(No Model.)

J. M. DOOLITTLE.

NON-REFILLABLE BOTTLE.

No. 590,054. Patented Sept. 14, 1897.

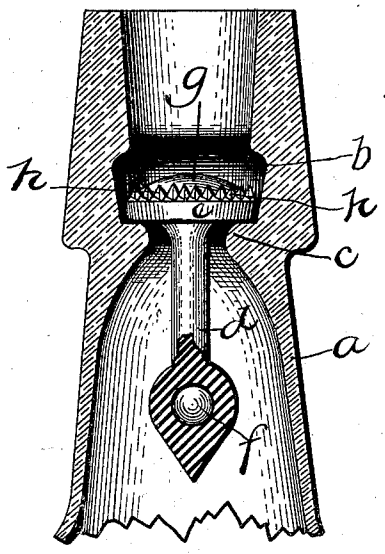


Fig. 1.

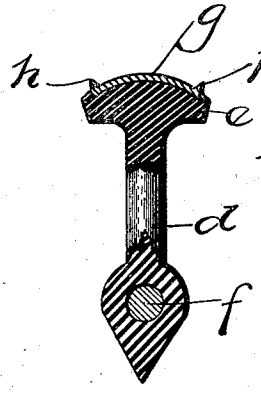
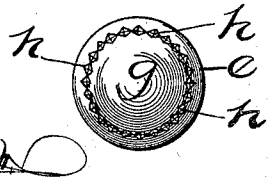


Fig. 2.

Fig. 3.



Witnesses:-
A. P. Appleman
A. M. Milton

Inventor:
Jacob M. Doolittle
By Henry C. Evert, Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JACOB M. DOOLITTLE, OF NEW KENSINGTON, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 590,054, dated September 14, 1897.

Application filed October 30, 1896. Serial No. 610,603. (No model.)

To all whom it may concern:

Be it known that I, JACOB M. DOOLITTLE, a citizen of the United States of America, residing at New Kensington, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in non-refillable bottles, and has for its object to construct a bottle that when once filled and the plunger inserted in the neck of same will permit the ready outflow of the liquid, but will prevent any additional liquid being introduced into the bottle or filling the same after the original contents have been removed.

The invention further aims to construct a bottle of this class that will be extremely simple in its construction, strong, durable, and effectual in its operation, and comparatively inexpensive to manufacture, adding but a few cents per gross to the original cost of the bottles.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, to be hereinafter more specifically described, and particularly pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like letters of reference indicate similar parts throughout the several views, in which—

Figure 1 is a vertical sectional view of the bottle-neck, showing stopper or plunger in position. Fig. 2 is a vertical sectional view of the stopper or plunger. Fig. 3 is a top plan view of the same.

In the drawings, *a* represents the bottle-neck formed with an interior annular groove *b* and an interior flange *c*, forming a rest for the head of the plunger or stopper. This plunger consists of the stem *d* and cap-head *e*, which are composed, preferably, of hard rubber or similar material, said stem being provided with a weighted portion *f* and the cap-head being provided with a metal or other suitable covering *g*, having upwardly-projecting points *h h* around its outer periphery.

The operation of my improved non-refillable bottle will be readily apparent from the views of the same that I have shown in the drawings, but in order to illustrate same more clearly to those unskilled in the same I will describe it as follows: The bottle is filled with the liquid and the plunger of stopper placed in the neck of the same and forced downward, the stem passing down into the bottle-neck and the head or cap engaging in the groove *b*, the flexible material of which said cap or head is composed permitting the same passing into the groove, as it will be observed, by reference to Fig. 2 of the drawings, that the metal covering is not as great in circumference as the head *e*. When this plunger is inserted in the neck of the bottle, it will be impossible to remove the same by reason of the projecting points of the covering and the head itself engaging the flange *b'*, formed at the top of the groove *b*, and the projecting points of the covering will prevent a knife or other instrument being inserted in the neck of the bottle and engaging the head in such a manner as to hold same up sufficiently to allow the liquid to be introduced into the bottle. As the bottle is tilted the pressure of the liquid against the head *e* will force same from off its seat and allow the liquid to flow around same and out of the mouth of the bottle, but when the bottle is again elevated to its vertical position the weighted plunger will again force the head *e* on its seat and prevent any liquid being passed into the bottle.

I desire to call particular attention to the simplicity of construction of this arrangement. The weighted end of the plunger will serve to keep the head firmly on its seat and prevent any refilling of the bottle; also, that various changes may be made in the details of construction of my improved non-refillable bottle without departing from the general spirit of my invention.

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

In combination with a bottle having an annular recess formed in its neck producing

an upper and lower shoulder, a guard composed of a head rounded on its top and having a flat bottom, said bottom being adapted to lie on the lower shoulder of the recess, a crown or covering for the head consisting of a convex plate embedded in the head, spurs formed with the crown or covering around its edge, said spurs being adapted to engage the upper shoulder when the bottle is tilted, a stem formed with and depending from the head having an enlarged end with a weight inclosed therein, as and for the purpose described.

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

JACOB M. DOOLITTLE.

Witnesses:
A. M. WILSON,
H. E. SEIBERT.