

No. 680,073.

Patented Aug. 6, 1901.

H. K. PROSSER.
NON-REFILLABLE BOTTLE.

(Application filed Apr. 17, 1901.)

(No Model.)

Fig. 1.

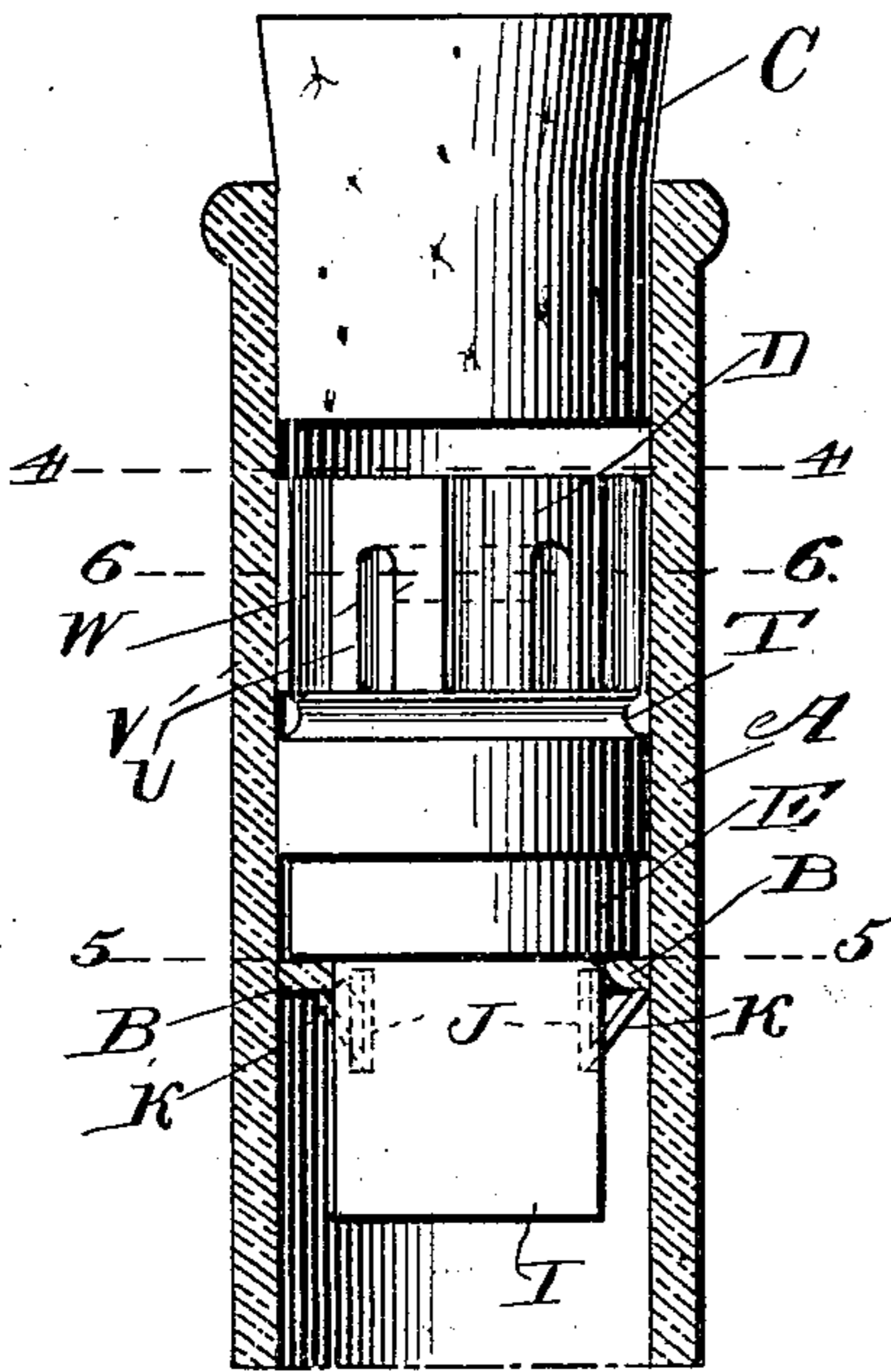


Fig. 2.

