No. 826,218.

PATENTED JULY 17, 1906.

M. AXELROOD.

NON-REFILLABLE BOTTLE.

APPLICATION FILED JUNE 19, 1905.

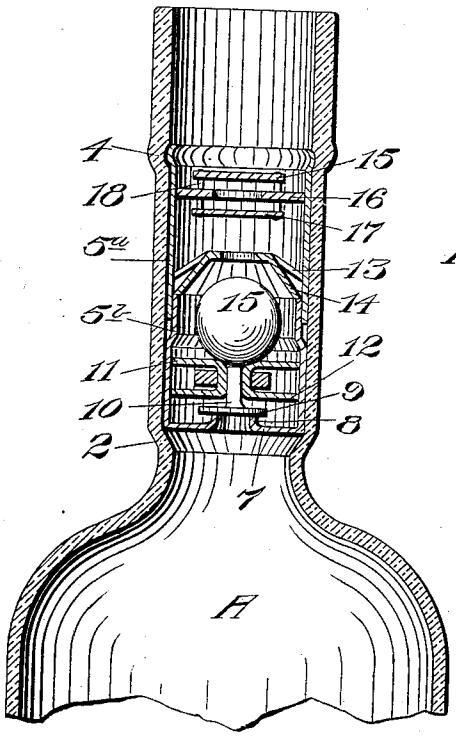


Fig. 1.

Fig. 2.

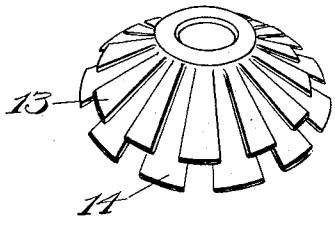


Fig. 3.

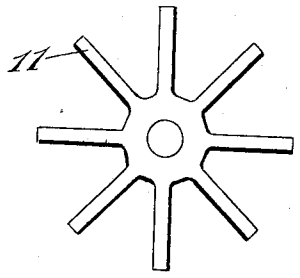
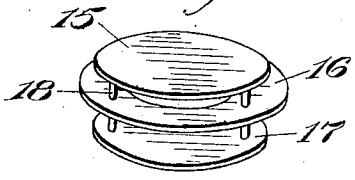


Fig. 4.



Witnesses.

C. Fairbourg.

J. B. Bowse

Inventor:

Max Axelrood

By Geo. H. Strong. Atty

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MAX AXELROOD, OF SAN FRANCISCO, CALIFORNIA.

NON-REFILLABLE BOTTLE.

No. 826,218. Specification of Letters Patent. Patented July 17, 1906.

Application filed June 19, 1905. Serial No. 265,952.

To all whom it may concern:

Be it known that I, MAX AXELROOD, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to improvements in bottles and attachments therefor whereby the contents of the bottle are prevented from being replaced after the bottle has once been emptied.

It comprises the combination of parts and details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a section of bottle and neck, showing my invention. Fig. 2 is a perspective view of the ball-cage. Fig. 3 is a plan of one of the radial valve-guides. Fig. 4 is a perspective view of the baffle-disks.

A is the body of the bottle, having a neck formed with an indented annular crease, as at 2. From this point the neck extends cylindrically upward to a point where it is so molded or formed that another annular depression or crease is made at 4. The shoulders 2 and 4 serve to hold a casing containing the operative parts of my device. This casing consists of cylinders 5^a 5^b, made of thin metal, telescoping together at their meeting ends for convenience and construction. The part 5^a of the casing is expanded after being introduced to interlock with the depression 4, and the part 5^b, which telescopes into 5^a and has a shoulder at this point, has its lower end abutting against the contraction of the lower end of the bottle-neck. A disk-shaped bottom 7 is contained in the lower part of the casing having an upturned inner edge or flange 8, inclosing a central opening.

9 is a valve fixed upon the stem 10 and closable upon the seat. The stem 10 has radial arm-guides 11 and 12, which approach the interior of the casing, serving as a guide for the valve and also maintaining it substantially parallel with the edge of the flange 8, upon which it is closable. Above the seat is a truncated cone which may be made of non-corrosive metal. This cone is composed of alternate leaves 13 and 14, which are bent into different planes divergent downwardly, as shown in Fig. 2, and these leaves form divergent channels gradually widening from the center outwardly, so that when the bottle is inverted and the weight of the liquid forces the valve 9 away from its seat the liquid will then flow through the opening in the seat, around the edge of the valve, through the radial arm-guides 11 and 12, and finally out through the radial slots between the leaves 13 and 14.

15 is a ball of considerable weight located within the conical cage formed by the leaves 13 and 14, and the space between these (the cage and the upper radial guides 12) is in such proportion to the size of the ball that if the bottle lies upon its side the ball will fit between the conical cage and the guide 12, so as to keep the valve closed upon its seat, and it will not leave this position until the bottle is turned to such a sharp angle with the neck downwardly as will allow the ball to roll into the central portion of the cage, and thus relieve the pressure upon the valve and allow it to be opened. In this inclined position no liquid can be passed into the bottle. In order to further guard the apparatus, I have shown three disks 15, 16, and 17. The upper and lower disks are of smaller diameter than the central one, and the three are united by studs or posts 18, so that the disks lie closely together.

The central disk has a hole made through it of smaller diameter than either of the disks 15 and 16. This device is fixed in the space in the bottle-neck above the cage 13 14, and in this position the edge of the central disk 16 is fitted closely within the casing, and there will be sufficient space around the peripheries of the other two disks to allow liquid to flow around these disks and through the central opening; but this device interposes such a tortuous passage from the outside that it would be practically impossible to introduce a wire or other instrument which might otherwise be passed down between the leaves 13 14 to hold the ball out of its normal position and possibly allow the liquid to be inserted into the bottle.

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

The combination of a bottle having a neck, a valve mechanism therein, and a two-part telescoping casing one part of which houses said valve mechanism, a guard located within the other part of said casing above the valve mechanism, said guard consisting of three spaced disks, the upper and

lower of said disks being of smaller diameter than the central disk and of less diameter than the interior of the casing, and the central disk having a hole made through it of smaller diameter than the upper and lower disks, said central disk having a diameter about equal to that of the casing.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MAX AXELROOD.

Witnesses:
S. H. NOURSE,
F. C. FLIEDNER.