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ICE CUBE FREEZING TRAY

Bernard N. Waldenmeyer, Detroit, Mich.

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4 Claims. (Cl. 62—108.5)

This invention relates to ice cube freezing trays and has for an object to provide a tray for mechanical refrigerators having incorporated therein a cube release mechanism adapted to permit the cubes to be removed from the tray easily and quickly and without the necessity of taking the tray from the freezing box.

A further object is to provide a device of this character which will be formed of a few strong simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of this specification,

Figure 1 is a perspective view of a cube freezing tray constructed in accordance with the invention.

Figure 2 is a perspective view of the tray showing the flexible front end defomed downwardly to permit the grid being pulled forwardly to eject the cubes.

Figure 3 is a perspective view of the wire reinforcing frame for the walls and bottom of the tray.

Figure 4 is a longitudinal sectional view of the tray.

Figure 5 is a cross sectional view of the tray taken on the line 5—5 of Figure 4.

Figure 6 is a cross sectional view of the tray taken on the line 6—6 of Figure 4.

Figure 7 is a perspective view of the tray and showing the means for latching the same to the bottom of the freezing box for facilitating removal of the cubes.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, 9 designates a rubber tray having the bottom 10 stiffened and reinforced by a substantially rectangular wire frame 11 imbedded in the rubber, as best shown in Figure 7. The side and rear end walls 12 and 13 respectively are reinforced and stiffened at the top by a substantially U-shaped wire frame 14, imbedded in the rubber. The sides of the frame are bent downwardly near the front end of the tray to provide upright reinforcing members 15 which are imbedded in the rubber. These members permit the front ends of the side walls and the front end wall 16 of the tray to be unreinforced and flexible so as to be capable of being pivotally deformed downwardly, as best shown in Figure 2, to facilitate scraping off of the ice cubes from the bottom 10.

The front ends of the side walls 12 and the front wall 15 are connected below the bottom 10, which latter is free from said walls, by a sub-bottom 17 that is integral at its rear end as shown at 18, in Figure 4, with the bottom 10. The joint 18 permits of the front of the tray being deformed, as described, when a handle 19 on the front end wall 15 is grasped by the operator and pulled downwardly.

A rubber grid 20 is disposed within the tray in the usual manner and comprises transverse webs 21 and a longitudinal web 22 connecting all of the transverse webs.

A rod 23 is passed through eyes 24 formed at the junctures of the transverse webs with the longitudinal web and forms means for pulling the grid forwardly to eject the cubes. To facilitate easy ejection of the cubes, a metal grid 25 is disposed in rear of the last rubber grid and is rigidly secured to the rod by soldering, welding, or otherwise.

The uprights 15 which brace the side walls of the tray are provided at the lower ends with laterally directed hooks 26. The bottom 27 of the freezing box is provided with cleats 28 which open toward the rear of the freezing box, as best shown in Figure 7. These cleats receive the hooks 26 when the tray is pulled forwardly into ejecting position as a preliminary operation to removing the cubes.

In operation the handle 19 is grasped and the tray is pulled bodily forward to project from the front of the freezing chamber, at which position the hooks 26 engage underneath the cleats 28 and prevent further movement of the tray. The handle 19 is now pulled downwardly whereupon the Joint 18 permits of the front ends of the side walls, the front end wall 16 and the bottom 17, being deformed downwardly on the joint 18 as a pivot to the position shown in Figure 2. The knob 29 of the rod 23 is now pulled forwardly to move the grids so that the last grid 25 being of metal will cause a dislodgment or loosening of all of the cubes in the tray from the side walls and bottom of the tray. The loosened cubes fall over the front edge of the bottom 10 of the tray when the rod 23 is pulled outwardly to project beyond the bottom and the gravitating cubes may be caught in any suitable vessel.
From the above description is is thought that
the construction and operation of the invention
will be fully understood without further explana-
tion.
What is claimed is:
1. A freezing tray including flexible walls and
a bottom, the bottom being disconnected from
the walls at the front of the tray, and means re-
inforcing the walls and the bottom at localized
portions thereof to permit the front of the tray
being rocked downward below the bottom.
2. A rubber freezing tray including walls and
a bottom, means reinforcing the walls to a point
adjacent the front of the tray, means reinforc-
ing the bottom at the marginal edge thereof, a
rubber sub-bottom connecting the walls at the
front of the tray below the bottom and hinged
to the bottom, and means connected to the front
portion of the tray by means of which the front
portion and sub-bottom may be deformed down-
wardly below the bottom of the tray.
3. The combination with the bottom of a freez-
ing box, of stops on said bottom, a rubber freez-
ing tray having the front portion deformable
below the bottom of the tray and below said bot-
tom of the freezing box, and stops on the tray
engageable with the first named stops to limit
withdrawing movement of the tray from the
freezing box.
4. A rubber freezing tray having a front por-
tion deformable downward below the bottom of
the tray, a grid on the bottom of the tray, a rod
connected to the grid for sliding the grid for-
ward on the bottom of the tray to dislodge cubes
from the tray when said front portion is de-
formed downwardly, and a rigid web connected
to the rear end of the rod for effectively loosening
and dislodging ice cubes when the rod is
pulled forwardly.

BERNARD N. WALDENMEYER.