Dec. 24, 1935. J. M. KISSELLE 2,025,290

SHARP FREEZING CONTAINER

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Fig. 1

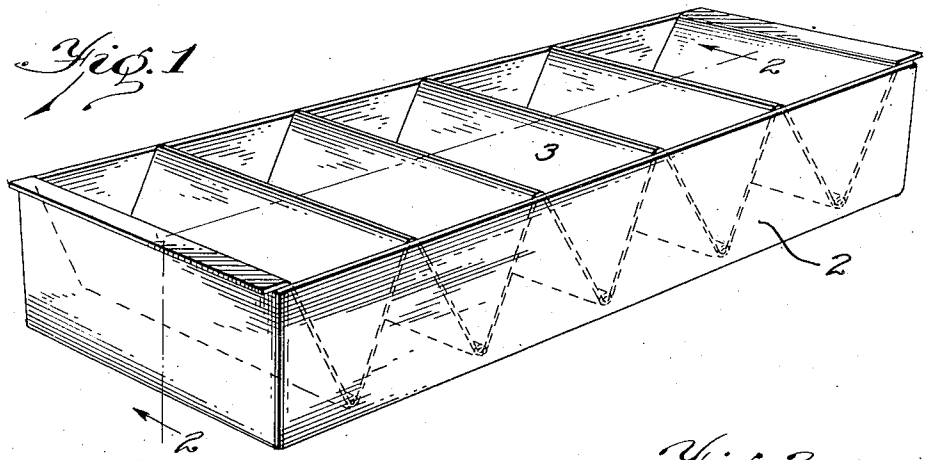
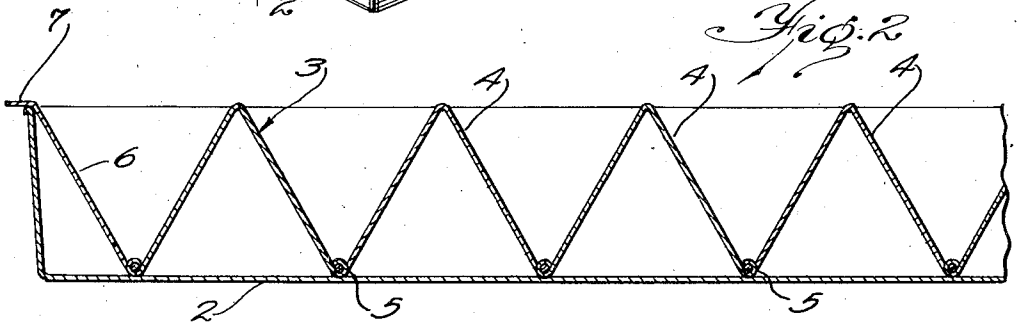


