

March 10, 1959

A. A. HEYMAN
PASTRY CUPS

2,877,117

Filed June 11, 1957

2 Sheets-Sheet 1

FIG. 1.

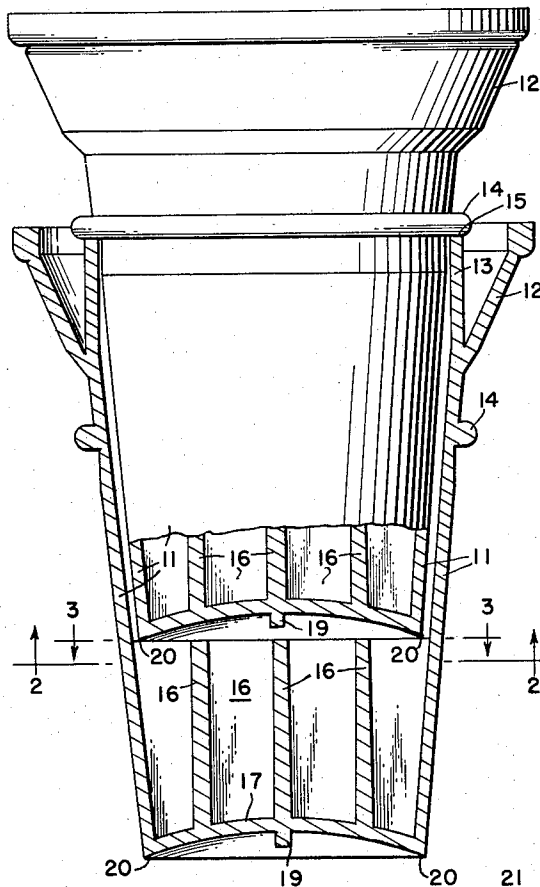


FIG. 2.

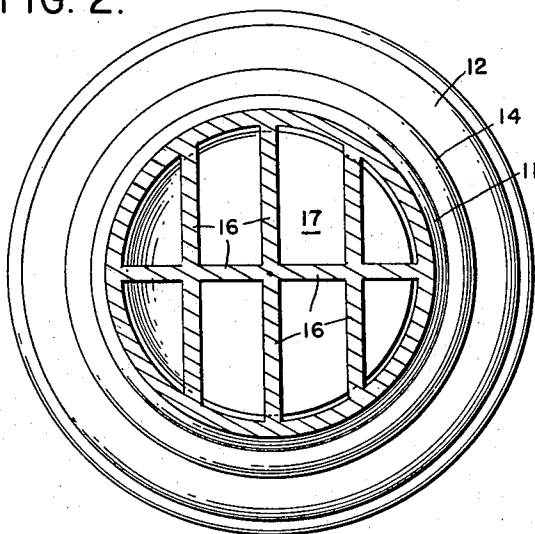
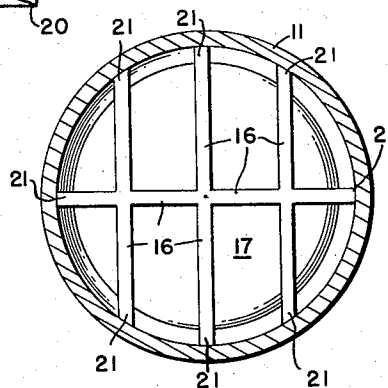


FIG. 3.



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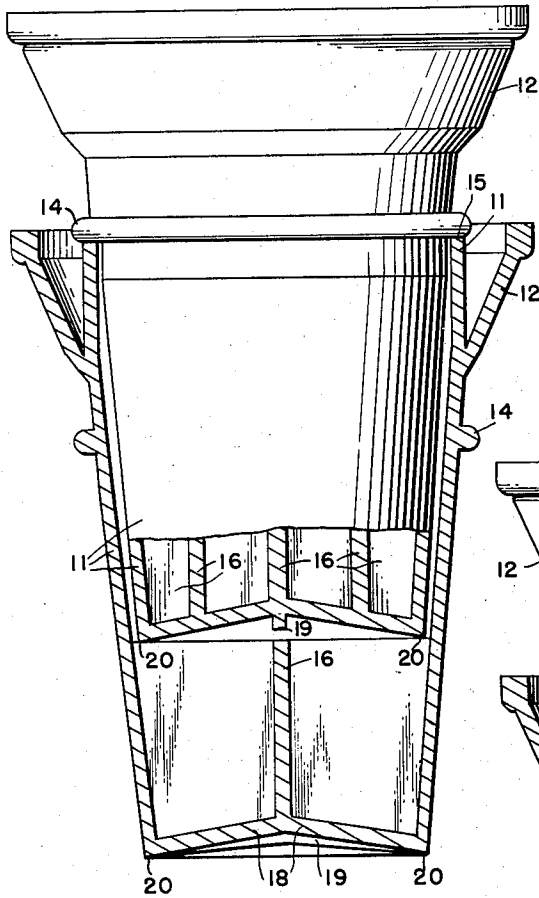


FIG. 4.

