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REFRIGERATING TRAY

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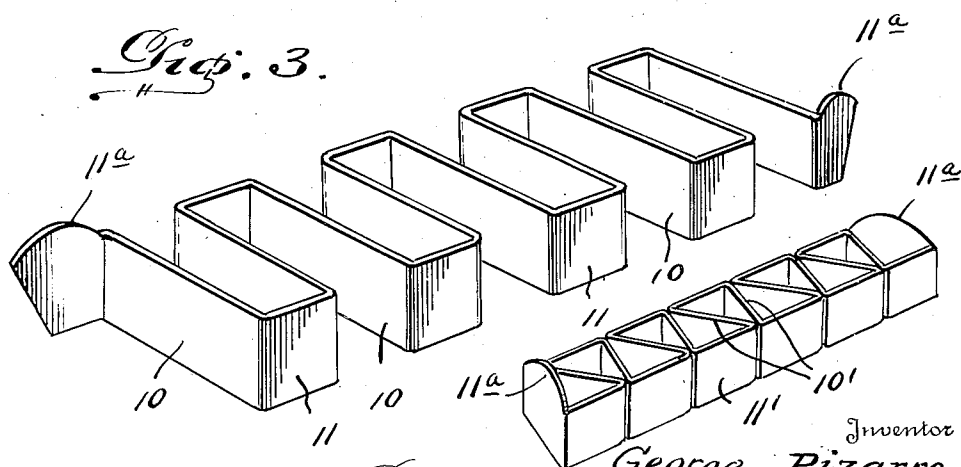
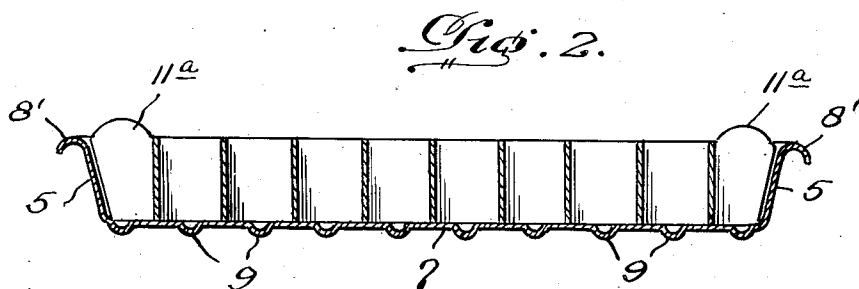
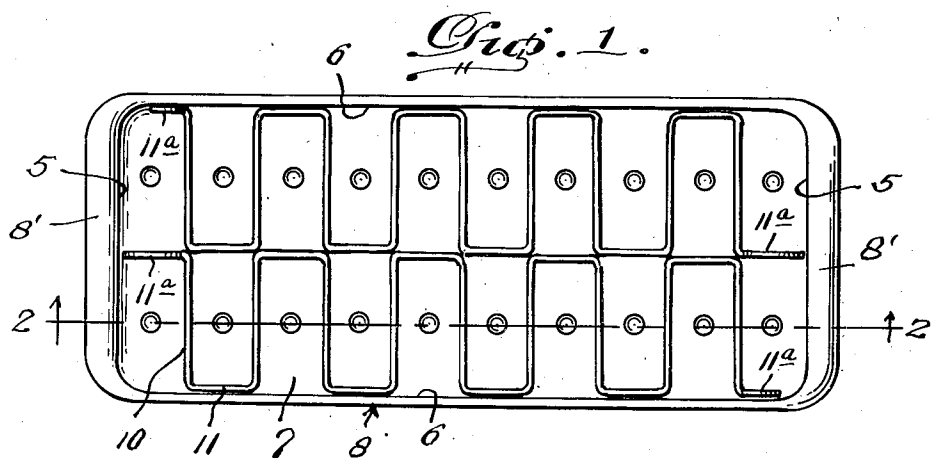


Fig. 4.

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REFRIGERATING TRAY

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2 Claims. (Cl. 62—108.5)

This invention relates to refrigerating trays of the type commonly employed in automatic domestic refrigerators for making ice cubes, etc.

Refrigerating trays of the above kind have heretofore been made of metal or rubber. In either case, it has been found necessary to provide mechanical means to facilitate removal of the ice cubes or to run water on the trays and the dividers thereof in order to loosen the ice cubes and effect their removal. Very often, the trays proper become frozen to the walls of the refrigerating chambers and it is extremely difficult to remove the trays from said chambers. In addition, refrigerating trays made of metal or rubber have not been entirely satisfactory as to sanitation, aesthetic appearance, rapid freezing, economical manufacture, and the like.

After much study and experimentation, I have discovered that by making refrigeration trays and their dividers of Celluloid or kindred material, the stated disadvantages of the trays and dividers made of metal and rubber will be effectively overcome. Such Celluloid trays and dividers promote faster freezing, are more easily removable from the box, permit more ready removal of the ice cubes, are more sanitary, and can be manufactured either transparent or in colors to enable visibility of the frozen material or to blend the tray with the colors employed for the exterior or interior finish of the refrigerator, and other kitchen equipment. The extreme facility of removal of the Celluloid trays from the refrigerating chamber and removal of the ice cubes from the tray is an outstanding advantage of the use of Celluloid in the manufacture of refrigerating trays.

In carrying out the present invention, the tray proper is preferably molded in one piece of Celluloid with the bottom wall provided with longitudinal rows of depending hollow bead-like projections, and the walls of the tray proper and of the divider are flexible. In this way, the removal of the tray from the refrigerating chamber is greatly facilitated and likewise with respect to removal of the ice cubes.