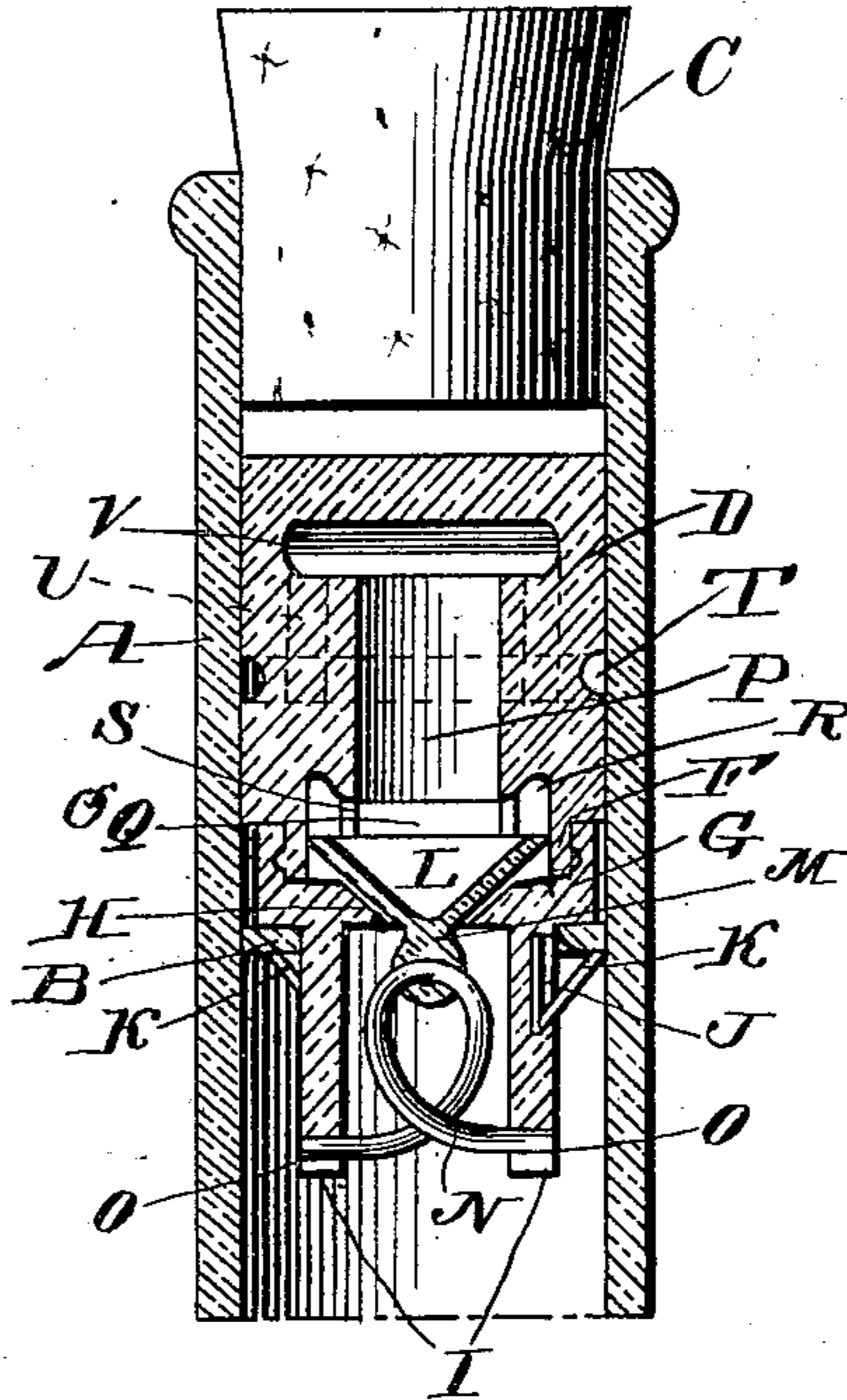


Fig. 3.