Fig. 2



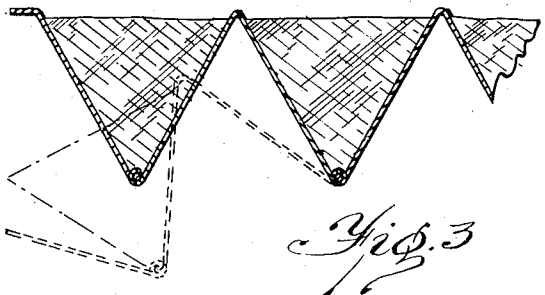


Fig. 3

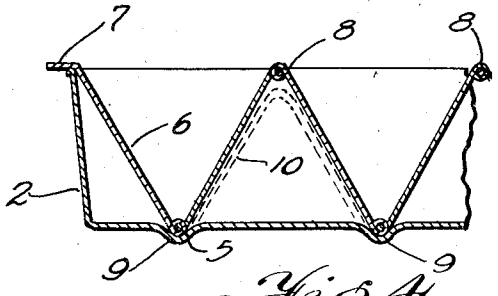


Fig. 4

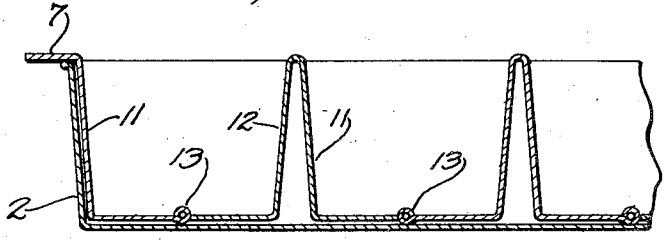


Fig. 5

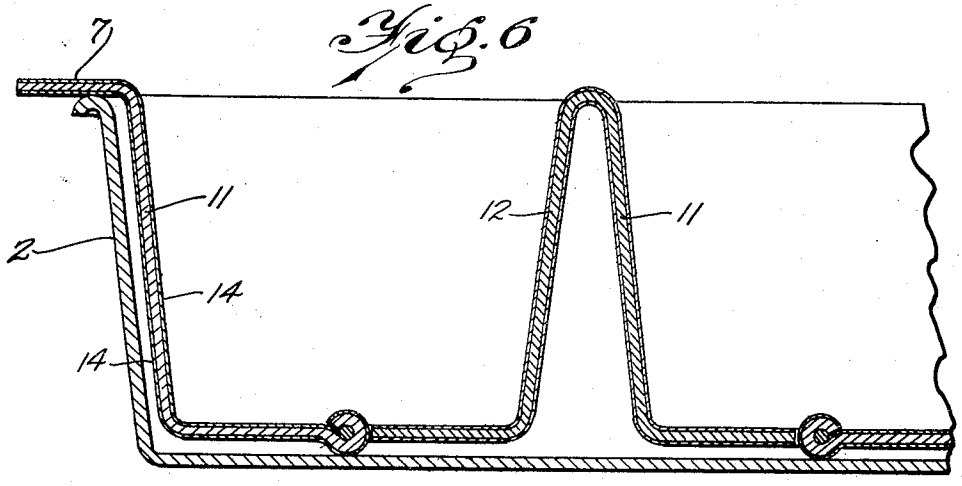
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Fig. 6



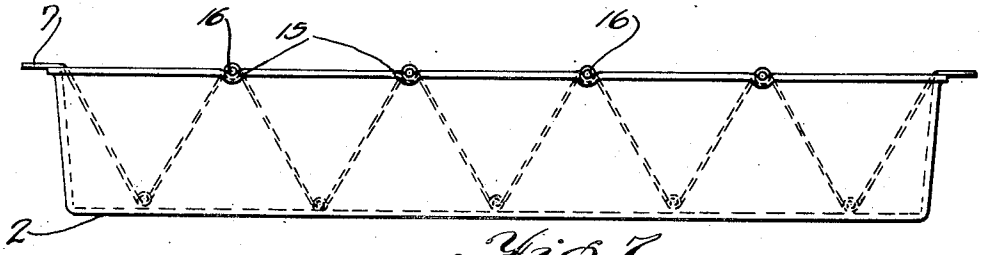


Fig. 7

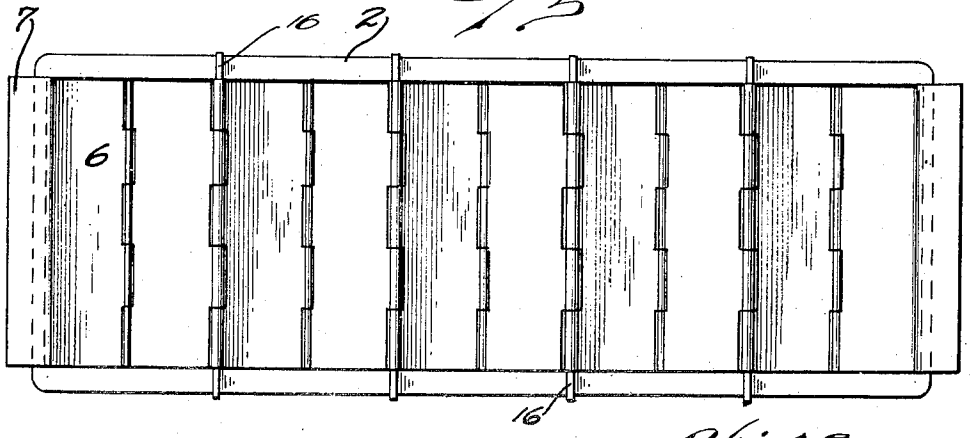


Fig. 8

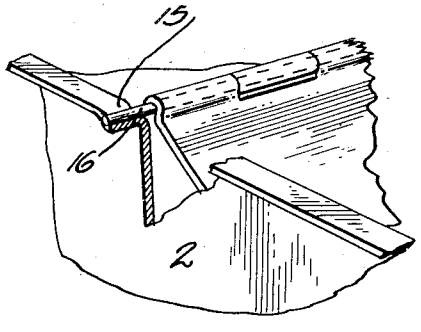


Fig. 9

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2,025,290

SHARP FREEZING CONTAINER

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Application October 13, 1931, Serial No. 568,570

14 Claims. (Cl. 62—108.5)

REISSUED

This invention relates to sharp freezing containers, and has to do particularly with that type of container having compartment forming partitions for the forming of ice cubes or blocks.

