(No Model.)

C. P. LUNDQUISTE.

BOTTLE.

No. 569,217. Patented Oct. 13, 1896.

Fig. 1.

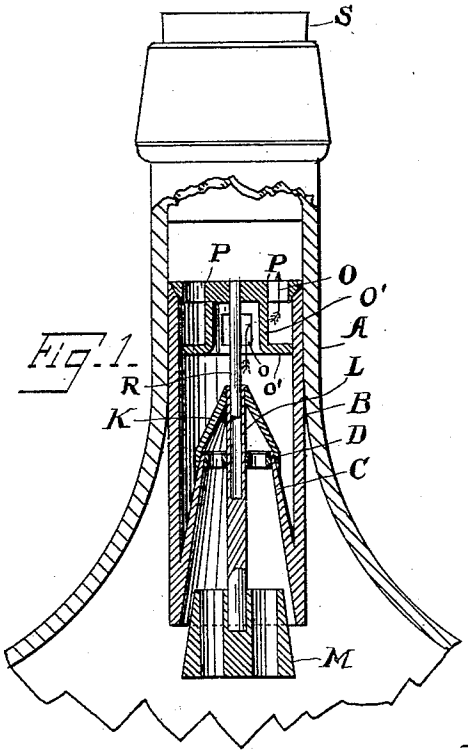


Fig. 2.

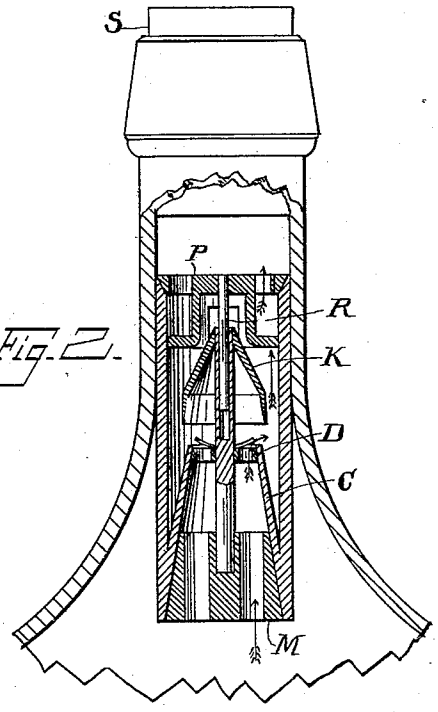


Fig. 6.

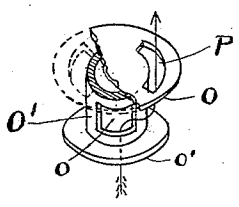


Fig. 3.

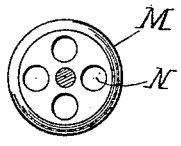


Fig. 4.

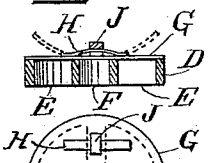
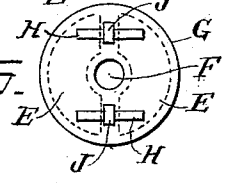


Fig. 5.



Charles P. Lundquiste,
Inventor

Witnesses
Harry J Perkins.
C Gerak

By Attorneys Edgar Tate & Co

UNITED STATES PATENT OFFICE.

CHARLES P. LUNDQUISTE, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO EDWIN C. DENNIN, OF SAME PLACE.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 569,217, dated October 13, 1896.

Application filed July 24, 1895. Serial No. 556,977. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. LUNDQUISTE, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, 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, and the object thereof is to produce a bottle the neck of which is provided with a non-removable stopper or attachment so constructed and arranged that when the bottle has been filled and the attachment applied the bottle may be emptied of its contents but cannot be refilled or reused.

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

Figure 1 is a vertical sectional view of the neck of a bottle provided with my improvement; Fig. 2, a similar view showing the parts which constitute the improvement in a different relative position; and Figs. 3, 4, 5, and 6 represent details of the construction.

In the practice of my invention I secure within the neck A of a bottle a tubular plug B, which has within its lower end an upwardly-directed conical device C, which is open at the bottom and the apex of which is cut away and has fitted therein a plate D, having side apertures or ports E and a central bore F, the side apertures or ports being shown in full lines in Fig. 4 and in dotted lines in Fig. 5.

Mounted upon the top of the ring D is a mica valve G, adapted to close the ports E, said plates being held in position by spring-pins H, which pass through lugs or projections J, formed on the upper side of the plate D, as clearly shown in said Fig. 5.

