

J. T. McKENNA.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 20, 1910.

980,656.

Patented Jan. 3, 1911.

Fig. 1.

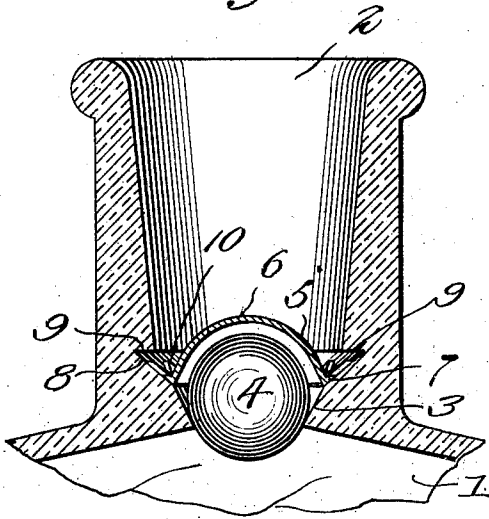


Fig. 3.

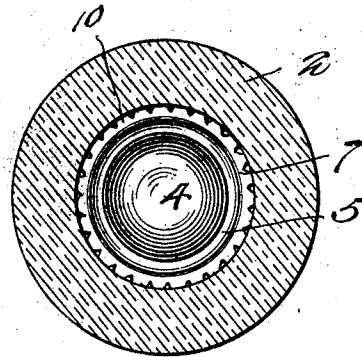


Fig. 2.

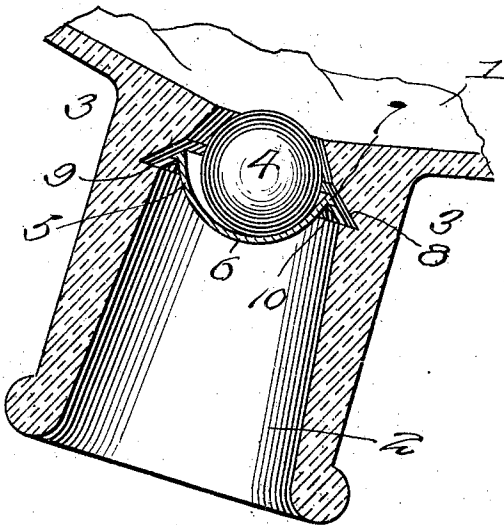


Fig. 4.

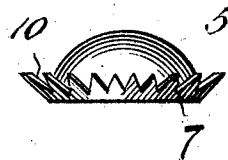
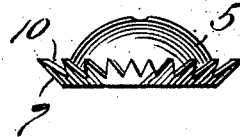


Fig. 5.



Witnesses

Hugh H. Litt
K. Allen.

Inventor
John T. McKenna

By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOHN T. McKENNA, OF NEW CANTON, VIRGINIA.

NON-REFILLABLE BOTTLE.

980,656.

Specification of Letters Patent.

Patented Jan. 3, 1911.

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To all whom it may concern:

Be it known that I, JOHN T. McKENNA, a citizen of the United States of America, residing at New Canton, in the county of Buckingham and State of Virginia, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, and the principal object of the invention is to provide means capable of being applied to standard forms of bottles without materially changing them in structure thus enabling the article to be placed on the market at a relatively low cost.

Another object of the invention is to provide novel forms of valves which are normally seated in the neck of the bottle when the latter is in a perpendicular position, one of the said valves being constructed to serve the purpose of a stop for the other valve to limit its movement in one direction in the neck and to prevent its casual displacement.

A still further object of the invention is to provide valved means in the neck of the bottle which cannot be tampered with without detection thus enabling the purchaser to readily ascertain whether or not the purchased package has been tampered with.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a detail vertical section through a portion of my improved bottle. Fig. 2 is a similar view showing the bottle in a partly inverted position. Fig. 3 is a detail horizontal section taken on the line 3—3 of Fig. 2. Fig. 4 is a detail view of the combined valve and guard. Fig. 5 is a similar view showing a slightly modified form of the same.

My improved article consists of a bottle 1 which is formed with a neck 2 which communicates with the main body of the bottle as in the ordinary manner. The neck is formed at its inner end with a downwardly and inwardly beveled face 3 which forms a seat for a spherical valve 4. The valve is preferably made of porcelain, glass, or suitable equivalent non-corrosive material or of such material that will not injure the contents of the bottle. The valve 4 is free for slight longitudinal movement

in the neck and its outward movement is limited by a combined guard and valve 5.

The combined valve and guard 5 is formed of any suitable material which can be readily stamped or otherwise formed to provide a substantially semi-spherical crown or guard portion 6 which is partly surrounded by an upwardly and outwardly extending flange 7 which is mounted for slight movement on a shoulder 8 in the neck. The shoulder 8 has its walls extended directly into the walls of the face 3. The shoulder 8 is formed by a cavity having a wall 9 which serves as a stop to limit the outward sliding movement of the combined guard and valve 5.

In practice, the bottle is filled in the ordinary manner, after which the valve 4 is inserted in the neck and properly lodged against the seat formed by the bevel face 3. After the valve 4 has been thus positioned in the neck of the bottle the combined valve and guard 6 is inserted and its flanged portion 7 is manipulated in any suitable or desired manner to cause it to be confined in the cavity formed by the shoulders 8 and 9. After the valve 4 and the combined guard and valve 5 have been operatively positioned in the neck of the bottle the liquid therein can only be removed after the bottle has been inverted. At this time the weight of the valve 4 will be sufficient to move the combined guard and valve 5 in an outward direction to cause the flange 7 to rest against the shoulder 9. The flange 7 is serrated or formed to provide suitable passages or substantially V-shaped notches 10 which are provided for the purpose to establish communication between the neck and body portions of the bottle when the latter is inverted as described. When the bottle has been again moved to its perpendicular position the weight of the valve 4 will restore it to its normal position. The weight of the combined guard and valve 5 will be sufficient to automatically restore it to its normal position and communication between the neck and the body portions of the bottle will be closed. The crown portion 6 of the combined guard and valve 5 serves as a protector to prevent the introduction of a tampering tool into the body of the bottle as will be understood. The flanged portion 7 of the combined guard and valve is guarded by the shoulder 9 to effectively prevent the in-

roduction of a tampering tool beneath the shoulder which may be inserted for the purpose of tampering with the flange to remove the said combined guard and valve
5 from the neck.

I claim:—

The combination with a bottle having its neck formed at its lower end to provide a tapered valve seat and formed adjacent to
10 the said seat and immediately outwardly thereof to provide outwardly flared walls which extend directly into the walls of the seat, a shoulder outwardly of the said flared walls, of a member of concavo-convex form
15 having its concavity disposed immediately above the said valve seat and having an annular flared portion fitting the said out-

wardly flared walls of the neck and formed to provide a plurality of discharge passages, and a spherical valve engaging the seat of
20 the neck and operable for movement into the concavity of the said concavo-convex member and operable to move the member when the bottle is inverted to cause the same to rest on the said shoulder of the neck to estab-
25 lish communication between the neck and the said body portion of the bottle.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN T. McKENNA.

Witnesses:

M. M. DAVIS,
A. T. FEIQUEA.