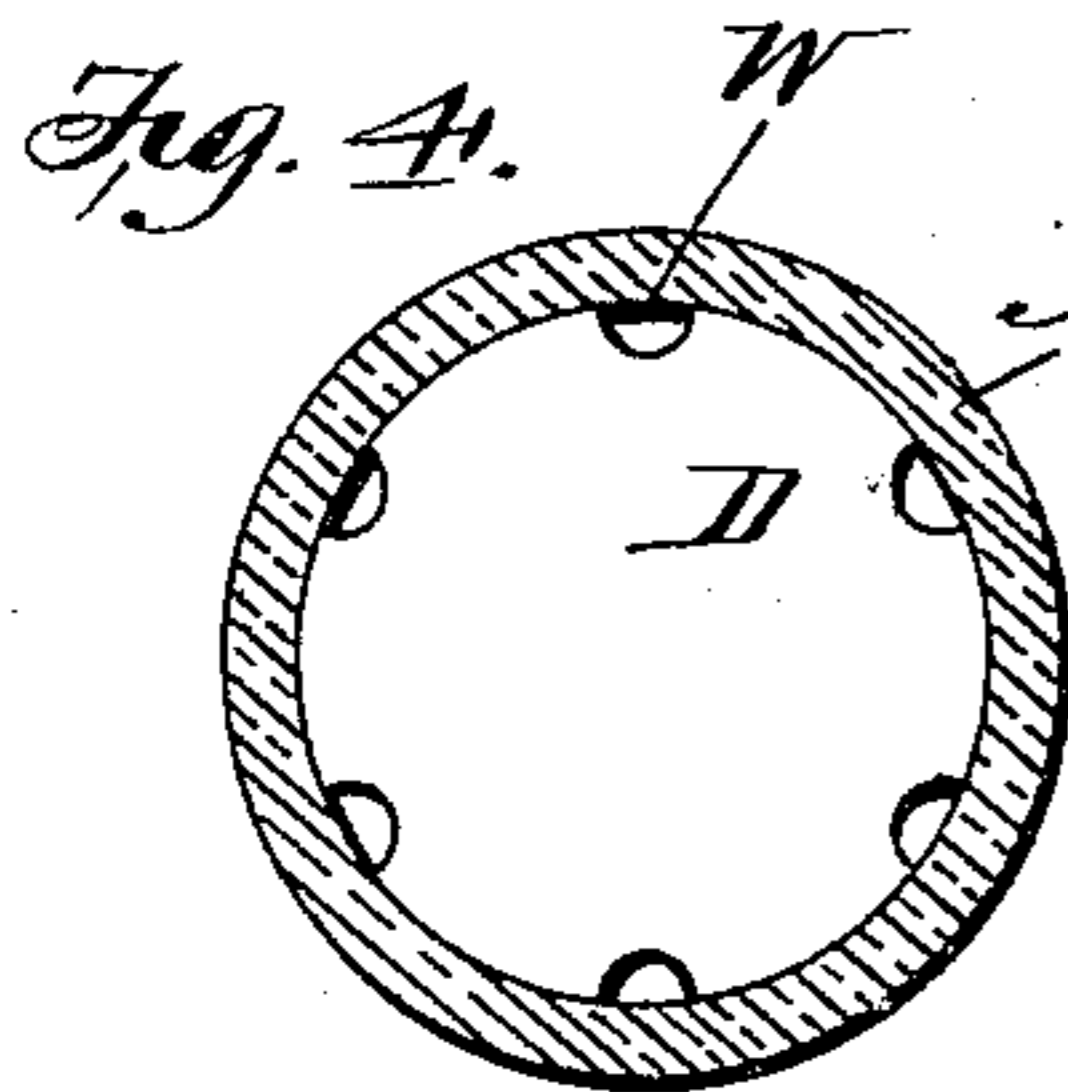
