Nov. 14, 1967 W. B. BERNSTROM ETAL 3,352,528

ICE TRAY ASSEMBLY

Filed April 26, 1965

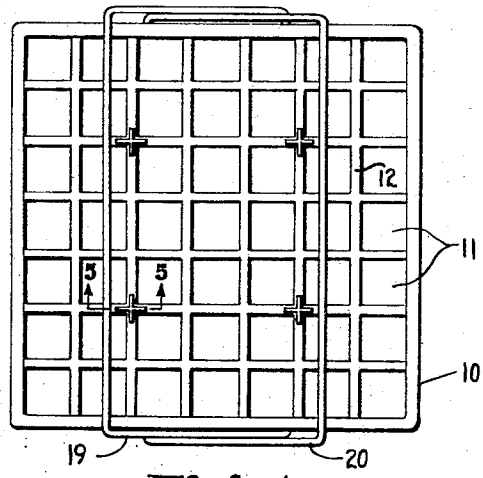
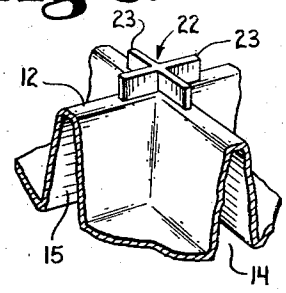


Fig. 1.

Fig. 3.



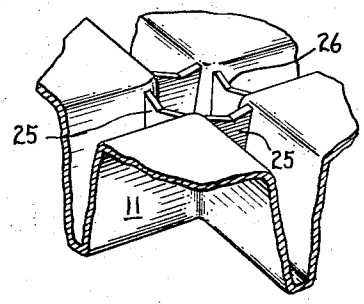


Fig. 4.

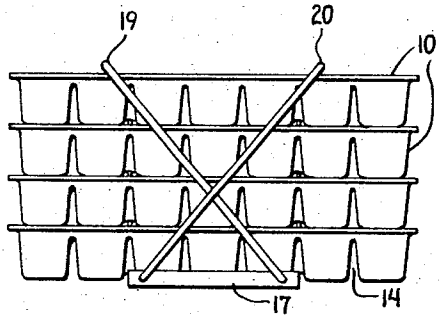


Fig. 2.

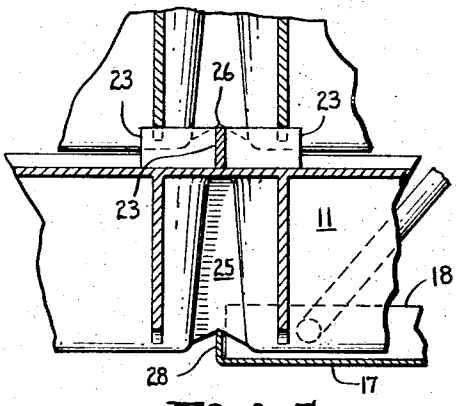


Fig. 5.

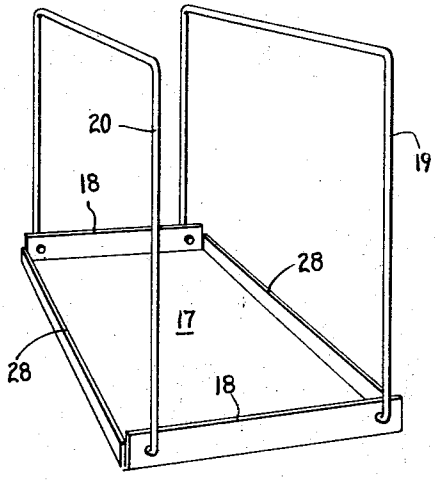


Fig. 6.

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United States Patent Office 3,352,528 Patented Nov. 14, 1967

3,352,528

ICE TRAY ASSEMBLY

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Filed Apr. 26, 1965, Ser. No. 450,793
5 Claims. (Cl. 249—126)

ABSTRACT OF THE DISCLOSURE

An ice cube molding assembly having a plurality of trays with ice molding pockets, extending supports formed on the upper side of each tray and mating notched support receivers formed on the lower side of each tray for holding the trays in alignment and separated when stacked, and a bailed pan for suppporting a stack of the trays.

Summary of the invention

Many types of home refrigerators are provided with freezing compartments which do not have any means for holding stacks of ice molding trays and, consequently, it is necessary to place one or more trays on the floor of the freezing compartment whereby a substantial area of the compartment will be occupied by the trays, and it is not possible to store packages of frozen food or other items in the space above the ice trays. Conventional ice molding trays do not have any structure for permitting stacking of trays so that there is no means of preventing trays from slipping sideways with respect to one another, and there is no means for spacing trays one above the other for permitting air to circulate between trays or for preventing trays from freezing together. Accordingly, the prior art provides no convenient means for freezing relatively large quantities of ice cubes in many types of conventional home refrigerators.

The principal object of this invention is to provide ice molding trays having means so arranged that a plurality of trays may be stacked one upon the other in spaced relation to one another and in such a manner that the stacked trays will not slip off of one another.

Another object of this invention is to provide an ice cube molding assembly consisting of a carrying means adapted to support a plurality of stacked ice cube molding trays, each tray having means for retaining it in vertical alignment with trays above and below it.

