

No. 689,383.

Patented Dec. 24, 1901.

J. J. BROWN.  
NON-REFILLABLE BOTTLE.  
(Application filed Mar. 23, 1901.)

(No Model.)

Fig. 1.

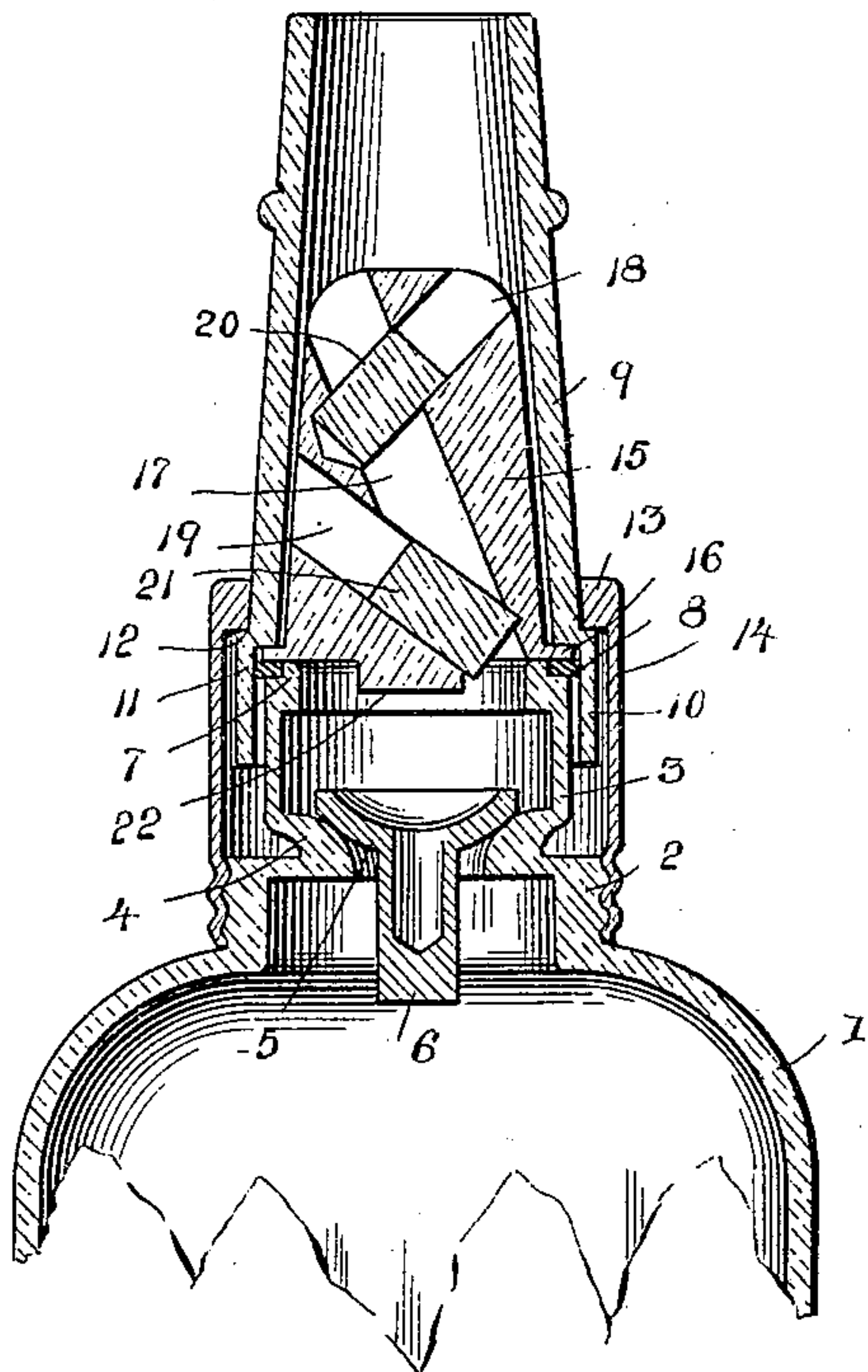
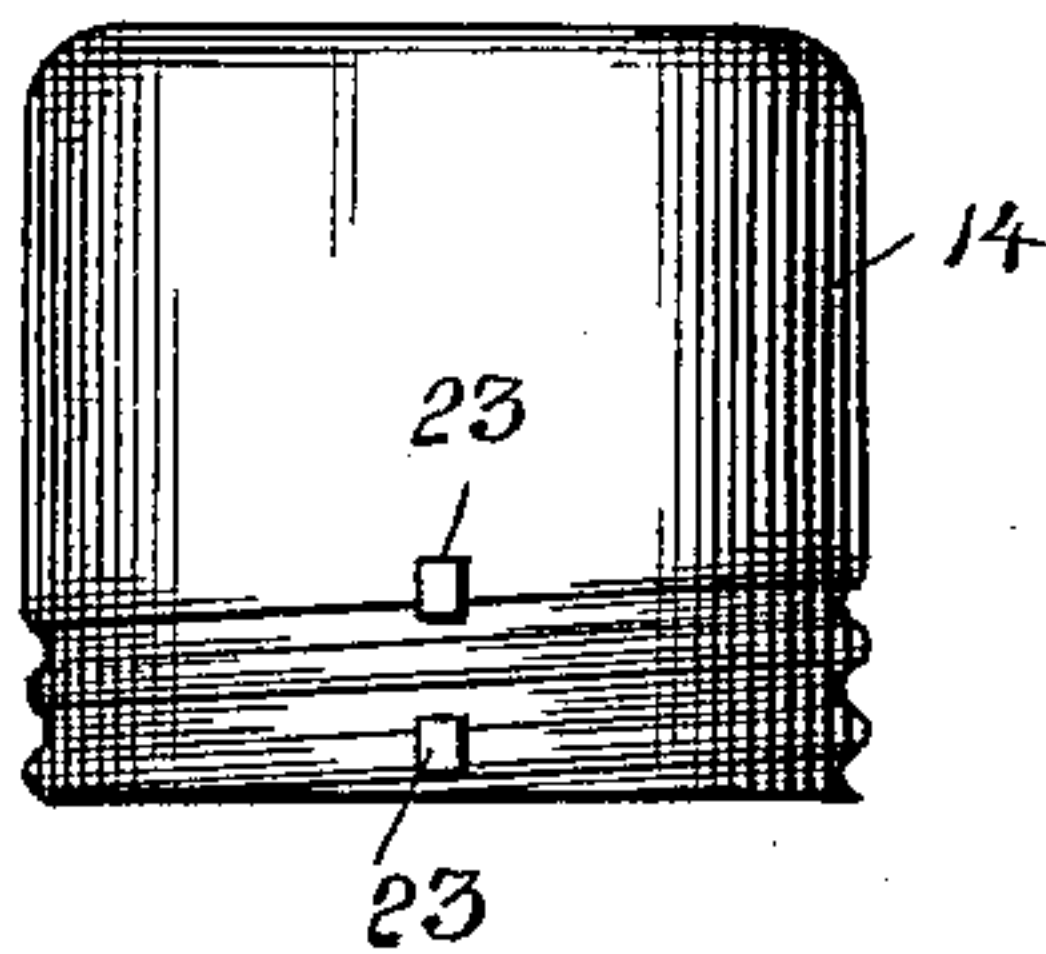


