

**No. 661,044.**

**Patented Nov. 6, 1900.**

**R. M. ELLIS.**  
**NON-REFILLABLE BOTTLE.**

(Application filed Aug. 1, 1900.)

(No Model.)

Fig. 1.

Fig. 2.

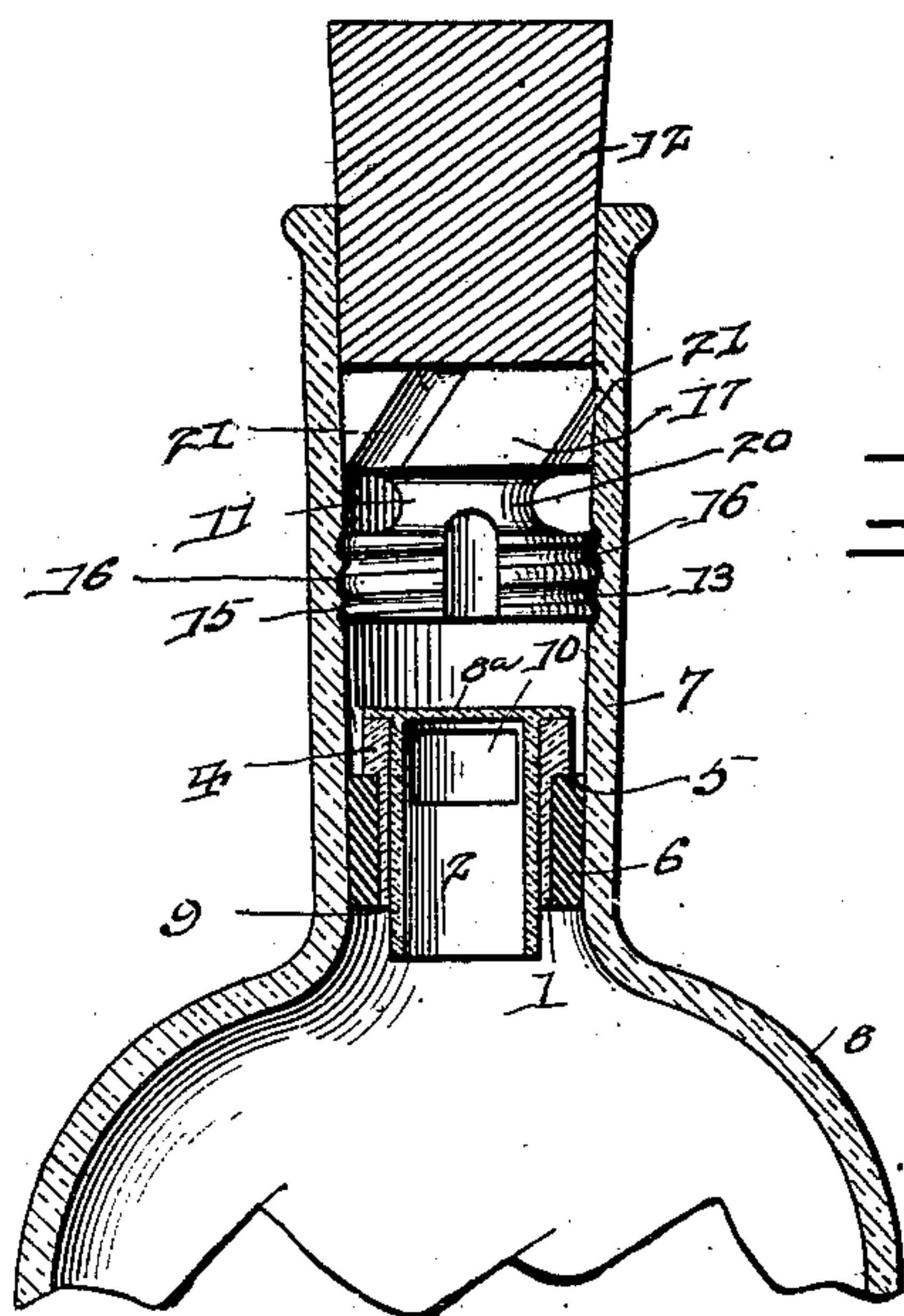


Fig. 6

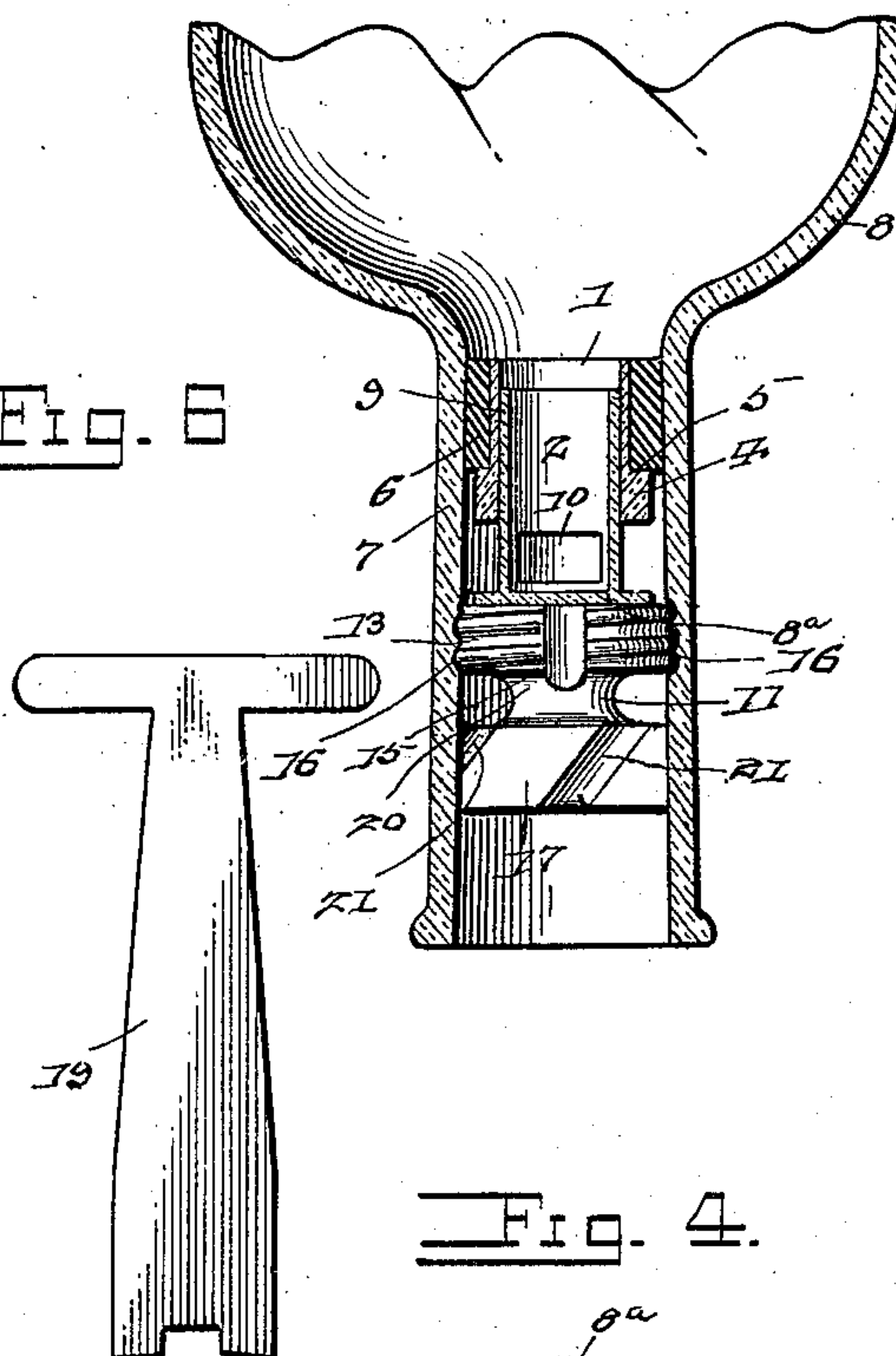


Fig. 3.