Mounted on the upper end of the conical device C is a conical valve K, the lower end of which is adapted to closely fit around the upper end of the conical device C, as shown in Fig. 1, and secured centrally within said conical valve K is a tube L, which extends downward through the central bore in the plate D and has secured thereto at its lower end a weight M, provided with vertical ports N, the outer walls of which are inclined upward in such manner as to fit within the lower end of the tubular plug A and the conical device C at the lower end thereof.

Mounted on or at the upper end of the tube A is an end plate O, adapted to be secured to said tube in any desired manner, said end plate being provided with ports P and a central rod R, which extends downward and into the plug L, connected with the valve K, as clearly shown in Figs. 1 and 2, and the lower part of said plate O is provided with a downwardly-directed tubular extension O′, having side ports *o* and an annular flange or rim *o′*, the ports *o* in the tubular extension being transverse to or out of line with the ports or openings P in the plate O, the details of this arrangement being most clearly shown in Fig. 6.

In this class of devices the bottle must be filled with the desired contents before the non-removable stopper is applied, and the operation of the improvement is as follows: The bottle having been filled, the plug B, with its connected devices, is inserted into and secured within the neck of the bottle in any desired manner, and the nozzle of the bottle may be then closed by a cork or stopper S in the usual manner. When it is desired to empty the bottle or discharge a portion of its contents, it is only necessary to remove the cork or stopper S and invert or tilt the bottle, when the valve K and the weight M will assume the position shown in Fig. 2, the valve K being forced from its seat by the weight M, said valve sliding on the rod R, when the liquid within the bottle will flow out through the ports N in the weight M, the ports E in the plate D, and into and out of the tubular extension of the plate O through ports *o*, and thence through the ports P in the plate O, as shown by the arrows in Figs. 1 and 2. In this operation the sides of the mica valve G, which covers the ports E, are lifted slightly by the pressure of the fluid, as shown in full lines in Fig. 2 and in dotted lines in Fig. 4, and this operation may be continued or repeated as long as any fluid remains within the bottle.

If an attempt be made to refill the bottle by pouring liquids through the nozzle thereof, the valve K will at once be reseated on the upper end of the conical device C by the weight M, as will be readily understood, and nothing can enter the bottle, and this operation of the valve will be the same in any position in which the bottle could be held in an attempt to pour liquids thereinto. It will also be observed that as soon as the bottle is emptied the mica valve G will also be reseated either by its own action or by its own action in connection with the action of the spring-pins H, which are composed of whalebone or similar material, and are of just sufficient strength to exert a very slight pressure on the valve G, and this action of the valve G will also be sufficient to prevent the refilling of the bottle, and said action will be the same in any position in which the bottle can be held, and it will thus be evident that by reason of the valve G liquids cannot be forced into the bottle even when the bottle is held in an inverted position.

The plate O and its ports P and the extension O′ thereof, having the side ports *o* and the flange or rim *o′*, prevent any interference with the valve or valves by inserting a tool or other instrument into the ends of the bottle.

It will thus be seen that I accomplish the object of my invention by means of a device which is simple in construction and operation, and which is perfectly adapted to produce the result for which it is intended.

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

The combination with a bottle or similar receptacle of a tubular plug, adapted to be secured within the neck thereof and within the lower end of said plug is formed an upwardly-directed conical portion, the lower end of which is connected with the tubular portion forming an incline valve-seat, the enlarged end of which extends downwardly, the apex of said device being cut away, and adapted to receive a plate provided with apertures or ports, and having a central bore, a plate O mounted at the upper end of a tube A, which plate is provided with ports and having located centrally therein a downwardly-directed rod, said plate O also being provided with downwardly-directed tubular extensions, having side ports and an annular rim, an inverted conical valve having a depending annular flange adapted to inclose the upper portion of the conical device C, the ports in said device being closed by a mica valve which is held in position by spring-pins H, which pass through lugs or projections formed on the upper side of the plate B, said conical valve K being provided with a downwardly-directed rod, the upper portion of which is tubular, adapted to receive the lower end of the rod R, connected with the plate O and to be vertically movable thereon, the valve K being vertically movable thereon, the lower end of said tube B being provided with a weight M, the sides of which are beveled and which is provided with ports or openings, said weight being adapted to close the lower end of the tube A whereby, the bottle may not be filled without injury being done thereto, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 23d day of July, 1895.

CHARLES P. LUNDQUISTE.

Witnesses:
C. GERST,
A. M. CUSACK.