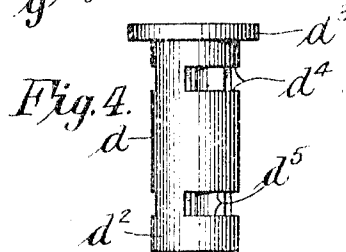
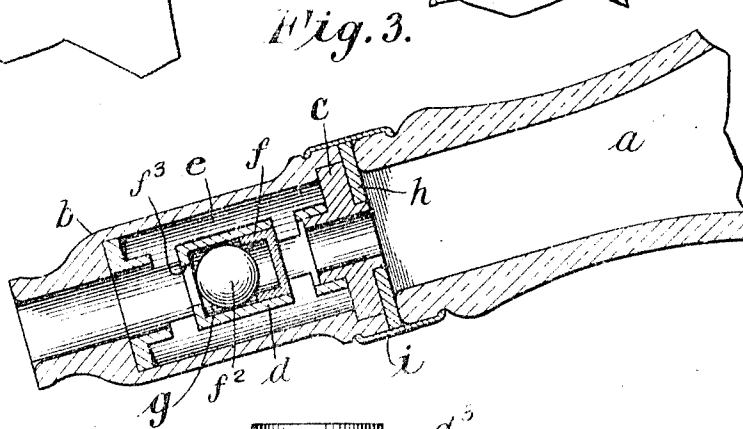
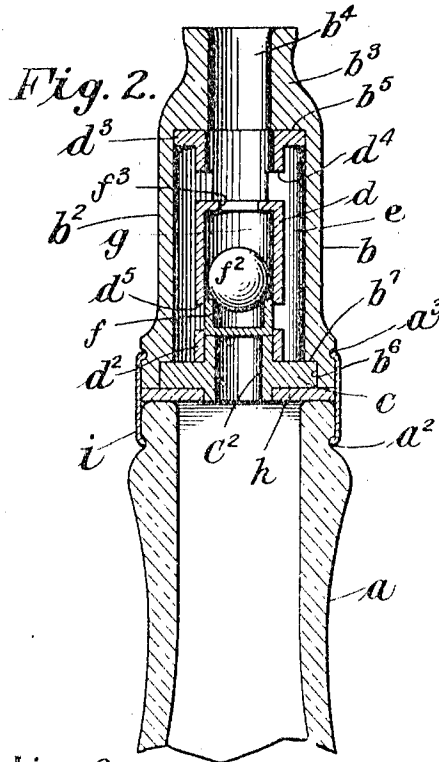
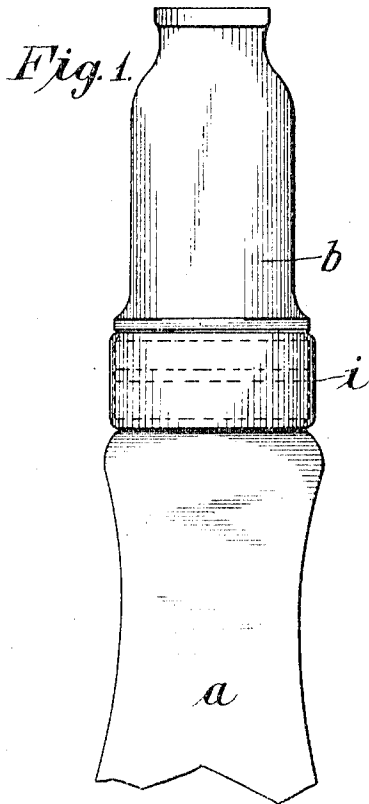


P. J. HERBERT.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 21, 1912

1,061,288.

Patented May 13, 1913.



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NON-REFILLABLE BOTTLE.

1,061,288.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed October 21, 1912. Serial No. 726,877.

To all whom it may concern:

Be it known that I, PATRICK J. HERBERT, a citizen of the United States, and residing at Dover Plains, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to bottles, jugs, jars and similar vessels provided with a neck, and the object thereof is to provide a vessel of this class with an improved neck attachment or construction whereby, when the vessel has been once filled and emptied of its contents, it cannot be refilled or reused without leaving evidence of the fact.

In the accompanying drawing, I have shown my improvement applied to the neck of an ordinary bottle, and the invention is fully disclosed in the following specification of which the said drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a side view of the neck portion of a bottle provided with my improvement;—Fig. 2 a central vertical section thereof;—Fig. 3 a view similar to Fig. 1, but showing the bottle or the neck thereof in a tilted or partially inverted position, and; Fig. 4 a side view of a part of the neck attachment or construction detached.

