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2,490,886

ICE TRAY STRUCTURE

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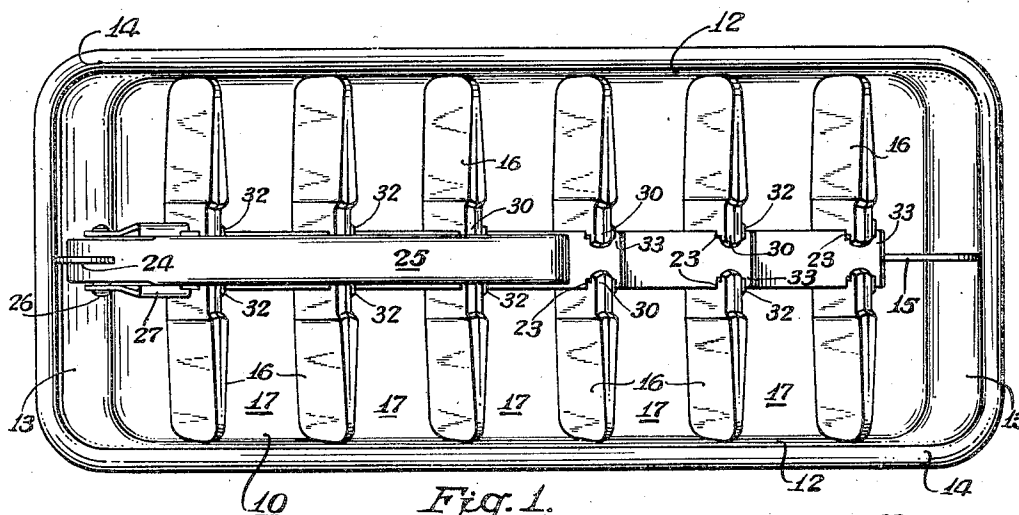


Fig. 1.

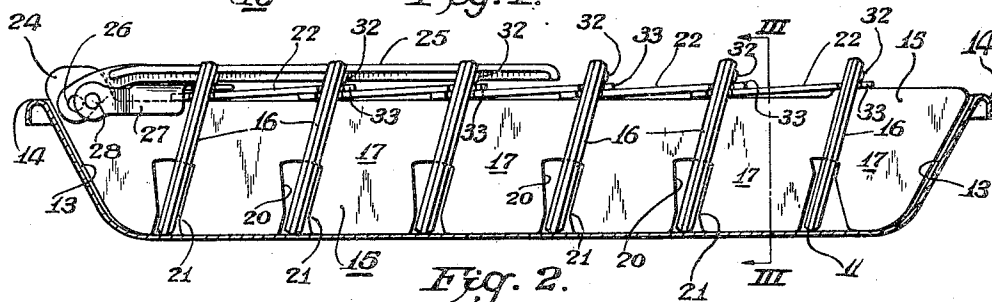


Fig. 2.

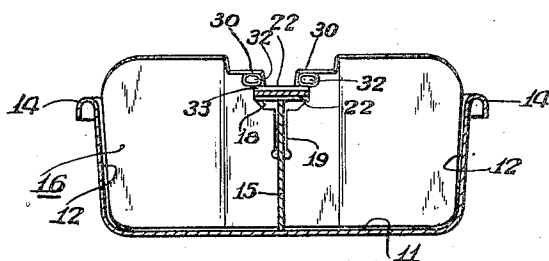


Fig. 3.

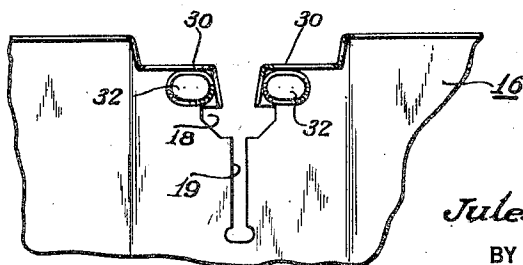


Fig. 4.

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ICE TRAY STRUCTURE

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2 Claims. (Cl. 62—108.5)

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This invention relates to ice trays, and more particularly, to the grid structure used in such ice trays. The invention is particularly applicable to tray combinations having grids of the mechanical type in which the movable crosspieces of the grid are made of plastic material such as polystyrene.

