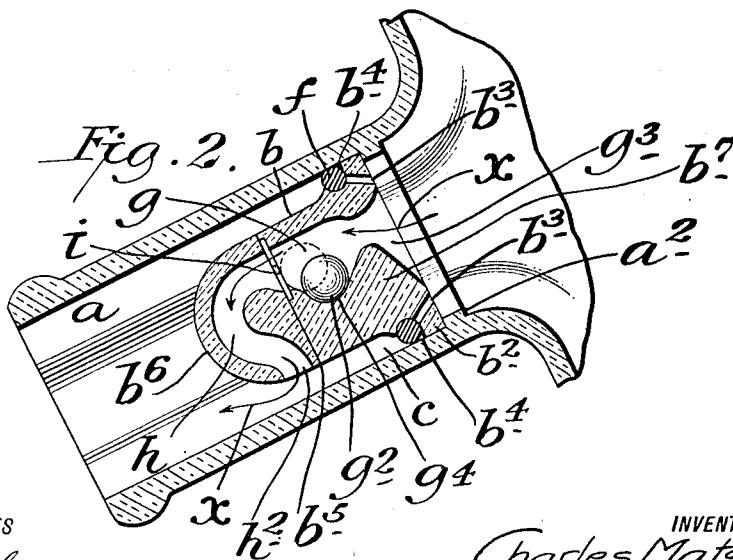
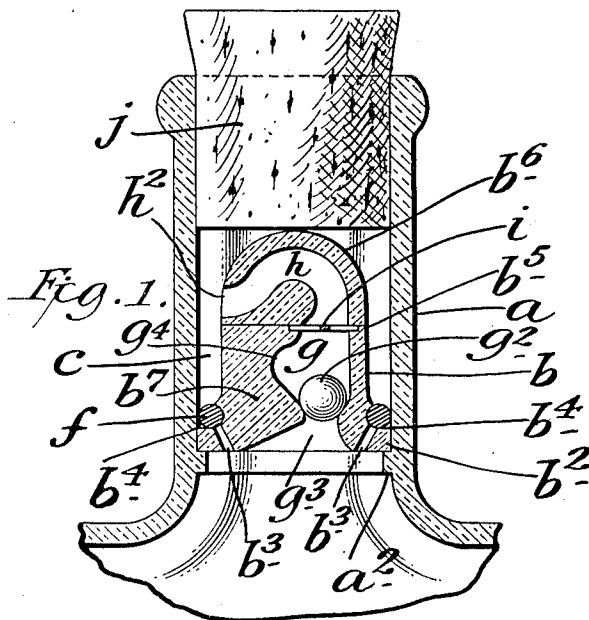


C. MATSON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED DEC. 9, 1911.

1,020,997.

Patented Mar. 26, 1912.



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UNITED STATES PATENT OFFICE.

CHARLES MATSON, OF ELIZABETH, NEW JERSEY.

NON-REFILLABLE BOTTLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES MATSON, a citizen of the United States, and residing at Elizabeth, in the county of Union and State of New Jersey, 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, and the object thereof is to provide a vessel of this class with a neck attachment so constructed that when the vessel has been filled and the neck attachment applied, the said vessel may be emptied of its contents, but cannot be refilled or re-used.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my invention are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a central vertical section of the neck part of a bottle provided with my improvement, and; Fig. 2 a similar view, but showing the bottle in an inverted or partially inverted position.

In the drawing forming part of this specification, I have shown at *a* the neck of a bottle which, in the form of construction shown, is provided at the bottom thereof with an internal annular shoulder or projection *a*², and in the practice of my invention I provide a neck attachment *b* which is adapted to be inserted into the neck of the bottle and to be secured therein in any desired manner, preferably by means of glass cement, and when placed in position, the attachment *b* rests on the shoulder or projection *a*², but said shoulder or projection is not an essential feature of my invention and the attachment *b* may be secured in the neck *a* in any desired way.

The attachment *b* is dome-shaped in form and provided at its base with an annular enlargement *b*² which closely fits the neck of the bottle and whereby an annular space or chamber *c* is formed between the body of the dome-shaped attachment and the inner walls of the neck *a*.

The enlarged base portion *b*² of the attachment is provided with ports or passages *b*³ which form a communication between the annular space or chamber *c* and the interior

of the bottle, and in the top portion of the enlarged base *b*² of the attachment is formed an annular groove *b*⁴ adapted to receive an elastic ring or gasket *f* preferably composed of soft rubber and which is adapted to be passed down over the top and body portion of the attachment and to be forced into said groove, and which, when in position, securely closes the ports or passages *b*³.

