L. G. BUGNON.

NON-REFILLABLE BOTTLE.

APPLICATION FILED FEB. 1, 1909.

971,488. Patented Sept. 27, 1910.

Fig. 1.

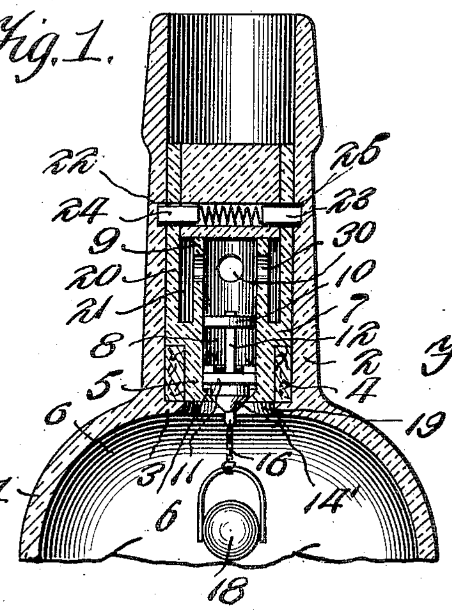


Fig. 2.

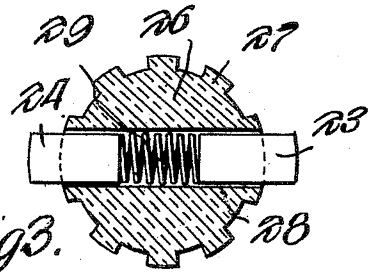


Fig. 3.

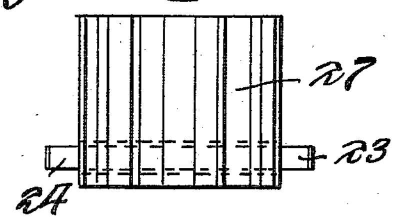


Fig. 4.

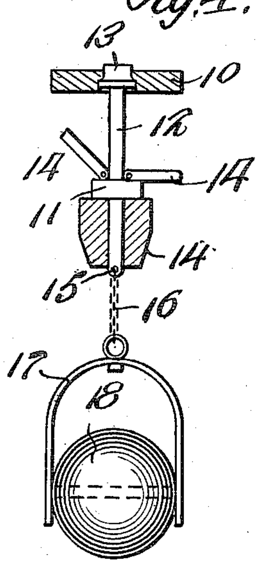


Fig. 5

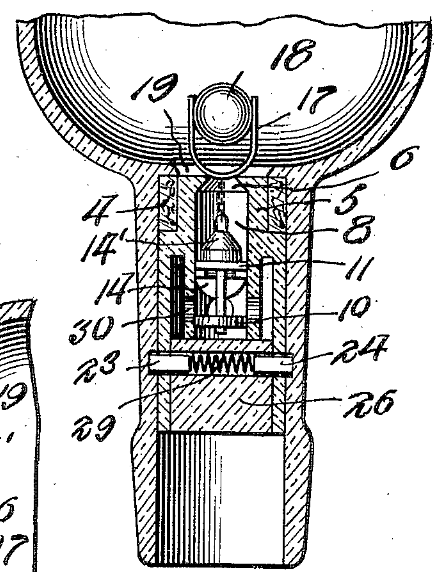
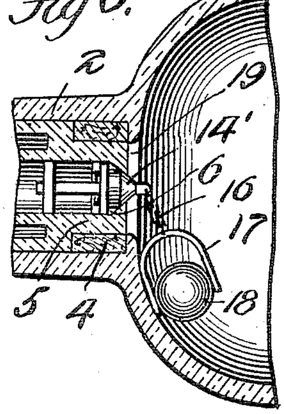


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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NON-REFILLABLE BOTTLE.

971,488. Specification of Letters Patent. Patented Sept. 27, 1910.

Application filed February 1, 1909. Serial No. 475,513.

To all whom it may concern:

Be it known that I, LEON GUSTAVE BUGNON, residing at Seattle, in the county of King and State of Washington, and whose post-office address is Federal Hotel, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a clear and concise specification.

My invention relates to a non-refillable bottle in which the neck of the bottle is constructed in substantially the usual shape and size and provided with a non-refilling device having a weighted valve which is prevented from being held in an open position by a suspended ball within the body of the bottle when the bottle is lying in a horizontal position.

The objects of my invention are to prevent the valves and parts hereinafter more fully set forth and succinctly pointed out in the appended claim from being held back while the bottle is lying on its side thus permitting liquid to be injected into the body thereof.

Another feature relating to my invention is to provide a non-refillable bottle having pockets in which heated liquid or molten metal is deposited before coming in contact with the valves thus preventing damage.

I accomplish these as well as minor objects by the construction now preferred by me as herein set forth and illustrated in the accompanying drawings in which—

Figure 1 is a fragmentary section of the bottle in which my device is shown in the normal or upright position. Fig. 2 is a transverse section of the securing piece through the center line of the securing pins provided therein. Fig. 3 is an elevation of the securing piece and securing pin. Fig. 4 is a detailed view of the valves and weights. Fig. 5 is a fragmentary view of the bottle in which my device is held in an inverted position. Fig. 6 is a view of a portion of the bottle showing the weighted ball holding the valve closed.

