

Dec. 21, 1948.

B. H. POLCYN

2,456,989

TUMBLER

Filed May 25, 1944

Fig. 1.

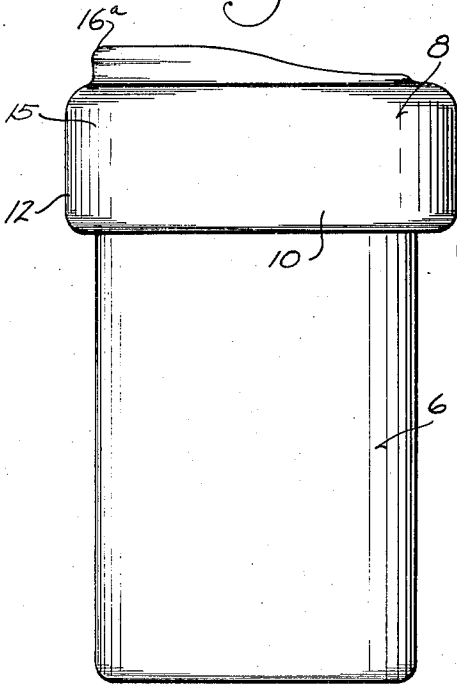


Fig. 2.

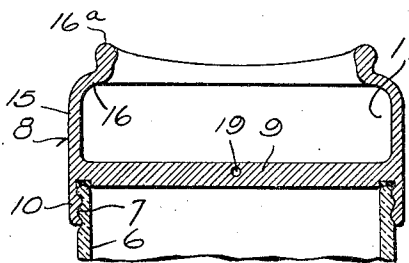
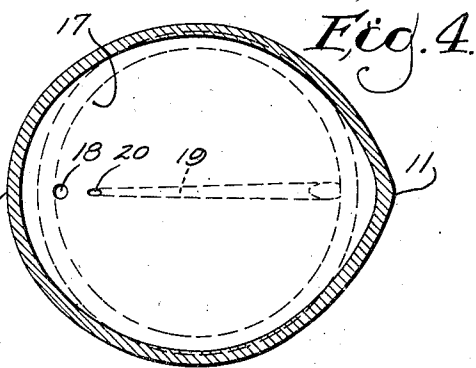
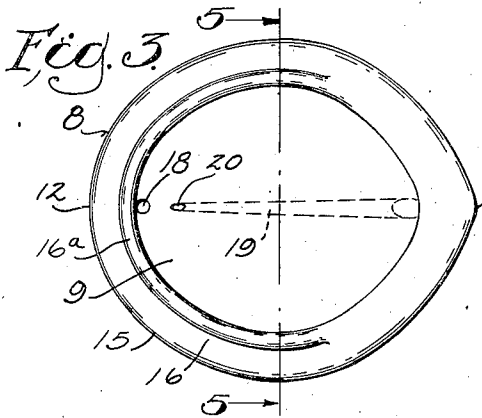
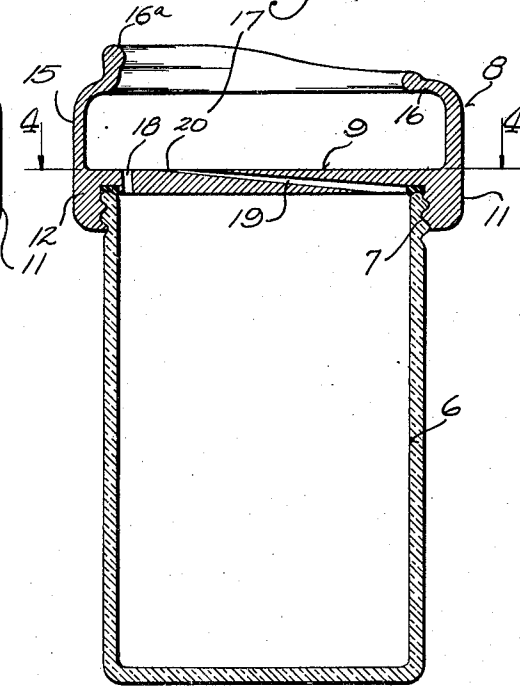


Fig. 5.

