

T. NISHIDA.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAR. 13, 1911.

1,012,095.

Patented Dec. 19, 1911.

Fig. 1.

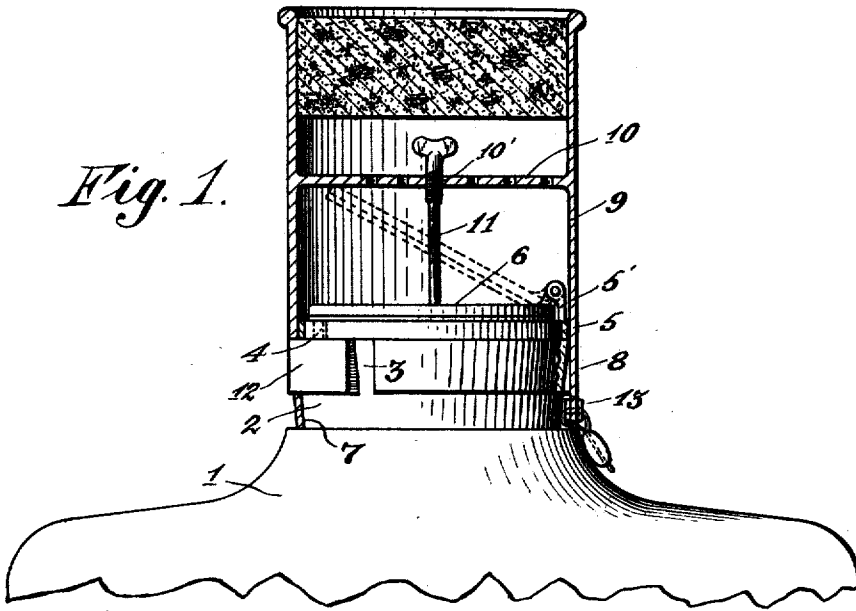


Fig. 2.

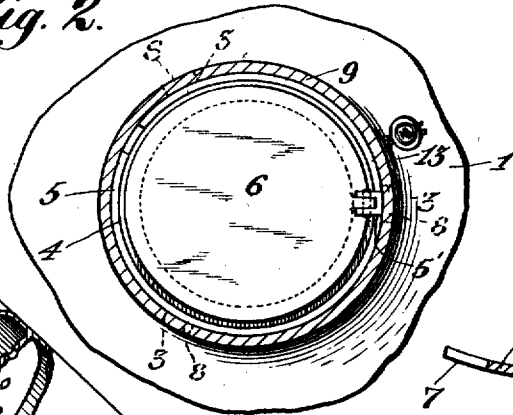


Fig. 3.

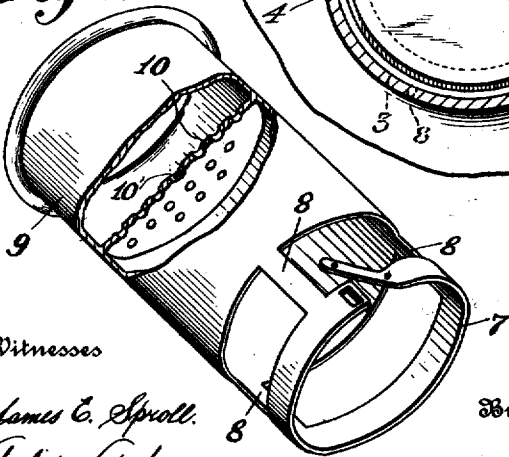
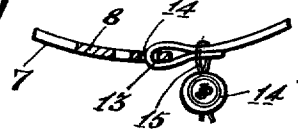


Fig. 4.



Inventor

Tokuhiro Nishida.

By

Adams & Brooks

Attorneys

Witnesses

James C. Spruell.

Arleta Adams

UNITED STATES PATENT OFFICE.

TOKUTARO NISHIDA, OF SEATTLE, WASHINGTON.

NON-REFILLABLE BOTTLE.

1,012,095.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed March 13, 1911. Serial No. 614,203.

