E. J. MORIN.

NON-REFILLABLE BOTTLE.

APPLICATION FILED AUG. 18, 1915.

1,200,390. Patented Oct. 3, 1916.

Fig. 1.

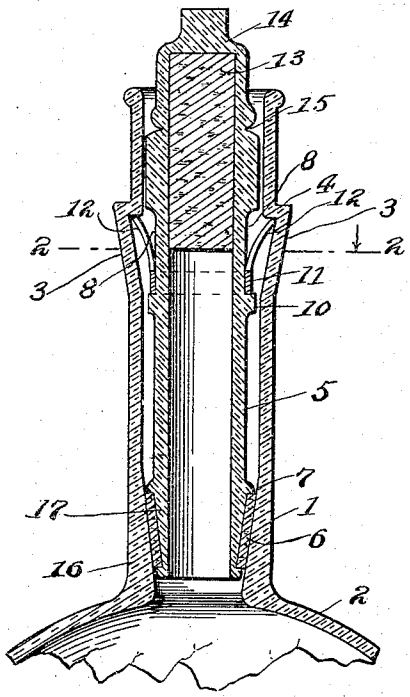


Fig. 3.

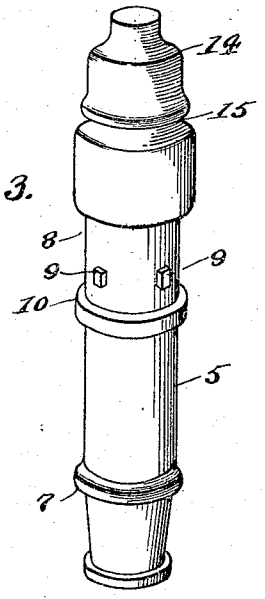


Fig. 2.

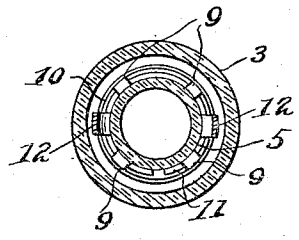
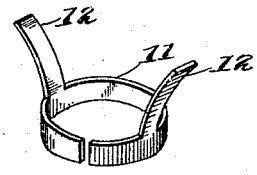


Fig. 4.



Witnesses

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NON-REFILLABLE BOTTLE.

1,200,390. Specification of Letters Patent. Patented Oct. 3, 1916.

Application filed August 18, 1915. Serial No. 46,172.

To all whom it may concern:

Be it known that I, EDWARD J. MORIN, a citizen of the United States, residing at Wynot, in the county of Cedar and State of Nebraska, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to non-refillable bottles, and it has for an object the provision of a device of this character of comparatively simple construction and one which will be cheap of manufacture.

A further object is the construction of a non-refillable bottle that is positive in operation, that is one in which all possibility of refilling without detection is removed.

Still another object is to provide novel clamping means for holding the tube in the neck of the bottle.

With the foregoing and other objects in view, my invention contemplates the construction and arrangements of parts described and claimed in the annexed specification and claim, the preferred embodiment of which is shown in the accompanying drawings.

Referring to the drawings:—Figure 1 is a longitudinal sectional view of a portion of a bottle, showing my invention applied to the neck thereof. Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of the tube. Fig. 4 is a detail perspective view of the clamping element.

In reducing my invention to practice, I have provided the neck 1 of an ordinary bottle 2 with a flared portion 3, by means of which I produce an annular shoulder 4 for a purpose hereinafter explained. A cylindrical glass tube 5; the exterior diameter of which is slightly less than the interior diameter of the neck of the bottle, and which is adapted to fit within the neck of the bottle and extend a slight distance above the top of the neck, is inserted therein. Suitable packing 6 is provided at the lower end of the tube and around the inside of the bottle neck to prevent any leakage on the outside of the tube. This packing may be of cork or any other suitable material. I further provide an annular projection 7 which is adapted to hold the packing in place.

Adjacent the flared portion of the neck of the bottle, the tube is provided with a groove 8, and arranged within the groove 8 and suitably spaced from the lower edge 10 are provided a number of lugs 9 for a purpose hereinafter described. The lower edge 10 of the groove and the lugs 9 are so spaced as to coöperate to hold the clamping member 11 in position. The clamping member comprises a split ring and a number of outwardly and upwardly diverging spring arms 12.

The lower portion 16 of the interior of the bottle neck tapers inwardly and the tube is provided with a correspondingly tapering portion 17 below the annular projection 7. The tube is made of such size that with the packing 6 in place there is provided a tight joint preventing any possibility of leakage. The correspondingly tapering portions prevent the tube from being forced into the bottle and the outwardly and upwardly diverging spring arms 12 prevent the tube from being lifted from the neck of the bottle.

In the upper portion of the glass tube, a cork 13 is placed and is so spaced as to be easily removed when the head of the tube has been broken off. The tube is provided with an ornamental head 14 preferably constructed in the form of a glass stopper. Below the head, the tube is provided with a weakened portion 15 which forms a line upon which the head of the cylinder is adapted to be broken off. When the head of the cylinder has been removed, the cork 13 may be taken from its place and the contents of the bottle may be poured from the same.

The operation of this device is apparent: The bottle is first filled, and the tube is then lowered into the neck of the bottle. When the spring arms come into position under the shoulder, the tube is permanently held in the neck of the bottle. Once the head 14 of the cylinder has been removed, notice is given that the bottle has been opened and the fraudulent refilling of the same is prevented.

What I claim is:—

The combination with a bottle having an internal annular groove in the neck thereof, of a hollow elongated stopper fitted within the neck, an auxiliary stopper arranged within the first mentioned stopper, a shoulder surrounding the elongated stopper at a point in its length, a circumferentially disposed series of spaced lugs projecting from

the elongated stopper at points above said shoulder, a split band embracing said stopper and having a width equal to the distance between said shoulder and lugs so as to be snugly fitted and retained in position about the stopper between said parts, and a plurality of resilient arms rising from said band between the lugs and disposed within said groove and the neck for the purpose described.

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

EDWARD J. MORIN.

Witnesses:

ESTHER SUNDLEAF,

ROSS P. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."