No. 814,284.

PATENTED MAR. 6. 1906.

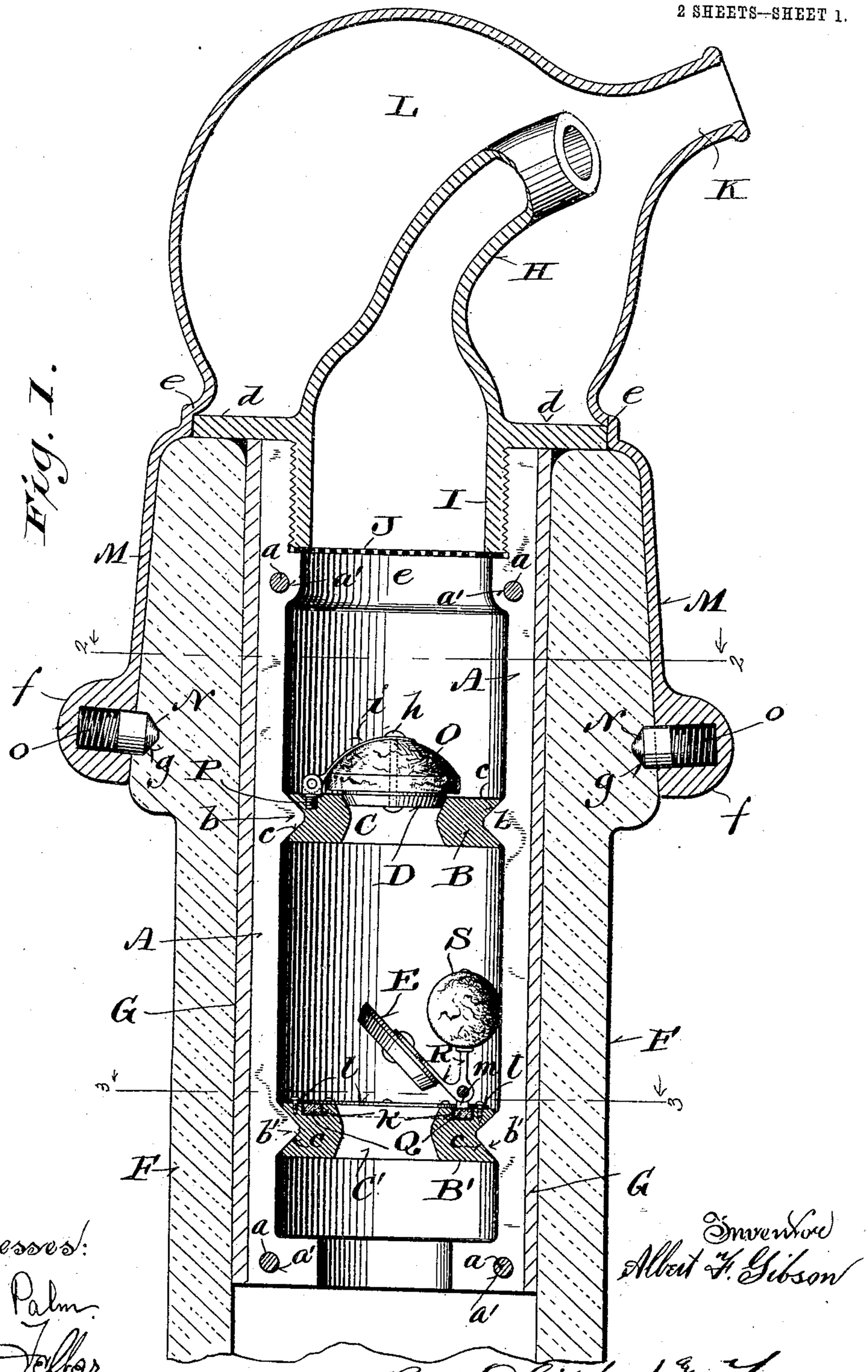
A. F. GIBSON.

NON-REFILLABLE BOTTLE.

APPLICATION FILED OCT. 9, 1905.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

Fred Palm.

Geo. Telter.

Inventor

Albert F. Gibson

By Oliphant and Young

Attorneys

No. 814,284.

PATENTED MAR. 6, 1906.

A. F. GIBSON.

NON-REFILLABLE BOTTLE.

APPLICATION FILED OCT. 9, 1905.

2 SHEETS—SHEET 2.

Fig. 3.

