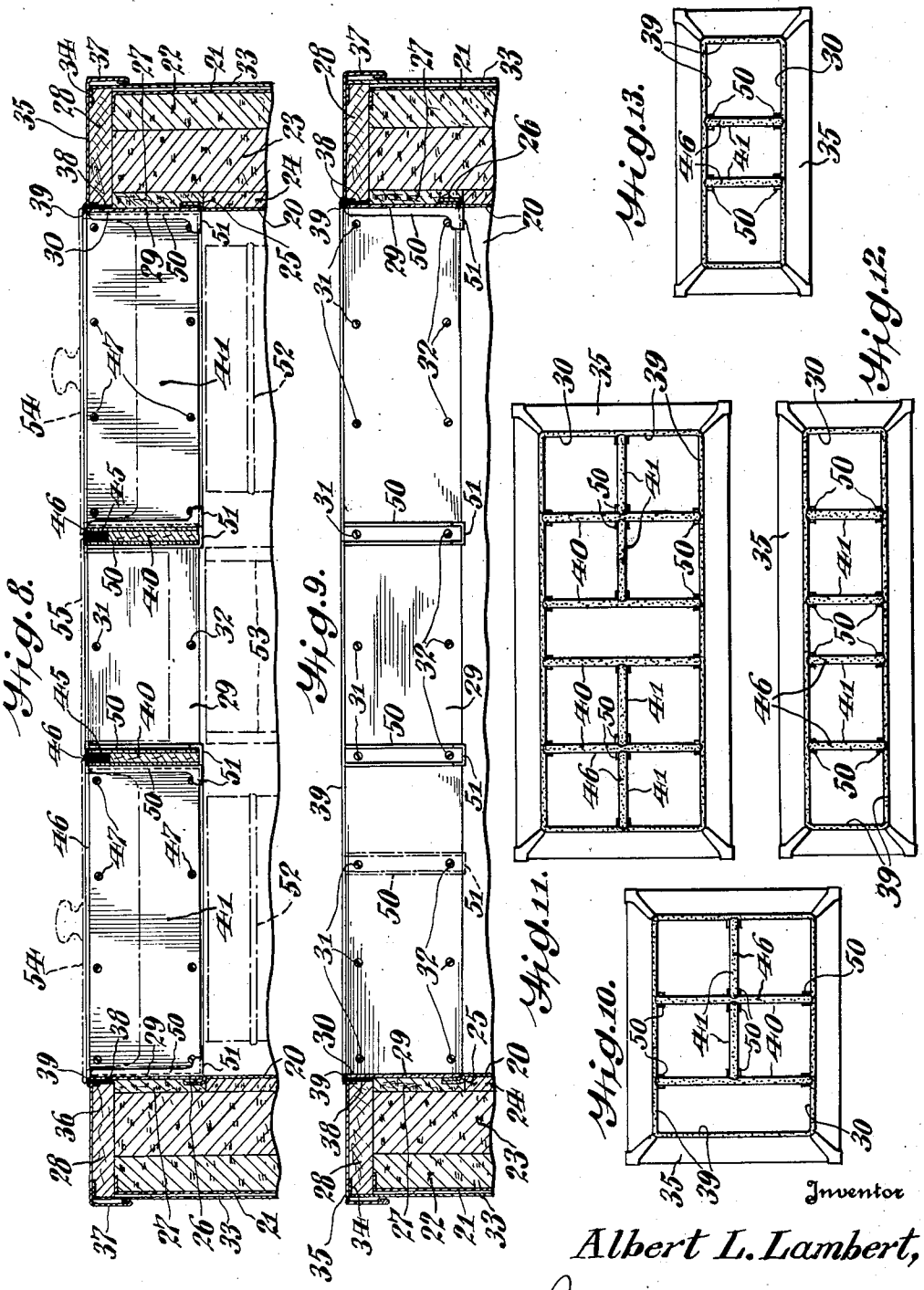
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REFRIGERATOR CABINET

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1,980,807

REFRIGERATOR CABINET

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Application October 11, 1932, Serial No. 637,232

11 Claims. (Cl. 220—9)

This invention relates to refrigerator cabinets and involves an improvement in the construction of such cabinets whereby the top opening may be variously subdivided by removable partitions in order that various parts of the structure may be standardized in manufacture and interchanged, after the cabinet has been put into use, in accordance with the desires of the user.

More particularly, the improvement has to do with refrigerator cabinets that are designed and adapted to hold containers for ice cream and similar products in locations where such products may be readily available for dispensing therefrom. As disclosed herein the improvements are incorporated in a cabinet structure the contents of which are refrigerated by means of dry ice, although the improvements are equally applicable to cabinet structures in which other means and methods of refrigeration are employed.