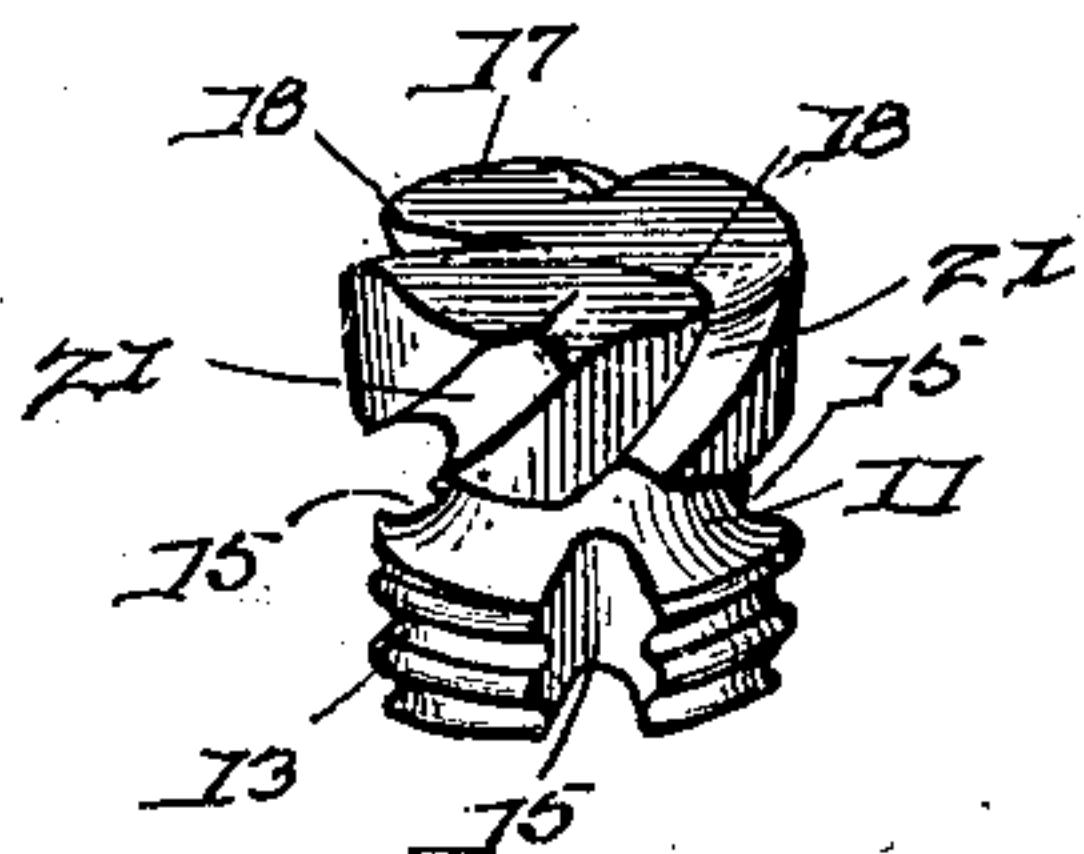


Fig. 4.

