

No. 773,011.

PATENTED OCT. 25, 1904.

F. A. HEATH.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 12, 1904.

NO MODEL.

Fig. 1.

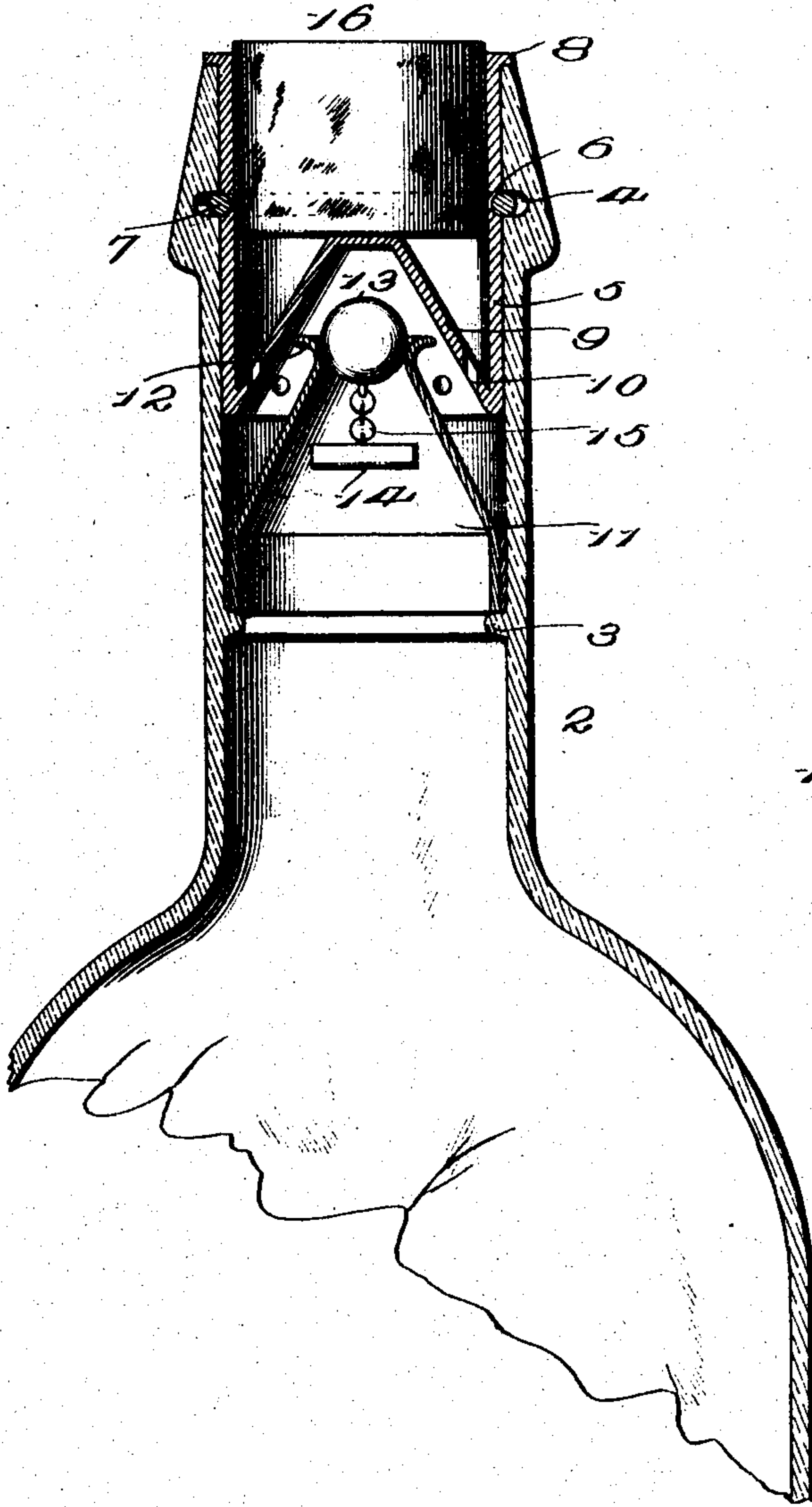


Fig. 2.