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TUMBLER

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Application May 25, 1944, Serial No. 537,259

5 Claims. (Cl. 65-13)

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This invention relates to improvements in tumblers.

It is the object of the invention to provide a tumbler from which the contents will not spill, regardless of accidents to which it may be subjected in use. My improved tumbler is designed particularly for use by children or invalids, or in dining cars or on airplanes where it may be subject to jiggling or tipping. It is my purpose to provide a tumbler from which the entire contents may readily be consumed by a normal drinking operation but from which no loss of contents will occur if the tumbler is tipped on to a table surface, so long as the tumbler is not inverted.

It is my further object to provide a tumbler having a drinking compartment and a storage compartment and to deliver automatically, subject to the control of an air lock, any amount of liquid from the storage compartment to the drinking compartment to replace what has been consumed from the latter, the drinking compartment having an annular channel sufficiently large to hold, when the tumbler is lying on its side, the entire contents normally in the drinking compartment.

It is a further object of the invention to provide an attachment adapted to be connected with any screw top jar to convert the jar into a drinking tumbler embodying the invention.

In the drawings:

Fig. 1 is a side elevation of a complete device embodying the invention.

Fig. 2 is a vertical section through the device of Fig. 1.

Fig. 3 is a plan view of the device shown in Fig. 1.

Fig. 4 is a view taken in horizontal section on the line 4-4 of Fig. 2.

Fig. 5 is a fragmentary detail view in transverse section on the line 5-5 of Fig. 3.

Like parts are identified by the same reference characters throughout the several views.

The storage part of the tumbler may comprise a jar 6 having a screw thread 7 about its mouth. To this, I screw an attachment comprising the appliance 8 having a web portion 9 which almost closes the mouth of the jar and a depending skirt portion 10 provided with screw threads complementary to those of the jar. The appliance 8 is preferably elliptical in cross section, as best shown in Fig. 3, and elongated or outwardly extended at 11 and 12 to the extent indicated by comparison of Fig. 2 with Fig. 3. Thus if the tumbler is tipped over on to its side, it will tend to roll to a posi-

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tion with the longer diameter of the ellipse horizontal.

Rising above the horizontal web 9 is a wall 15 which encloses the drinking portion of the assembly. Overhanging wall 15 throughout its periphery is an inwardly turned margin 16 which, at the drinking portion of the tumbler, comprises an upstanding lip 16a formed like the margin of any tumbler. The annular channel 17 formed within the wall 15 and enclosed by the overhang at 16 has sufficient capacity to hold any amount of liquid which may be trapped in the drinking chamber when the tumbler is lying on its side, as occurs when the glass is held at an angle for drinking therefrom, and the liquid runs into the drinking chamber through duct 18 at a faster rate than it is consumed over the drinking lips 16a.

An orifice at 18 admits liquid from the jar to the drinking chamber. The duct 19 leads from a point near the aperture 18 inwardly through the web 9 and diametrically across the jar to a point near its opposite margin. The duct 19 preferably expands in cross section as it leads inwardly. Duct 19 serves to admit air to the jar 6 except when its inlet end 20 is locked against air admission by the accumulation of liquid in the channel at 17.

When the operator lifts the tumbler, to drink therefrom, the drinking chamber above the horizontal partition will be empty, its entire contents having drained back through the port 18 into the jar. As the user tilts the tumbler to drink therefrom, the contents of the jar 6 will flow through the orifice 18 into the drinking chamber until the liquid accumulates in channel 17 to a depth sufficient to cover orifice 20, whereupon the duct 19 will be sealed and no appreciable additional quantity of liquid will flow from the jar into the drinking chamber until sufficient liquid is drunk from the chamber to expose orifice 20 to admission of additional air. As rapidly as the user consumes the liquid from the drinking chamber, additional liquid will be supplied from the jar.