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN J. BROWN, OF EAST TOLEDO, OHIO.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 689,383, dated December 24, 1901.

Application filed March 23, 1901. Serial No. 52,611. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. BROWN, a citizen of the United States, residing at East Toledo, in the county of Lucas and State of Ohio, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to non-refillable bottles, the primary object being to provide improved means for preventing the unauthorized refilling of a bottle so constructed as to permit the contents of the bottle to be readily decanted.

Another object of the invention is to avoid the use of rubber valves which will come in contact with the contents of the bottle and would be likely to deteriorate the same.

The construction of the improvement will be fully described hereinafter in connection with the accompanying drawings, forming part of this specification, and its novel features will be defined in the appended claims.

In the drawings, Figure 1 is a central vertical section of the upper portion of a non-refillable bottle embodying the invention, and Fig. 2 is a side elevation of the threaded securing-sleeve employed with the improvement.

The reference-numeral 1 designates the body of a bottle formed at its upper end with an externally-threaded flange 2, from which projects a hollow cylindrical extension 3, the lower portion of which is contracted to form a seat 4 to receive a valve comprising a hollow semicircular body portion 5 and a depending hollow stem 6. The upper edge of the cylindrical extension 3 is recessed to form an annular shoulder 7, serving as a seat for an elastic gasket 8.

9 designates the bottle-neck, which is made removable and is formed with a downwardly-extending annular flange 10. The bottle-neck 9 is also formed with an internal annular shoulder 11 and an external annular shoulder 12, the latter being adapted to be engaged by an inwardly-projecting annular flange 13, formed at the upper end of a sleeve 14. The sleeve 14 surrounds the extension 3 of the bottle and is threaded at its lower end to engage the threaded flange 2 of the bottle.

