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L. G. COPEMAN

1,740,919

FLEXIBLE SHARP FREEZING CONTAINER

Filed Oct. 5, 1928

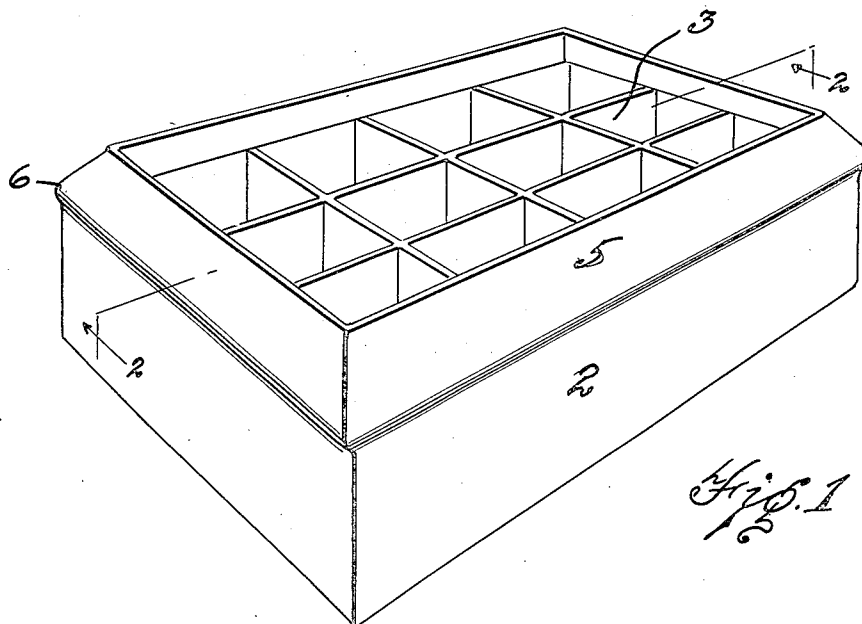


Fig. 1

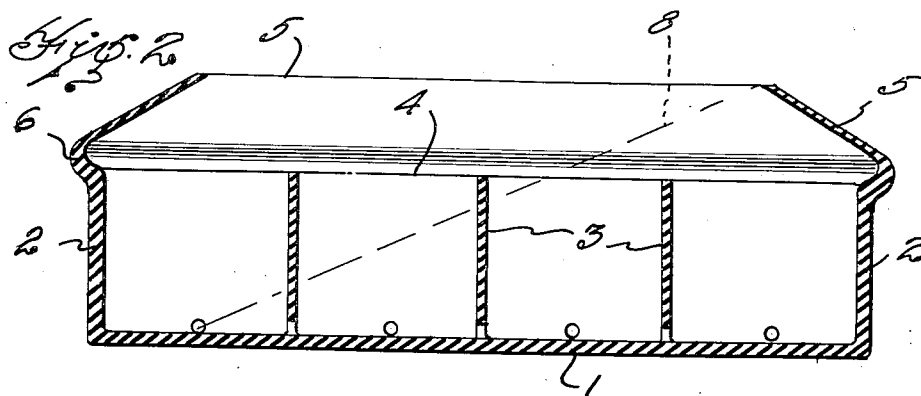


Fig. 2

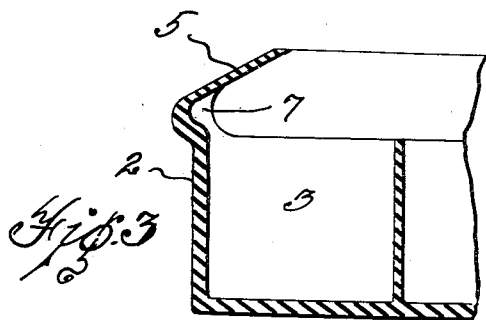


Fig. 3

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FLEXIBLE SHARP-FREEZING CONTAINER

Application filed October 5, 1928. Serial No. 310,556.

This invention relates to flexible sharp freezing containers and has to do particularly with sharp freezing containers of the type formed of rubber or similar flexible material, which may be easily distorted to effect easy removal of the ice cubes.

Such a flexible ice cube tray is shown in my Patent No. 1,675,599 issued July 3rd, 1928. The present invention relates to certain improvements upon the disclosure in said patent, in that the ice cube tray of the present invention is particularly adapted for use with those installations where the refrigerator or at least the sharp freezing unit is subjected to movement during operation. In this respect I refer particularly to boats, aeroplanes, and the like.

More specifically the present invention contemplates the use of a flexible ice cube tray preferably of rubber wherein the outer walls are provided with an upwardly and preferably inwardly positioned extension. In this case the ice cube tray may be tilted to an angle of substantially 45° and still prevent the overflowing of any liquid contents, while the upwardly and inwardly positioned extension, being flexible, permits easy removal of the ice cubes.

