Sept. 4, 1945. B. H. MOORE 2,384,041

MOLD FOR FROZEN COMESTIBLES

Filed Jan. 23, 1943

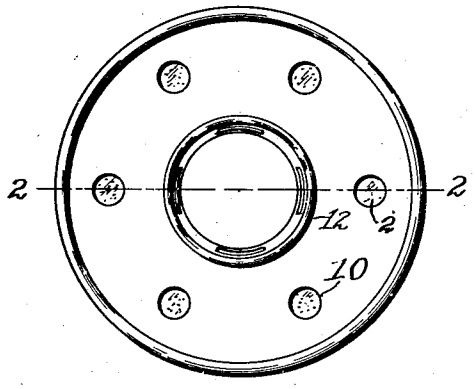


Fig. 1

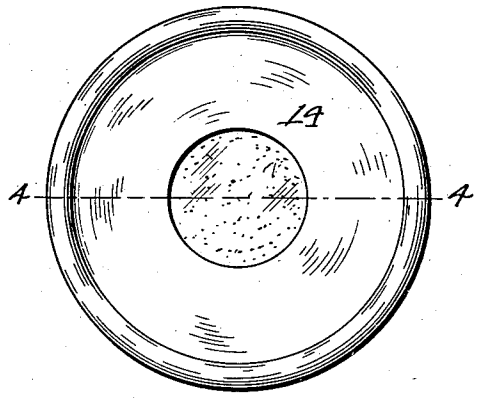


Fig. 3

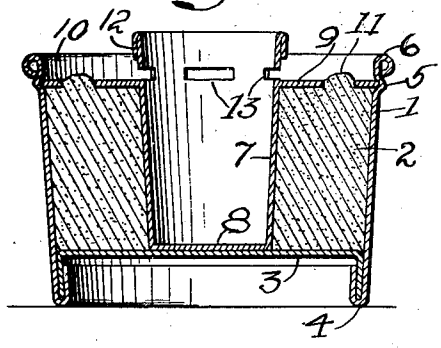


Fig. 2

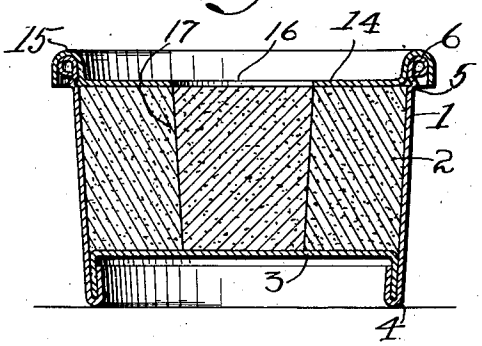


Fig. 4

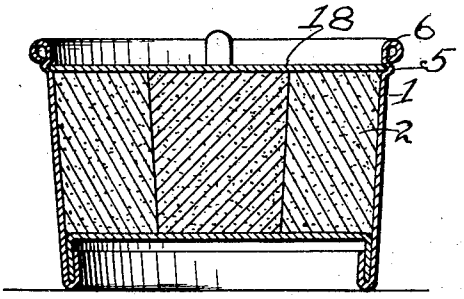


Fig. 5

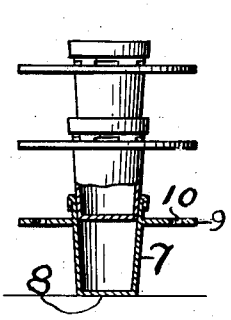


Fig. 6

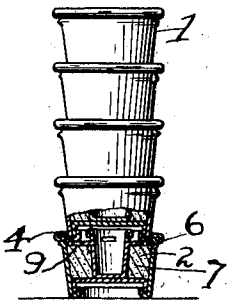


Fig. 7

INVENTOR
Bartram H. Moore
BY
Geo. G. Dewey Jr.
ATTORNEY

Patented Sept. 4, 1945

2,384,041

UNITED STATES PATENT OFFICE

2,384,041

MOLD FOR FROZEN COMESTIBLES

Bartram H. Moore, Doylestown, Pa.

Application January 23, 1943, Serial No. 473,345

5 Claims. (Cl. 107—19)

My invention is an improved apparatus for economically molding a comestible shell with a contrasting core within a vendible paper cup having end structures facilitating the stacking of the cups during "hardening" and storage.

In accordance with the preferred practice of my invention, a tapered paper cup, preferably having a recessed bottom, is partially filled with a soft, semi-solid, partially frozen comestible. Into the fictile comestible, I insert a chilled hollow core having a closed bottom end and of sufficient displacement to elevate the surface of the comestible against the under surface of a disk rigidly fixed to the core intermediate its ends. The disk is of sufficient diameter to form a close joint with the cup wall below the top thereof and preferably registers with a peripheral groove in the cup wall designed to ultimately secure a paper closure in place. The disk contains a vent or vents between the core and cup wall to permit the escape of air during the insertion of the core and to further permit the extrusion of a small amount of the comestible upon the expansion thereof during hardening. A portion of the core projects above the disk and contains vents or ports at or about the level thereof for the passage of water to break or loosen the frost-bond between the comestible and the disk and core. The projecting portion of the core is preferably reenforced to provide a handle for turning the core and disk and shearing the beads of comestible extruded through the vents in the disk to facilitate the removal of the core and disk from the comestible after the latter has hardened.