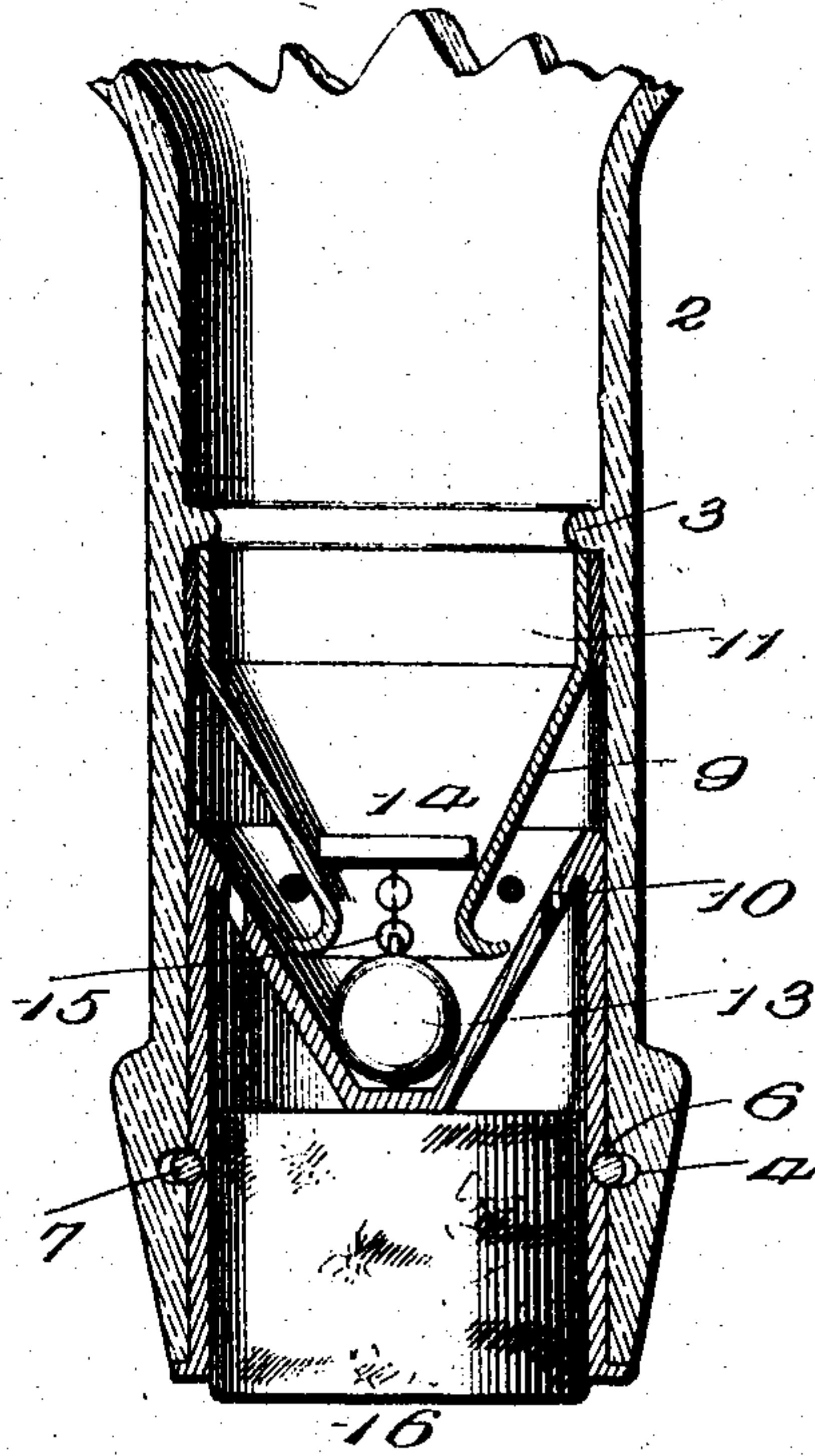
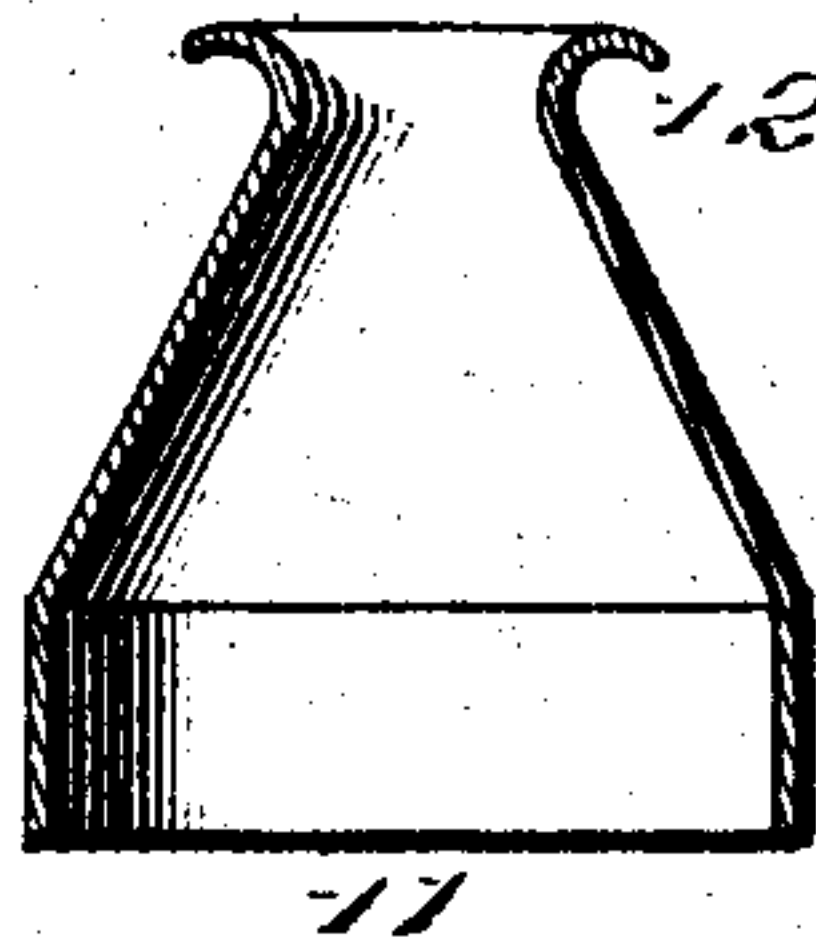


