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L. ARNAVAT, A. MENDEZ & J. B. FERNANDEZ.

NON-REFILLABLE BOTTLE.

APPLICATION FILED AUG. 6, 1906.

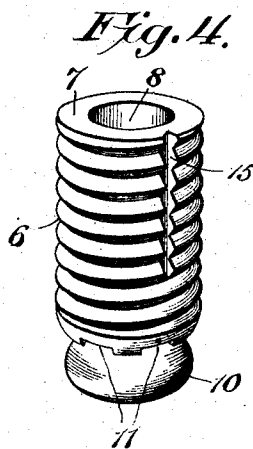
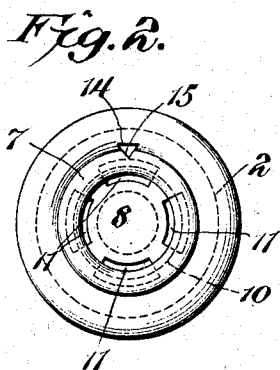
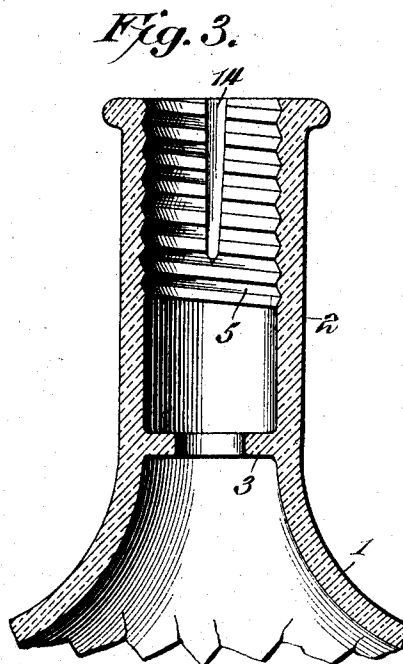
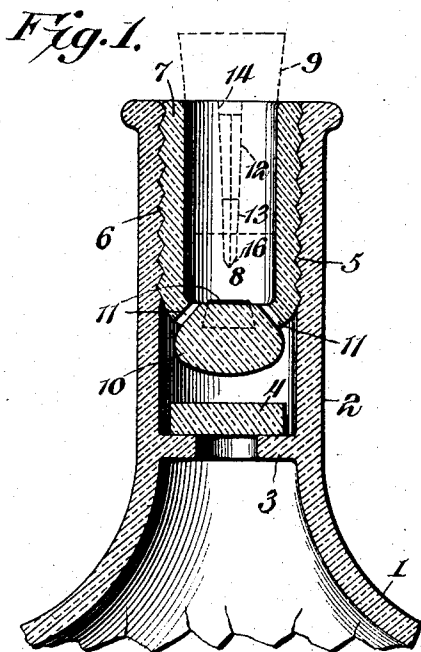
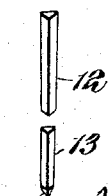


Fig. 6.



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UNITED STATES PATENT OFFICE.

LUIS ARNAVAT, ANTONIO MENDEZ, AND JOSÉ B. FERNANDEZ, OF TAMPA, FLORIDA, ASSIGN-
ORS OF TEN ONE-HUNDREDTHS TO JOAQUIN RIERA, OF TAMPA, FLORIDA.

NON-REFILLABLE BOTTLE.

No. 866,252.

Specification of Letters Patent.

Patented Sept. 17, 1907.

Application filed August 6, 1906. Serial No. 329,452.

To all whom it may concern:

Be it known that we, LUIS ARNAVAT, ANTONIO MENDEZ, and JOSÉ B. FERNANDEZ, citizens of the United States, residing at Tampa, in the county of Hillsboro and State of Florida, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

The invention relates to improvements in non-refillable bottles.

10 The object of the present invention is to improve the construction of non-refillable bottles, and to provide a simple, inexpensive and efficient one adapted to be constructed entirely of glass, and to be sealed with an ordinary cork or stopper, and capable, after it has received its original contents, of effectually preventing a liquid from being introduced into it, whereby adulterations and fraudulent refillings are prevented.

15 A further object of the invention is to provide a non-refillable bottle of this character, in which the parts may be easily and quickly assembled after the bottle has been filled.

20 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

25 In the drawing:—Figure 1 is a vertical sectional view of a non-refillable bottle, constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a vertical sectional view of the bottle, showing the same before the valve and guard are applied. Fig. 35 4 is a detail perspective view of the guard. Fig. 5 is a similar view of the valve. Fig. 6 is a detail perspective view of the wedge.

