

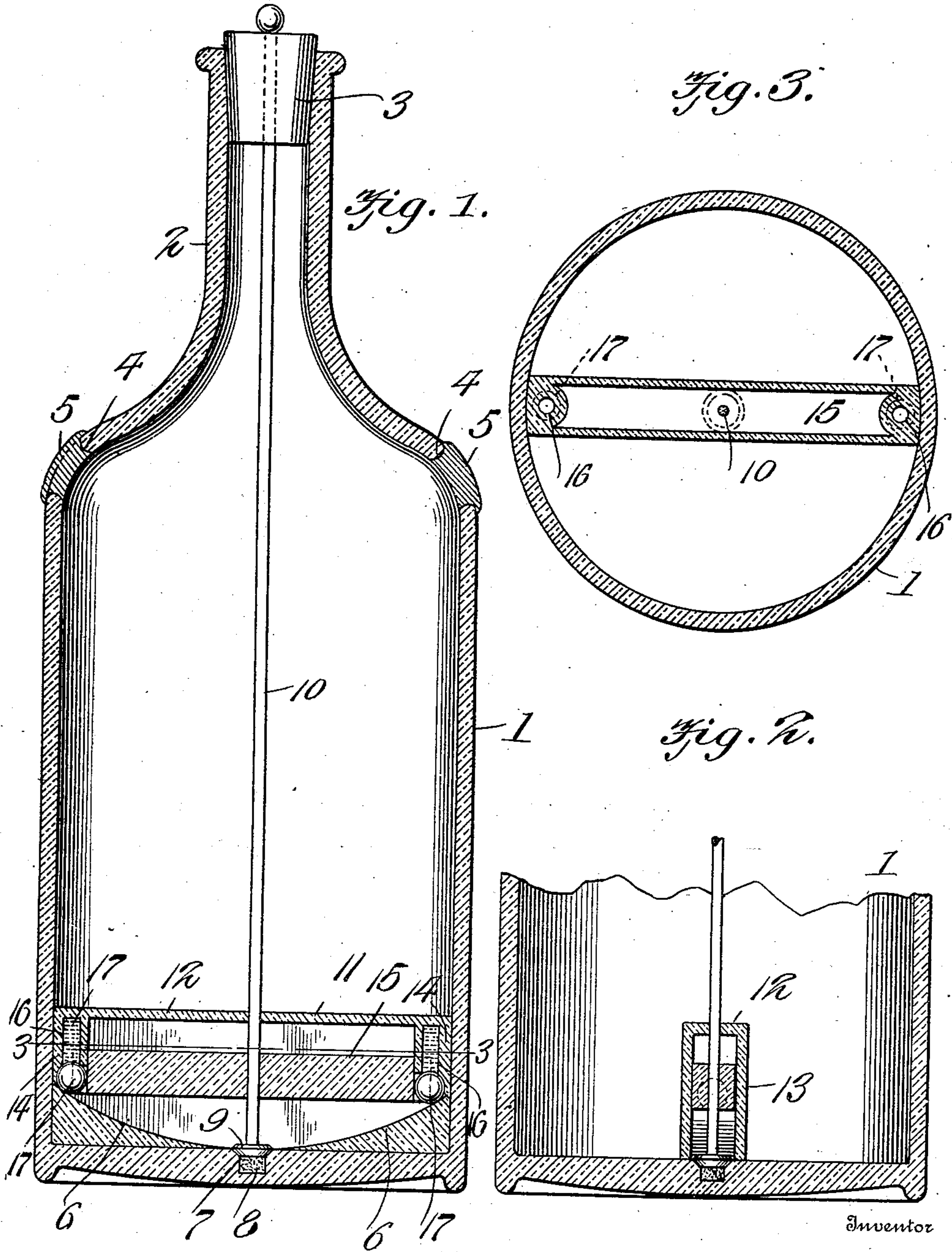
R. L. SANDERS.

BOTTLE.

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917,665.

Patented Apr. 6, 1909.



Witnesses

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BOTTLE.

No. 917,665.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed August 18, 1908. Serial No. 449,161.

To all whom it may concern:

Be it known that I, RICHARD L. SANDERS, a citizen of the United States, residing at Mobeetie, in the county of Wheeler and State of Texas, have invented new and useful Improvements in Bottles, of which the following is a specification.

