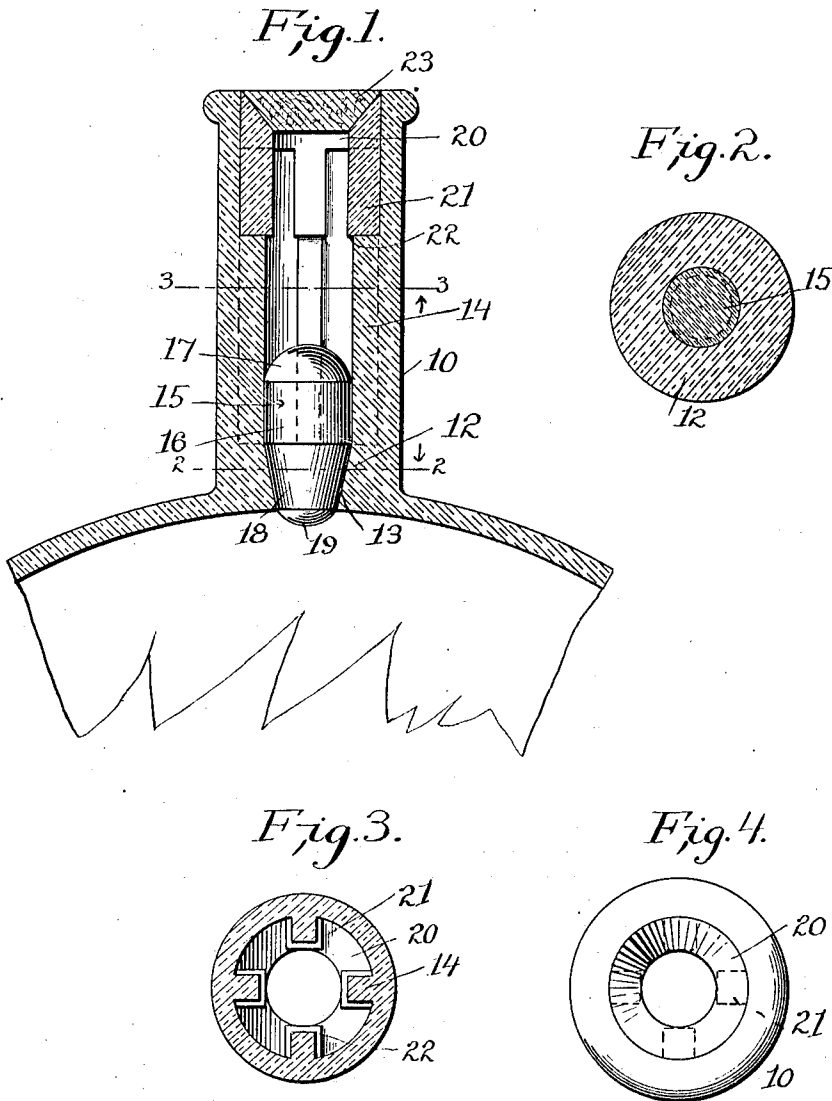


F. P. STOUGH.
NON-REFILLABLE BOTTLE.
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1,048,601.

Patented Dec. 31, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDRICK P. STOUGH, OF ERIE, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

Patented Dec. 31, 1912.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDRICK P. STOUGH, a citizen of the United States, residing at Erie, in the county of Erie, State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles; 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 non-refillable bottles and has for an object to provide an extremely simple and inexpensive valve construction which will permit emptying the bottle but will prevent refilling, the valve itself being so formed as to present no bearing surfaces for a wire or similar tool to engage for holding the valve raised to permit of fraudulent refilling of the bottle.

With the above object in view the invention consists of certain novel details of construction and combination of parts herein-after fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawing forming part of this specification:—Figure 1 is a longitudinal sectional view through a bottle neck embodying my improvements. Fig. 2 is a cross sectional view taken on the line 2—2 Fig. 1. Fig. 3 is a cross sectional view taken on the line 3—3 Fig. 1. Fig. 4 is a plan view of the device.

Referring now to the drawing in which like characters of reference designate similar parts, 10 designates the bottle neck, the neck being provided internally at its junction with the body with an annular integral shoulder 12, the inner wall 13 of which is inverted conical in contour and forms a seat for the valve which will presently be described. Formed integral with the inner wall of the bottle neck and with the top face of the shoulder are a plurality of parallel upright equally spaced ribs 14, each of which is substantially square in cross section, these ribs forming guides for the valve.

The valve 15 may be formed of any desired material, preferably glass, and is in the nature of a plug having a centrally disposed cylindrical body 16 adapted to loosely engage and slide upon the guide ribs, the upper end portion 17 of the valve being con-

vex as shown, and the lower end portion being substantially conical as shown at 18 to fit snugly in the valve seat, the extreme lower end of the valve being rounded as shown at 19. As shown in Fig. 1 the outer surface of the valve is perfectly smooth with no angular projections which might form a bearing surface for a wire or similar tool used with fraudulent intent to manually lift the valve from its seat when the bottle is in upright position.

Fixedly secured in the throat of the bottle neck by means of cement or other means, is a substantially frusto-conical stop ring 20 having depending integral equally spaced legs 21, the same in number as the ribs 14 and seating upon the upper ends of the latter, these legs being slightly greater in cross section than the ribs whereby to present projecting corners 22 which contact with and limit sliding movement of the valve when the bottle is inverted for emptying. A closure of any preferred type may be inserted in the bottle neck to prevent evaporation, an ordinary cork closure 23 being herein shown inserted in the neck above the stop ring.

In assembling the parts the valve is inserted and drops into its seat. The stop ring is then inserted and fixedly secured in position. Upon inversion of the bottle the valve will gravitate along the guide ribs in the direction of the throat of the neck, whereupon the liquid will flow through the annular shoulder 12, through the spaces between the guide ribs, and through the aligned spaces between the stop ring legs and finally escape through the stop ring. Upon returning the bottle to normal position the valve will gravitate into its seat and form a closure in the bottle neck and positively prevent refilling of the bottle.

What is claimed, is:—

A non-refillable bottle including a body, a neck, an internal annular shoulder in said neck having an inverted substantially conical inner wall forming a valve seat, spaced ribs integral with the neck inner wall and with the top face of said shoulder and extending longitudinally in said neck, a valve having rounded ends and having a contiguous cylindrical portion and an inverted frusto-conical portion between said ends, said cylindrical portion slidably fitting said guide-ribs, said inverted frusto-conical

portion fitting in said valve seat, and a stop ring fixedly secured in said neck having depending spaced legs seated upon the upper ends of and forming longitudinal extensions of said guide ribs, and having their inner faces projecting beyond the inner faces of said ribs whereby the lower corners of said legs form stops for

limiting sliding movement of said valve in the direction of the neck mouth. 10

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

FREDRICK P. STOUGH.

Witnesses:

J. C. OSBORNE,
CARL GRADY.

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