Such a grid is described in my copending application Serial No. 759,974, filed July 10, 1947. I have found that when such a crosspiece is operated at its upper edge by a link mechanism such as is shown in that application, there is a tendency for the link mechanism to cut through the portion of the crosspiece overhanging the link, thus rendering the grid inoperative.

An object of the invention is to provide a construction at the junction of the link and the connected crosspiece which is strong enough to retain the link in its normal position during repeated operations of the grid.

A further object is to provide such a construction having in mind simplicity of construction and relative cheapness.

These and other objects are effected by the invention as will be apparent from the following description and claims taken in connection with the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a plan view of an ice-tray assembly embodying the invention;

Fig. 2 is a side elevation of the tray assembly of Fig. 1, but with a side wall of the pan removed to show details of the grid;

Fig. 3 is a section on line III—III of Fig. 2, showing details of a link and crosspiece assembly; and

Fig. 4 is an enlarged view of the upper portion of a grid crosspiece, showing in further detail the reinforcing construction adjacent the link.

In the drawings, 10 denotes a pan having a bottom wall 11, side walls 12 and outwardly sloping end walls 13. The top of the pan may be reinforced by a rolled bead 14.

The grid structure proper comprises a longitudinal center strip 15 on which crosspieces 16 are loosely mounted at regular intervals. The crosspieces extend between the side walls 11 of the tray and some distance above the top of the side walls. Together with the center strip 15 and the tray walls, the crosspieces serve to divide the tray into partitions 17, each representing a separate ice cube.

Each crosspiece 16 is formed of a plastic material, for example, polystyrene. A relatively wide shallow slot 18 is provided centrally of the cross-

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piece and a long narrow slot 19 extends below the slot 18.

The center strip 15 is provided with a plurality of notches 20 extending upwardly from the bottom of the strip and the walls of which converge as at 21 to provide pivots or bearings for the crosspieces associated therewith. When the crosspieces are assembled with the center strip, the upper part of the strip extends through slots 18 and the low part of each crosspiece fits loosely in a notch 20. The whole assembly is such that the crosspieces are freely movable, with a limited range, relative to the center strip.

In operation the crosspieces may be moved relative to the center strip and the tray walls by any of several well-known mechanisms. The mechanism here shown comprises a plurality of separate flat links 22 having notches 23 at each end which engage the overhanging walls of each crosspiece adjacent the slot 17. One end of the grid has a vertical projection 24 to which a handle 25 is pivoted at 26. The forward link 27 is somewhat U-shaped and has a pivoted connection, as at 28 with the handle 25. Pivot 28 lies between pivot 26 connecting the handle to the projection 24 and the crosspieces. Thus when the handle 25 is moved from its normal position to its full extended position, the crosspieces are moved by the connected linkage from an angular position to a relatively vertical position. The movement is sufficient to release ice blocks from grid and tray walls.

The links are retained loosely in the crosspieces by overhanging projections 30 formed of the plastic material of the crosspiece, which projections engage the notch 23 formed near the end of the link. However, when the handle is operated there is a tendency for the ends of the links to rise vertically and in time this movement causes the portion 23 of the link to cut through the overhang 30 of the crosspiece and make the grid inoperative.

I have found that if a reinforcing ledge 32 is formed on the rear of each overhanging projection 30, the operating life of the assembly is materially increased. This ledge 32 extends rearwardly over the wide end portion 33 of the adjacent link and serves both to reinforce the projections 30 and to prevent the end of the link from rising vertically when the grid is operated.

The invention here described has the aforesaid advantages of cheapness and simplicity of construction and at the same time materially extends the operating life of a grid constructed with plastic cross pieces and connected operating links.

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While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof.

What I claim is:

1. A removable grid adapted to be inserted in a pan for dividing the pan into individual compartments, said grid comprising a plurality of relatively rigid non-metallic cross members, individual links connecting said cross members, said links each having notched end portions for engaging a pair of spaced crosspieces, a pair of protuberances formed on each cross member for engaging and overlying the notched portion of an adjacent link, and a reinforcing portion formed on each protuberance and overlying the end portion of the link beyond the notched portion.

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2. Structure according to claim 1 in which the protuberances and their associated projections are formed of the same material as the crosspiece.

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REFERENCES CITED

The following references are of record in the file of this patent:

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