To all whom it may concern:

Be it known that I, TOKUTARO NISHIDA, a subject of the Emperor of Japan, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to devices of the above type, having more particular reference to an attachment for safeguarding a bottle against refilling by unauthorized or unscrupulous persons, and it has for a primary object the provision of a comparatively simple construction of this type, which can be readily applied to a bottle neck and secured by suitable means which will readily indicate or bear evidence of any attempts to tamper therewith.

Other objects will be set forth as my description progresses and those features of construction, arrangements and combinations of parts on which I desire protection, succinctly defined in my annexed claim.

Referring to the accompanying drawing wherein like numerals of reference indicate like parts throughout the several views: Figure 1 is a fragmentary elevation of the upper end portion of a bottle provided with my attachment which is disclosed in vertical section. Fig. 2 is a horizontal section through my attachment, the valve holding device being removed. Fig. 3 is a perspective of my attachment removed from the bottle neck, portions thereof being broken, and Fig. 4 is a fragmentary detail illustrating more particularly the manner of sealing the attachment as applied to the bottle.

In carrying out my invention I provide the neck of the bottle 1 with a circumferential groove 2 whose bottom is frusto-conical and with which communicate spaced vertical grooves 3, the latter extending from an annular seat 4 provided on the exterior of the bottle neck at its upper edge portion for reception of a split ring 5, of spring metal, which ring is provided with an upwardly projecting lug 5' pivotally carrying a valve 6 adapted to seat flatly upon the upper end of the bottle neck over the mouth thereof, as clearly shown in Figs. 1 and 2.

Groove 2 is of greater depth than seat 4, and the bottom of grooves 3 taper inwardly toward and coincide with the conical bottom of said groove 2, whereby a split clamping

ring, as 7 and spaced vertical arms 8 of my improved attachment can be more firmly seated, as hereinafter more fully set forth.

My improved attachment comprises a tubular cylindrical casing 9 provided with a guard 10, suitably arranged in said casing to limit upward or opening movement of valve 6, (see dotted position of valve 6 in Fig. 1), and comprising an apertured disk having positive connection around its entire periphery with said casing and spaced from the bottle mouth, the apertures of which disk are arranged inwardly of the edge of valve 6 to protect the valve against improper operation, as through the insertion of a wire or other device through the openings of the guard.

Reference numeral 11 indicates a device for securing valve 6 against opening movement, as may be desired during shipment, the same comprising a stem having threaded engagement in an aperture 10' of guard 10 for adjustment into and out of engagement with the valve.

The lower portion of casing 9 seats in seat 4 and against the upper edge of the annular external cylindrical shoulder 12, provided between seat 4 and groove 2, and snugly receives ring 5.

In operation, my attachment is slipped over the outer end of the neck of the bottle, with its arms 8 engaging in the vertical grooves 3 thereof, until the lower edge of casing 9 bears against shoulder 12, as hereinbefore set forth, and ring 7 lies over groove 2. The tongue 13 of ring 7 is now drawn through the eye 14 to contract said ring and thereby compel the same to enter groove 2, during which movement the lower end portions of arms 8 are moved inwardly to a more effective seating in their grooves 3.

Reference numeral 14' indicates a seal which can be applied, as to a wire 15, as shown in Fig. 4, when my attachment is applied to the bottle, which feature of the invention permits of a manufacturer or shipper placing his goods on the market under seal in such a manner as to prevent the refilling of the bottle with spurious goods without detection.

Various changes can be made in the minor details of construction without departing from the spirit of my invention, as set forth in my appended claim.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent of the United States of America, is:

5 In combination with a bottle formed at its neck with a cylindrical shoulder, a circumferential groove below the shoulder, an annular seat above the shoulder, and longitudinal grooves connecting said first named
10 groove and seat, a split ring of spring metal engaged in the seat of said bottle neck, a valve pivoted to said ring and seated flatly upon the upper end of the neck over the mouth of said bottle, a casing snugly fitting

over said ring and with its lower edge received in said seat to have bearing against 15 the upper edge of said shoulder, depending arms on said casing fitting in the longitudinal grooves of said bottle, and securing means connecting said arms and engaged in the circumferential groove of said bottle. 20

Signed at Seattle, Washington this 6 day of March 1911.

TOKUTARO NISHIDA.

Witnesses:

B. K. SUGUIRO,
STEPHEN A. BROOKS.

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