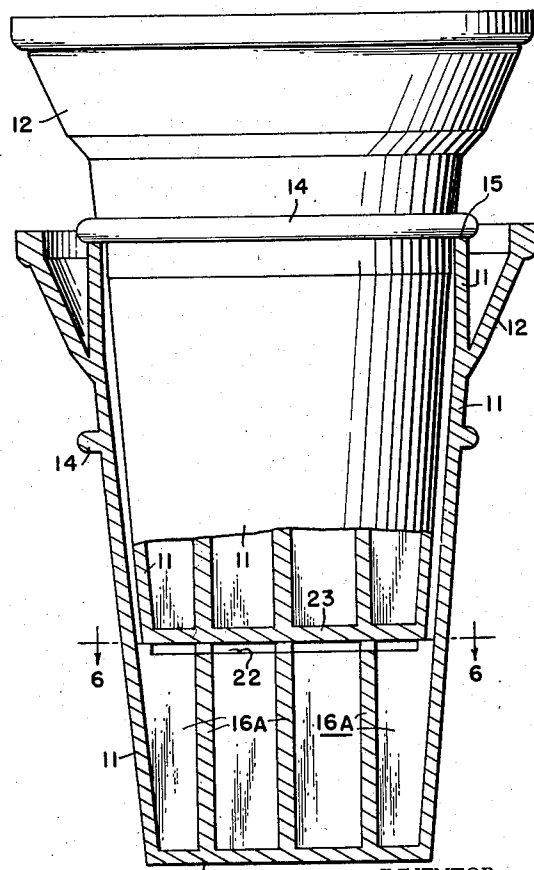
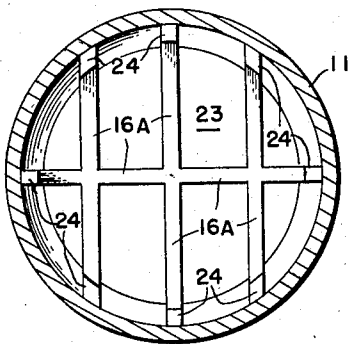


FIG. 5.

FIG. 6.



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5 Claims. (Cl. 99—89)

This invention relates to food containers and it is more particularly concerned with edible pastry cups of the type commonly used to hold ice cream, sherberts, ices and similar confectionary products.

Containers of this general type, as a departure from the old fashioned "ice cream cones," are of a frusto-conical shape and have a flat bottom to permit setting them on a horizontal surface, in an upright position. This bottom portion is extremely vulnerable to breakage and attempts have heretofore been made to reinforce this vulnerable part of the cup. One reinforcing means which has proven effective is the provision of ribs or wings on the inside of the cup adjacent the bottom thereof and integral with the bottom and sidewalls, as shown in U. S. Patent No. 2,435,906.

In packaging cups of this kind for storage and shipment, the manufacturer places them in a nested relation to conserve space and as a result of this the upper edges of the ribs of one cup are frequently pushed against the bottom of a cup nested therein with the result that the bottom is broken through, the resistance to breakage decreasing toward the center. In order to minimize such damage, nesting rings are frequently provided to limit the depth of nesting of one cup into the other. For maximum efficiency in the conservation of packaging space, the minimum amount of clearance is provided between the bottom of one cup and the top of the reinforcing ribs of an adjacent cup. There are frequent instances, however, where such means are ineffective to prevent breakage of the cup bottoms. Pastry cups of this type are conventionally mass produced by the use of a one-piece male mold and a split or two-part female mold in order to permit removal after baking in view of the filigree design usually formed on the outside surface of the cups by the female mold. The use of such a two-part mold gives rise to "fins" on the exterior of the pastry cups due to some of the batter lodging in the crack between the two female mold parts, particularly under conditions where the contacting edges of these mold parts have become worn from repeated use or where they are not held in close engagement for any other reason. Such fins may form at any one or more places along the longitudinal crack of the mold and the thickness thereof may be small or relatively large depending upon the particular deficiency of the mold at the time. When a fin of this kind is formed along the bottom of the pastry cup, it may be very troublesome because even where nesting rings are provided, it frequently is in excess of the clearance provided between the cup bottom and the reinforcing ridges, thus presenting a condition favorable to breakage.