Assuming the device to be dropped or assuming that it is tipped over while liquid still remains in the drinking chamber above the partition 9, the greater radial projection of the appliance at 12 will tend to prevent the device from lodging in a position in which the orifice 18 is downward. The shape of the appliance will tend to cause the jar to roll to a position where the appliance has a minimum radial projection. In any such position, the channel 17 will have sufficient capacity to hold the liquid contents of the drinking cham-

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ber. It is not essential that the appliance have extra radial projection at 11. Nor, in fact, is it necessary that the appliance necessarily have any abnormal radial projection at any particular point. However, the preferred location of the inlet 20 to the air bleed duct 19 is preferably somewhat removed inwardly from the orifice 18 and, to prevent overflow in the event that the jar falls with the orifice 18 downwardly, it is preferred that the appliance be enlarged at 12 to cause the jar to roll from the position in which such leakage may occur.

I claim:

1. A cup-like extension for a drinking receptacle having a bottom for capping the receptacle said bottom being provided with a restricted aperture near one margin through which liquid may be slowly poured from the receptacle, said bottom also being obliquely perforated to form a vent leading from its upper surface near said aperture downwardly and across the bottom to a point in its under surface near its opposite side, and said extension having side walls inturned at their upper margins to retain liquid escaping through the aperture when the receptacle and its extension is tilted at right angles to the normal upright position, and said side walls having portions arcuately extended horizontally.

2. A closure for the circular mouth of a receptacle, said closure comprising a cap adapted to span the receptacle mouth and provided with a receptacle engaging flange interiorly of circular contour, the cap further being provided with bores opening to the upper face of the cap closely adjacent each other at one side of the cap, one of said bores extending directly through the cap and the other extending obliquely to open below the cap at the opposite side thereof, an upstanding wall about the cap having an inwardly overhanging rim cooperating with the cap and said wall to define a channel, and a drinking lip upstanding on a portion of said rim above that side of the cap at which said bores open to the upper face thereof.

3. The device of claim 2 in which said cap is provided with an external radial projection from the last mentioned side of the cap to prevent said side from lodging downwardly in the event of the upsetting of a receptacle to which such cap is applied.

4. The device of claim 2 in which the cap is

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externally elliptical in plan and has its major axis substantially coinciding with the direction in which said oblique bore extends.

5. A cup shaped cap applicable to a receptacle as a closure therefor and to provide a drinking cup thereon, said cap comprising, in combination, an annular receptacle-engaging flange, a transverse wall constituting a receptacle closure and a cap bottom, said wall having an aperture near one side of the flange for the flow of liquid from said receptacle through said wall and having a vent extending obliquely through said wall from a point near the aperture at the top surface of the wall to a point remote from the aperture at the lower surface of the wall, and an annular rim rising above said wall and providing a drinking chamber and having an inwardly overhanging flange portion forming a channel having sufficient capacity to hold the contents normally in said cap, the said vent tending to limit the said contents when the cap and receptacle are tilted for drinking by becoming sealed when the liquid in the cap covers the vent at the point first mentioned.

BERNARD H. POLCYN.

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Certificate of Correction

Patent No. 2,456,989.

December 21, 1948.

BERNARD H. POLCYN

It is hereby certified that errors appear in the printed specification of the above numbered patent requiring correction as follows:

Column 2, line 13, after the word "side" strike out the comma and insert instead a period; line 14, beginning with "as occurs" strike out all to and including "16a." in line 17; line 27, after the numeral "17" strike out the period and insert instead the following: *, as occurs when the glass is held at an angle for drinking therefrom, and the liquid runs into the drinking chamber through duct 18 at a faster rate than it is consumed over the drinking lips 16a.;*

and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 26th day of April, A. D. 1949.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.