Similar reference numerals refer to similar parts throughout the several views of my device as illustrated in the accompanying drawings.

I have provided a bottle having a body portion 1 and a neck 2, both said bottle and neck being of the general contour of bottles common in use for the storing of liquid such as wines and liquors. At the base of the neck is formed an inwardly extending flange 3 adapted to protect the gasket 4 which surrounds the depending sleeve 5 which is provided at its base with the valve seat 6. This sleeve is preferably formed integral with the disk 7 which is provided with an aperture 8 and which is a continuance of the inner surface of said depending sleeve 5; an upwardly extending sleeve 9 is formed integral with said disk 7 and also provided with a hollow center of the same diameter as said aperture 8. The inner surfaces of the upwardly extending sleeve as well as the aperture 8 and the inner surfaces of the depending sleeve 5 serve as a guide for the plunger weight 10 which is connected to the cross bar 11 by means of the spindle 12 being preferably of metal and cast within said weight 10 which is preferably of glass and is provided with a flexible bumper 13 (Fig. 4), said cross-bar 11 being provided with two butterfly valves 14 which when in their closed position completely fill the space within the walls of the depending sleeve and the inner surfaces in alinement therewith. I have provided a flexible valve 14′ surrounding the spindle 12 which extends through cross bar 11 and thus holding said seat 6 against the undersurface thereof; said spindle 12 is provided with an aperture 15 adapted to receive a chain 16 which is connected to a bail 17 which is secured to the weighted ball 18 and said bail being U shaped, the open ends of the U being secured to said ball are extended sufficiently to prevent the ball from closing the aperture 19 below the valve seat and permitting the liquid to freely flow through said aperture.

The disk 7 is preferably formed integral with an outer upwardly extending sleeve 20 which is of a larger diameter than the sleeve 9 thus forming a space 21 therebetween which serves as a pocket to catch heated liquid or molten metal which might be injected to destroy the flexible valve 14′; said outer upwardly extending sleeve 20 is provided with apertures 22 adapted to receive the pins 23 and 24 which pass therethrough and into the groove 25 provided on the inner surface of the bottle neck; said pins 23 are preferably mounted in the securing piece 26 which is provided with vertically disposed projections or ridges 27 forming grooves 28 therebetween permitting the exit of the liquid from the bottle, said pins 23 are preferably extended when in alinement with the groove 25 by the spring 29. The upwardly

extending sleeve 9 is provided with apertures 30 also for the purpose of permitting the liquid to flow therethrough when emptying the bottle. It will be seen by referring to Fig. 1 of the drawings that if heated liquid or molten metal were poured into the bottle for the purpose of destroying said valve 14′ that said heated material will first lodge in the space 21 after filling said space which will cool said heated material. The heated substance will pass through said apertures 30 and on the upper surface of the plunger weight 10 which will prevent its passing farther toward the flexible valve 14′. Any leakage which will pass said weight 10 will be further retarded in its progress by the butterfly valves 14. Wires or other devices will also be stopped in a similar manner. The securing piece 26, as well as the disk and both upwardly extending sleeve and the depending sleeve and as well as the weight 10 are preferably made of glass thus permitting the inspection of the vital parts of my device. The apertures 22 when the sleeve and parts secured thereto are in the desired position are in alinement with said groove 25 facilitating the pins 23 and 24 to be readily forced to engage said groove. It is obvious that the ball 18 illustrated in Fig. 6 which ball is suspended within the body of the bottle will by reason of the flexibility of the chain force the valve 14′ against its seat. The apertures 30 are disposed in said upwardly extended sleeve 9 above the weight 10 when the valve is resting against its seat and below said weight 10 when the valve is in its extreme open position and away from its seat.

I do not wish to be limited to the specific features illustrated and herein before set forth but wish to depart from such details as are within the scope of the appended claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

A non-refillable bottle provided with a neck having an interior groove and an interior flange formed at its juncture with the body of the bottle, a valve cage within the neck and connected with the annular flange of the bottle, said cage comprising a central bore having its lower end provided with a valve seat, a valve for said seat, said valve being provided with a stem connected with a piston adapted to engage the walls of the bore, a ball provided with a bail supported from the lower end of the valve by a flexible connection, the bore for the valve and piston terminating a distance away from the top of the member, the member being provided with an annular depression between its outer face and the central bore, the wall between the bore and the depression being provided with a plurality of communicating openings, a sleeve provided with spring pressed retaining members positioned within the sleeve and resting upon the wall provided by the central bore and the depression adjacent the bore, the valve cage having its walls provided with openings alining with the depression of the bottle neck to allow the spring pressed retaining members to engage the said opening, and the sleeve having its outer face provided with spaced grooves and depressions, substantially as and for the purpose set forth.

In testimony whereof I have signed my name hereunto in the presence of two subscribing witnesses.

LEON GUSTAVE BUGNON.

Witnesses:
H. E. Talbot,
S. Allbin.