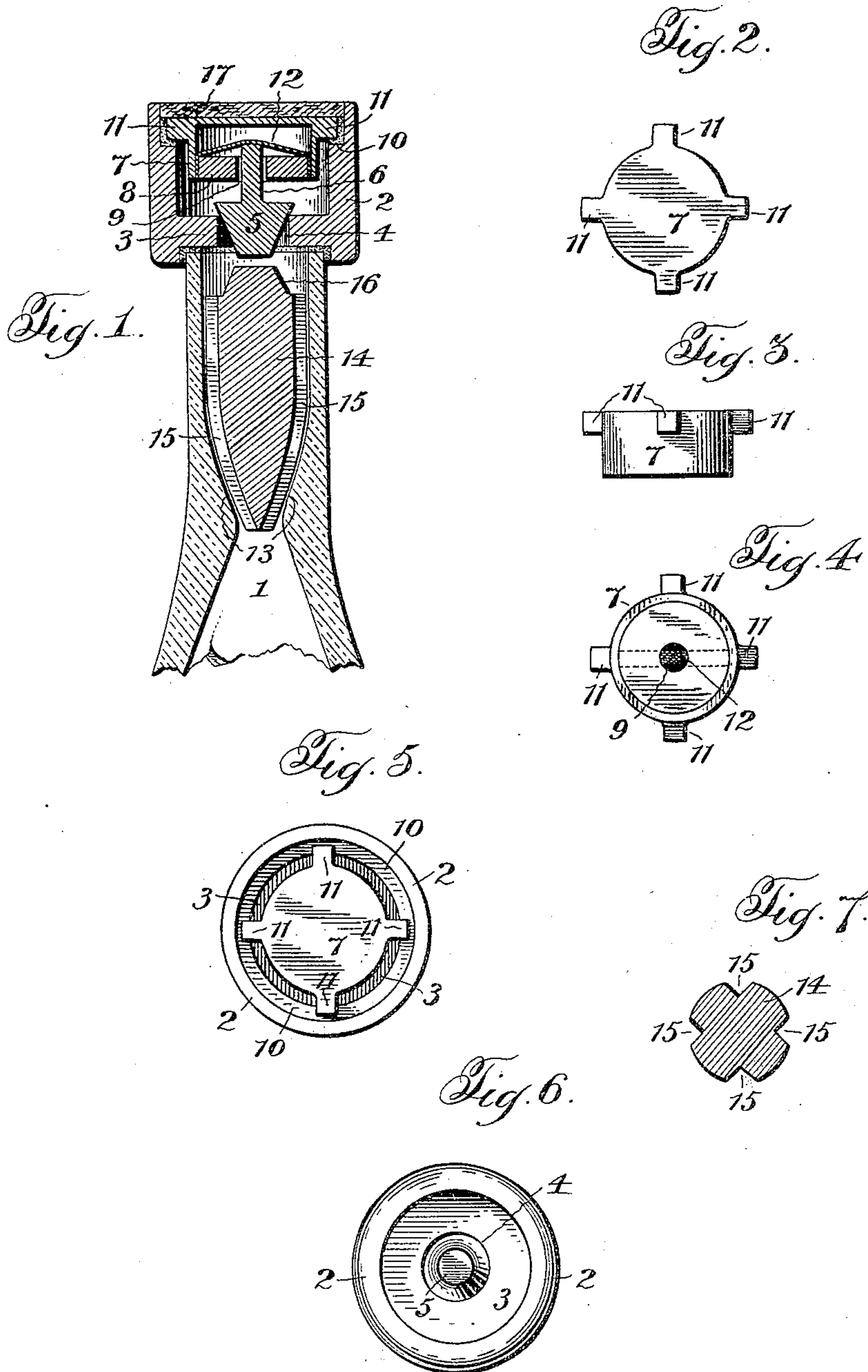


No. 824,504.

PATENTED JUNE 26, 1906.

W. J. MUELLER.
BOTTLE CLOSURE.

APPLICATION FILED NOV. 28, 1905.



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UNITED STATES PATENT OFFICE.

WILLIAM J. MUELLER, OF SALAMANCA, NEW YORK.

BOTTLE-CLOSURE.

No. 824,504.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed November 28, 1905. Serial No. 289,447.

To all whom it may concern:

Be it known that I, WILLIAM J. MUELLER, a citizen of the United States, residing at Salamanca, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Bottle-Closures, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to receptacle-closures; and its object is to provide means whereby a receptacle may be closed in such manner that its original contents may be easily withdrawn, but so that it cannot be refilled.

The details of construction and arrangement of parts contemplated by this invention are disclosed in the accompanying drawings, forming part hereof, wherein an embodiment of the invention as applied to a bottle is shown for purposes of illustration.

In the drawings like reference characters refer to corresponding parts in the several views, of which—

Figure 1 is a sectional view of the closure. Fig. 2 is a top view of the stopper. Fig. 3 is a side view of the stopper. Fig. 4 is a bottom view of the stopper. Fig. 5 is a top view of the closure with the sealing-disk removed. Fig. 6 is a bottom view of the closure, and Fig. 7 is a cross-sectional view of the weight.

