Feb. 13, 1940. R. H. MONEY ET AL 2,189,959

ICE CUBE TRAY GRID

Filed Oct. 11, 1937

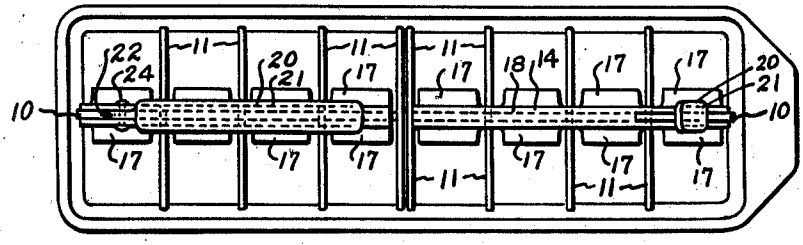


FIG. 1.

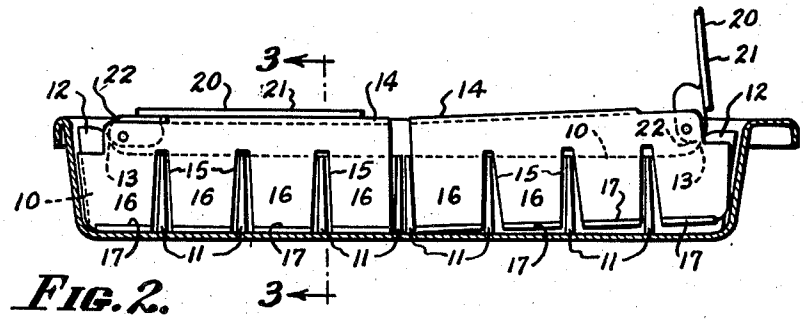


FIG. 2.

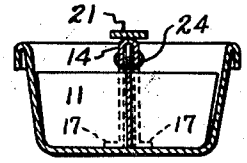
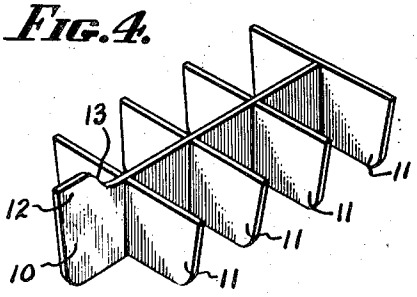


FIG. 3.

FIG. 4.



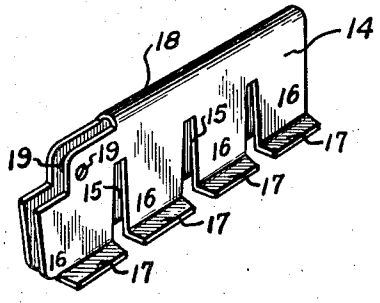


FIG. 5.

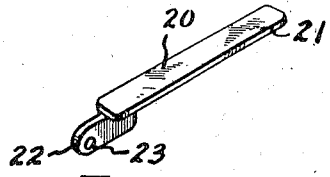


FIG. 6.

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Patented Feb. 13, 1940 2,189,959

UNITED STATES PATENT OFFICE

2,189,959

ICE CUBE GRID

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Application October 11, 1937, Serial No. 168,326

2 Claims. (Cl. 62—108.5)

This invention relates to ice cube tray grids such as are used currently in combination with ice trays in domestic refrigerators for the purpose of causing the ice to form in cubes. More particularly this invention relates to a grid which may be manipulated for freeing the ice cubes therefrom in a simple and economical manner.

Conventional procedure in freeing cubes from an ice tray involves holding the tray under a stream of hot or cold water until the block of ice which is frozen around the grid is freed from the tray and then running either hot or cold water over the block to which the grid is frozen until the individual cubes are freed from the grid.

This procedure is relatively slow and is unpleasant because it involves holding the ice cubes which makes the hands uncomfortably cold and furthermore because it involves the use of considerable amounts of water and the consequent waste of cubes. For example if it is desired to use a number of cubes less than the entire number of cubes in the tray, it is necessary to free all the cubes as above outlined, and the remaining cubes are therefore wasted. Furthermore, the replacement of the ice in the tray with fresh water, involves the use of additional power for freezing.

With the above factors in mind it is an object of our invention to provide a device which is cheap and simple in construction, so that it could be made a part of standard ice cube trays, or which could be sold as an accessory for use in existing trays, which renders it possible to free a number of cubes less than the whole number in the tray, and which will permit the unused cubes to remain in position in the tray, whereby unused cubes are not wasted, as in conventional procedures.

It is another object of our invention to provide a device of the character described by means of which a portion of the cubes in the tray may be removed manually without pouring water over the tray, so that the cubes when freed for use, have not been reduced in mass by the melting incident to conventional procedures where running water is used.