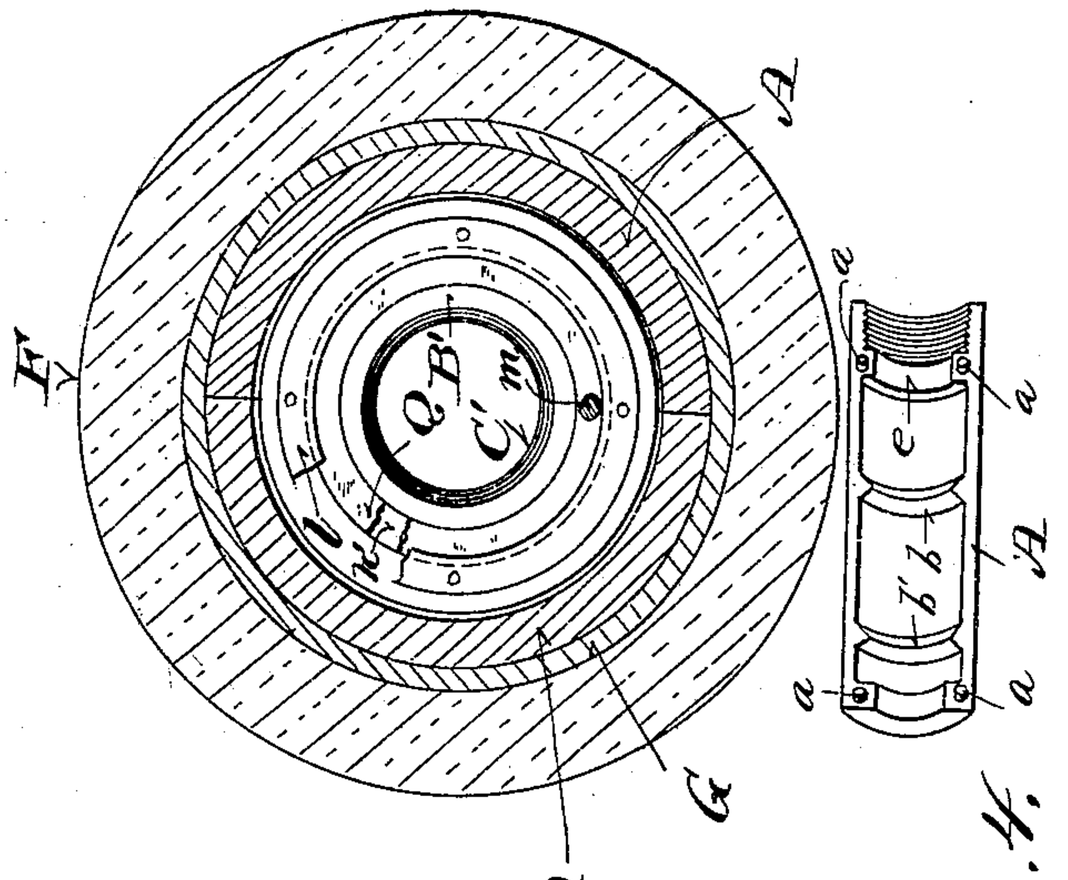