In view of the demands in this particular trade it is necessary for the manufacturer of ice cream cabinets to supply a variety of forms and shapes of cabinets. With the constructions heretofore employed these various forms and shapes of cabinets have necessitated special and individual construction, thus making it impossible for the user of the cabinet to make any alteration or rearrangement of the top openings. In the different forms and shapes of cabinets heretofore made for this general purpose it is necessary to sub-divide the open top of the cabinet by means of partitions for the purpose of providing a separate opening for each ice cream container, also a separate opening through which the cabinet may be serviced with dry ice when dry ice is utilized as the refrigerant. One of the objects of this invention is to so construct such an ice cream cabinet that the partitions which are utilized for sub-dividing the top opening may be easily and quickly mounted within the opening. A further object of the invention is the provision of improved partitions which are easily removable from the cabinet opening after being mounted therein. A still further object of the invention is the provision of improved partitions which are readily interchangeable in the top opening of the cabinet. A still further object of the invention is the provision of improved means secured within the cabinet opening for supporting the ends of the partitions in such a manner that the partitions may be readily removed and interchanged. It is a still further object of the invention to provide an improved construction in the top wall of the refrigerator cabinet, particularly that portion of the wall immediately surrounding the top opening. Another object of the invention is the provision of an improved partition for sub-dividing the top opening of an ice cream cabinet. Still other objects of the invention will be apparent from the disclosure herein contained.

In order that the invention may be clearly understood, reference may be made to the accompanying drawings wherein:

Fig. 1 is a plan view, partly broken away, of an ice cream cabinet with the improvements embodied therein;

Fig. 2 is a detailed vertical sectional view showing the structure of the top wall of the cabinet and the manner in which the partitions are removably supported thereby;

Fig. 3 is a perspective view, partly broken away, showing one of the transverse partitions;

Fig. 4 is a perspective view, partly broken away, of one of the longitudinal partitions;

Fig. 5 is a perspective view of one of the interchangeable stirrups for supporting the ends of the partitions;

Fig. 6 is a detailed sectional view showing the manner in which the ends of the longitudinal partitions are supported by the transverse partitions;

Fig. 7 is a detailed sectional view through a portion of the top wall of the cabinet showing the manner in which the lining for the opening and the seal surrounding the opening are secured in position;

Fig. 8 is a longitudinal sectional view through the cabinet shown in Fig. 1, taken on the line 8—8;

Fig. 9 is a longitudinal sectional view through the cabinet shown in Fig. 1, showing, in dotted lines, the manner in which the partition supporting means may be interchanged;

Fig. 10 is a plan view of the cabinet shown in Fig. 1, with the closure elements removed and the partitions located as shown by the dotted line position in Fig. 9; and

Figs. 11, 12 and 13 are plan views, with the closure elements removed, showing different forms of cabinets with the improvements incorporated therein.

The cabinet to which the improvement described herein has been adapted comprises inner and outer shells 20 and 21, preferably formed from rust-resistant metal, spaced apart to receive a suitable thickness of heat insulating material, preferably utilized in the form of slabs or layers of corkboard or any other well-known material adapted for this purpose, as shown at 22, 23 and 24. The upper edge of the inner

metallic shell 20 is preferably bent outwardly at 25 to rest upon the upper edge of the innermost layer 24 of insulating material, and is then bent upwardly and folded backwardly upon itself as shown at 26 in order that the upper edge of the inner shell may be suitably reinforced for a purpose hereinafter described. A horizontally arranged framework 28 preferably extends substantially across the upper edges of the layers of insulating material 22, 23 and 27. Preferably this framework is made of wood, although other suitable material may be utilized so long as it is sufficiently substantial and of a character to retain the screws by means of which the various parts of the cabinet structure are held together.

A lining 29 is secured to the top framework and entirely surrounds the opening 30 in the top of the cabinet. Preferably this lining is made of moisture-proof, heat insulating material. At its upper edge it is secured to the wooden framework 28 forming the top of the cabinet by means of screws 31, while its lower edge is secured in position by screws 32 passing through suitable openings therein into the reinforced upper edge of the inner shell 20.

An outer metallic shell 33 may be provided for the vertical walls of the cabinet. This outer shell being largely for purposes of ornamentation, it may be enameled or finished in any manner that may be desired. The upper edge of this outer shell is preferably turned inwardly to provide a flange 34 which rests upon the upper outer edge of the top framework 28. A metallic cover strip 35 may also be provided for the upper framework 28. This cover strip may likewise be enameled or ornamented similarly to the outer vertical shell 33. Preferably the inner edge of the cover strip 35 is turned downwardly at 36 into engagement with the inner edge of the framework 28, and the outer edge may be turned downwardly as shown at 37 along the outer vertical shell for the purpose of giving a finished appearance to the construction. It will be understood that this cover strip will be suitably secured to the upper framework in any manner that may be desired.

