

G. TURNER.
BOTTLE CLOSURE.
APPLICATION FILED FEB. 28, 1911.

1,011,282.

Patented Dec. 12, 1911.

Fig. 1.

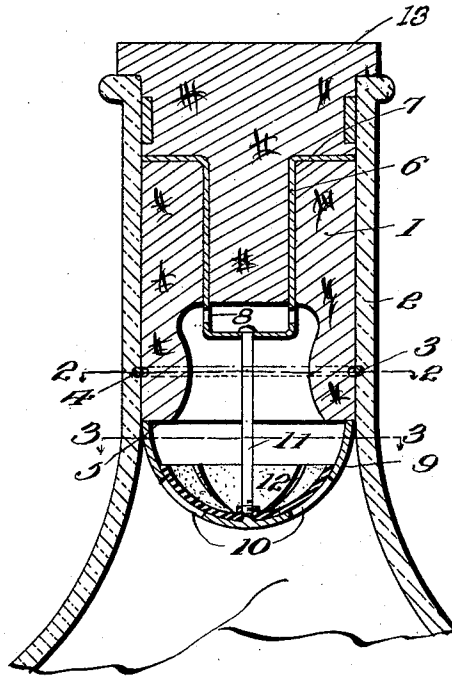


Fig. 2.

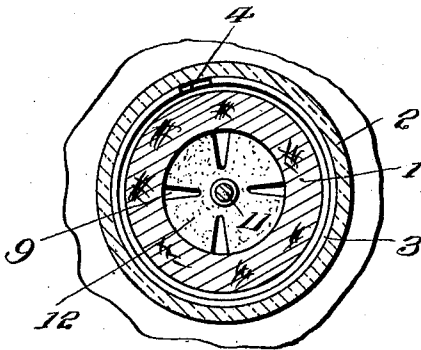
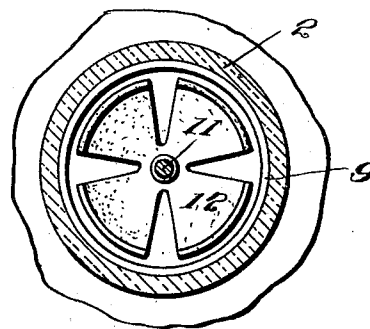


Fig. 3.



Inventor
Gilbert Turner.

Witnesses

Floyd R. Cornwall

Chas. L. Hubbard

By *Wm. C. W. Intire*

Attorney

UNITED STATES PATENT OFFICE.

GILBERT TURNER, OF WHITE PLAINS, NEW YORK.

BOTTLE-CLOSURE.

1,011,282.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GILBERT TURNER, a citizen of the United States, residing at White Plains, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Bottle-Closures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in bottle closures, and in particular to that type known as the non-refillable stopper.

The device provides a bottle stopper that may be easily used on an ordinary bottle neck with but a very slight change in its formation.

It further provides a simple and inexpensive device that will resist any attempts to refill the bottle once it has been emptied.

It is to be further noted that in most of the so-called non-refillable bottle stoppers, the bottle may easily be filled after emptying by placing on its side in a tank, or by inserting a tube of small bore through the passages open when the bottle is inverted. With this device, however, such tampering is eliminated, and the valve will not open unless there is fluid behind to force it open.

With the above and other objects in view, the novelty of the invention resides in the peculiar formation, combinations and arrangements of parts to be hereafter more fully described, claimed and illustrated in the accompanying drawing, in which—

Figure 1 is a sectional view of a bottle constructed in accordance with my invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a section taken on the line 3—3 of Fig. 1.

Referring to the drawing by characters of reference, the numeral 1 represents a stopper, made of cork or other suitable material, and fitted within the neck of the bottle 2. A split ring 3 is inserted in a groove in the stopper 1, and when the stopper is slid down into place the split ring will register with and expand into a groove 4 formed in the inner surface of the neck 2, thereby securing the stopper in place and preventing its removal.

A circular central opening is formed in the stopper 1, and about midway its length the lower portion of the opening is curved

outward to a greater diameter approaching closely to that of the neck of the bottle, leaving, however, a shoulder 5 at the lower end of the stopper. A metal tube 6, the upper portion of which is flanged outward, as at 7, is then inserted and suitably secured within the opening in the stopper, its lower end extending within the enlarged portion and provided with openings 8 around the periphery of its lower end, the bottom being closed. The flanged portion 7 extends out to the neck of the bottle, thus preventing any one from inserting an instrument through the cork and tampering with the valve.

An upwardly turned thimble or cone 9 has its outer edge shaped to conform to the neck of the bottle and rest on the shoulder 5 of the stopper. This inverted thimble has four oval openings 10 spaced diametrically opposite, through which fluid may flow, and is further provided with a spindle 11 suitably attached to its center on the upper side and extending upward through a hole in the bottom of the tube 6 and suitably fastened thereto, as by riveting. A washer or valve 12, made of rubber, or some flexible fabric, is conformed to the inner surface of the thimble 9, and is cut into four flaps or leaves, each one of which registers with one of the openings 10 of the thimble. A portion of the spindle 11 above the thimble is threaded and a nut placed thereon to securely hold the center of the washer against the thimble.

From the above it will be seen that when the device is assembled and forced in the neck of a bottle, which has previously been filled, and the plug 13, which is used merely to keep the opening free from dust, has been removed, the act of tilting the bottle will cause the fluid to press against the leaves of the washer 12 and force them outward and away from the openings 10, thereby allowing the fluid to run out through these openings and through the openings 8 into the tube 6. On removing the pressure of the fluid from the leaves of the washer 12 they will again regain their original position by reason of their elasticity, or springs may be inserted to serve the same purpose.

When the bottle is empty it is impossible to open the leaves of the washer, since they are entirely protected from the use of any instrument and will not open by inverting the bottle or placing it on its side.

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

5 A bottle closing device such as described consisting of a stopper, means for retaining same within the neck of the bottle, a central opening in said stopper and enlarged through its lower portion, a tube extending through said opening, its lower part
10 extending into the enlarged portion of the opening in the stopper, an inverted thimble abutting against the lower end of the stopper, a spindle connecting the thimble to said

lower end of the tube, openings in the inverted thimble, and a flexible washer attached within the thimble, and leaves extending thereupon to normally cover the openings in the thimble, substantially as and for the purposes set forth. 15

In testimony whereof I affix my signature 20 in presence of two witnesses.

GILBERT TURNER.

Witnesses:

PETER O'NEIL,
CHARLEY AMUNDSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