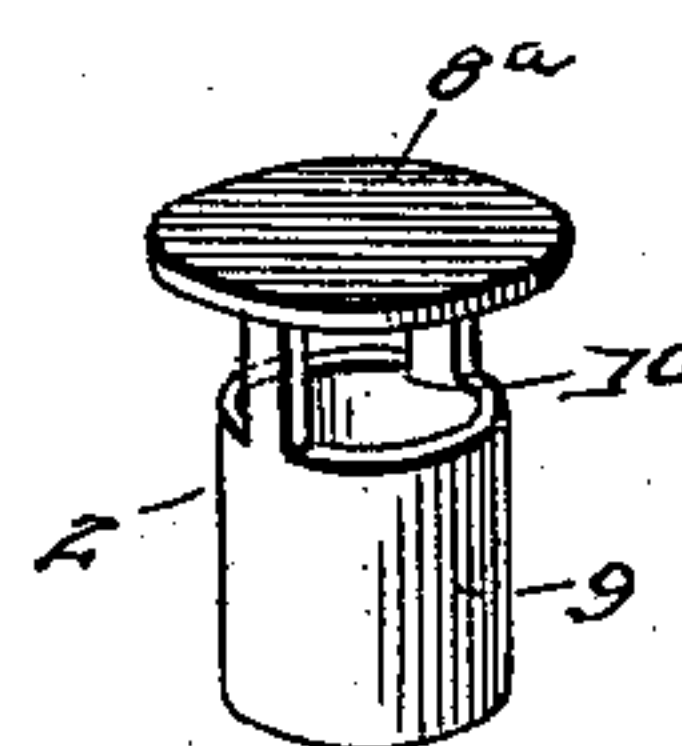
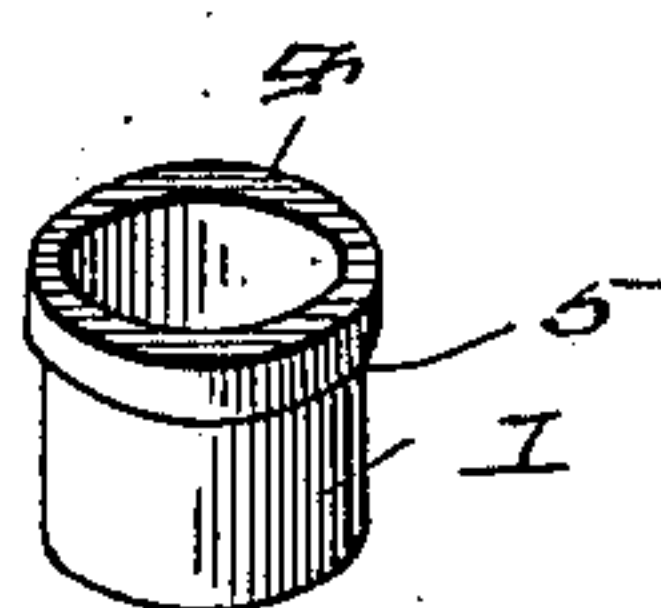


Fig. 5.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ROBERT M. ELLIS, OF MARTIN, TENNESSEE.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 661,044, dated November 6, 1900.

Application filed August 1, 1900. Serial No. 25,567. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT M. ELLIS, a citizen of the United States, residing at Martin, in the county of Weakley and State of Tennessee, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

The invention relates to improvements in non-refillable bottles.

10 The object of the present invention is to improve the construction of non-refillable bottles and to provide a simple and comparatively inexpensive device adapted to be applied to the necks of bottles and analogous  
15 receptacles and capable after a receptacle has received its original contents of effectually preventing a liquid from being introduced into the same, whereby the contents of the receptacle are protected against adulterations and the receptacle prevented from being  
20 refilled fraudulently.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated  
25 in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a vertical sectional view of a portion of a bottle constructed in accordance with this invention. Fig. 2 is  
30 a similar view illustrating the arrangement of the parts when the bottle is inverted. Fig. 3 is a detail perspective view of the guard or shield. Fig. 4 is a similar view of the valve. Fig. 5 is a detail view of the sleeve which  
35 forms the seat.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a sleeve designed to be constructed of glass or other suitable material  
40 and forming a seat for a valve 2 and provided with an exterior annular enlargement or rib 4, located at the top of the sleeve to provide a shoulder 5 for engaging an elastic  
45 band or sleeve 6, of rubber, cork, or other material. The sleeve 1 is arranged within the lower portion of the neck 7 of a bottle 8, and the elastic band 6, which is interposed between the sleeve and the bottle, firmly holds  
50 the former in the latter, and the neck of the bottle or other receptacle may be tapered or provided with any suitable means for pre-

venting the sleeve from being forced into the body of the same. The valve 2 is provided with a head 8<sup>a</sup>, consisting of a flat disk extending entirely across the neck of the bottle  
55 when it is arranged on the seat, and the said neck has sufficient taper to form an opening when the valve is open or away from the seat; but with a bottle or other receptacle having  
60 a neck substantially straight the valve may be of less diameter than the neck, so that there will be a space or opening between its edges and the inner face of the neck when  
65 the said valve is open. The valve is provided with a tubular stem 9, fitting within and conforming to the configuration of the sleeve 5 and provided at its upper end with  
70 opposite openings 10, forming passages for the discharge of the contents of the bottle when the latter is inverted. The valve opens and closes by gravity, and when inverted, as  
75 illustrated in Fig. 2 of the accompanying drawings, the head 8<sup>a</sup> leaves the seat, and the contents of the bottle are permitted to flow freely therefrom.

