

No. 784,975

PATENTED MAR. 14, 1905.

L. N. BISHOP.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAY 28, 1904.

Fig. 1.

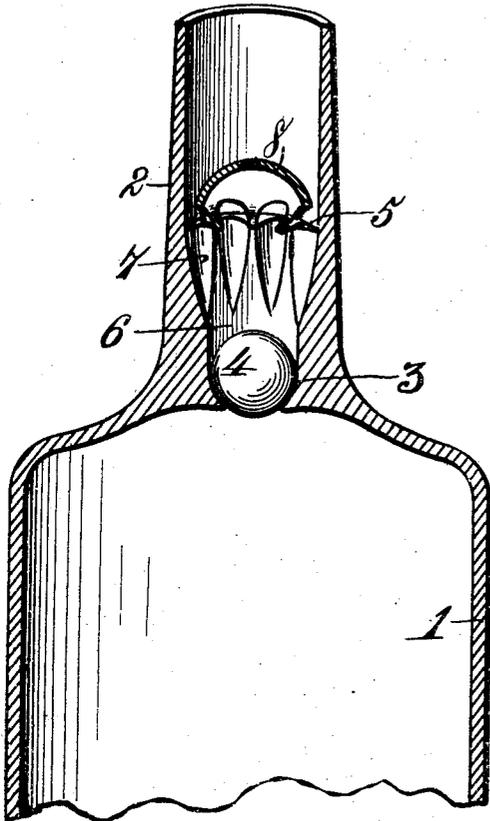


Fig. 2.

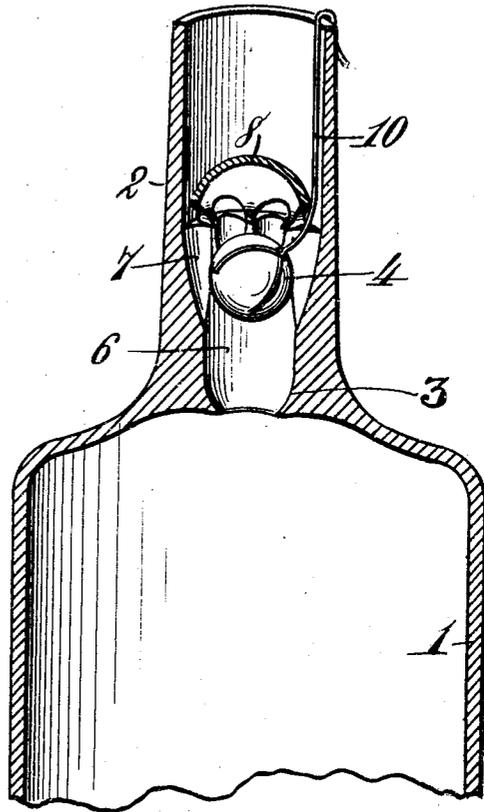


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS NICHOLAS BISHOP, OF DAYTON, KENTUCKY.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 784,975, dated March 14, 1905.

Application filed May 28, 1904. Serial No. 210,245.

To all whom it may concern:

Be it known that I, LOUIS NICHOLAS BISHOP, a citizen of the United States, residing at Dayton, in the county of Campbell and State of Kentucky, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to bottles of the non-refillable class; and the object thereof is to provide a new and novel form of bottle so constructed as to prevent the refilling thereof after its contents have been discharged or partly discharged.

The invention further aims to construct what is termed a "non-refillable bottle" which shall be extremely simple in its construction, strong, durable, efficient in its use, one that cannot be refilled after the contents have been removed, and one that is comparatively inexpensive to manufacture.

With the foregoing and other objects in view the invention consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like reference characters denote corresponding parts throughout the several views, in which—

Figure 1 is a sectional elevation of the bottle with the body portion thereof broken away. Fig. 2 is a like view, showing the bottle-valve lifted by a suitable tool to permit of initially filling the bottle. Fig. 3 is a perspective view of the valve guard and arrester.

Referring to the drawings by reference characters, 1 denotes the body portion of the bottle broken away at its bottom, and 2 the bottle-neck, having its inner face at its lower end terminating in a valve-seat 3 for the bottle-valve 4, the latter being in the form of a sphere and constructed of any suitable material, preferably glass. The inner face of the neck 2 at a point removed from its upper end is formed with an annular shoulder 5, and

that portion of the bottle-neck 2 between said shoulder 5 and the valve-seat 3 is termed a "valve-chamber" 6 to permit of the movement of the valve 4 off its seat when the bottle is tilted to remove the contents thereof, and the said chamber 6 is cylindrical in contour and of much smaller diameter than the inner diameter of the bottle-neck above the shoulder 5. The wall of the valve-chamber 6 is formed with a plurality of outlet-channels 7 for the discharge of the contents of the bottle. Said channels 7 start at a point removed from the valve-seat 3 and terminate in the shoulder 5, gradually increase in width upwardly, and are preferably partly cylindrical in contour.