The present invention also aims to provide a novel construction of tray proper affording handles at either end of the tray for use in removing the latter from the refrigerating chamber and for handling the tray. Still further, I contemplate the provision of a novel form of divider made of Celluloid consisting of a zig-zag strip or two coacting similar zig-zag strips. When made in this way, the ends of the strip or strips forming the divider may be pulled and the walls of

the tray may be flexed so as to effect removal of the individual cubes without the necessity of running water on the divider and cubes. This is particularly so because of the fact that the ice does not adhere very strongly to the Celluloid material of the tray or divider.

The present invention consists in the novel use of Celluloid and in the novel features of construction hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:

Figure 1 is a top plan view of a refrigerating tray, with a novel form of divider, constructed in accordance with the present invention.

Figure 2 is a vertical longitudinal section on line 2—2 of Figure 1.

Figure 3 is an enlarged perspective view of one of the sections of the divider shown in Figure 1; and

Figure 4 is a view similar to Figure 3 of a modified form of divider section embodying the present invention.

Referring in detail to the drawing, the present invention consists of a tray proper molded in one piece and of Celluloid in the form of a shallow substantially rectangular pan having flexible end walls 5, side walls 6 and bottom wall 7. Formed integral with the upper edges of the walls 5 and 6 is an outwardly and downwardly rolled marginal rim 8 which is widened at the ends of the tray to provide handles 8'. While a handle may be provided in this way at either or both ends of the tray, the construction shown is preferred because either end of the tray may be inserted foremost and the other end of the tray will present a handle which may be conveniently grasped. The bottom wall 7 of the tray is formed with longitudinal rows of depending hollow projections 9 of bead-like form, thus affording a hollow projection centrally of each ice cube compartment as will be presently apparent. The purpose of these hollow projections is to additionally facilitate easy removal of the tray from the refrigerating compartment of the refrigerator and easy removal of the ice cubes and divider from the tray. The divider may be of standard or ordinary construction except that the material of the same is Celluloid. However, I prefer to provide a special form of divider as shown in Figure 3 of the drawing, such divider consisting of two members coacting with each other and each formed of a zig-zag strip of Celluloid presenting transverse spaced parallel wall portions 10 and connecting wall portions 11 disposed longitudinally with re-

spect to the tray when the divider is placed in the latter. The connecting longitudinally disposed wall portions 11 of each divider section acts as closure walls for the ice cube spaces formed by the other divider member. The ends of the strip have integral upstanding finger tabs 11a to facilitate grasping the same when pulling the ends of the strip to expand the ice cube chambers and effect removal of the ice cubes. Upon removal of the divider and ice cubes from the tray proper, the ends of the divider sections may be pulled and the walls thereof are flexible so that removal of the individual ice cubes from the divider may be effected with facility and ease, particularly in view of the fact that the ice cubes do not adhere strongly to the Celluloid material of which the divider sections are formed. The construction of Figure 4 is similar to that of Figure 3, except that the transverse wall portions 10' are normally obliquely disposed and the longitudinal wall portions 11' are normally disposed in contiguous relation to provide normally-closed expansible ice cube chambers. Actual experiments have shown that material will freeze much faster in trays made of Celluloid than in trays made of rubber and most other materials, and a great deal less difficulty is had in removing the tray and ice cubes than is encountered in any other material. The Celluloid material may easily be cleaned and the presence of dirt or other foreign matter readily detected, so that the tray and divider may be easily kept in a clean and sanitary condition. By the use of transparent Celluloid, the contents of the tray will be clearly visible. However, if visibility of the contents is not desired or preferred, the Celluloid may be suitably colored to match the finish of the refrigerator in which the tray is used or the surface finish in the kitchen or on other equipment therein. A refrigerating tray with a divider constructed of Celluloid as above set forth may be most economically manufactured, and particularly at a lower cost than could be effected by the use of metal or rubber. I am aware of the fact that Celluloid and many of its qualities are widely known, but the advantages of the use of this material in the refrigerating tray art have not been heretofore understood and appreciated, to my knowledge.

By making the strips of the divider sections of zig-zag form as described, each section presents a plurality of ice cube chambers which may be expanded by pulling the ends of the strip. It will be seen that I have provided a needed improvement in the art of refrigerating trays, and minor changes in details described are contemplated within the spirit and scope of the invention as claimed.

The present invention further contemplates novelty designed Celluloid trays to set within the freezing compartment of the ordinary domestic or commercial refrigerator for the purpose of freezing novel shaped desserts or icings, in such ordinary shapes as animals, circles, triangles, oblongs, cylinders, alphabetical letters, or other kindred novel designs.

Either the entire tray or novel shaped trays may be removed from the refrigerator and placed upon the dining table for direct dining use.

What I claim as new is:

1. The combination of a refrigerator tray and a divider comprising a single zig-zag strip of flexible Celluloid affording longitudinal and transverse walls defining substantially triangular expansible ice-forming chambers within said tray, certain of said wall portions being disposed each at an angle with respect to the longitudinal axis of the divider, and the rest of said wall portions being disposed in substantial parallel relation with said longitudinal axis, the last-mentioned wall portions being disposed in contiguous relation to each other at their vertical edges, whereby the wall portions cooperate to form a plurality of completely closed substantially triangular shaped ice-forming chambers.

2. The combination with a refrigerator tray of a divider comprising a single strip of flexible Celluloid material forming longitudinal and transverse walls of a plurality of substantially triangular shaped expansible ice-forming chambers positioned adjacent to each other, each of said chambers formed by a longitudinal wall and a plurality of transverse walls which are connected to opposite ends of said longitudinal wall and which extend in angular relationship therefrom to adjacent ends of contiguously positioned longitudinal walls of adjacent chambers.

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