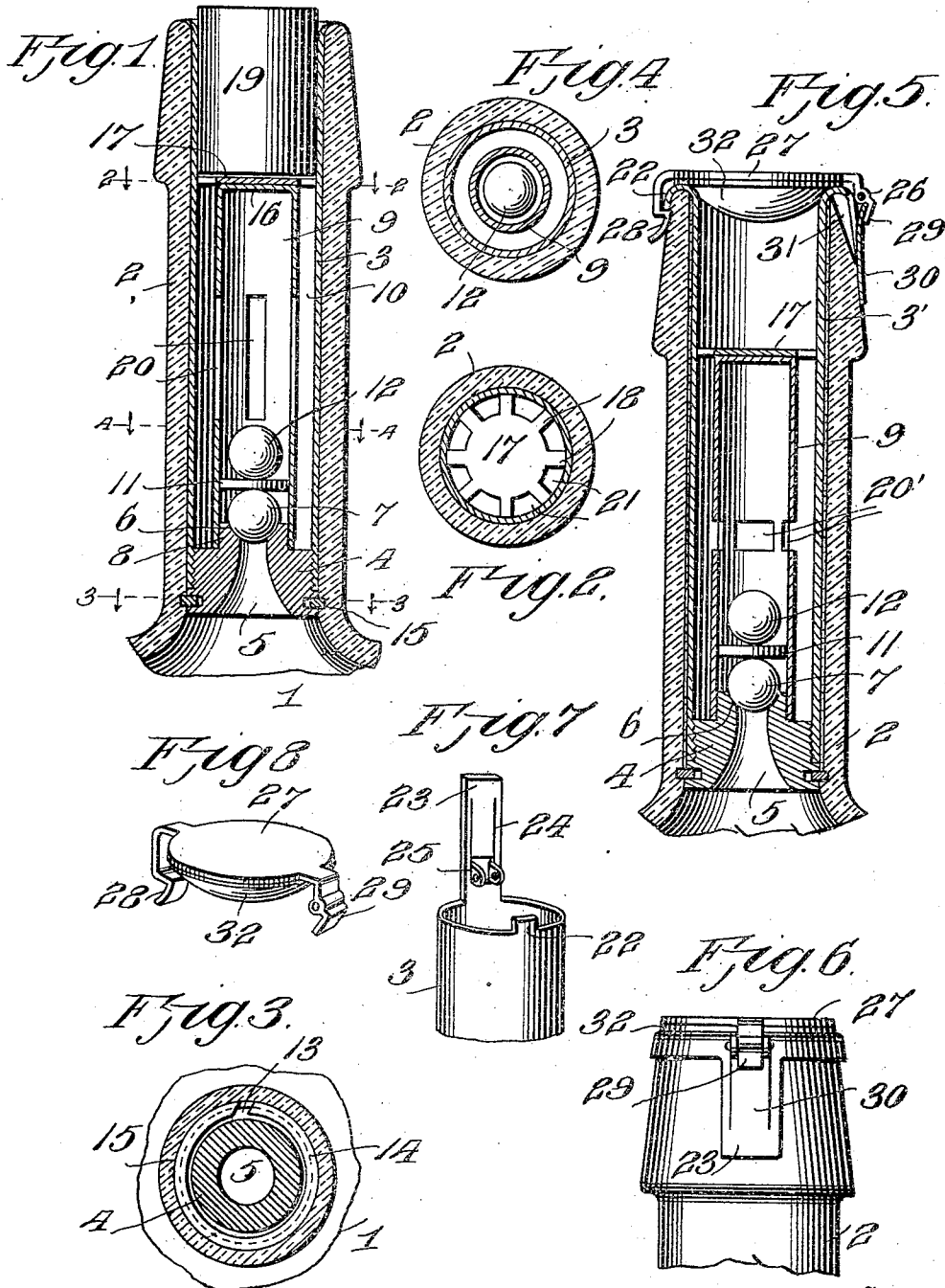


W. J. BURLEIGH.
NON-REFILLABLE BOTTLE.
APPLICATION FILED SEPT. 8, 1909.

958,588.