This invention relates to bottles and analogous containers, its object being to provide a means inoperative while the bottle is filled and sealed and rendered operative when the seal is broken and the contents discharged to liberate a coloring agent whereby the bottle will be stained, thus indicating that it has been once used and preventing its further use without detection, by which means the practice of fraudulent refilling a bottle after use with a spurious or inferior grade of liquid will be deterred and the successful sale of the imitation for the genuine liquid frustrated.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a central vertical section through a sealed bottle embodying our invention. Fig. 2 is a section through the base of the bottle taken at right angles to the plane of section shown in Fig. 1. Fig. 3 is a horizontal section on line 3—3 of Fig. 1.

Referring to the drawing, 1 designates the body of the bottle or receptacle, which may be of any preferred form, and which is shown as provided with the usual neck 2 adapted to be closed by a stopper 3 of any suitable material. The bottle is designed to be filled through one or more openings 4 preferably located at or near the top of the bottle, which openings are then permanently closed by stoppers or seals 5, immovably secured in place in any desired manner.

Upon the bottom of the bottle are disposed inclined or concaved surfaces 6, forming guides or runways leading from diametrically opposite sides of the bottle to the central portion of the bottom of the bottle. These guideways may be formed by elevating the bottom in the form of ribs having the curved or inclined surfaces, or independent blocks or pieces of material may be formed and secured by indissoluble cement or other

means to the bottom so that they will not be affected by the contents of the bottle. 55

Disposed at the center of the bottom of the bottle between the lower ends of the inclined runways 6 is a recess 7 containing a charge 8 of some suitable harmless coloring substance, preferably stored in powder form. 60 The upper portion of this recess is beveled to form a seat for a valve 9 by which the recess is normally closed, said valve being mounted upon the lower end of a stem 10 extending vertically through the body and neck and united in any suitable manner to the stopper 3, so that when said stopper is withdrawn for the purpose of discharging the contents of the bottle the valve will be opened to expose the charge 8. 70

A cage, casing or shield 11 is provided to inclose the runways 6 and to exclude communication between the body of the bottle and the recess 7. This shield or casing comprises a top wall 12, depending side walls 13 and end walls 14, and provides an oblong rectangular chamber in which the runways are inclosed and from which the liquid contents of the bottle are excluded. The side walls of this cage bear against the sides of the runway ribs and rest on the bottom of the bottle, while the end walls thereof bear against the side walls of the bottle and rest at their lower ends upon the outer ends of the ribs. The stem 10 extends through an opening in the top wall of said casing and has secured thereto a follower block 15 movable therewith within the casing, in which opening the stem is slidably mounted. Preferably, the casing and follower are made of glass or some other suitable transparent water-proof material, and the ends of the casing are formed with pockets or chambers 16, each containing a charge 17 of an innocuous coloring substance, either in powder or liquid form. The lower ends of the inner walls of these pockets or chambers are cut away to form seats and exits for controlling valves 17 preferably of the ball type and which close the pockets against the escape of the charges 17 under normal conditions. The balls rest upon the upper portions of the inclined runway 6 and are retained in position by the follower 15 which closes said cut away spaces or exits. 80 85 90 95 100 105

It will be understood in practice that the

bottle may be constructed in any suitable manner to permit of the insertion of the devices contained therein, and that when the bottle is completed and ready to be filled the coloring charges are inserted and protected in the manner described, while the neck or mouth of the receptacle is closed by the stopper 3. The bottle is filled through the openings 4, after which the said openings are permanently closed by the seals or stoppers 5.

When it is desired to discharge the contents of the bottle, the stopper 3 is extracted in the customary manner, carrying with it the stem 10, which slides through the opening in the top of the cage or casing and opens the valve 9. The valve is opened during the first part of the movement of the stopper and stem, and then comes in contact with and elevates the follower 15, thus releasing the valves 17 which roll down the inclined surfaces 6 to the center of the bottom, thus uncovering the chambers or pockets 6. Further upward movement of the stem causes the follower to come into contact with the top of the cage and to elevate the same, the cage being raised to a determined extent upon the passage of the lower end of the stopper 3 beyond the neck of the bottle, thus allowing a small portion of the contents of the bottle to enter the cage and act upon the charges of coloring matter, whereby the cage, follower and adjacent portions of the bottle will be permanently stained, giving visual evidence of the fact that the bottle has been once filled and its contents discharged. As the parts of the charge container cannot afterward be restored to normal position through the impossibility of again bringing the balls into position to close the chambers 16, and also because of the impossibility of again inserting corresponding charges and removing the same, the bottle cannot again be employed without indicating that the original charge has been removed and that the contents are of a fraudulent or inferior character.

