

(No Model.)

A. ULLMANN.
BOTTLE.

No. 568,818.

Patented Oct. 6, 1896.

Fig. 1.

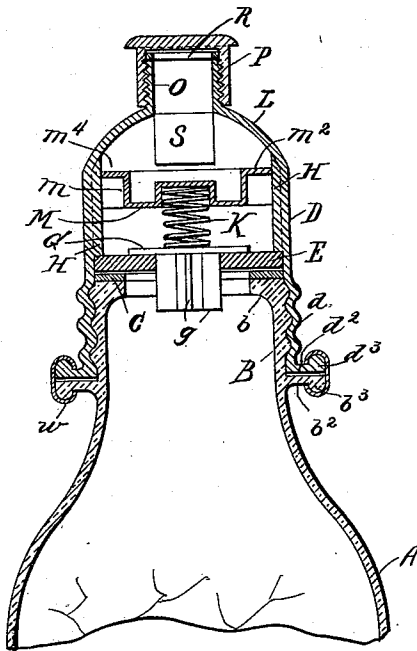


Fig. 4.

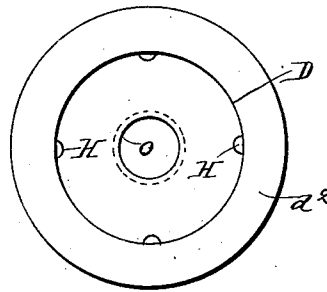


Fig. 5.

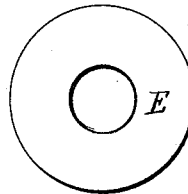


Fig. 6.

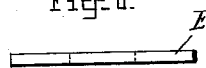


Fig. 7.

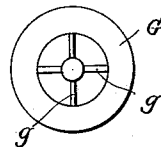


Fig. 2.

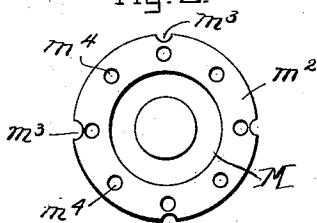


Fig. 3.



WITNESSES:

B. E. Whitney
E. G. Smith

INVENTOR

Albert Ullmann.

BY

Edgar Tate & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALBERT ULLMANN, OF MACON, GEORGIA.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 568,818, dated October 6, 1896.

Application filed January 25, 1896. Serial No. 576,821. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ULLMANN, a citizen of the United States, and a resident of Macon, in the county of Bibb and State of Georgia, have invented certain new and useful Improvements in Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to bottles, jugs, jars, and similar vessels, and the object thereof is to provide a vessel of this class with a neck attachment in which is placed an automatic valve which is so constructed and arranged that when the vessel has once been filled it may be emptied of its contents, but cannot be reused or refilled without leaving evidence of the fact; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a central vertical section of the upper part of a bottle provided with my improvement; Fig. 2, a plan view of a valve-guard; Fig. 3, a side view thereof; Fig. 4, a bottom plan view of the neck attachment in which the valve, the valve-guard, and other guards are located; Fig. 5, a plan view of the valve seat or plate; Fig. 6, an edge view thereof, and Fig. 7 a bottom plan view of the valve.

In the drawings forming part of this specification I have shown my invention applied to a bottle, and in the practice of my invention I provide a bottle A, having a neck B, at the upper end of which is formed an inwardly-directed flange or shoulder b , and the outer walls of said neck are screw-threaded, and formed thereon at a predetermined distance from the upper end of the neck is an outwardly-directed rim or flange b^2 , on the lower side of which is formed an annular bead b^3 . I also provide a neck attachment consisting of a tube D, the lower end of which is screw-threaded, as shown at d , and the screw-thread thereon is adapted to engage with the screw-thread formed on the neck B, and formed on the lower end of the tube D is an outwardly-directed flange or

rim d^2 , on the outer edge of which is formed an annular bead d^3 .

Placed upon the neck B of the bottle or the inwardly-directed flange or shoulder b^3 thereon is a packing-ring C, of cork or similar material, and above the ring C is placed a disk or plate E, which is provided with a central port or opening which is adapted to be closed by the valve G, and formed on or secured to the lower side of said valve are cross-plates g , as shown in Figs. 1 and 7, and which are adapted to serve as guides to the valve in the operation thereof, as hereinafter described.

Formed in the inner walls of the tube D are vertical ribs H, which, when said tube is in position, are adapted to rest upon the disk or plate E, and when the tube is screwed down on the neck these ribs H press upon said plate or disk and securely hold the same upon the packing-ring C, which is pressed in contact with the annular shoulder or flange b of the neck B.

It will be understood that the plate or disk E constitutes a valve-seat for the valve G, and placed upon said valve is a spiral spring K, the upper end of which fits within a circular cavity formed in a plate M, which constitutes a vertically-movable valve-guard. Said plate M is circular in form and is of less diameter than the inner diameter of the tube D, and is provided at its outer edge with an upwardly-directed annular flange or rim m , and at the upper end of which is formed an annular outwardly-directed flange m^2 , which is adapted to fit within the said tube, and said flange or rim m^2 is provided with notches or recesses m^3 , which correspond with the ribs H on the inner side of said tube, and the valve-guard M is thus free to move up and down within said tube.

