

No. 820,966.

PATENTED MAY 22, 1906.

F. J. GHEEN & A. MAUCHER.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JUNE 14, 1905.

Fig. 1.

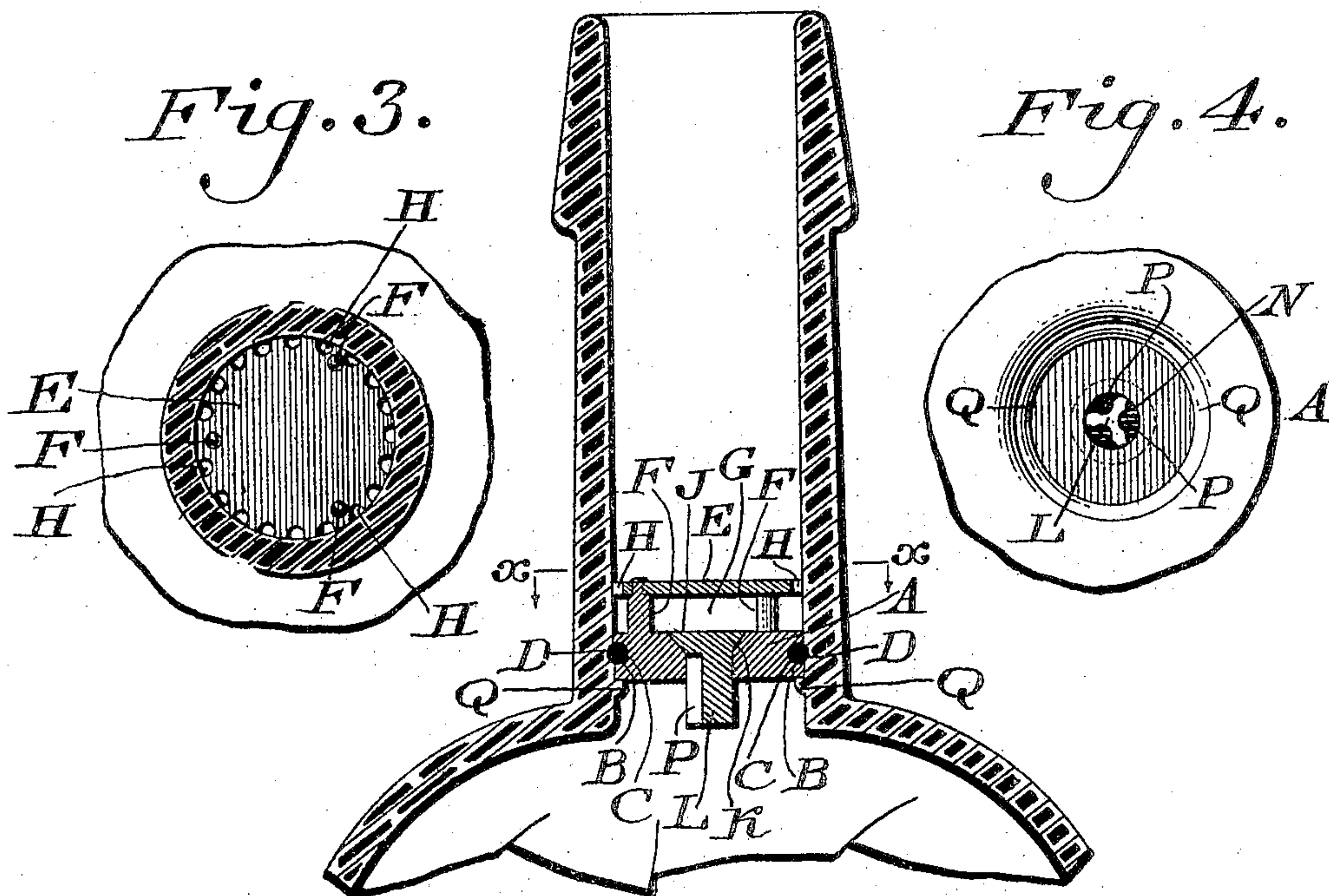
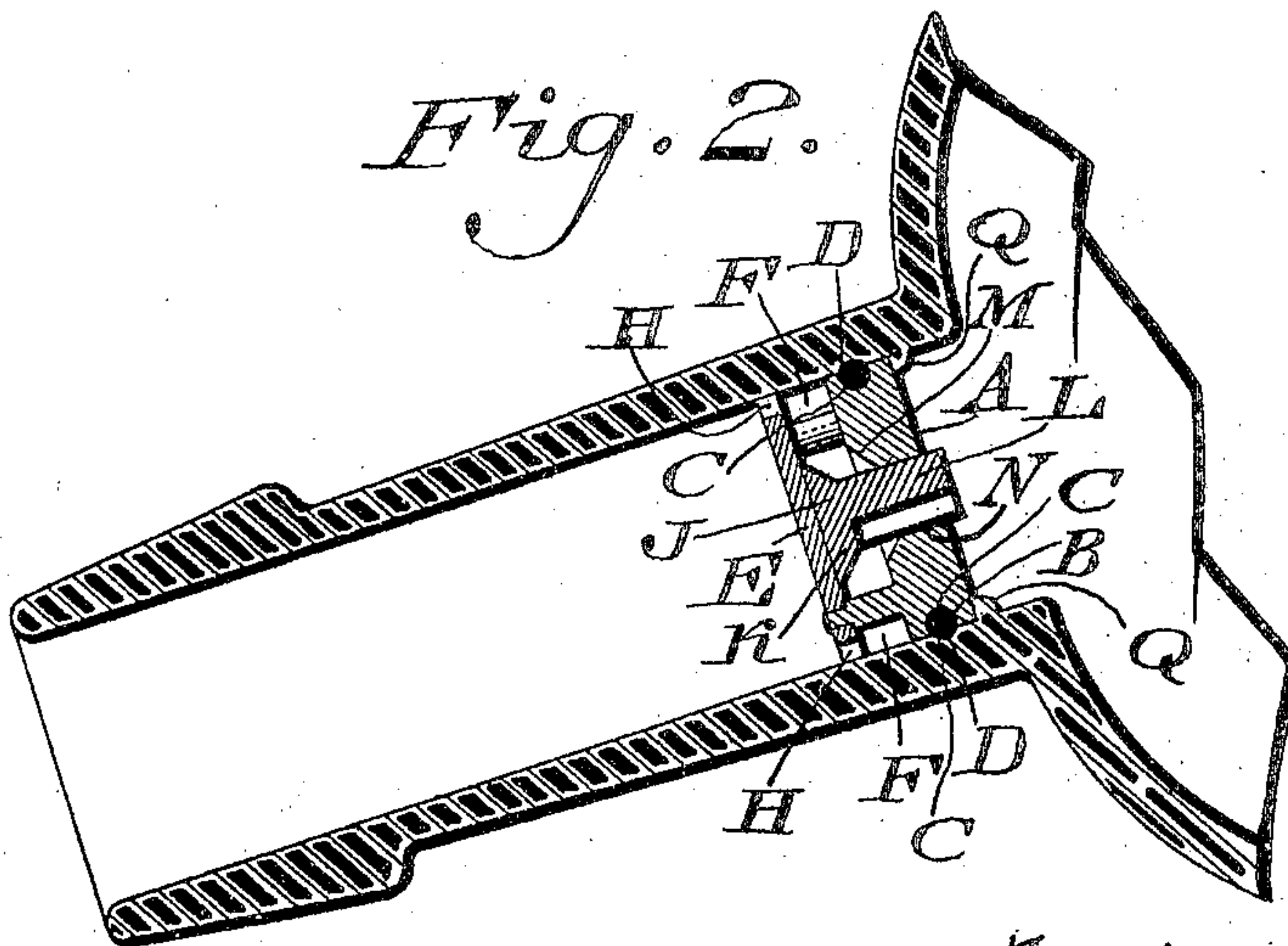