Patented May 17, 1910.



Witnesses

Frank Hough
James A. Koch

Inventor
William J. Burleigh

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. BURLEIGH, OF ROME, NEW YORK.

NON-REFILLABLE BOTTLE.

958,588.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed September 8, 1909. Serial No. 516,672.

To all whom it may concern:

Be it known that I, WILLIAM JACOB BURLEIGH, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to a non-refillable bottle and an object of the invention is to provide a bottle of this character wherein novel, effective and simple means will be employed for preventing the refilling of the bottle after the original contents has been dispensed therefrom.

Another object of my invention resides in the provision of a novel form of valve-carrying member which may be conveniently positioned and fixed in the neck of the bottle, the said member being provided with a simple and novel form of valve upon which is normally seated a weight which latter is adapted to hold the valve in its operative position.

Other objects and advantages will be apparent as the nature of the invention is better disclosed and it will be understood that changes within the scope of the claims can be made without departing from the spirit of the invention.

In the drawing forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a vertical section taken through a portion of my improved bottle. Fig. 2 is a section taken on the line 2—2 of Fig. 1. Fig. 3 is a section taken on the line 3—3 of Fig. 1. Fig. 4 is a section taken on the line 4—4 of Fig. 1. Fig. 5 is a view similar to Fig. 1 showing a slightly modified form of my invention. Fig. 6 is a detail elevational view of a portion of the neck of the bottle shown in Fig. 5. Fig. 7 is a detail perspective view of a portion of the valve-carrying member shown in Fig. 5. Fig. 8 is a detail perspective view of the cap member shown in Fig. 5.

With particular reference to Figs. 1 to 4 inclusive it will be seen that my improved non-refillable bottle embodies a body 1 of usual or any desired form or construction, the said body having formed integrally therewith the usual neck 2. A valve-carrying member is located in the neck of the bottle and this member preferably consists of a cylindrical tube 3 which extends approx-

imately throughout the entire length of the neck, the said member being curved around a portion of the upper end of the neck for a purpose to be hereinafter described. The tube 3 is threaded interiorly at its lower end and receives a plug 4 which is formed with a tapered discharge passage 5 whose upper walls are formed into a seat 6 for the reception of a valve 7. The valve 7 as herein shown is of spherical form but it will be appreciated that any other well-known form of valve may be employed. The plug 4 has formed integrally therewith a reduced neck 8 which receives and to which is securely fastened in any suitable manner the lower extremity of a tube 9. The tube 9 is of less diameter than the tube 3 and it has its walls spaced from those of the tube 3 to provide a chamber 10 between the tubes as is obvious. A cylindrical disk 11 is movable in the tube 9 and is seated normally upon the valve 7. This disk is engaged by a weight 12 which is employed for the purpose of holding the disk normally in its operative position and to entirely close the transverse area of the tube 9 at a point immediately above the valve. The plug 4 is provided with an annular groove 13 in which is seated a spring washer 14 which is adapted when the valve-carrying member is operatively inserted in the bottle to expand into an annular groove 15 in the neck of the bottle. The washer effectively serves the purpose of a locking device and the provision of the same prevents removal of the valve-carrying member after it has been once placed into the neck. The upper end of the tube 9 is provided with a seat forming head 16 to which is secured a spider 17 whose fingers 18 extend radially and are engaged at their outer extremities with the walls of the tube 3. The upper closed end of the tube 9 terminates short of the upper open end of the tube 3 thus providing for the insertion into the tube 3 of a cork or other suitable plug closure 19. The tube 9 is formed with a plurality of spaced longitudinally extending feed or discharge passages 20 which are positioned preferably midway between the ends of the said tube.

