April 28, 1959 O. F. LAMPKIN 2,884,157

ANTI-SPILL LIQUID CONTAINER

Filed Sept. 6, 1955

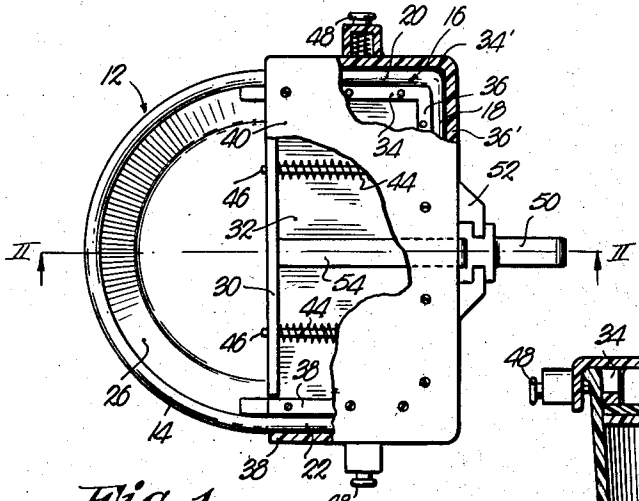


Fig. 1.

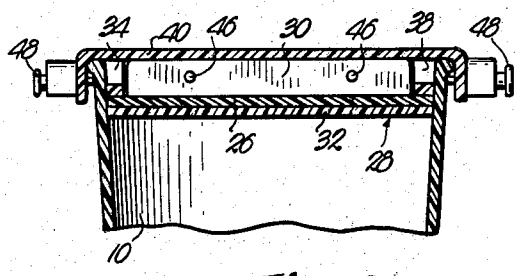


Fig. 3.

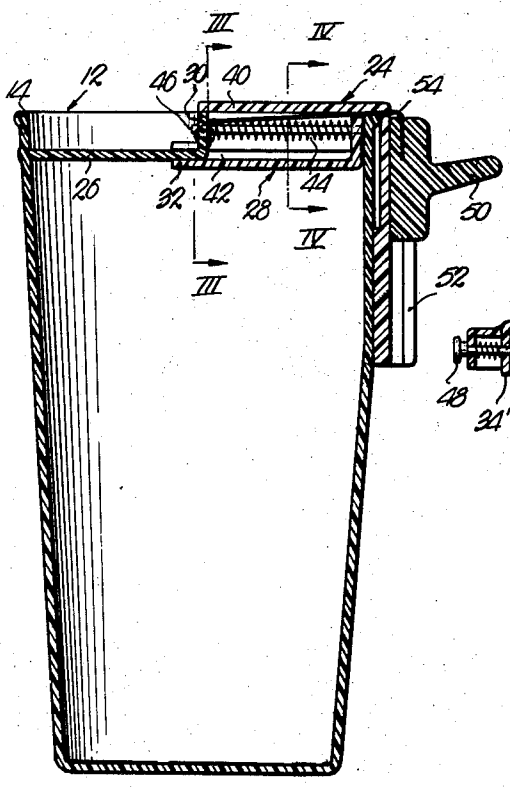


Fig. 2.

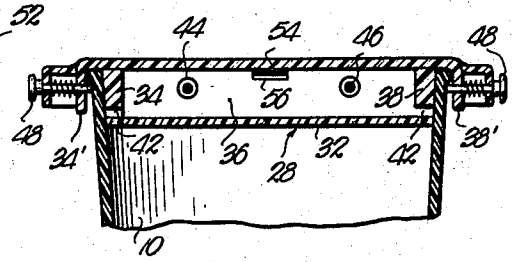


Fig. 4.

INVENTOR.
Omar F. Lampkin
BY
ATTORNEY.

United States Patent Office 2,884,157 Patented Apr. 28, 1959

2,884,157

ANTI-SPILL LIQUID CONTAINER

Omar F. Lampkin, Kansas City, Mo.

Application September 6, 1955, Serial No. 532,430

1 Claim. (Cl. 220—41)

This invention relates to a closure for containers, particularly tumblers or glasses normally employed for drinking purposes, and has for its primary object to avoid accidental spilling of the contents of the tumbler especially when used by children.

It is the most important object of the present invention to provide a sectional closure adapted for releasable attachment to a tumbler at the uppermost open top thereof and having manually manipulable structure for shifting one of the sections of the closure to an open position, together with yieldable means for maintaining such section normally in a closed position.

Another important object of the present invention is to provide a device of the aforementioned character that may be used interchangeably with especially shaped containers after the latter have been used initially for the merchandising of food products or the like, thereby adapting the closure structure as a premium item and therefore, as an inducement for the purchase of the products.

A further object of this invention is to provide an anti-spill closure that is inexpensive, easily operated and readily placed on the container and removed for cleaning purposes as desired.

