(No Model.)

P. B. TINGLEY.

BOTTLE.

No. 580,238. Patented Apr. 6, 1897.

Fig. 1.

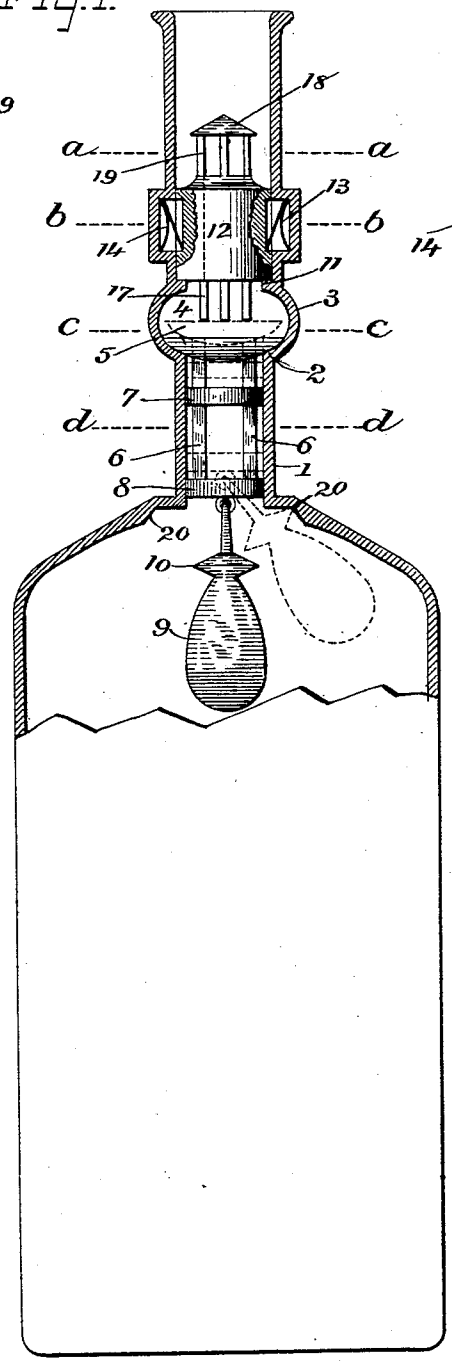

Fig. 2.

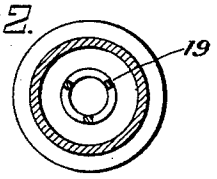

Fig. 3.

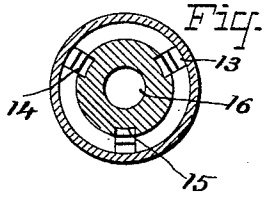

Fig. 4.

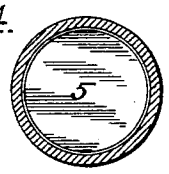

Fig. 5.

WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

PHILO B. TINGLEY, OF NEW YORK, N. Y.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 580,238, dated April 6, 1897.

Application filed May 10, 1894. Serial No. 510,822. (No model.)

To all whom it may concern:

Be it known that I, PHILO B. TINGLEY, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Bottles, of which the following is a specification.

The subject of the present invention is a bottle so constructed as to prevent refilling, the object being to provide a bottle which will guarantee its contents as being of the original brand or manufacture.

As is well known, bottles containing the labels of certain manufacturers are frequently used by being refilled with a spurious liquid, to the detriment and damage of the original bottler. My improved construction obviates the objections noted and at the same time provides a bottle from which the contents can be readily poured whenever necessary and be protected from the air whenever the bottle is in an upright position.

In the drawings accompanying this specification, Figure 1 is a vertical view of a bottle provided with my improvements, the upper portion of the figure being represented in section in order to more clearly show the arrangements and construction of parts located in the neck. Fig. 2 is a transverse horizontal section taken in the plane indicated by the dotted line *a a*, Fig. 1; and Figs. 3, 4, and 5 are corresponding views taken in the planes indicated by the dotted lines *b c d*, respectively.

The neck 1 of the bottle is intermediately provided with an internal valve-seat 2, preferably located at the bottom of an enlarged portion 3 of the neck, forming a valve-chamber 4. The valve 5, closing said seat, is of the shape suitable for conforming to the contour of the bottom of the valve-chamber, which, as illustrated in the present instance, is convex. Connected with said valve and depending therefrom within the lower part of the bottle-neck is a cage or frame consisting of vertically-depending bars 6 6, connected by horizontal rings 7 8. Pivotally connected with the lower ring 8 is a suspended gravity-weight 9, preferably of the peculiar shape shown in Fig. 1, wherein it is represented as being provided with upper shoulder or head 10, designed to contact with the interior of the bottle-body 20 when the bottle is tipped or inverted.