In operation of a bottle as herein shown and described liquid is first inserted in the bottle in the usual manner, after which the valve-carrying member is operatively positioned in the neck of the bottle. When it is desired to remove the contents of the bot-

the latter is inverted as in the ordinary manner, and in this position of the bottle the weight 12, the valve 7 and the disk 11 will move approximately simultaneously and will be disposed at the closed end of the tube 9, the weight 12 resting against the seat forming head 16. It will be readily understood that when the said valve, weight and disk have been moved into the position just named communication will be established between the body of the bottle and the feed or discharge passages and the liquid will be free to flow into the chamber 10 to be discharged therefrom through the passages 21 between the fingers 18 of the hereinabove described spider. The spider is of such construction and is arranged in such position relative to the valve-carrying chamber that it is impossible to effectively insert a tampering tool into the tube 9 of the valve-carrying member and the weight, disk or valve cannot become dislodged by one desiring to replace the original and true contents of the bottle by an inferior liquid.

In the form of my invention shown in Figs. 5 to 8 inclusive the valve-carrying member is approximately the same as that described in the preferred form, the difference being in the formation principally of the tube 3'. The tube 3' in this instance is formed at its upper end with a tongue 22 and with a finger 23. The tongue 22 is bent outwardly and downwardly over the neck of the bottle likewise the finger 23. The finger 23 is provided with a longitudinally extending slot 24 and at one end of the slot, the said finger is formed with a pair of spaced ears 25. These ears pivotally receive therebetween the bearing 26 of a cap 27 which is adapted to lie across the open end of the neck of the bottle. This cap is provided with a spring latch member 28 which is adapted to be engaged with the lower edge portion of the tongue 22 as shown to best advantage in Fig. 5 of the drawing. The bearing member 26 of the cap is formed with a lip 29 which is engaged by a leaf spring 30. The lip 29 is of such construction that when the cap 27 is moved to its open position the engagement of the leaf spring with the lip will act sufficiently to hold the cap in its open position. The provision of the slot 24 accommodates for the swinging movement of the spring 30 and to further accommodate for the movement of this spring the neck of the bottle is slotted sufficiently as shown at 31.

The bottle described in the modified form of my invention is preferably adapted for liquids that contain considerable air

pressure and the cap 27 is provided with a semi-spherical plug 32 which is adapted to be engaged with the tube 3' of the valve-carrying member to form a perfect air tight connection. The plug 32 is preferably of rubber whereby it may yield sufficiently to form any irregularities of the tube 3' but it will be understood however, that the said plug may be formed of any material that may be found most desirable for the purpose intended. The tube 9' in the modified form of my invention is substantially the same as that described in the preferred form, the difference being in the formation of the feed or discharge passages 20'. In this instance the said passages are somewhat smaller.

Having thus described the invention what is claimed as new is:

1. A bottle having a neck, a valve-carrying member located in the neck and adapted to be secured thereto, said valve carrying member comprising inner and outer spaced tubes, the inner tube having a closed outer end, a spider engaged with the said closed outer end and provided with a series of radially spaced fingers, said inner tube having a plurality of feed passages formed therein, a valve seat at the lower end of the said valve-carrying member, said valve-carrying member having a passage which opens at one end into the inner tube and at the other end into the neck of the bottle, the outer end of the said passage being formed into the valve seat, a valve engaged with the seat, a weight above the said valve, and a disk conforming in contour to the transverse area of the inner tube and interposed between the valve and weight respectively.

2. A bottle having a neck, a valve-carrying member located in the neck and adapted to be permanently engaged therewith, an apertured plug carried by the said member and provided at one end of its aperture with a valve seat, a valve normally engaged with the seat, a weight above the valve, and a disk interposed between the said weight and valve respectively and adapted to normally close the transverse area of the valve-carrying member at a point immediately above the said valve, said valve-carrying member having a series of feed passages formed therein.

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

WILLIAM J. BURLEIGH.

Witnesses:

HENRY J. BURLEIGH,
JAMES A. KOEHL.