In order to facilitate or render possible the formation of the attachment of glass or similar material, the body portion thereof is divided transversely at *b*⁵ into separate parts, a top part *b*⁶ and a bottom part *b*⁷, and in one side of the bottom part is formed a valve chamber *g* in which is placed a ball valve *g*² which is adapted to close a bottom port *g*³ which forms a communication between the valve chamber *g* and the interior of the bottle, and the central inner wall of the valve chamber *g* is provided with a recess *g*⁴ adapted to receive the valve *g*² when the bottle is inverted or tilted as shown in Fig. 2.

The top part *b*⁶ of the attachment is provided with a curved or S-shaped passage *h* which communicates with the valve chamber *g* and which opens through one side of the top portion of the attachment into the annular space or chamber *c* as shown at *h*², and between the passage *h* and the valve chamber *g* is placed a spider or open-work partition *i* which may serve to prevent the valve *g*² from closing the passage *h* when said bottle is inverted or if the valve *g* should roll out of the recess *g*⁴ as indicated in dotted lines in Fig. 2.

The separate parts *b*⁶ and *b*⁷ of the attachment may be connected by glass cement or in any desired manner, and in practice the bottle with the attachment therein is made complete, the separate parts of the attachment being assembled and said attachment being inserted into and secured in the neck of the bottle.

The bottle is filled in the usual manner by pouring the liquid into the neck thereof in which operation said liquid flows down through the ports or passages *b*³, and after the bottle has been filled in this manner, the rubber ring or gasket *f* is forced into the neck of said bottle and down around the body of the dome-shaped attachment and into the groove *b*⁴ where it remains and in which position it securely closes the ports or passages *b*³. When the bottle has thus

been filled, the neck may be closed by the usual cork or stopper *j* in the usual manner, and when it is desired to empty the bottle or discharge a portion of its contents the
 5 cork or stopper *j* is removed and the bottle is inverted or tilted as shown in Fig. 2 and the contents thereof will flow out as indicated by the arrows *w* and this operation may be continued or repeated until the bot-
 10 tle is entirely empty. In this operation the valve *g*² moves forwardly, either into the recess *g*⁴ or onto the spider *i* and in either position it does not prevent the outflow of the contents of the bottle. If, however, an
 15 attempt be made to refill the bottle by pouring liquids thereinto the valve *g*² will at once be reseated to close the port or passage *g*³ and on liquids can enter the bottle, and this will be the operation of said valve in
 20 any position in which the bottle can be held in an attempt to pour liquids thereinto.

The valve *g*² may also be made to serve as a float if desired, and in this event the said valve would rise to its seat if an attempt
 25 were made to force liquids into the bottle while holding the same in an inverted position, or if an attempt were made to fill or partially fill the bottle by forcing the neck portion thereof downwardly into a tub or
 30 vessel containing the liquids.

In practice, the attachment *b* is preferably made of glass or other material that will not be affected by liquids or acids and my invention is not limited to the use of
 35 any particular material in the construction of the attachment nor to the exact details of construction shown and described, and various changes therein and modifications thereof may be made, without departing
 40 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:—

45 1. A bottle or similar vessel having a neck, and a dome-shaped attachment adapted to be inserted into and secured in said neck, said attachment being provided with an annularly enlarged base which closely fits
 50 the inner walls of the neck and above which is an annular space or chamber formed by

the body of the attachment, and the walls of the neck, said base being provided with ports or passages forming a communication between said space or chamber and the in-
 55 terior of the vessel and the top of said base being provided with an annular groove adapted to receive an annular ring or gasket of elastic material which, when in position, closes said ports or passages, the central
 60 part of the attachment being also provided with a valve chamber, a valve adapted to close a port between said chamber and the interior of the vessel, and the top part of the attachment being provided with a
 65 curved passage which communicates with said valve chamber and which opens into said annular space or chamber through one side of the attachment, and said valve chamber being also provided with means to pre-
 70 vent the valve from closing said curved passage.

2. A bottle or similar vessel having a neck provided with a dome-shaped attachment adapted to be inserted thereinto and to be
 75 secured therein, said attachment being provided with an enlarged annular base above which is an annular space or chamber formed by the body of the attachment and the walls of the neck, said base being pro-
 80 vided with ports or passages forming a communication between said space or chamber and the interior of the vessel, said base being also provided in the top walls thereof with an annular groove adapted to receive
 85 an elastic ring or gasket which, when in position, closes said ports or passages, and said attachment being also provided with means whereby when the vessel is inverted the contents thereof may flow out through
 90 said attachment, which means are also adapted to prevent the refilling of the vessel.

In testimony that I claim the foregoing as my invention I have signed my name in
 95 presence of the subscribing witnesses this 6 day of December, 1911.

CHARLES MATSON.

Witnesses:

ALBERT PEDERSON,
 EMIL L. SCHEELE.