When the bottle is in the position illustrated in Fig. 1, the valve 5 bears upon its seat, and thus the contents of the bottle are closed against the atmosphere the same as though an ordinary cork were employed. When, however, the bottle is tipped or tilted, the frame, which is of movable character, together with the valve, moves so that the latter leaves its seat and the contents can readily be poured out. When the bottle is again placed in an upright position, the gravity-weight restores the frame and valve to its first position, and thereby closes the neck of the same against refilling or the introduction of any further liquid.

In order to confine the valve and protect the same against manipulation, the neck of the bottle immediately above the valve-chamber 3 is provided with an annular shoulder 11, which supports a shell 12, rigidly secured in position within said neck. The shell can be secured by any suitable means. The arrangement shown consists in forming the neck adjacent to said shell with a recess or recesses 13, in which are located spring pawls or catches 14, so formed that a free portion thereof will be pressed within its recess when the lower part of the shell passes the same and enter and engage a recess therefor when said shell reaches its proper position. By this means the surreptitious removal of the shell is prevented.

While I have described the spring-engaging means in detail, I wish it distinctly understood that I do not limit myself to any particular securing means. For instance, I may prefer to rigidly secure the shell in position by means of a cement or fused glass. The said shell 12 is provided with a central duct or passage 16, through which the liquid passes to issue from the mouth of the bottle, and in order to limit the movement of the valve 5, so that the same will not obstruct said passage when the bottle is tilted, the said shell 12 is provided on its under side with a series of depending pins 17, with which said valve comes in contact when the bottle is turned to a position for dispensing its contents. The opening 16 at the top of the shell is guarded or protected by a cap 18, supported upon pins

19, between which latter the liquid passes from the passage 16 to the bottle-mouth.

From the foregoing it will be readily seen that my improved bottle is of such construction that the neck is closed, whatever its position, when relieved of internal liquid-pressure and that its valve is securely protected against manipulation that would enable the refilling or renewal of the contents of the bottle.

The shouldered part 10 of the gravity weight comes in contact with the internal surface of the top of the bottle-body 20, as indicated by the dotted lines in Fig. 1, so that said weight can secure proper leverage or bearing.

The character and relation of the combined gravity-weight and float are such that it possesses a certain amount of buoyancy, with the result that when the bottle is tilted to pour out a portion of its contents the gravity-weight will first assume the position indicated by the dotted line in Fig. 1, so that the valve is still held to its seat, and thereafter when the liquid comes in contact with the weight the latter will be displaced to an extent sufficient to permit the valve to leave its seat and enable the discharge of the contents. It will therefore be comprehended that the valve can only leave its seat so long as the bottle contains some liquid and will not open when the bottle is empty. It will therefore not be possible to refill the bottle for this reason.

I claim—

1. The combination with a bottle, the neck of which is provided with a seat 2, of a movable valve for closing said seat and provided with a depending guiding-frame carrying a combined gravity-weight and float, together with a perforated shell 12, secured in said neck to prevent access to said valve, substantially as set forth.

2. The combination with a bottle, the neck of which contains a movable valve as described, together with a combined gravity-weight and float controlling said valve and provided with a shouldered portion, designed to contact with the interior surface of the top of the bottle-body when the bottle is tilted or inverted, substantially as set forth.

3. The combination with a bottle the neck of which is provided with a seat 2, a movable valve provided with a depending frame carrying a combined gravity-weight and float for seating said valve on said seat, together with a perforated shell 12, and the shoulder 20 formed in the upper part of said bottle for receiving the head 10 of the gravity-weight to insure fulcrumage of the same, substantially as described.

4. The combination with a bottle-neck having a valve-seat, a valve having a disk adapted to engage said seat and a buoyant pendant pivotally attached to the lower end of the valve, of a guard in the bottle-neck above the valve through which liquid may pass freely, and a cone-shaped plate attached to said guard which permits liquid to pass freely, but prevents the insertion of a tool.

5. The combination with a bottle-neck having a valve-seat, and a valve engaging said seat, of a buoyant pendant pivotally attached to the lower end of the valve and swinging freely in the bottle, said pendant having a bearing-surface near its upper end adapted to engage the bottle and a base which serves as a weight to hold the valve seated when its weight is not neutralized by liquid in the pouring operation.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 3d day of May, 1894.

PHILO B. TINGLEY.

Witnesses:
JAS. W. KERRIGAN,
C. M. CATLIN.