The reference character 8 denotes a valve guard and arrester substantially dome-shaped in contour and provided with a plurality of supporting-lugs 9, which are mounted upon and secured to the shoulder 5 by any suitable means, and said lugs 9 extend slightly over the edge of the shoulder 5 to arrest the movement of the valve 4 in one direction, so as not to close the openings between the lugs 9 and further prevent the entrance of the valve into the guard. The lugs 9 are of such height as to retain the guard 8 a suitable distance above the shoulder 5, so that outlets for the channels 7 will be provided; but at the same time the space between the guard 8 and shoulder 5 is such as to prevent the entrance of any device to tamper with the valve 4. The guard 8 may be constructed of any suitable material or of any suitable form; but preferably the material from which the guard 8 is constructed is glass, and preferably the contour of the guard 8 is dome-shaped.

Any suitable means may be employed for lifting the bottle-valve to permit of initially filling the bottle. Preferably the means employed is that as shown, which consists of the elongated piece of wire 10, having its upper end bent over the neck of the bottle, so as to suspend said wire 10 when in an operative position. The lower end of said wire 10 has pivoted thereto a plurality of curvilinear prongs, forming when extended what may be termed a "crow-foot," adapted to partly

surround and connect the valve 4 with the wire 10, so that said valve 4 can be lifted to permit of the entrance of the liquid to the bottle when initially filling it. The prongs engage the valve 4 in such a manner as to be easily detached therefrom. The engagement of the prongs with the valve 4 is had before the guard 8 is secured in position. After the latter has been secured in position the wire 10 extends through one of the openings formed between the lugs 9, and after the bottle has been filled the wire 10 is pulled upon or, rather, removed from the bottle-neck, and such action causes the separation of the prongs from the valve 4 and the passage of the prongs, with the wire 10, through the opening between the lugs 9. After the bottle is filled and the lifting means is removed from the neck of the bottle the bottle-neck is closed by a cork or any other sealing means.

It is thought the many advantages of a non-refillable bottle constructed in accordance with the foregoing description, taken in connection with the accompanying drawings, can be readily understood, and it will furthermore be evident that changes, variations, and modifications can be resorted to without departing from the spirit of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the details of construction hereinbefore described and as shown in the accompanying drawings, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a non-refillable bottle, a neck portion having its inner face terminating at its lower end in a valve-seat and further provided with an annular shoulder at a point removed from said seat, the inner diameter of that portion of the neck between the shoulder and said valve-seat being of smaller diameter than the inner diameter of the neck above the shoulder, and that portion of the bottle-neck between the shoulder and valve-seat forming a valve-chamber with the wall thereof formed with a series of outlet-channels starting from a point removed from said seat and terminating in said shoulder and gradually increasing in size upwardly, a valve operating in said

chamber, and a valve-guard mounted upon said shoulder.

2. In a non-refillable bottle, a neck portion having its inner face terminating at its lower end in a valve-seat and further provided with an annular shoulder at a point removed from said seat, the inner diameter of that portion of the neck between the shoulder and said valve-seat being of smaller diameter than the inner diameter of the neck above the shoulder, and that portion of the bottle-neck between the shoulder and valve-seat forming a valve-chamber, a valve guard and arrester arranged in said neck portion and provided with a plurality of supporting-lugs secured to and projecting over the edge of said shoulder, and a valve operating in said chamber.

3. In a non-refillable bottle, a neck portion having its inner face terminating at its lower end in a valve-seat and further provided with an annular shoulder at a point removed from said seat, the inner diameter of that portion of the neck between the shoulder and said valve-seat being of smaller diameter than the inner diameter of the neck above the shoulder, and that portion of the bottle-neck between the shoulder and valve-seat forming a valve-chamber with the wall thereof formed with a series of outlet-channels starting from a point removed from said seat and terminating in said shoulder and gradually increasing in size upwardly, a valve guard and arrester arranged in the neck portion and provided with a plurality of supporting-lugs secured to and projecting over the edge of said shoulder, and a valve operating in said chamber.

4. In a non-refillable bottle, a neck portion provided on its inner face intermediate its ends with an annular shoulder and further provided with a valve-seat, said neck portion having its inner face at a point removed from said valve-seat provided with a plurality of outlet-channels terminating in said shoulder, a valve adapted to engage said seat, and a combined valve guard and arrester suitably secured to said shoulder.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS NICHOLAS BISHOP.

Witnesses:

JNO. S. STORRS,

LOUIS NICHOLAS BOGAN.