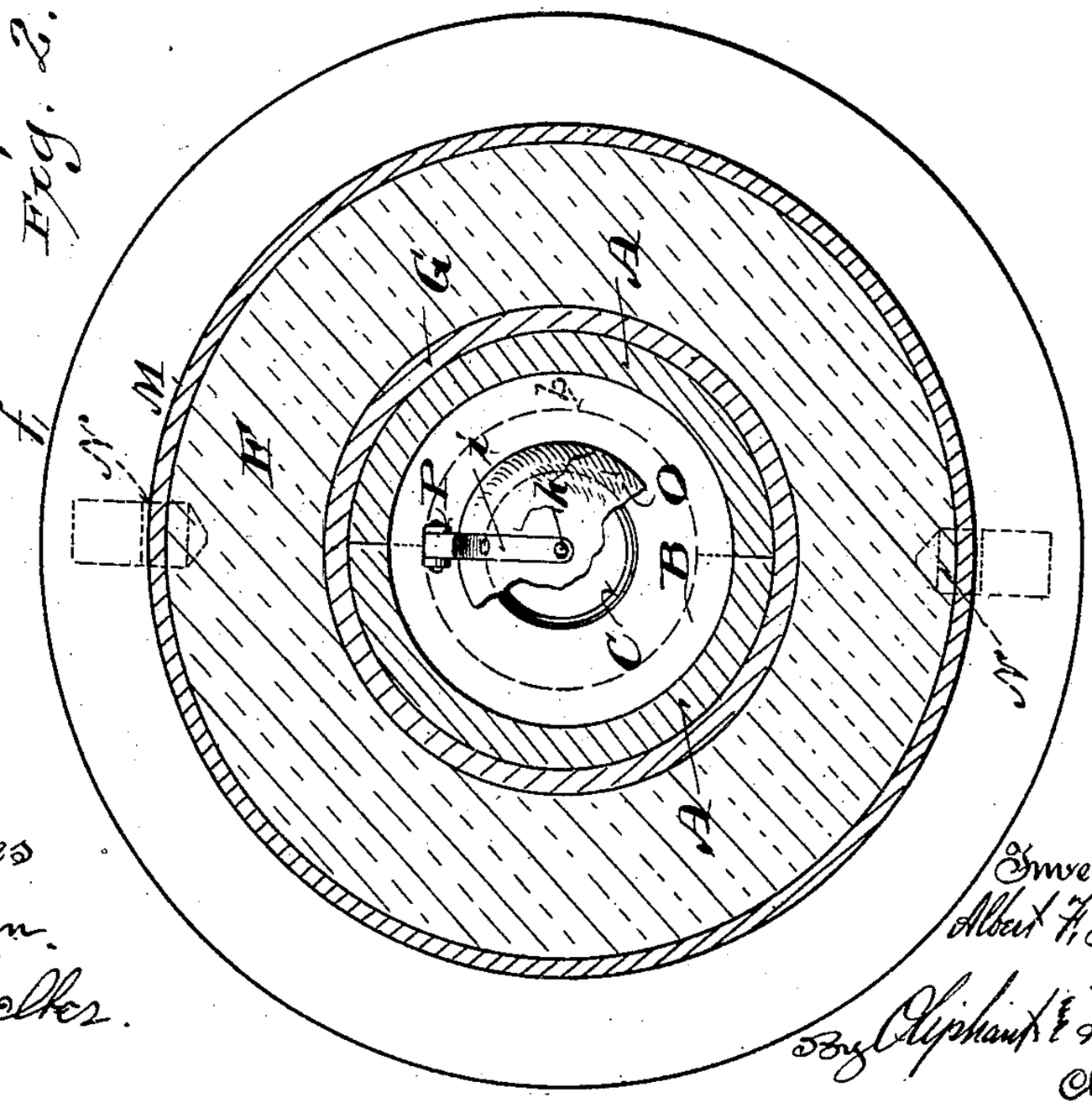