The upper portion of the tube D is contracted, as shown at L, and provided with a tubular extension O, which constitutes the nozzle of the bottle or vessel, and said tube O is screw-threaded on its outer surface, and is provided with a screw-threaded cap P, and placed between the end of said tube and said cap is a packing-ring R, of cork or similar material.

The annular flange or rim m^2 of the valve-guard is provided with perforations or openings m^4 , and I also prefer to form on the outer

edge of said annular flange or rim m^2 a depending rim m^4 , as shown in Fig. 3, but this feature is immaterial, and said depending rim m^5 may be omitted, if desired.

5 I also provide a supplemental guard S, which may be supported on the valve-guard M or suspended from the cap P, and which extends crosswise of said valve-guard below the tube O, and this device is also intended
10 to assist the valve-guard M in preventing any interference with the operation of the valve, as hereinafter described.

In this class of devices the bottle or other vessel is first filled before the neck attachment is applied, and, the bottle having been filled, the packing-ring C, the disk or plate E, the valve G, and the spring K are placed in position, and the tube D, with the valve-guard M, is then screwed onto the neck, as
20 shown in Fig. 1, until the flange d^2 thereof rests upon the flange or rim b^2 , formed on the neck, and in this position the separate parts of the neck attachment will appear as shown in said figure, after which the cap P is placed
25 in position.

The tube D may be secured to the neck in any desired manner, and cement may be employed in connection with the screw-threads to accomplish this result; but I prefer to employ a metal band W, which is spun over the annular bead d^3 , connected with the lower end of the tube D, and the annular bead b^3 , formed on the flange or rim b^2 of the neck B. By means of this device the tube D may be
30 secured to the neck of the vessel in such manner that it cannot be removed without destroying either said tube or said vessel, and I may also place on the band W a trade-mark, or the name of the manufacturer or proprietor of the contents of the bottle, and, if desired, after the bottle or vessel has once been emptied it may be returned to the manufacturer and again filled and closed or sealed as before.

45 When it is desired to empty the bottle or vessel, it is only necessary to remove the cap P and invert or tilt the bottle, when the valve g will be forced from its seat by the pressure of the liquids in the bottle, and the latter
50 will flow out around said valve and through the openings m^4 in the valve-guard and out around the guard S and through the tubular nozzle O, and this operation may be continued or repeated until the vessel is entirely emptied.
55

The valve-guard M is free to move up and down within the tube D, and the spring K may be connected therewith in such manner that the weight of the guard will assist in
60 opening the valve, and if an attempt be made to refill the vessel said valve will at once be reseated by the operation of gravity and the pressure of the spring K, and no liquids can enter the vessel; and this operation of the
65 valve will be the same in any position in which the vessel can be held in an attempt to fill the same by pouring liquids thereinto;

and it will be apparent that by reason of the location of the openings m^4 in the flange or rim m^2 of the valve-guard M, and also by reason of the guard S, an instrument, wire, tool, or other device cannot be inserted through the tube O, so as to interfere with the operation of the valve.

It will thus be seen that I accomplish the object of my invention by means of a device which is comparatively inexpensive and well adapted to produce the result for which it is intended; and it is evident that changes in and modifications of the construction herein described may be made without departing from the spirit of the invention or sacrificing its advantages.

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

1. The combination with a bottle or other vessel provided with a neck, of a tubular attachment secured thereto, a plate or disk placed upon the neck of the bottle and provided with a central port or opening, a valve adapted to close the same, a spiral spring placed upon said valve and a vertically-movable valve-guard supported upon said spring, said valve-guard being adapted to fit within the tubular attachment and being provided with a row of perforations or openings in the outer side thereof, said tubular attachment being provided with a cap which is adapted to be secured thereto, and with a supplemental valve-guard which is arranged above the movable valve-guard, said parts being constructed, combined and arranged, substantially as shown and described.

2. The combination with a bottle or other vessel provided with a neck, of a tubular attachment secured thereto, a plate or disk placed upon the neck of the bottle and provided with a central port or opening, a valve adapted to close the same, a spiral spring placed upon said valve and a vertically-movable valve-guard supported upon said spring, said valve-guard being adapted to fit within the tubular attachment and being provided with a row of perforations or openings in the outer side thereof, said tubular attachment being provided with a cap which is adapted to be secured thereto, and with a supplemental valve-guard which is arranged above the movable valve-guard, and said tubular attachment being provided with vertical ribs in its inner walls which rest upon the disk or plate on which the valve is placed, and by means of which said disk or plate is held in position, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 17th day of January, 1896.

ALBERT ULLMANN.

Witnesses:

W. R. WHITE,
I. L. DUNWODY.