In accordance with this invention there is provided an ice cube molding assembly comprising a pan member having a plurality of ice cube molding trays stacked thereon, each tray including means for supporting and/or retaining it in vertical alignment with said pan and with upper and lower trays, and a pair of bails spanning the stack and pivotally attached to the ends of said pan and in spaced relation to one another.

Also, in accordance with this invention there is provided an ice tray comprising a plurality of longitudinal and transverse rows of ice molding pockets separated on the lower side thereof by channels and joined together at their top edges, and tray stacking and aligning means consisting of piloting supports disposed on the upper side of the trays and mating support receiving means disposed in said channels.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

FIG. 1 is a top plan view of a stack of ice molding trays and carrier as provided in accordance with this invention.

FIG. 2 is an end view of the stack illustrated in FIG. 1.

FIG. 3 is an enlarged fragmentary perspective view of an ice tray and one of the tray aligning and supporting members illustrated in FIG. 1.

FIG. 4 is an enlarged fagmentary perspective view of the bottom of an ice tray illustrating web members which cooperate with the aligning and supporting member illustrated in FIG. 3.

FIG. 5 is an enlarged cross section taken on line 5—5 of FIG. 1.

FIG. 6 is a perspective view of the ice tray carrier illustrated in FIGS. 1 and 2.

Referring to the drawings there is provided in accordance with this invention an ice tray **10** which may be formed of conventional metalic or plastic material to provide a plurality of ice molding pocket members **11** joined together at their upper edges as illustrated at **12** and separated on the lower side thereof by longitudinal channels **14** and transverse channels **15**. As illustrated in the drawings, each tray may consist of 49 pocket members, and 4 trays may be stacked one upon the other to form an assembly which will mold 196 ice cubes. For supporting the trays **10**, as an assembly or as a package, there is provided a pan **17** on which the trays may be stacked. The pan may be formed to have vertical lip members **18** to which bails **19** and **20** are pivotally mounted in spaced relation to one another. The bail **20** may be slightly longer than the bail **19** so that both bails may be depressed to the crossed position illustrated in FIG. 2 when the ice trays are inserted in the freezing compartment of a refrigerator. It will be obvious that the stack of trays may be hand-carried by bringing the horizontal portions of the bails together. Thus, there is provided in accordance with this invention an ice molding assembly for freezing a relatively large number of ice cubes in a minimum amount of space. For supporting the trays one above the other and in spaced relation to one another the trays may be formed to include a plurality of supports **22** extending upwardly from the upper edges of 4 adjacent ice molding pockets as illustrated in FIG. 3. The supports **22** comprise 4 plate members **23** disposed at right angles to one another.

Beneath each of the supports **22** and in vertical alignment therewith are web members **25** extending between the 4 corners of 4 adjacent ice molding pocket members as illustrated in FIG. 4. Each of the web members is notched slightly as indicated at **26** so that one tray may be rested on another with the plate members **23** of each support **22** engaging the notched portions of the webs **25**. In this relationship the trays will not slip off one another and stack in alignment with one another. Also, the supports **22** space the trays apart from each other so that they cannot freeze together and so that air may circulate between trays to expedite freezing.

The pan **17** is provided with side rails **28** which are so spaced that the webs **25** in the longitudinal channels of the lowermost tray will rest thereon. This will prevent the stack of trays from slipping off the pan **17**.

From the foregoing description it will be apparent that this invention provides an assembly or package of ice molding trays particularly adapted to be used in home refrigerators for freezing relatively large quantities of ice cubes. This eliminates the inconvenience and expense of purchasing ice cubes when relatively large quantities are required. The tray supporting and aligning means renders the assembly compact and saving of space, prevents the trays from slipping off one another, permits circulation of air between trays, and prevents trays from freezing to one another.

The carrier structure is self-balancing and can be handled in one hand for convenient placing of the stack

within a refrigerator, includes means cooperating with the lowermost tray to prevent slippage of the stack, and the handles are so arranged that they may be folded downwardly on to the trays after they are placed in the refrigerator thereby to eliminate excessive space requirements.

The invention claimed is:

1. An ice-cube molding assembly comprising a pan, a stack of trays, each being formed to include a plurality of ice-molding pockets and having means for retaining it in vertical alignment with upper and lower trays, and a pair of bails spanning said stack and pivotally attached to the ends of said pan in spaced relation to one another.

2. An ice-cube molding assembly according to claim 1 wherein said retaining means comprises vertically extending supports formed on the upper side of each of said trays and mating support receiving means on the lower side of each of said trays.

3. An ice-cube molding assembly according to claim 1 wherein said pan includes means for engaging the retaining means of the lowermost tray of the stack.

4. An ice-cube molding assembly according to claim 3 wherein said engaging means comprises side rails.

5. An ice tray comprising a plurality of longitudinal and transverse rows of generally rectangular pocket members joined together at their upper edges, the side walls of adjacent pockets diverging from said upper edges to the pocket bases to form longitudinal and transverse channels between said pockets, and tray stacking and aligning means comprising spaced groups of webs in said channels and joining adjacent corners of four adjacent pocket members and having their lower ends notched, and piloting supports disposed in vertical alignment with each said group of webs and comprising plate members extending upwardly from the upper edges of said adjacent pocket members whereby one tray may be stacked on another tray in spaced relation thereto with said piloting supports of a lower tray nested in the notches of aligned webs of an upper tray.

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