The object of the present invention is to facilitate the removal of ice blocks or cubes from an ice cube tray, and is in the nature of an improvement over prior art ice cube trays of this type, such as the rubber trays disclosed in Copeman Reissue Patent No. 17,278, and the triangular shaped flexible metal partition disclosed by the Spreen Patent No. 1,688,887, in that ready removal of the ice blocks is obtained by hinging the compartment forming walls of the partition. Instead of relying mainly upon flexibility, distortability, or the particular kind of material used, the essential feature of the present invention contemplates the bodily movement of one partition wall relative to another to facilitate ejection or removal of the ice cubes.

In the drawings:

Fig. 1 is a perspective view of a sharp freezing container provided with a compartment forming partition unit embodying the present invention.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1 and illustrating the preferred method of hinging the partition walls when arranged to form triangular shaped blocks of ice.

Fig. 3 is a fragmentary view illustrating in dotted lines the relative bodily movement of the compartment walls.

Fig. 4 is a fragmentary sectional view illustrating a slightly modified form of the structure shown in Fig. 2, wherein both the top and bottom apexes of the triangular shaped partition walls are hinged.

Fig. 5 is a fragmentary sectional view illustrating a modified form of the invention wherein the hinged partition walls are shaped to form ice blocks or cubes of rectangular cross section.

Fig. 6 is a further modification somewhat along the lines shown in Fig. 5 except that the surfaces of the hinged partitions are coated with a material to which ice does not readily adhere.

Fig. 7 is a side elevation of a container unit constructed in accordance with the showing in Fig. 4 and illustrating notches in the top of the container wall for positioning the hinged pins.

Fig. 8 is a plan view of the structure shown in Fig. 7.

Fig. 9 is a fragmentary perspective view illustrating the manner of locating the hinged partition sections at the top of the container wall.

In illustrating the various embodiments of the present invention, I have shown ice cube trays of a single width, but it will be distinctly understood that the hinged partition units may be designed and used in any multiple arrangement desired. In this connection the outside container unit 2 is preferably of metal and of any standard shape.

A removable partition unit 3 is adapted to be inserted within the container 2, and as shown in Figs. 1, 2 and 3, this partition unit is made up of a plurality of inverted V-shaped members 4, hinged together at the bottom as at 5, the end members 6 of the partition being preferably provided with suitable extensions 7 to permit grasping of the partition in the removal of the ice cubes. By this arrangement the adjacent hinged walls form the upper compartments for forming the ice blocks. Inasmuch as the walls of each compartment are relatively bodily movable, it will be seen that flexibility ceases to become an important factor as far as ice cube removal is concerned. Material forming the partition unit need not therefore be flexible, but may be made quite rigid and solid so as to obtain relatively great conductivity and provide a permanent partition unit which may be neatly fitted within the container at all times. This is in direct contrast to the standard one piece flexible partition member which upon distortion and flexing loses its original shape after extended use.

The relative bodily movement of the compartment walls will assist materially in the removal of the partition and the frozen blocks of ice from the container. The operator can grasp the portion 7 at one end of the partition and move the same inwardly, compressing the block of ice in the first compartment during the first part of the movement and then releasing the block of ice when the partition member 6 is up far enough to permit forward lateral movement. In this manner, one or several ice blocks may be removed from the container without removing the entire partition from the container, or after the entire partition has been removed in any manner, it will be obvious, referring particularly to Fig. 3, that movement of the compartment walls about the hinged members will result in relatively bodily movement of such compartment walls and the release of the ice blocks.

The partition unit may be so formed as to provide a hinged connection 8 at the top of each compartment wall as well as at the bottom. In this case it is desirable to have transverse depressions 9 in the bottom wall of the container so as to locate the bottom hinge members 5 of the partition unit, or if desired the bottom of the container unit may be formed as shown at 10 in dotted

lines so as to form a series of spaced triangular shaped portions for positively locating the walls of the partition unit. In the latter case the only ice blocks formed will be those formed by the opened compartments of the partition unit; in other words, the removal of the partition unit in such case would not leave any ice blocks in the container, as would be the case in the unit shown in Figs. 1 and 2.