Referring more particularly to the drawings, 1 designates a bottle, preferably choked-necked, to which is sealed a closure portion 2, of any suitable material. Closure 2 is of substantially hollow cylindrical formation, is open at the top, and is formed with a bottom 3. Through bottom 3 is formed a vertically-disposed aperture 4. Seated in aperture 4 is a valve 5, projecting through said aperture and below bottom 3, and also projecting above said bottom. This valve 5 is of greater diameter toward the top than at the bottom, the construction forming a closure for aperture 4 when the bottle is in upright position and preventing the valve falling through said aperture. Valve 5 includes an upwardly-projecting stem 6. A cylindrical stopper portion 7 is seated in closure portion 2. Stopper 7 is formed with a bottom 8, having an aperture 9 therein, into which valve-stem 6 projects. The inside diameter of closure portion 2 is greater than the outside diameter of stopper portion 7, so that a space is left between these two por-

tions. The shell of closure portion 2 is interiorly cut away at the top, so as to form a seat 10. Projecting laterally from the upper part of stopper portion 7 are a plurality of lugs 11, arranged to rest on seat 10, whereby said stopper portion is held in place. Within stopper portion 7 and across aperture 9 is disposed a resilient band 12, which is arranged to engage the upper end of valve-stem 6 to hold valve 5 normally seated in aperture 4.

In the neck of the bottle between choked part 13 thereof and closure 2 is an elongated weight 14 of but little less diameter than the neck, so that it can fit snugly therein, but at the same time be free for longitudinal movement therein. Weight 14 is provided with longitudinally-disposed grooves 15 and with an upward projection 16. Projection 16 is arranged to register with and be capable of engagement with the lower end of valve 5 and is made so that it can fit into aperture 4 from the bottom. Weight 14 is arranged so that there can be some play thereof between choked portion 13 of the bottle and valve 5. Weight 14 is placed in the bottle-neck. Closure portion 2 is cemented to the bottle after the bottle is filled. Valve 5 is dropped into aperture 4, and stopper portion 7 is then seated into place, being cemented where lugs 11 engage seat 10. When stopper 7 is in this position, band 12 engages valve-stem 6 and tends to hold valve 5 in aperture 4, thereby securely stopping the bottle. A stopper-disk 17, of cork or other suitable material, is then inserted in the top of closure portion 2 and against stopper portion 7, whereby the bottle is tightly closed and the latter portion held in place while the cement hardens.

When it is desired to remove the contents from the bottle, stopper-disk 17 is withdrawn, and when the bottle is inverted, weight 14 engages valve 5 and moves it a slight distance through aperture 4 and against resilient band 12, thereby affording sufficient space for liquid which has passed through grooves 15 to flow through aperture 4 and to be discharged through the space between the closure and stopper portions. When the bottle is returned to upright position, it will become closed by automatic operation of weight 14, band 12, and valve 5.

It will be seen that while the construction and arrangements of the parts are such as to permit egress of liquid from the bottle after

the same is sealed up refilling is prevented by valve 5 and weight 14. When the closure is tampered with in attempted refilling, it will be necessary to remove stopper portion 5 7, which will release valve 5. With valve 5 removed when the bottle is inverted portion 16 will seat in aperture 4 and prevent egress of the contained liquid.

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

1. In combination with a receptacle, a closure therefor having a discharge-aperture, a valve for said aperture, means for normally holding said valve in place, and a weight for automatically moving said valve whereby when said receptacle is inverted outflow of contents is permitted, said weight being provided with longitudinally-disposed 20 grooves for passage of said contents.

2. In combination with a receptacle, a closure therefor having a discharge-aperture, a valve for said aperture, means for normally holding said valve in place, means for automatically moving said valve whereby when said receptacle is inverted outflow of contents is permitted, and means whereby said outflow is prevented when said valve is withdrawn and said receptacle is inverted.

3. In combination with a receptacle, a closure therefor having a discharge-aperture, a valve for said aperture, means for normally holding said valve in place, a weight for automatically moving said valve whereby when said receptacle is inverted outflow of contents is permitted, and means on said weight whereby said outflow is prevented when said valve is removed and said receptacle is inverted.

4. In combination with a receptacle, a closure therefor having a discharge-aperture, a valve for said aperture, means for normally holding said valve in place, a weight for automatically moving said valve whereby when said receptacle is inverted outflow of contents is permitted, and a projection on said weight whereby said aperture is closed when said

valve is removed and said receptacle is inverted.

5. In combination with a receptacle, means for closing said receptacle comprising a closure portion and a stopper portion fitted in said closure portion, said closure portion having a discharge-aperture therein, a valve arranged to seat in said aperture, and said stopper portion having an aperture therein into which said valve projects, and resilient means in said stopper portion whereby said valve is normally kept seated in said discharge-aperture. 55 60

6. In combination with a receptacle, means for closing said receptacle comprising a closure portion and a stopper portion fitted in said closure portion, said closure portion having a discharge-aperture therein, a valve arranged to seat in said aperture, and said stopper portion having an aperture therein into which said valve projects, and resilient means associated with said stopper portion and engaging the part of the valve projecting therein whereby said valve is normally kept seated in said discharge-aperture. 65 70

7. In combination with a receptacle having a choked neck, a closure therefor comprising a closure portion provided with a discharge-aperture, and a stopper portion fitted in said closure portion provided with an aperture, a valve for said discharge-aperture and projecting into the opening in said stopper portion, means in said stopper portion for holding said valve in place, a weight in said neck below said closure for moving said valve whereby outflow of contents of the receptacle is permitted, and means on said weight whereby said discharge-aperture is closed when said valve is withdrawn and said receptacle is inverted. 75 80 85

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. MUELLER.

Witnesses:

MATTHEW WEBER,
C. F. BUCKMASTER.