Within the bottle-neck 9 is arranged a plug or stopper 15, which is of tapering form to

correspond to the internal contour of the neck and formed at its lower end with an annular horizontal flange 16, which rests upon the upper edge of the hollow extension 3 and extends over upon the elastic gasket 8. The annular shoulder 11 of the bottle-neck 9 rests upon the upper surface of the flange 16, as clearly shown in Fig. 1.

The plug 15 is formed with an inclined through-opening 17, through which the contents of the bottle may be discharged, said opening extending from the upper end of the plug to the lower end thereof and inclined, as shown. The plug 15 is also formed with an inclined opening 18, extending from the upper end of the plug to a point beyond the upper wall of the passage-way 17, said opening 18 intersecting the passage 17 and being inclined in a direction opposite to that of the inclination of the passage. The plug 15 is also formed below the opening 18 with an opening 19, which extends from the side of the plug to a point adjacent to the lower end of the passage 17, intersecting said passage 17 and being inclined at a greater angle than that of the passage 17. Within each of the openings 19 is arranged a movable valve, (designated by the numerals 20 and 21, respectively.)

In assembling the parts of the device the valve 5 and 6 is placed within its seat, after which the gasket 8 is placed upon the shoulder 7. The plug 15 is then placed in position, and the bottle-neck 9 is then placed over the plug, with its shoulder 11 resting upon the flange 16, and finally the sleeve 14 is slipped over the bottle-neck and secured into engagement with the threaded flange 2, thus firmly securing all of the parts together.

It will be understood that the valves 20 and 21 are to be placed within the openings 18 and 19 before the block 15 is seated. These valves 20 and 21 are of cylindrical form, and the operation of the device may be described as follows: Normally the valves 20 and 21 rest by gravity at the lower ends of the openings 18 and 19 and the valve 5 rests within its seat 4, and hence as long as the bottle is in an upright position it will be impossible to either pour liquid into or out of the bottle. When the bottle is turned to a substantially



horizontal position, the valve 20 will slide within the opening 18 to the outer end of the said opening, and the valve 21 will still obstruct the discharge-passage 17, and in order to permit the discharge of liquid through the passage 17 it will be necessary to invert the bottle, which causes the valve 21 to slide within the opening 19 to the outer end of said opening, thus leaving the passage 17 unobstructed. At the same time the valve 5 will be unseated, thus permitting liquid to be decanted. The circular projection 22 depends from the inner end of the plug 15 to prevent the valve 5 from obstructing the inner end of the passage 17.

It will be obvious that as soon as the bottle is returned to its upright vertical position the valves 20, 21, and 5 will assume their normal positions, thus closing the discharge-passage 17 against the introduction of liquid.

As the sleeve 14 will be tightly secured upon the threaded flange 2 of the bottle, I preferably provide said sleeve with projecting lugs 23 to facilitate the unsealing of the sleeve by authorized parties.

It is designed to construct all of the parts of the device, with the exception of the yielding gasket 8 of the sleeve 14, of glass, thus avoiding the contact of the contents of the bottle with rubber or metallic surfaces, which would have a deteriorating effect upon the liquid.

I claim—

1. The combination with a bottle formed at its upper end with a valve-seat; of a valve supported in said seat; a detachable bottle-neck; a plug within said neck formed with an inclined discharge-passage and a plurality of oppositely-inclined circular openings intersecting said discharge-passage; and cy-

lindrical valves arranged within said openings and adapted to slide therein.

2. The combination with a bottle formed at its upper end with an externally-threaded flange and a hollow cylindrical extension contracted at its lower end to form a valve-seat; a removable bottle-neck; a plug within said neck formed with an inclined through-opening serving as a discharge-passage and with a plurality of oppositely-inclined circular openings intersecting the discharge-passage; cylindrical valves within said inclined openings; and a flanged sleeve for securing the bottle-neck in position, said sleeve being threaded to engage the threaded flange of the bottle.

3. The combination with a bottle provided with a threaded flange at its upper end and with a hollow cylindrical extension, the upper end of which is formed with an annular shoulder; a gasket seated on said shoulder; a plug formed at its lower end with an annular flange resting on the gasket having an inclined discharge-passage and a plurality of oppositely-inclined openings intersecting said passage; a bottle-neck fitting over said block and formed at its lower end with a depending annular flange and with external and internal shoulders; and a sleeve screw-threaded at its lower end to engage the threaded flange of the bottle and formed at its upper end with an annular internally-extending flange to engage the external shoulder of the bottle-neck.

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

JOHN J. BROWN.

Witnesses:

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DEXTER ALLEN.