For the purpose of providing a seal around the top opening 30 of the cabinet a strip 38 of rubber or other suitable resilient, insulating material is secured between the upper outer face of the lining 29 and the inner edge of the horizontal portion 28 of the upper framework, and is clamped therein by means of the screws 31 which secure the upper edge of the lining to the wooden portion 28. Preferably the upper edge of this sealing strip is formed with a head or beading 39 arranged to overlie the upper edge of the lining 29 and to extend slightly over the inner edge of the cover plate 35.

The improved transverse partition members 40 and longitudinal partition members 41 comprise a wooden core 42 having a strip 43 of moisture-proof heat insulating material secured to each face thereof. The upper edges of each of these facing strips 43 extend a short distance above the upper edge of the wooden core 42 to provide an open-topped channel 44 throughout the length of each partition member. A sealing strip 45 of rubber or other suitable resilient, insulating material is inserted in this channel and extends slightly above the upper edges of the facing strips 43. Preferably the upper edge of this rubber sealing strip 45 is provided with a head or bead-like portion 46 which overlies the upper edges of the facing strips. The facing strips are preferably secured to the wooden core by means of bolts 47 provided with ferruled nuts 48, both the bolts and nuts being provided with slotted heads and beveled so as to be countersunk in the facing strips when the parts of the partition members are assembled. By the use of bolts of this type the parts of the partition members may be easily and quickly assembled without requiring the use of any tools other than an ordinary screwdriver. The ends of the sealing strips 45 are suitably undercut or otherwise shaped as shown at 49 to conform to the bead 39 on the sealing strip 38, as shown in Figs. 2, 3 and 4, and the ends of the sealing strips in the longitudinal partitions 41 are likewise so shaped as to conform to the sealing strips in the transverse partitions or the sealing strip surrounding the top opening.

The improved means for supporting the ends of the partition members in the top opening 30 of the cabinet comprise channel-shaped metallic members 50 the lower ends of which are bent at right angles to the body portion thereof, the right angularly bent portion 51 serving as a support for the ends of the partition members when in place in the cabinet opening. The partition retaining members or stirrups 50 are suitably secured to any convenient portion of the cabinet about the opening 30, and are preferably secured to a composite supporting member comprising the framework 28 and lining 29 by means of the screws 31 which secure the lining 29 to this framework, also by the screws 32 which secure the lower edge of the lining to the inner shell 20, and are arranged along the sides of the top opening 30 to space the transverse partitions 40 so that the ice cream containers 52 may be readily inserted in the cabinet and removed therefrom between the partition members. The longitudinal partitions 41 are mounted in stirrups 50 secured to the upper framework of the cabinet and to the transverse partitions, or they may be mounted in stirrups secured to the transverse partitions alone. In either case, the stirrups on the transverse partitions are secured thereto by means of the bolts 47 and ferruled nuts 48 heretofore described. The particular arrangement of the partitions will depend of course upon the desired arrangement of the ice cream containers 52 and the dry ice bunker 53 in the cabinet. As shown in Figs. 1 and 8 of the drawings, the partitions are so arranged that two containers are located adjacent each end of the cabinet with the ice bunker in the middle. As shown in Figs. 9 and 10, however, the transverse partitions may readily be rearranged so that the bunker is adjacent one end of the cabinet, and this rearrangement may be effected by the use of the same parts—partition members 40 and 41, stirrups 50 and closure members 54 and 55—as are utilized in the arrangement shown in Figs. 1 and 8.

Fig. 11 of the drawings shows a cabinet wherein the dry ice bunker is arranged transversely in the middle of the cabinet with such an arrangement of partition members as to accommodate four ice cream containers on each side thereof. With the improvement described herein it will be readily understood that the partitions may be rearranged so as to locate the ice bunker adjacent either end of the cabinet.

Fig. 12 discloses a form of cabinet in which the dry ice bunker is arranged transversely in the middle of the cabinet with an arrangement for two ice cream containers on each side of

the bunker. With the improvement described herein it will be clear that the partitions in this form of cabinet may readily be interchanged so as to locate the ice bunker adjacent either end of the cabinet.

Fig. 13 discloses a form of cabinet adapted to hold two ice cream containers, the arrangement being such that the dry ice bunker extends transversely in the middle of the cabinet with a container adjacent each end. The partitions in this form of cabinet may likewise be interchanged so as to locate the bunker adjacent either end as may be desired.

