(No Model.)

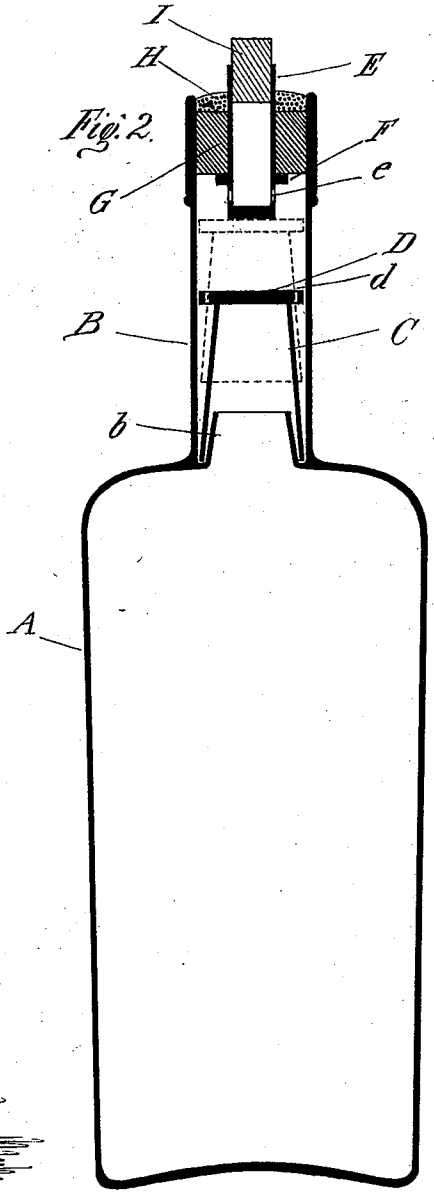
S. ALEXANDER.

BOTTLE.

No. 569,988. Patented Oct. 27, 1896.

Fig. 1.

Fig. 2.



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SAMUEL ALEXANDER, OF MERIDEN, CONNECTICUT.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 569,988, dated October 27, 1896.

Application filed April 22, 1895. Serial No. 546,789. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ALEXANDER, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented a new and useful Improvement in Bottles, of which the following is a specification.

My invention relates chiefly to that class of bottles, flasks, and the like in which proprietary articles are put up. It is intended to prevent the fraudulent reuse of such bottles or flasks for the sale of a spurious or inferior article.

In the accompanying drawings, Figure 1 represents a bottle embodying my invention, partly broken away to show the interior mechanism. Fig. 2 is a vertical section of the same.

The same letters refer to like parts in both views.

A designates a bottle provided with neck B and nipple *b;* C, a cap whose top D is perforated at *d;* E, a tube perforated at *e;* F, a flange on the tube E; G, a stopper; H, a body of cement; I, a cork.

In the example of my invention illustrated in the drawings the bottle or flask A and neck B may be of any desired shape or style. Within the neck B and preferably at or near its junction with the body is an open nipple *b*, concentric with and smaller than the neck B and so as to leave an annular space between said neck and said nipple.

Within the neck B is the cap C, preferably tapered, as shown, and of a size to surround and cover the nipple *b*. The solid top D of the cap C has a projecting flange provided with a row of perforations *d*. The tube E is open at its upper end and closed at its lower end and provided with a plurality of lateral perforations *e*. A flange F is attached to or formed integrally with the tube E, near its lower end, but above the apertures *e*. Surrounding the tube E and supporting it within the mouth of the bottle is the stopper G, which is covered by a cap H, of cement or the like. The mouth of the tube E is closed by a removable cork I or its equivalent.

The operation of my device is as follows: The bottle A being first filled with any desired liquid, the cap C is dropped into place. The stopper G, with its contained tube E, is driven into place and firmly secured against removal by a cap of cement H. The mouth of the tube E being then closed by the cork I, the bottle is ready for shipment. On removing the cork or equivalent closure I the liquid contents of the bottle may be readily poured out, the cap C falling, when the bottle is partly inverted, to the position shown in dotted lines in Fig. 2 and offering practically no obstruction to the flow. It is impossible, however, to pour any liquid into the bottle, as the cap C drops back to its original position—*i. e.*, in the annular space between the nipple *b* and the neck of the bottle—as soon as the bottle is raised from a horizontal position and coöperates with the nipple *b* to form an effectual seal. As the stopper G is firmly secured by means of the cement cap H, and as the flange F prevents the withdrawal of the tube E, these cannot be tampered with without destroying them. To prevent the introduction of a wire or the like by which the cap C might be lifted from its seat, the bottom of the tube E is left solid and the apertures *e* are made in its side, as above described.

It is obvious that in the manufacture of my device certain mechanical alterations may be made and that various suitable materials may be employed in the different parts.

I am aware of various prior devices in which a ground valve-seat is formed in the neck of a bottle to act in conjunction with a ball or equivalent valve fitting therein. In practice the grinding or fitting of such valve-seats and valves has been found far too expensive for commercial use. In my device the action is pneumatic and no fitting is required. Another advantage of my cap C over any ball or the like lies in its buoyancy, by means of which it is lifted or carried to its operative position by the entering stream of liquid when an attempt is made to fill the bottle by inverting or partially inverting it.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is as follows:

1. In a bottle in combination a neck, a nipple within said neck, a vertically-adjustable cap in said neck adapted when the bottle is in its normal position to enter the annular space between said neck and said nipple and

to form with said nipple an air-trap and when said bottle is inverted to drop out of said annular space and to break said trap, substantially as described.

2. In a bottle in combination a neck, a nipple within said neck, a vertically-adjustable cap in said neck provided with a projecting perforated flange and adapted when the bottle is in its normal position to enter the annular space between said neck and said nipple and to form with said nipple an air-trap and when said bottle is inverted to drop out of said annular space and to break said trap, substantially as described.

3. In a bottle in combination a neck, a nipple within said neck, a vertically-adjustable cap in said neck adapted when the bottle is in its normal position to enter the annular space between said neck and said nipple and to form with said nipple an air-trap and when said bottle is inverted to drop out of said annular space and to break said trap, a stopper secured within said neck and a tube passing through said stopper closed at its lower end and provided with lateral apertures, substantially as described.

4. In a bottle in combination a neck, a nipple within said neck, a vertically-adjustable cap in said neck adapted when the bottle is in its normal position to enter the annular space between said neck and said nipple and to form with said nipple an air-trap and when said bottle is inverted to drop out of said annular space and to break said trap, a tubed stopper in said neck and means as a body of cement for securing said stopper in said neck, substantially as described.

SAMUEL ALEXANDER.

Witnesses:
GEO. L. COOPER,
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