The movement of the automatically-operating valve is limited by a guard or shield 11,  
80 arranged within the upper portion of the neck and spaced sufficiently from the top thereof to permit the neck to receive an ordinary cork or stopper 12. The guard or shield is provided with a lower threaded portion 13,  
85 and the threads are intersected at intervals by grooves 15, forming passages for the contents of a bottle. The threads of the lower  
90 portion of the guard or shield are adapted to engage corresponding screw-threads 16 of the neck of the bottle, and the upper portion 17 of the guard or shield is provided with  
95 opposite recesses 18, formed in its upper face and having opposite shoulders adapted to be engaged by a wrench 19 or similar tool in rotating or turning the guard or shield to the  
100 right to screw it into the neck of a bottle. The recesses 18 are beveled at the opposite side to prevent the wrench from taking hold of the guard or shield should an attempt be made to unscrew it. By this construction the guard or shield may be readily screwed  
into the neck of a bottle or other receptacle and is effectually prevented from being unscrewed therefrom.

The guard or shield, which is designed to



be constructed of glass, is provided with a reduced central portion or neck 20, which is surrounded by an annular space when the guard or shield is arranged within the neck of the bottle. The upper portion of the guard or shield is provided at its periphery with diagonally-arranged grooves 21, forming inclined passages for the contents of the bottle, and by this arrangement of grooves or passages the liquid is permitted to flow freely from the bottle or receptacle and at the same time any attempt to manipulate the valve by introducing an instrument into the bottle will be rendered ineffectual. The valve is also designed to be constructed of glass; but any material which will be unaffected by the contents of a receptacle and which will not affect the same may be utilized. The outward movement of the valve is limited by the guard or shield, and the head 8<sup>a</sup> is of less diameter than the inner end of the said guard or shield and does not close the passages formed by the grooves 15.

It will be seen that the bottle is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that while it permits the contents of a receptacle to be readily decanted it will effectually prevent a liquid from being introduced into the same after the receptacle has received its original contents. It will also be apparent that it will prevent adulteration and fraudulent refilling and that the guard or shield effectually prevents access to the valve, so that the latter cannot be tampered with.

What I claim is—

1. A device of the class described comprising a receptacle having a neck provided with interior screw-threads, the guard or shield located within the neck and consisting of a threaded lower portion engaging the threads of the neck and provided with grooves intersecting the screw-threads, an upper portion provided with grooves having their lower ends offset from the upper ends of the grooves of the lower portion, a neck connecting the

upper and lower portions of the guard or shield and being of less diameter than the neck of the receptacle to provide an annular space, a sleeve arranged within the neck of the receptacle at a point below the guard or shield, and a valve consisting of a tubular stem arranged within the said sleeve and provided with openings, and a disk or head arranged to fit against the upper edges of the sleeve to close the receptacle, and having its upward or outward movement limited by the guard or shield and being of a less diameter than the lower end of the same to clear the grooves thereof, substantially as described.

2. A device of the class described comprising a receptacle having a neck provided with interior screw-threads, the guard or shield located within the neck and consisting of a threaded lower portion engaging the threads of the neck and provided with grooves intersecting the threads, an upper portion provided with grooves having their lower ends offset from the grooves of the lower portion, and a neck connecting the upper and lower portions of the guard or shield, and being of a less diameter than the neck of the receptacle, a sleeve arranged within the neck of the receptacle at a point below the guard or shield and provided near its upper end with an outer shoulder, an elastic band surrounding the said sleeve adjacent to the shoulder and engaging the neck of the receptacle, and a valve consisting of a tubular stem arranged within the sleeve and provided at its top with openings, and a disk or head seated upon the upper edges of the sleeve and having its outward movement limited by the lower end of the guard or shield and being of a less diameter than the same, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT M. ELLIS.

Witnesses:

A. CRAVENS,  
M. HANNINGS.