It is a further object of our invention to provide a device as above outlined, which will be easy to clean, inasmuch as it consists of only a few parts.

These and other objects of our invention we accomplish by that construction and arrangement of parts of which we shall now describe an exemplary embodiment. Other objects will appear to those skilled in the art upon reading this specification.

Reference is now made to the drawing forming a part hereof, and in which:

Figure 1 is a plan view of an ice cube tray, and a grid, according to our invention.

Fig. 2 is a horizontal elevation thereof with the tray in section.

Fig. 3 is a cross-sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of one of the grids.

Fig. 5 is a perspective view of one of the members interfitting with the grid, and

Fig. 6 is a perspective view of the actuating lever.

Briefly in the practice of our invention we provide a grid of more or less conventional form which is of a length less than that of the tray, and which will preferably be of a length which is an aliquot part of the length of the tray.

For purposes of description only, we have illustrated a two-piece grid or rather two grids, each of which is half the length of the tray. We provide a breaking member adapted to fit over the grids, and having legs extending in between the transverse fins. On the breaking member we mount pivotally a lever having a cam portion to produce relative movement between the breaking member and the grid, and we preferably provide the legs above mentioned with feet extending outwardly from the divider.

For example, if it is desired to remove half of the cubes in the tray, the actuating lever on one of the breaking members is raised manually to the position indicated in Fig. 2, whereby relative movement is produced between the grid and the breaking member. By virtue of the fact that the legs of the breaking member are provided with feet, the individual cubes will be withdrawn from the tray by the breaking member, and may readily be removed therefrom manually.

We have shown in Fig. 4, one of the grids according to our invention. This grid consists of a divider 10, and a number of transverse fins 11. The divider 10 is provided at one end with a raised portion 12, providing a curved surface 13.

In Fig. 5, we have shown a breaking member according to our invention, generally indicated at 14. The member 14 may be made from a piece of sheet metal bent centrally to provide two closely spaced walls, and the walls are slotted as indicated at 15, for passage of the fins 11. The slotting as at 15, provides a number of leg members 16, which we preferably provide with the

outwardly extending feet 17. Adjacent one end of the member 14, we eliminate the connecting portion 18 between the two sets of legs, and provide aligned perforations 19.

The actuating member 20 is shown in detail in Fig. 6, and comprises a handle portion 21, and a cam portion 22, which is perforated as at 23, so that it may be pivotally mounted upon the member 14 by means of a pin or rivet 24, passing through the perforations 19 and 23.

It will now be clear that when the member 14 is placed in position over the grid member of Fig. 4, the handle member 20 being in a horizontal position, the assembly may be placed in a tray and ice will freeze in and between the fins on the grid and the legs on the breaking element. As above stated, one or more of these grids may be provided for the tray, although we prefer to provide at least two so that it is possible to remove a number of cubes less than the whole number contained in the tray. When it is desired to remove a number of ice cubes, the member 21 is raised to the position indicated at the right hand side of Fig. 2, whereupon the eccentric portion 22 rides up on the curved surface 13 on the divider whereby the breaking element 14 is raised to the position shown at the right hand side of Fig. 2. This movement breaks the bond between the tray and the divider, and the member 14 may now be withdrawn and the cubes which have adhered to the leg member 16 and feet 17, may be removed from the member 14 manually.

It is to be understood that it is within the scope of our invention to provide a single grid extending the entire length of a tray, the grid being according to our invention, but we have found it preferable to provide two or three short grids to take up the length of the tray, so that a small number of cubes may be used without wasting the entire number.

It is also within the scope of our invention to provide two grids, one of which extends one-third the length of the tray, and the other of which extends two-thirds the length of the tray, so that if a very small number of cubes is required, the short grid may be used, while if a larger number of cubes is desired, the longer grid may be used.

Generally it will be understood that modifications may be made in our invention without departing from the spirit thereof, and that we do not intend to limit ourselves otherwise than as pointed out in the claims attached hereto.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. In combination with an ice cube tray, a grid comprising a divider and fins, said grid being of a length which is an aliquot part of the length of said tray, and a member separate from said grid and straddling said divider, and having legs entering between adjacent fins, the bottoms of said legs being turned outwardly from said divider, and means pivotally mounted on said member and having an eccentric portion to cooperate with said divider for producing relative movement between said grid and said member.

2. In combination with an ice cube tray, a grid comprising a divider and fins, said divider having an upwardly curved portion, and a member interfitting therewith and having outwardly turned portions extending substantially along the floor of said tray between said fins, and means pivotally mounted on said member and having an eccentric portion to cooperate with said curved portion on said grid for producing relative movement between said grid and said member.

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