In the drawings Fig. 1 is a perspective view of a sharp freezing container embodying the present invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1, and illustrating one manner of molding the lip extension at the top of the outer walls.

Fig. 3 is a fragmentary sectional view similar to Fig. 2, but illustrating a slightly modified embodiment of the invention.

While it is possible to mold or fabricate the tray, embodied in the present invention, from various materials and compositions, I preferably mold the same from rubber.

The rubber tray shown as embodying the present invention is preferably formed as a single integral article having a bottom wall 1, and side walls 2, similar in shape and size to the standard metal ice cube tray. Suitable partitions 3 are also preferably formed integral with the bottom and side walls so as to define the ice cube chambers in accordance

with the desires of the particular manufacturer.

Instead of terminating the side walls 2 at the upper edge 4 of the partitions 3, I preferably mold an upwardly and inwardly extending lip formation 5. This upwardly and inwardly extending lip preferably extends as a continuous annular lip entirely around the periphery of the container, as best shown in Fig. 1. In forming the tray the joint between the walls 2 and the lip 5 is preferably formed in the nature of an outwardly extending groove or fillet 6.

It will be understood that the lip 5 may take many various shapes and positions, both as to thickness, size, and the angle to which it is positioned relative to the side walls. In some instances where the tray would not be subjected to much rocking or even in local stationary use it will be desirable to have only a relatively short lip which need only extend inwardly at a very slight angle.

In Fig. 3 I have shown a slightly modified form in that the partitions 3, adjacent the walls 2, are preferably extended upwardly as at 7 whereby to form suitable reinforcing ribs for the lip or extension 5.

In operation the tray will be filled with water or other liquid approximately to the top 4 of the partitions 3. By reason of the lips 5 it will be seen that the tray may be substantially filled almost to the edge 4 and then placed in the sharp freezing unit without any danger of spilling. In this connection it will be obvious that a tray provided with a very short lip extension would be useful in inserting freshly filled trays. Even if the water should be at a level slightly above the top 4 it would make little difference in the present tray, for the reason that the tray may be bodily distorted as a whole in addition to the pressure applied at the bottom of each ice cube with the result that the cubes may be easily separated and removed.

After the tray is inserted in its receptacle it will be obvious that the entire unit may rock to such an angle that the liquid may assume the position shown in dotted lines as at 8 before any overflowing would occur. The very nature of the rubber tray will prevent its slip-

ping around in its receptacle, although, if desirable, it will be obvious that my rubber tray may be inserted in the ordinary metal container. After the cubes are frozen any one of the individual ice cubes may be removed by merely distorting the bottom of the tray adjacent said ice cubes, and if the cube is adjacent the outer wall of the tray it will be obvious that the lip 5 offers no obstruction to its removal because of its inherent flexibility. Moreover, if the liquid should extend above the top edge 4, and become frozen in a contiguous upper layer it will be only necessary to flex the entire unit whereby to sever such upper contiguous layer in accordance with the walls formed by the partitions 3.

What I claim is:

1. As a new article of manufacture, a sharp freezing container formed of flexible material, the outer walls of said container being provided with a lip extending above the normal level of the liquid to be frozen.

2. A sharp freezing container for use in connection with mechanical refrigerating units, comprising a standard outer wall and compartments formed to receive a predetermined amount of liquid and means extending around the top of the outer wall of the container and above the normal liquid level for preventing overflowing of the liquid.

3. A sharp freezing container for use in connection with mechanical refrigerating units comprising walls for defining the shape and size of the article or articles to be frozen and a lip extension extending above the normal outer wall of the container and formed of flexible material to prevent overflowing of the liquid and at the same time permit easy removal of the ice cubes.

4. A sharp freezing container for use in connection with mechanical refrigerating units comprising walls for defining the shape and size of the article or articles to be frozen and a lip extension extending above and inwardly of the outer wall of the container and formed of flexible material to prevent overflowing of the liquid and at the same time permit easy removal of the ice cubes.

5. As a new article of manufacture, a sharp freezing container of the type adapted to be positioned in heat conducting relation with the low side of a mechanical refrigerating system, the walls of such container being formed of a material to which ice does not readily adhere, and the outer walls of said container terminating in a flexible lip extending above and inwardly of the outer wall whereby to prevent overflowing of liquid from the container but permit easy removal of the ice cubes.

6. As a new article of manufacture, a sharp freezing container formed integrally of rubber, the walls of said container defining the shape and size of the article or articles to be

frozen and the outer walls of said container terminating in a lip extending above the normal liquid level for preventing overflowing of liquid from the container but permitting easy removal of the ice cube or cubes.

In testimony whereof I have affixed my signature.

LLOYD G. COPEMAN.