The partition unit instead of being arranged to form triangularly shaped compartments may be arranged as shown in Fig. 5 to form cubical or rectangular shaped compartments. In this case the side walls 11 and 12 of the partition are preferably slightly inwardly and downwardly tapered and are hinged together as at 13. The operation of such a unit as shown in Fig. 5 will be substantially the same as the partition unit shown in Fig. 2.

In Fig. 6 I have shown a somewhat modified form of the structure shown in Fig. 5 wherein the compartment forming walls 11 and 12 are covered, preferably on both sides, with a coating 14 of rubber or any permanent material such as tung oil mixture, as set forth in Hathorne Patent No. 1,932,731. Whatever permanent material is selected, it should be of such a nature that ice will not readily adhere to it. It will be obvious that with hinged compartment members and walls formed of rubber and the like that the removal of the ice blocks will be a comparatively easy matter.

In Figs. 7, 8 and 9, I have illustrated a modified manner of mounting the partition unit shown in Fig. 4 wherein the bottom of the container is preferably flat but a series of depressions 15 are formed in the top side wall of the container to receive and locate the hinged pins 16 of the partition unit.

It will be understood that the descriptive word "hinged" in the specification and claims is used in its broadest sense and refers merely to a mechanical joint having a hinging or pivotal action.

What I claim is:

1. A sharp freezing container comprising a removable partition unit having compartment forming walls, said compartments normally extending the length of the container, said walls being hinged to facilitate removal of frozen blocks from said compartments.

2. A sharp freezing container, comprising a removable partition unit adapted to be positioned within the container to form compartments, at least one wall of each compartment being transversely hinged to permit relative bodily movement of the walls of the compartments.

3. A sharp freezing container, comprising a removable partition unit adapted to be positioned within a container to form compartments, all of said partitions extending transversely of the side walls of the container, the end compartment formed by said partition unit having hinged walls to permit bodily movement of the walls of said end compartment.

4. A sharp freezing container comprising a partition shaped to divide the container into compartments, the adjacent walls of each compartment being integral and positioned transversely of the side walls of the container and the walls of each compartment being hinged.

5. A sharp freezing container comprising a partition shaped to divide the container into compartments, the adjacent walls of each compartment being integral and the walls of each compartment being hinged, said adjacent vertical walls being positioned at an angle to each other.

6. A sharp freezing container comprising a partition shaped to divide the container into compartments, the adjacent walls of each compartment being integral and the walls of each compartment being hinged, said adjacent vertical walls being positioned at an angle to each other to form triangularly shaped compartments.

7. A sharp freezing container, comprising a partition shaped to divide the container into compartments, the adjacent walls of each compartment being integral and parallel to the end wall of the container and the bottom wall of the compartments being hinged.

8. A sharp freezing container comprising a partition shaped to divide the container into compartments, the adjacent walls of each compartment being integral and the walls of each compartment being hinged, and spaced depressions formed in said container for positioning the hinged compartments.

9. A sharp freezing container comprising a partition unit within a container, said partition unit being made up of a plurality of units hinged together in zigzag form to provide compartments, a wall of said container being so shaped as to positively locate the individual hinged compartments within the container.

10. A sharp freezing container comprising a partition unit formed to provide inverted V-shaped compartments, the side walls of each compartment being hinged together at the bottom and the bottom wall of said container being shaped to cooperate with the walls of said compartment to locate the same in proper spaced relationship within the container.

11. A sharp freezing container comprising a partition unit formed of sections of relatively thin material hinged together to form a plurality of compartments, the walls of said partition unit being formed of a material to which ice does not readily adhere.

12. A sharp freezing container comprising a partition unit formed of sections hinged together to form a plurality of compartments, both sides of the walls of said partition unit being formed of a material to which ice does not readily adhere.

13. A sharp freezing container comprising a tray, a partition unit supported by the tray and formed of relatively rigid sections hinged together to form a plurality of compartments, the ends of the compartments being defined by side walls of the tray, the points of hinging being closely adjacent the walls of each compartment, some of the walls being coated with a permanent material to which ice does not readily adhere.

14. A sharp freezing container comprising a partition unit formed of sections of relatively thin material hinged together to form a plurality of compartments for receiving a substance to be frozen, surfaces of the walls of said compartments in contact with said substance to be frozen being formed of a material to which ice does not readily adhere.

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