Fig. 3.



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UNITED STATES PATENT OFFICE.

FORREST A. HEATH, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO CHARLES C. GUERNSEY, OF NASHVILLE, TENNESSEE.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 773,011, dated October 25, 1904.

Application filed January 12, 1904. Serial No. 188,729. (No model.)

To all whom it may concern:

Be it known that I, FORREST A. HEATH, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention provides an improved form of bottle or like receptacle adapted particularly to prevent fraud on the part of dealers, as is oftentimes practiced in refilling the receptacle with an inferior grade of goods, utilizing the trade-mark and other indicia of the original seller to deceive the public.

The invention relates, essentially, to the provision of a peculiar form of guard disposed within the neck of the bottle and a valve-support coöperating with the guard and mounted in a peculiar manner adjacent thereto.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a bottle, showing the embodiment of the invention. Fig. 2 is a view similar to Fig. 1, showing the receptacle partially inverted and the relative disposal of the parts when the said receptacle is in this position. Fig. 3 is a detail view of the valve-support.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The invention is shown applied to a bottle 1, though it will be understood that the same is adapted for application to various forms of necked receptacles of this type. The neck 2 of the bottle is provided at a point about intermediate the mouth and the point of jointure of the body of the receptacle with an annular enlargement in the form of a bead 3,