Fig. 4.

Fig. 2.



Witnesses
Fred Palm.
Geo. Folker.

Inventor
Albert F. Gibson.
By Dyrenforth & Young.
Attorneys

UNITED STATES PATENT OFFICE.

ALBERT F. GIBSON, OF MILWAUKEE, WISCONSIN.

NON-REFILLABLE BOTTLE.

No. 814,284. Specification of Letters Patent. Patented March 6, 1906.

Application filed October 9, 1905. Serial No. 281,913.

To all whom it may concern:

Be it known that I, ALBERT F. GIBSON, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide a simple and economical attachment for bottles which will prevent the refilling thereof under all conditions, as well as means for locking the same to the neck of a bottle in such a manner that said attachment cannot be detached without breaking the bottle-neck, said invention consisting in certain peculiarities of construction and combination of parts, as fully set forth hereinafter with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents an enlarged vertical section view of a bottle-neck, showing my attachment secured thereto; Fig. 2, a cross-section of the same, indicated by line 2 2 of Fig. 1; Fig. 3, another cross-section upon the plane indicated by line 3 3 of same figure; and Fig. 4 a detail perspective view of one member of the split valve-casing, said view being on a scale approximately full size.

Referring by letter to the drawings, A represents the valve-casing, which is tubular in form and composed of semicircular members, for convenience in assembling the parts said members being held in registered position with relation to each other by dowel-pins *a*, projecting from one of the members into corresponding holes *a'* in the other member. The valve-casing is open at its ends to form a passage for the discharge of liquid, there being internal conical flanges *b b'* projecting from its side walls intermediate of the ends thereof for the reception of disks B B', which are provided with openings C C', controlled by valves D E, secured to the disks. The said disks B B' have annular grooves *c*, into which are fitted the conical flanges *b b'* of the casing, the aforesaid disks, together with their respective valves, being placed in position previous to the insertion of the said valve-casing within the neck F of the bottle, which, together with an interposed cork shell G, serves to hold the valve-casing members firmly in place. The valve-casing A is held in one direction longitudinally of the bottle-neck by a spout H, which is provided for this purpose with a flange *d* and a shank I in threaded connection with the discharge end of said casing. The said shank when in position also serves to expand the valve-casing members, together with the cork shell G, tightly against the inner walls of said bottle-neck. The bottom edge of the shank I confines a strainer or screen J in position upon an annular shoulder of said valve-casing A, and the flange *d*, which, projecting from the upper edge of said shank, rests upon the edge of the bottle-mouth, thereby preventing the entire device from dropping or being pushed into the bottle.

The discharge end of the spout, as shown, is preferably set at an angle to a nozzle K of a globe-cap L for the purpose of preventing a wire or other instrument from being inserted therein in order to tamper with the valve mechanism. Said globe-cap is provided with a shoulder *e*, which rests upon the upper face of the spout-flange *d* and prevents upward displacement of the valve-casing by reason of the locking engagement of said globe-cap and bottle-neck to be hereinafter described. The globe-cap L is provided with an apron M of the same contour as the head of the bottle to which it is secured, the apron terminating in a bead *f*, which at intervals is bored out internally for the reception of a series of inwardly-extending radial plugs N, having springs *o* arranged to force said plugs into engagement with recesses *g*, formed in the head of said bottle. These recesses are so positioned that when the said globe-cap is pushed into place the plugs N will by their springs be forced therein, and thus lock the attachment.

The disk B, which is adjacent to the discharge of the bottle-neck, has its valve D secured to a cork float O by means of a rivet *h* passing therethough, which rivet also serves to secure a strap *i*, that is pivoted between ears of a stud P, threaded into said disk, thus forming a simple flap-valve having a backing of buoyant material adjacent to the discharge.

The lower valve E is secured to its disk B by means of a loose ring Q, fitted into an annular recess *k* in the upper face of the disk, the ring being confined by an annular plate *l*, which projects over the face of said ring and is secured by screws to the valve-disk. This ring has a stud *m* projecting therefrom, on which is pivoted a bell-crank R, one arm of

which has secured thereto the valve E, while the other arm carries a float S, of cork or other buoyant material.

By the above-described construction of the valve D it will be seen that should the bottle be inverted and immersed vertically in liquid said valve will by reason of its backing of cork float upward upon its hinge and close the valve-opening. If the bottle be placed in a horizontal position and partly submerged in liquid, the lower valve E would by reason of its weight cause the ring Q to revolve until the pivot-point of said valve had adjusted itself by gravity to the lowest point. This would bring the float S in position to be acted upon by a stream of liquid which may enter the bottle-neck, the result being a rise of the float, thereby causing the valve to adjust itself upon its seat and check the inward flow of liquid.

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

1. In a non-refillable bottle, a valve-casing having a valve-seat adjacent to the discharge end thereof, a flap-valve for the same having a float secured thereto, a secured valve-seat in the casing below the first-named seat, a bell-crank fulcrumed in concentric rotary relation to said valve-seat, a valve secured to one arm of the bell-crank and a float mounted upon the other arm thereof.

2. In a non-refillable bottle, a valve-casing composed of semicircular members in dowel connection with each other, a valve mounted in the casing, a tubular shell fitted over said valve-casing and a nozzle in threaded engagement with the mouth thereof.

3. In a non-refillable bottle, a valve-casing fitted in the bottle-neck, a valve mounted therein, a nozzle secured to the mouth of the valve-casing, a cap surmounting the nozzle having its discharge-opening at an angle to said nozzle, and means for permanently locking the cap to the outer walls of said bottle-neck.

4. In a non-refillable bottle, a valve-casing secured within the bottle-neck, a valve-seat in the casing, a bell-crank fulcrumed in concentric rotary relation to the valve-seat, a valve secured to one arm of the bell-crank and a float mounted upon the other arm thereof.

5. In a non-refillable bottle, a valve-casing secured within the bottle-neck, a disk secured in the valve-casing provided with a central opening, a revoluble ring secured to the disk concentric with the opening therein, a bell-crank pivoted to the ring, a valve secured to one arm of the bell-crank, arranged to close said disk-opening, and a float secured to the other arm of said bell-crank.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ALBERT F. GIBSON.

Witnesses:
GEO. W. YOUNG,
FRED PALM.