40 Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a bottle or analogous receptacle, having a neck 2, which is provided on its interior with a horizontal annular flange 3, forming a valve seat and having a central opening for the passage of the contents of the bottle. The upper face of the horizontal flange is designed to be burnished, or otherwise highly polished, and it is adapted to receive a valve 4, constructed of glass and consisting of a disk, having its lower face burnished or polished to cooperate with the burnished or polished upper face of the valve seat to form a liquid tight joint, when the bottle or other receptacle is in an upright position, to prevent any liquid from being introduced into the bottle after the same has received its original contents. The valve which has flat upper and

lower faces rests upon and is supported by the valve seat, when the bottle is in a vertical position, as clearly illustrated in Fig. 1 of the drawing, and it is of less diameter than the interior of the neck of the bottle to permit the contents of the bottle to pass around it, when the bottle is inverted.

60 The neck 2 of the bottle is provided at its upper portion with interior screw threads 5, which are designed to be burnished and which are adapted to be engaged by exterior screw threads 6 of a guard 7. The screw threads of the guard 7 are also burnished or polished, and the guards 7 consist of a hollow plug, constructed of glass and provided with an interior stopper receiving chamber 8, open at the top and closed at the bottom. An ordinary cork or stopper 9 is adapted to be placed in the hollow chamber of the guard, as illustrated in dotted lines in Fig. 1 of the drawing, for sealing the bottle in the usual manner. The guard is provided at its lower end with a depending circular protuberance or head 10, which is substantially elliptical in vertical section and which is adapted to space the valve from outlet slots or apertures 11 of the bottom of the guard. The outlet slots or apertures 11 are inclined, and extend downwardly and outwardly from the bottom of the chamber 8, as clearly shown in Fig. 1 of the drawing, and the protuberance or head 10 presents a rounded side face or edge, which extends outwardly and downwardly from the lower ends of the inclined apertures 11. These downwardly and outwardly inclined faces are adapted to deflect a wire and prevent the same, or any other instrument from being introduced into the neck of the bottle and interfering with the operation of the valve. These inclined apertures are preferably four in number, and are curved concentric with the neck of the bottle, as clearly shown in Fig. 2 of the drawing. The depending protuberance presents a convex or rounded lower face to the flat upper face of the valve, when the bottle is inverted for decanting its contents, and the said valve will be caused to lie at an angle or inclination, and thereby facilitate a free flow of the contents of the bottle.

95 In order to prevent the guard from being unscrewed from the neck of the bottle, it is locked therein by means of a vertical wedge or wedge-shaped key, composed of upper and lower sections 12 and 13 and adapted to be arranged in a vertical socket, formed by registering grooves 14 and 15 of the neck of the bottle and the guard. The vertical groove 14 of the neck of the bottle intersects the screw threads 5, and is tapered, and the groove 15 of the guard intersects the threads 6. The sections 12 and 13 of the wedge are tapered longitudinally, and are substantially triangular in cross section, and the grooves 14 and 15 and the sections of the wedge are burnished or polished to enable the parts

to fit tightly together, when assembled. The upper end of the upper section 12 of the wedge is located below the upper edges of the neck of the bottle of the guard, when the wedge is placed in position, so that it will be impossible to remove the wedge. The lower end 16 of the lower section 13 of the wedge is tapered or pyramidal, and the wedge is constructed of two sections to increase its efficiency, and to prevent the guard from being unscrewed, should the upper section 10 be removed in any manner. When the wedge is in position, it intersects the screw threads and effectually prevents the guard from being unscrewed. As the wedge is interposed between the guard and the neck of the bottle, which will preferably be made transparent, any injury to the wedge, in attempting to remove the same, may readily be seen. The upper threads of the guard and the bottle may, if desired, be coated with some adhesive material or cement, as there is no liability of the contents of the bottle coming in contact with such material, or being affected by the same.

Although the bottle and the means for preventing the same from being refilled are designed to be constructed of glass, any other suitable material, which will not

affect, or be effected by, the contents of the bottle, may be employed in the construction of the same.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

The combination of a receptacle having a neck and provided at the center thereof with an annular flange having a horizontal upper face forming a valve seat, a valve consisting of a disk having flat upper and lower faces and arranged on the valve seat, and a guard consisting of a hollow plug secured within the neck of the receptacle and having an interior stopper-receiving chamber and provided at the bottom thereof with inclined apertures, said guard being also provided at the bottom with a depending central protuberance or head having downwardly or outwardly curved side faces and presenting a lower rounded or convex face to the valve, whereby the latter is caused to assume an inclined position when the bottle is inverted.

In testimony, that we claim the foregoing as our own, we have hereto affixed our signature in the presence of two witnesses.

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Witnesses:

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