located upon the inner portion of the said neck. Adjacent the mouth of the neck the same is provided upon the inner side with an annular groove 4. A guard 5 of tubular form is insertible within the neck of the bottle and is provided upon its periphery with a groove 6, corresponding in form to the groove 4 in the neck of the bottle. A compressible lock-spring 7 is utilized to lock the guard permanently within the neck of the bottle, said lock-spring being seated within the corresponding lock-grooves 4 and 6. The guard 5 is provided with an annular flange 8 at its upper end, which flange overlaps the neck of the bottle at the mouth and serves to limit the inward movement of the guard 5 to a certain extent, coöperating with the lock-spring in this respect. The guard 5 is formed at its inner end with a guard-plate 9, which is of hollow conical or cup-shape form, and this plate 9 is provided with a plurality of openings 10, through which the contents of the receptacle pass in order to be removed from same. The openings 10 of the guard are located proximate the point of jointure of the plate 9 with the tubular body of the guard, the location of these openings being advantageous for reasons which will appear hereinafter. Below the guard 5 and within the neck is disposed the valve-support 11, which is also of tubular form. The support 11 is of somewhat conical or cup shape, and the upper portion of the said support is provided with an outlet-opening, being flared or flanged at this point, as shown at 12. The flared or flanged portion 12 of the support 11 constitutes a valve-seat, and this portion is received within the conical or cup-shaped plate 9 when the parts of the device are in their normal working positions. The support 11 rests upon the bead or enlargement in the neck of the bottle and is held in place by means of cement or the like, as found most suitable in the practical use of the invention. The valve 13 is a float-valve of the ball type and is normally held seated upon the flared portion 12 of the support 11 by means of a weight 14, suspended from the valve by a flexible connection 15. The weight 14 extends within the tubular support 11,

holding the valve seated when the receptacle is in an upright position. The guard-plate 9 in receiving the upper portion of the support 11 effectually prevents the introduction of a
 5 wire, implement, or analogous device for the purpose of preventing proper seating of the valve 13. The flared portion 12 of the support serves as a deflector, and in this capacity its cooperation with the guard-plate 9
 10 is of no small importance and advantage, as must be readily apparent. The position of the valve with respect to the openings 10 of course is a factor in securing the effectual guarding of the movement of the valve, as
 15 above described, since the said movement of the valve is wholly within the guard-plate 9 and wholly above the openings 10.

In assembling the parts the support 11 is first placed in position before the bottle has been
 20 filled and is cemented or otherwise secured. The guard 5 is introduced after the bottle has been filled and is locked from displacement by means of the lock-spring 7. A cork 16 is designed to be placed within the tubular portion of the guard 5 in the usual manner to prevent contamination of the contents of the
 25 bottle.

Removal of the contents of the bottle is effected by first removing the cork 16, and in-
 30 version of the receptacle will cause the valve 13 to be unseated, the weight 14 permitting this movement. An attempt to refill the bottle would be frustrated by the float capacity of the said valve or the peculiar structure of
 35 the guard and valve-seat.

Having thus described the invention, what is claimed as new is—

1. In a non-refillable bottle, the combination of a support provided with a valve-seat,
 40 a hollow guard-plate disposed above the support and receiving the valve-seat thereof, a guard-flange projected from the support ad-

jacent the valve-seat, and a valve disposed upon the valve-seat and movable within the guard-plate aforesaid. 45

2. In a non-refillable bottle, the combination with a guard comprising a tubular body secured within the neck of the bottle, a conical or cup-shaped guard-plate formed within the guard-body at the lower end thereof, the
 50 said guard-plate being provided with outlet-openings at the lower portions thereof, and a valve movable within the cup-shaped guard-plate above the outlet-openings.

3. In a non-refillable bottle, the combination with a tubular guard-body secured within the neck of the bottle, a guard-plate formed integrally with the said guard-body and of conical or cup-shaped form, the said guard-plate being provided with outlet-openings, a
 60 support disposed below the guard and provided with a flared valve-seat located within the cup-shaped guard-plate, and a valve normally seated upon the support aforesaid.

4. In a non-refillable bottle, the combination with a tubular guard secured within the neck of the bottle and provided at its lower end with a cup-shaped guard-plate integrally formed therewith, said guard-plate being provided with outlet-openings adjacent the point
 70 of jointure with the guard-body, an independent tubular support disposed beneath the guard and of approximately conical form and having its upper end flared to form a valve-seat, the flared end being received within the
 75 cup-shaped guard-plate, and a valve normally seated upon the flared valve-seat aforesaid and movable within the guard-plate.

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

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Witnesses:

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