It will be understood, of course, that where the cage is made movable in the manner described to saturate powdered charges of coloring material, a small portion of such material may pass out with and color the liquid, but, as it is contemplated to employ a coloring substance of a harmless character, this will not impair the quality of the liquid or render the same harmful. However, as some persons might object to the coloring of the contained liquid, the shield or cage may be immovably mounted and a small quantity of liquid inclosed therein to form with the powdered charges a coloring liquid to stain the cage and inclosed parts, or the charges within the recess and chambers may be of a liquid character, so that upon the upward movement of the stem and follower and the escape of the ball valves 17 the charges will

run out and stain the receptacle, as will be readily understood.

A bottle or receptacle constructed in accordance with my invention may be refilled after use through the neck and therefore re-used for some purposes, but it admirably tends to deter and prevent refilling of the bottle with a fraudulent or inferior grade of liquid and the sale of the same as an original package under the name or brand of the genuine liquid. In effect, therefore, the bottle may only be used a single time, and its advantages will therefore be manifest.

Having thus fully described the invention, what is claimed as new is:—

1. A bottle or receptacle having a filling opening and means for permanently closing the same, and provided with a discharge outlet, a stopper for closing the outlet, a casing within the bottle out of communication with its liquid containing space, said casing having a chamber therein, a coloring charge confined within said chamber, a valve closing said chamber, and means operated by the withdrawal of the stopper to open said valve for the escape of said charge into said casing.

2. A bottle or receptacle having a discharge outlet and a compartment provided with a chamber, said compartment being separated from the liquid containing space of the bottle, a coloring charge within said chamber, said charge being normally confined against its escape into the compartment, a closure for the discharge outlet, and means operated when said closure is displaced to open communication between said chamber and compartment for the escape of said coloring charge into said compartment.

3. A bottle having a discharge outlet and a chamber, the latter containing a charge of coloring material, a closure for the outlet, and means operative upon the removal of the closure to free said coloring material from said chamber.

4. A bottle having a discharge outlet and a chamber, the latter containing a charge of confined coloring material, a closure for the discharge outlet, a valve for closing the chamber, and means operative upon the removal of the closure to open said valve for the discharge of said coloring material from said chamber.

5. A bottle having an outlet, a closure therefor, a charge of confined coloring material within the bottle, and means for freeing said coloring material when said closure is broken or removed.

6. A bottle having a chamber therein, a charge of coloring material within the chamber, a valve closing said chamber, a stopper closing the bottle outlet, and means for opening the valve upon the removal of the said stopper.

7. A bottle having a chamber, a charge of coloring material therein, a valve closing

said chamber, a stopper for closing the bottle outlet, and a rod connecting the stopper and valve whereby when the stopper is removed the valve will be opened to free or expose the charge of coloring material.

8. A bottle having a discharge outlet, a transparent casing within the bottle, a charge of coloring material within the space closed by the casing, means for closing communication between said charge and the interior of the casing, a stopper for closing the outlet, and means operated upon the removal thereof for exposing said charge.

9. A bottle having a discharge outlet, a transparent casing within the bottle, a charge of coloring material confined within said casing, and out of communication with the interior thereof, a stopper closing the discharge outlet, and means operated by the removal of the stopper for freeing said charge for access to the casing.

10. A bottle provided with a discharge outlet, a closure for sealing the outlet, a charge of coloring material confined within the bottle, and out of communication therewith, and means for liberating said coloring material when said seal is broken or removed.

11. A bottle provided with a discharge outlet, a charge of staining material contained within and normally out of communication with the interior of the bottle, a closure for the discharge outlet, and means operative upon the removal of the closure for liberating the staining material.

12. A bottle having a discharge outlet, a movable casing within the bottom of the bottle provided with chambers containing charges of coloring material, valves for closing said chambers, means operative when the casing is in normal position for holding said valves closed against the escape of the material, a stopper closing the discharge outlet, and means operative by the removal of the stopper for moving said casing to free the valves and to permit the coloring material to discharge from said chambers.

13. A bottle provided with a discharge outlet and having inclined runways at the bottom thereof, a movable casing closing communication between the liquid containing space of the bottle and said runways, said casing being provided with chambers containing charges of coloring material and open at their lower ends, ball valves closing said open lower ends of the chambers and resting on said runways, a follower within the casing arranged to hold the valves in closed position, a stopper for closing the discharge outlet, and means operative upon the removal of the stopper to elevate the follower to free the valves and then elevate the casing.

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

RICHARD L. SANDERS.

Witnesses:

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JOHN F. CROWLEY.