In the drawing forming part of this specification, I have shown at *a* the neck portion of an ordinary bottle such as is usually employed as a receptacle or container for liquors or other liquid substances, and in the practice of my invention, as shown in the drawing, I provide a neck attachment *b* which forms an extension or continuation of the neck, and the construction and operation of which is as follows:

The neck attachment *b* consists of a main tubular shell *b*² provided at the top thereof with a reduced extension *b*³ having a central tubular bore *b*⁴ and forming within said shell an annular top shoulder *b*⁵, and within the bottom portion of said shell is an annular groove *b*⁶ forming a bottom annular shoulder *b*⁷.

Within the bottom of the shell *b* is placed a plate *c* which fits in the groove *b*⁶ and is provided with a central tubular member *c*²

which extends, in the form of construction shown, slightly below the plate *c* and to a predetermined distance above said plate, and mounted in the tubular shell *b*² and centrally and concentrically therein is a tubular casing *d* the lower end *d*² of which rests on the plate *c* and incloses the top portion of the central tubular member *c*² thereof, and the upper end of which is provided with a flange *d*³ which fits snugly within the shell *b*² and bears on the annular shoulder *b*⁵.

The central tubular casing *d* is of less transverse dimensions than the transverse inner dimensions of the shell *b*² and an annular chamber *e* is thus formed between said shell and said casing, and the sides of the casing *d* are provided near the top and bottom thereof with transverse ports or passages *d*⁴ and *d*⁵ whereby the interior of the casing *d* is placed in communication with said chamber.

Within the bottom portion of the tubular casing *d* is placed a vertically movable cup-shaped valve *f* which is cylindrical in form and which closely fits, but is freely movable in said casing and which when in its normal position rests on the top of the central tubular member *c*² of the plate *c* and closes the passage therethrough and also closes the bottom ports or passages *d*⁴, and placed in said tubular casing and normally resting on said valve *f* is a ball or spherical body *f*² which is also freely movable in said casing. The central part of the casing *d* forms a chamber *g* which is occupied by the ball or body *f*² and the top, of which is only partially closed, being provided with a central opening *f*³ of less transverse dimensions than the ball or body *f*².

In the top portion of the neck *a* of the bottle is an annular groove *a*², and in the bottom portion of the shell *b*² of the attachment is a corresponding annular groove *a*³, and in connecting said attachment with the neck of the bottle a gasket *h*, of cork or other suitable material, is preferably placed on the bottom of the shell *b*² and the plate *c*, and said attachment is secured to the neck of the bottle by means of an annular band *i* of soft metal the edges of which are compressed or forced into the grooves *a*² and *a*³ so as to make a close and firm connection between the said attachment and the neck of the bottle.

When the bottle has been filled, in the first instance, and the attachment connected

with the neck thereof, as described, the central bore or passage b^4 in the top of the shell b^2 of the attachment is closed by a cork or stopper in the usual manner, and when it is desired to empty the bottle or discharge a portion of its contents, the said cork or stopper is withdrawn and the bottle is inverted or tilted, as shown in Fig. 3, and the valve f and ball f^2 move forwardly and the ports or passages d^5 are opened and the contents of the bottle will flow through the tubular member c^2 into the casing d , but through the ports or passages d^5 and through the annular chamber e then inwardly through the ports or passages d^4 and out through the central bore or passage b^4 in the end of the shell b^2 , and this operation may be continued or repeated until the bottle is entirely empty. If an attempt be made to refill the bottle by holding the same in an upright position and pouring liquids therein, the valve f will at once drop into its seat, as shown in Fig. 1, and will be held in this position by the ball or body f^2 and no liquids can enter the bottle, and this operation of said valve and ball or body will be the same in any position in which the bottle can be held in an attempt to pour liquids therein. If an attempt be made to force liquids into the bottle by holding it in an inverted or partially inverted position, the said liquids will flow in through the openings f^3 in the top of the chamber g , in which the ball or body f^2 is placed, and the valve f and said ball or body may be made to serve as floats, and in this event the valve will again rise to its seat and no liquids can be forced into the bottle.

My improved neck attachment for bottles

and similar vessels may be made entirely of glass or of any other suitable material, and changes in and modifications of the construction described may be made, within the scope of the appended claim, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is;—

The combination with the neck of a bottle or similar vessel of an attachment comprising a main outer tubular shell in the bottom of which is placed a plate having a central, vertical tubular member, a tubular casing placed centrally and vertically in said shell, the lower end of which incloses the top of said tubular member and the sides of which are provided with transverse ports or passages in the top and bottom portions thereof, the ports or passages in the bottom portion of said tubular casing being above the top of said tubular member, a valve placed in said tubular casing and vertically movable therein and normally resting on the top of said tubular member and closing the bottom ports or passages in said tubular casing, and a ball placed in the chamber formed by the central portion of said tubular casing and normally resting on said valve.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 19th day of October 1912.

PATRICK J. HERBERT.

Witnesses:

C. MULREANY,
S. ANDREWS.