One of the objects of this invention is the provision of a reinforced pastry cup of the type mentioned which will overcome the problem of breakage at the bottom due to the presence of "fins" formed as a result of the female split mold.

Another object of the invention is the provision of such a pastry cup which does not reduce the number

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thereof that can be nested in a given space, such as in a packing box.

A further object of the invention is the provision of such a pastry cup in which the damage due to breakage on the bottom is minimized, irrespective of whether the usual nesting rings are provided.

These and other objects, advantages and features of the invention will be apparent from the following description in conjunction with the accompanying drawing.

In the drawing:

Fig. 1 is an elevational view, partly in section of a pair of nested pastry cups in accordance with an embodiment of this invention.

Fig. 2 is a cross sectional view along the line 2—2 of Fig. 1.

Fig. 3 is a cross sectional view along the line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 1 of a modified embodiment of the invention, the bottom cup being turned 90° relative to the upper cup.

Fig. 5 is a view similar to Fig. 1 of another modified embodiment of the invention.

Fig. 6 is a section along the line 6—6 of Fig. 5.

Referring with more particularity to the drawing in which like numerals designate like parts, the embodiment of Figs. 1 to 3 comprise an ordinary pastry cup having an inverted frusto-conical wall 11 with a flared annular section 12 at the top and an inner wall 13. The cup illustrated is provided with a nesting ring 14 to contact the upper edge 15 of the inner wall of a similar nested cup, as shown. The wall 13 is essentially vertical to increase its resistance to breakage under forces acting downwardly thereupon by the nesting ring.

Integral ribs 16 are disposed on the bottom of the inside to interconnect the wall 11 with the bottom 17. These ribs may be of any desired shape or design so long as they are integral and continuous with both the side walls and bottom of the cup. The bottom 17, however, instead of being flat, as conventional, is concave or inwardly recessed. In this particular embodiment, the concavity is of a spherical surface, while in the embodiment of Fig. 4, the bottom 18 is made conical. In each case, the slope of the bottom must be very small to permit opening the two-part mold without breaking the cup and the median point must be sufficiently offset upwardly to contain fins 19 which might be on the bottom of the cup after the mold is upset.

The outermost edge or rim 20 of the cup bottom thus bears against the top of the ribs 16 exclusively of any other part of the cup bottom at points 21 adjacent the wall 11 of the cup which has the maximum resistance to breakage of any points along the top edge of the ribs.

In the embodiment of Figs. 5 and 6, a similar result is achieved by recessing inner portions of the ribs 16A to leave a space 22 between these ribs and the bottom 23 of the nested cup even though this cup bottom is made flat, as shown. The remaining unrecessed portions 24 of the ribs adjacent the cup wall 11 provide effective bearing points for the rim of the bottom 23. With the means of this latter embodiment, the entire problem of breaking can be substantially met by modifying the ribs themselves without necessitating a redesigning of the bottom part of the cup and the mold from which it is made, although it may, if desired, be used in conjunction with a concave bottom cup.

Having thus described my invention, I claim:

1. Nestable pastry cups comprising each an inverted frusto-conical wall having an open top, a bottom wall and interior reinforcing ribs mutually integral with the bottom and side walls, said walls, ribs and bottom being shaped to limit contact between a nested pair of cups to the walls and parts adjacent to the walls

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and to provide clearance at all other points between the bottom and the ribs under nesting conditions.

2. A nestable pastry cup comprising an inverted frusto-conical wall, having an open top, a bottom wall and interior reinforcing ribs mutually integral with the bottom and side walls, a major central portion of said bottom wall being inwardly recessed.

3. A nestable pastry cup comprising an inverted frusto-conical wall, having an open top, a bottom wall, and interior reinforcing ribs mutually integral with the bottom and side walls, said bottom wall being spherically recessed.

4. A nestable pastry cup comprising an inverted frusto-conical wall having an open top, a bottom wall, and interior reinforcing ribs mutually integral with the bot- 15

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tom and side walls, said bottom wall being conically recessed.

5. A nestable pastry cup comprising an inverted conical wall having an open top, a bottom wall, and interior reinforcing ribs mutually integral with the bottom and side walls, said ribs having a major central portion of its upper edges recessed, the remaining portions being adapted as exclusive bearing points for the outer edge of the bottom of a similar cup nested therein.

References Cited in the file of this patent

UNITED STATES PATENTS

2,281,217	Turnbull	Apr. 28, 1942
2,435,906	Shapiro	Feb. 10, 1948