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK J. GHEEN AND ALBERT MAUCHER, OF PHILADELPHIA, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

No. 820,966.

Specification of Letters Patent.

Patented May 22, 1906.

Application filed June 14, 1905. Serial No. 265,188.

To all whom it may concern:

Be it known that we, FREDERICK J. GHEEN and ALBERT MAUCHER, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

Our invention consists of a device for rendering a bottle non-refillable, the same being composed of a base-plate adapted to be secured in the neck of a bottle, a valve having its seat on said plate, a diaphragm which is secured to said base-plate and separated therefrom, so as to form an air-cushion between said parts, and means on the valve for preventing improper displacement or disconnection of the same, while allowing the required opening and closing motions thereof.

Figures 1 and 2 represent longitudinal sections of a non-refillable bottle embodying our invention, the same being shown in different positions. Fig. 3 represents a horizontal section on line *x x*, Fig. 1. Fig. 4 represents a bottom plan view of the device embodying our invention.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the base-plate of the device, the same being adapted to enter the neck of a bottle and has a packing or gasket B, which partly occupies the recess C in the circumference of said plate and partly projects therefrom, so as to enter the recess D on the inner periphery of said neck, and consequently firmly retaining the device in the latter.

E designates a diaphragm which is connected with the upper or outer side of the base-plate A by means of the posts or studs F, which are integral with said plate, it being noticed that a space G exists between said plate and diaphragm adapted to form an air-cushion, as will be hereinafter referred to. In the peripheral portion or rim of said diaphragm are outlet openings or ports H, which, as will be seen, are adjacent to the inner wall of the neck of the bottle.

J designates a valve composed of a head K and stem L, said head having its seat M on the plate A and said stem passing freely through an opening N in said plate, said opening extending from the valve-seat entirely through said plate, so as to provide a proper communication between the interior

of the body of the bottle and the neck thereof, to assist in which the side of the stem has ducts P therein, the same extending from the under side of the head K to the lower terminal of said stem.

It will be seen that the stem L is of such length that should the bottle be decanted or overturned the head K may abut against the under side of the diaphragm E, while the stem will remain in the plate A without liability of the valve losing its engagement with said plate or becoming free other than what is necessary to move from and to its seat.

It will be seen that when it is desired to remove liquor or fluid from the bottle it is decanted or overturned, when the valve leaves its seat, as in Fig. 2, and the liquor will flow through the ducts P and opening N into the space or chamber G and from thence through the ports H, and so reach the neck of the bottle, after which it will flow out of said neck, as usual.

When the bottle is restored to upright position, or partly so, the valve will return to its seat, thus closing the opening N, as in Fig. 1.

Should liquor be poured into the neck to refill the bottle, it will pass through the ports H and partly enter the space or chamber G below the same, when it will meet resistance in the space, which now provides an air-cushion, which causes pressure on the head of the valve, holding the latter most firmly on its seat, and consequently preventing the liquor from passing through the base-plate, the effect of which is evident. It will also be evident that should a piece of wire or an implement be inserted through the ports H in order to reach the valve J its point will contact with the plate A, and so resist the further advance of said piece or implement.

In order to limit the entrance of the plate A with its appurtenances into the neck of the bottle and cause it to properly occupy its position therein and to prevent said plate, &c., from being pushed into the body of the bottle, the inner face of said neck is provided with an inwardly-projecting shoulder Q, on which said plate is rested, the effect of which is evident.

It is deemed important that the posts F be integral with the base A and shouldered to receive the plate or diaphragm E and that the valve K have its stem extend through the opening in the base and be so shaped as to

have bearings at different diametric points of the walls of the opening in the base instead of tapered. By this means we avoid possibility of leakage, which would occur if the bolts
5 connecting the base and plate were passed through openings therein. The shouldered integral bolts not only hold the base and plate at a fixed distance apart, but tend to preserve the air-chamber, while the close-fitting stem prevents tilting of the valve when
10 the bottle is turned sidewise, and thus passage of the liquid through the valve and refilling are prevented.

Having thus described our invention, what
15 we claim as new, and desire to secure by Letters Patent, is—

1. A non-refillable device for a bottle consisting of a base-plate, a valve on said plate, a diaphragm elevated from said plate and in-

tegral shouldered posts connected with said 20 plate and diaphragm supporting the latter, said diaphragm having a port therethrough.

2. A non-refillable device for a bottle consisting of a base-plate, a valve on said plate, a diaphragm elevated from said plate, and in- 25 tegral shouldered posts connected with said plate and diaphragm supporting the latter, said diaphragm having a port therethrough, said plate having an opening therethrough and said valve having an elongated stem 30 provided with a duct in its side and freely occupying said opening and extended there-through.

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Witnesses:

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