The projection of the core above the disk is preferably no greater than the distance between the bottom closure and the bottom edge of the cup's peripheral wall and the latter is preferably of smaller diameter than the disk attached to the core. A series of filled cups with cores and disks therein may be stacked during hardening of the comestible shell with the disk in one cup supporting the bottom edge of a superposed cup.

When hardening of the comestible shell is completed, water is poured into the core and over the surface of the disk to break or loosen the frost-bond between them and the comestible and the core and disk are rotated and removed from the shell. A plate having an inverted channeled edge, for engaging the edge of the cup, and a central aperture is then placed in the top of the cup and a comestible filler, such as sherbet, glacé fruit, ground cake, nuts, or other contrasting material, poured through the central aperture into the shell recess, where it may be hardened by stacking the bottom of one cup on the plate of another and placing the stack in a hardening room. When hardened, a paper disk closure may be substituted for the plate and the package is ready for vending.

The characteristic features and advantages of my invention will further appear from the following description and the accompanying drawing in illustration thereof:

In the drawing, Fig. 1 is a top plan view of a core and disk inserted in a tapered paper cup; Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a top plan view of an apertured filling plate positioned on the cup of Figs. 1 and 2, the shell hollow having been filled with a contrasting comestible; Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 3; Fig 5 is a vertical sectional view of the product in vendible form, with a paper lid engaged in a groove in the cup wall; Fig. 6 is a part sectional view showing a stack of nested cores; and Fig. 7 is a part sectional view showing a stack of nested cups containing cores and comestible shells.

As indicated in the drawing, a tapered paper cup 1 is partially filled with a soft comestible 2, such as partly frozen ice cream. The cup preferably has a bottom closure 3 retracted from the bottom edge 4 of the cup, and a peripheral groove or bead 5 near but below the rolled top edge 6 of the cup.

In accordance with my invention a portion of the comestible is displaced and the surface thereof is raised by inserting in the cup a mold comprising a hollow tapered core 7, having a closed bottom 8, and a disk 9 fixed to the core intermediate its ends and of sufficient diameter to make a close joint with the peripheral wall of the cup when brought into registration with the peripheral groove 5 therein.

The disk 9 contains vents 10 between its edge and the core for the escape of air during the insertion of the mold and for the extrustion of bosses 11 of ice cream as a result of expansion thereof caused by further freezing in a hardening room.

The portion of the core projecting above the disk 9 has an overturned edge 12 and contains slots 13 between the disk 9 and edge 12.

When a number of cups have been filled, as illustrated in Figs. 1 and 2, they are stacked as illustrated in Fig. 7 and placed in a hardening room. It will be noted that the bottom edge 4 of one cup rests on the disk 9 of another cup between the core 7 and edge 6 so as to form a stable and compact stack.

When the ice cream has hardened and frost-bonded to the mold, water is poured into the core 7 and overflows through the slots 13 onto the disk 9 to break or loosen the frost-bond without penetrating into the portion of the cup containing the hollow ice cream shell. By grasping the projecting portion of the core 7, the mold may be rotated and removed by a twist of the hand.

The cup and shell are then covered by a filler plate 14 having a channeled edge 15 engaging the cup edge 6 and containing a central aperture 16 which registers with the recess 17 left in the shell by the withdrawal of the core 7. A filler, such as fruit, nuts, sherbet or a contrasting ice cream, is poured through the opening 16 into the recess 17. During the filling operation, the plate 14 protects the smooth top of the hollow shell, with which it preferably makes contact. Any filler material spilled on the plate 14 may be readily salvaged without marring the surface of the hollow shell. Should the filler material require hardening, the cups with the filler plates thereon are stacked with the bottom edge of one cup resting on the filler plate of another so as to form a compact and stable stack which can be easily handled and placed in the hardening room for any requisite time.

When hardening, or if hardening is not required, after filling, the filler plate is removed and a paper disk 18 is snapped into the groove 6 in the cup wall.

The tapering of the hollow core 7 not only provides a shell wall of substantially uniform thickness in the tapered cup, but permits the molds to be nested together in compact stacks with the radial disks parallel when not in use, as illustrated in Fig. 6.

Having described my invention, I claim:

1. A mold including a hollow tapered core having a closed end for displacing a fictile substance in the mold and a reenforced end and a disk projecting radially from said core for limiting the rise of the top of such substance and containing a vent between its outer edge and said core, and said core containing a slot adjacent to and above said disk for the efflux of liquid from said core over said disk.

2. The combination with a cup, of a mold in said cup and comprising a hollow core having a closed end for displacing a fictile substance in the mold and a disk projecting radially from said core between its ends for limiting the rise of the top of such substance, said disk having an edge forming a close joint with said cup below the top thereof.

3. The combination with a cup having a wall containing a peripheral groove below the top thereof, of a mold comprising a disk having an edge seated in said groove and a core projecting into said cup below said disk for displacing a fictile substance in the mold.

4. A mold including a hollow core having a closed end for displacing a fictile substance in the mold and a disk projecting radially from such core between its ends for limiting the rise of the top of such substance, said core having a portion thereof projecting upward from said disk and forming a knob for turning said core.

5. A mold including a hollow core having a closed end for displacing a fictile substance in the mold and a disk projecting radially from such core between its ends for limiting the rise of the top of such substance in the mold, said core having a portion thereof projecting upward from said disk and forming a knob for turning said core, said projecting portion containing a slot adjacent to and above said disk, and said disk containing a vent between its outer edge and said core and permitting escape of air and fictile substance therethrough.

BARTRAM H. MOORE.