

No. 849,179.

PATENTED APR. 2, 1907.

W. WILSON.

BOTTLE.

APPLICATION FILED OCT. 13, 1906.

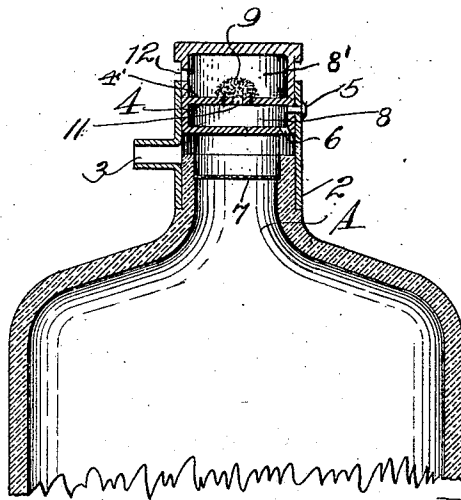


Fig. 1.

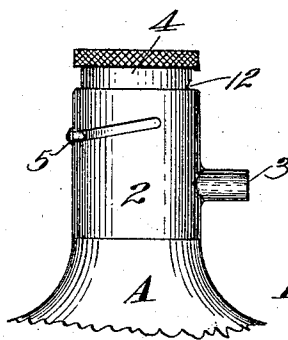


Fig. 2.

WITNESSES:

Fredrick Maynard
James

INVENTOR

William Wilson,
BY
Geo H Strong
ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM WILSON, OF OAKLAND, CALIFORNIA.

BOTTLE.

No. 849,179.

Specification of Letters Patent.

Patented April 2, 1907.

Application filed October 13, 1906. Serial No. 338,702.

To all whom it may concern:

Be it known that I, WILLIAM WILSON, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Bottles, of which the following is a specification.

My invention relates to an improvement in bottles, and is especially designed to prevent the fraudulent refilling thereof.

It consists in the parts and construction and combination of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a section of the device. Fig. 2 is an elevation.

A represents the neck of a bottle to which my improved cap and check apparatus is attached. This apparatus consists of a sleeve 2, which is cemented or otherwise permanently fixed upon the top of the bottle-neck. This sleeve has a discharge-opening at one side, as shown at 3, and a spirally-formed channel is made through one side of the sleeve.

Within the sleeve is a closely-fitting turnable stopper 4, having a pin 5 projecting through the spiral slot, as shown. This stopper is so constructed that when it is turned so that the pin is at the lower point of the spiral groove the stopper covers and closes the opening, and when turned in the opposite direction the stopper is raised sufficiently to expose the opening, so that when the bottle is turned downward the liquid may be discharged through the opening under the following conditions:

The stopper is hollow and has a bottom closed, except for an opening 6, which is made therethrough at such a point that when the stopper has been turned to allow the liquid to be decanted this opening will be upon the upper side, and through it air is admitted to pass into the bottle to take the place of the discharged liquid. Across the central portion of the stopper is a diaphragm 4', which forms a chamber 8 between itself and the bottom of the stopper, said chamber connecting with the interior of the bottle through the aforesaid opening 6. Between the top of the said diaphragm and the under side of the top of the stopper is formed another chamber 8', which connects with the chamber 8 through the opening 11 in said diaphragm. In the vertical wall of the stopper above the diaphragm is an opening 12.

On the upper side of said diaphragm is a valve 9, placed over the opening 11 and formed of a material which when wet causes the valve to expand and close the opening 11, and thereby prevent any air from passing through said opening to take the place of the liquid within the bottle. From this description it will be seen that when the bottle is turned so that the discharge-passage 3 is upon the lower side, the valve 9 being dry, air will enter through the passage 12. Thence passing through the opening 11 (through or around the valve 9) it will pass through the opening 6, thence into the bottle, thus relieving atmospheric pressure sufficiently to allow the liquid to pass out through the desired opening.

Within the bottle-neck below the stopper is fixed a fine screen or other foraminous surface 7, which by reason of the well-known resistance of such screens to the passage of liquids will make the passage of liquid nearly impossible unless the air-passage above described is open.

If now it be attempted to refill the bottle, it can only be done by turning the discharge-passage to such a point that liquid will flow in through this passage. The liquid thus flowing in will also pass through the opening 6, as the various openings will allow the air to escape in that direction, and the valve 9 becoming moistened will immediately close against the escape of air, and it will thus be impossible to introduce any liquid, the foraminous screen 7 between the opening and the interior of the bottle assisting materially in preventing the ingress of liquid.

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

1. In a bottle, a sleeve fixed thereto having an outlet-passage in one side, said sleeve having a spiral groove or guide, and a closely-fitting stopper having a pin engaging the spiral guide whereby the turning of the stopper serves to close or open the discharge-passage, said stopper having a bottom closed except for an air-passage therein, and a diaphragm extending across the central portion of the stopper and provided with an air-passage, said stopper having an opening through it above said diaphragm, said openings permitting air to enter the bottle to allow the liquid contents to be discharged.

2. In a bottle, a sleeve fixed to the neck thereof having a discharge-passage in one

side, a hollow stopper fitting and turnable
within the outer end of the sleeve, said sleeve
provided with a spiral guide and said stopper
having a pin to engage said guide whereby
5 the turning of the stopper closes or opens the
discharge-passage, a diaphragm extending
transversely across an intermediate portion
of the interior of the stopper, said diaphragm,
the bottom of the stopper and the vertical
10 wall of said stopper above the diaphragm,

being provided with air-openings, and a
valve controlling the opening through the
diaphragm.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 15
nesses.

WILLIAM WILSON.

Witnesses:

S. H. NOURSE,

FREDERICK E. MAYNARD.