With the improved cabinet structure disclosed herein it will be clear that the top opening of the cabinet may easily be sub-divided by interchanging the partition members in order to produce an arrangement wherein the contents of the cabinet, such as the ice cream containers shown herein, are in the most suitable location desired by the user of the cabinet. In event the user of the cabinet, for convenience or otherwise, desires to rearrange the contents of the cabinet, this may be easily and quickly done by merely removing the partitions from the stirrups, removing the screws which hold the stirrups in place, and relocating the stirrups so as to position the partitions as desired, then replacing the partitions.

It will also be noted that the structure of the cabinet top with the sealing strips embodied therein, and the structure of the partition members having the sealing strips therein, are such that the edges of the closure members for the individual openings rest upon the sealing strips when the partition members are in place. The construction provides a cabinet in which standardized parts may be utilized for the partition members thus obviating the need for the manufacturer to provide an unnecessary number of parts, and making it comparatively simple for the user of the cabinet to rearrange the ice cream containers and ice bunker in the particular cabinet which he may be utilizing.

In addition to the above advantages, the construction of the improved partition members is such that these members may be easily and quickly disassembled for repair purposes. By merely removing the bolts 47 and the ferruled nuts 48 the facing strips 43 are readily separable from the stiffening member or core 42 whereupon either of these parts, or the sealing strip 45, may be replaced as required.

Having thus described the invention, what is claimed is:

1. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening, a pair of stirrups removably secured to said supporting member for adjustment into different positions on opposite sides of said opening, and a partition extending across said opening and having its ends in removable engagement with said stirrups.

2. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, a pair of stirrups removably secured to said supporting member for adjustment into different positions on opposite sides of said opening, and a partition extending across said opening and having its ends in removable engagement with said stirrups.

3. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, interchangeable stirrups removably secured to said supporting member on opposite sides of said opening, and interchangeable partitions extending across said opening and having their ends in removable engagement with said stirrups.

4. In a refrigerator cabinet having an opening in the top thereof, a composite supporting member surrounding said opening and forming a part of the cabinet structure, interchangeable partitions extending across said opening, interchangeable means for removably receiving the ends of said partitions, and means for securing said composite supporting member together and for securing said interchangeable means thereto.

5. In a refrigerator cabinet having an elongated rectangular opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, interchangeable transverse partitions extending across said opening, interchangeable means removably secured to said supporting member for removably receiving the ends of said transverse partitions, interchangeable longitudinal partitions extending between said transverse partitions, and interchangeable means removably secured to said transverse partitions for removably receiving the ends of said longitudinal partitions.

6. In a refrigerator cabinet having an elongated rectangular opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, interchangeable transverse partitions extending across said opening, interchangeable means removably secured to said supporting member for removably receiving the ends of said transverse partitions, a longitudinal partition extending between one of said transverse partitions and said supporting member, and interchangeable means removably secured to said transverse partition and said supporting member for removably receiving the ends of said longitudinal partition.

7. In a refrigerator cabinet having an elongated rectangular opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, interchangeable transverse partitions extending across said opening, interchangeable means removably secured to said supporting member for removably receiving the ends of said transverse partitions, a longitudinal partition extending between said transverse partitions and said supporting member, and interchangeable means removably secured to said transverse partitions and said supporting member for removably receiving the ends of said longitudinal partitions.

8. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, and partition supporting means secured to said supporting member, comprising interchangeable channel-shaped members for removably receiving the ends of the partitions and having their lower ends bent inwardly for engagement with the lower edges of the partitions.

9. In a partition for the opening in the top of a refrigerator cabinet, a rigid core of heat insulating material, facing strips of rigid, moisture-proof, heat insulating material secured to the opposite faces of said core and projecting beyond one of the edges thereof to provide an open-topped channel extending lengthwise of one edge of the partition, and a strip of resilient heat insulating material secured in said channel and having a bead thereon overlying the edges of said facing strips.

10. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, a sealing gasket secured to said supporting member and projecting thereabove around said opening, interchangeable partitions removably supported across said opening to subdivide the same into a plurality of smaller openings, each of said partitions having a sealing gasket embodied therein and projecting thereabove into alinement and contact with the sealing gasket secured to said supporting member, and closure means for said smaller openings, provided with edge portions contacting with said gaskets.

11. In a refrigerator cabinet having an opening in the top thereof, a supporting member surrounding said opening and forming a part of the cabinet structure, a moisture-proof lining of heat insulating material secured within said opening to said supporting member, a sealing gasket secured between said lining and said supporting member and projecting thereabove around said opening, interchangeable partitions removably supported across said opening to sub-divide the same into a plurality of smaller openings, each of said partitions having a sealing gasket embodied therein and projecting thereabove into alinement and contact with the sealing gasket secured between said lining and said supporting member, and closure means for said smaller openings, provided with edge portions contacting with said gaskets.

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