In the drawing:

Figure 1 is a top plan view of an anti-spill liquid container made pursuant to the present invention, parts being broken away and in section for clearness.

Fig. 2 is a vertical, substantially central cross-sectional view taken on line II—II of Fig. 1.

Fig. 3 is a fragmentary, vertical, cross-sectional view taken on line III—III of Fig. 2; and

Fig. 4 is a fragmentary, vertical, cross-sectional view taken on line IV—IV of Fig. 2.

In accordance with the principles of the instant invention, container **10** is especially formed particularly at the uppermost extremities thereof in that the same is partially arcuate and partially polygonal in transverse cross-section. Therefore, the uppermost edge **12** which may be beaded if desired as shown, has a semi-circular portion **14** and a U-shaped portion **16** presenting a bight **18** and a pair of legs **20** and **22**.

The anti-spill closure **24** forming the subject matter of the instant invention and adapted for releasable attachment to the container **10**, includes a pair of sections **26** and **28**, the former of which is in the nature of a semi-circular plate conforming in configuration to the semi-circular portion **14** of the tumbler **10**.

Plate **26** has an upstanding flange **30** along the straight edge thereof that is disposed within the section **28** which is in the nature of a housing. Housing **28** includes a polygonal bottom wall **32** conforming in shape to the polygonal portion **16** of the container **10** and slidably receiving the plate **26** upon its uppermost surface when the plate **26** is retracted into the housing **28**.

Housing **28** is of double-wall construction, presenting therefore, inner walls **34**, **36** and **38** and corresponding outer walls **34'**, **36'** and **38'**. A cover **40** integral with walls **34'**, **36'** and **38'** is releasably attached to the walls **34**, **36** and **38**.

The two side walls **34** and **38** terminate at the lowermost edges thereof above the upper face of bottom wall **32**, presenting guide slots **42** for the reciprocable plate **26**.

The housing **28** contains a pair of springs **44** coiled about pins **46** and interposed between wall **36** and flange **30**. Pins **46** are secured to the wall **36** and extend through the flange **30** for free sliding movement of the latter to the pins **46**.

A pair of opposed, spring-loaded plungers **48** carried by the walls **34'** and **38'** releasably engage the container **10** immediately below the bead **12** thereof.

Manually manipulable structure for shifting the plate **26** to an open position against the action of springs **44**, includes a finger-engaging projection **50** reciprocable vertically along a track **52** exteriorly of the side of container **10** and depending from the wall **36'** with which it is integrally joined. A flexible strap **54** connects the finger extension **50** with the flange **30**, there being a clearance slot **56** in the wall **36** for the strap **54**.

It is seen that the plate **26** may be moved to an open position while the container **10** is grasped in one hand by depressing the extension **50**, thereby exerting a pull on the flange **30** through strap **54**. As soon as the extension **50** is released, the springs **44** will automatically return the plate **26** to the closed position shown in the drawing. The entire closure **24** may be removed by pulling the plungers **48** outwardly and it is, therefore, seen that a single anti-spill closure **24** may be used on any one of a number of containers **10** in the nature of that illustrated in the drawing.

As above indicated, it is contemplated that the container **10** will be used initially for packaging of various types of merchandise. After the contents have been used, the anti-spill device **24** may be employed by virtue of the fact that it is quickly and easily attached thereto in the manner illustrated.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

In combination with a container having an uppermost beaded edge provided with a semi-circular portion and a U-shaped portion defining a bight and a pair of legs, an anti-spill closure including a housing having three sides of double wall construction embracing the container at said U-shaped portion thereof, a rectangular bottom wall within the container and a rectangular cover resting on the U-shaped portion of said edge; a shiftable, semi-circular plate within the container and normally engaging the inner face of the latter adjacent the semi-circular portion of said edge, said plate having an upstanding flange forming a fourth side of said housing and movable into the latter as the plate is shifted to an open position sliding along the upper face of said bottom wall; spaced horizontal guide pins carried by the housing therewithin and projecting through the flange; springs coiled about the pins and yieldably biasing the plate closed; plate opening means including a vertically reciprocable member exteriorly of the container, track means depending from the housing at said bight and slidably receiving the member, and flexible strap interconnecting the flange and the member and extending into the housing between the cover and said bight; and opposed spring loaded plungers carried by the housing and engaging beneath the beaded edge adjacent each leg respectively for detachably mounting the closure on the container.

References Cited in the file of this patent

UNITED STATES PATENTS

562,577	Closen	June 23, 1896
1,102,275	Kime	July 7, 1914
1,541,172	Nuckols	June 9, 1925
1,756,249	Kaufman	Apr. 29, 1930
2,030,990	Holtzman	Feb. 18, 1936
2,254,608	Heyer	Sept. 2, 1941
2,258,002	Dekay	Oct. 7, 1941
2,274,844	Moss	Mar. 3, 1942
2,578,201	Nicorvo	Dec. 11, 1951