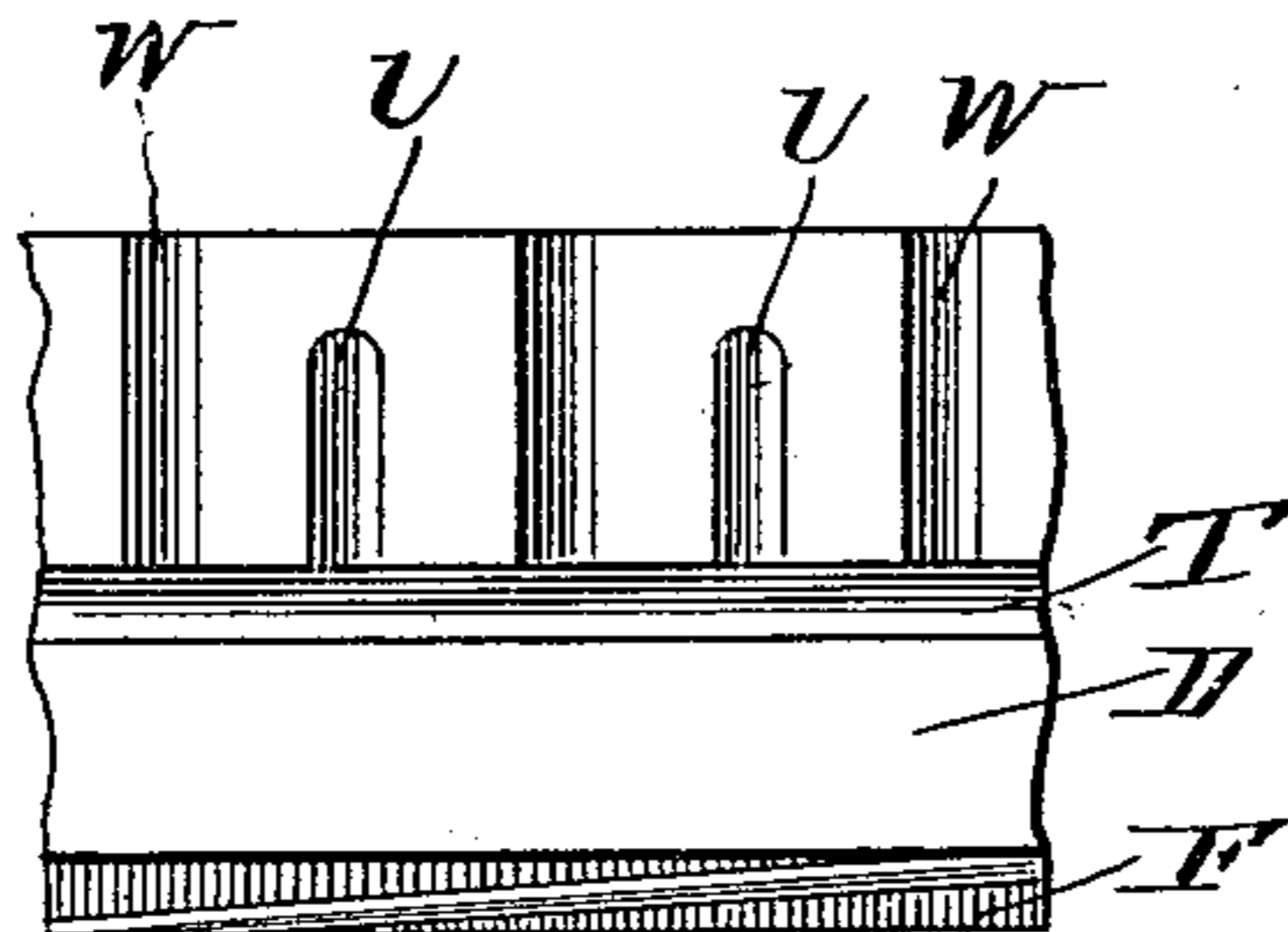


Fig. 5.

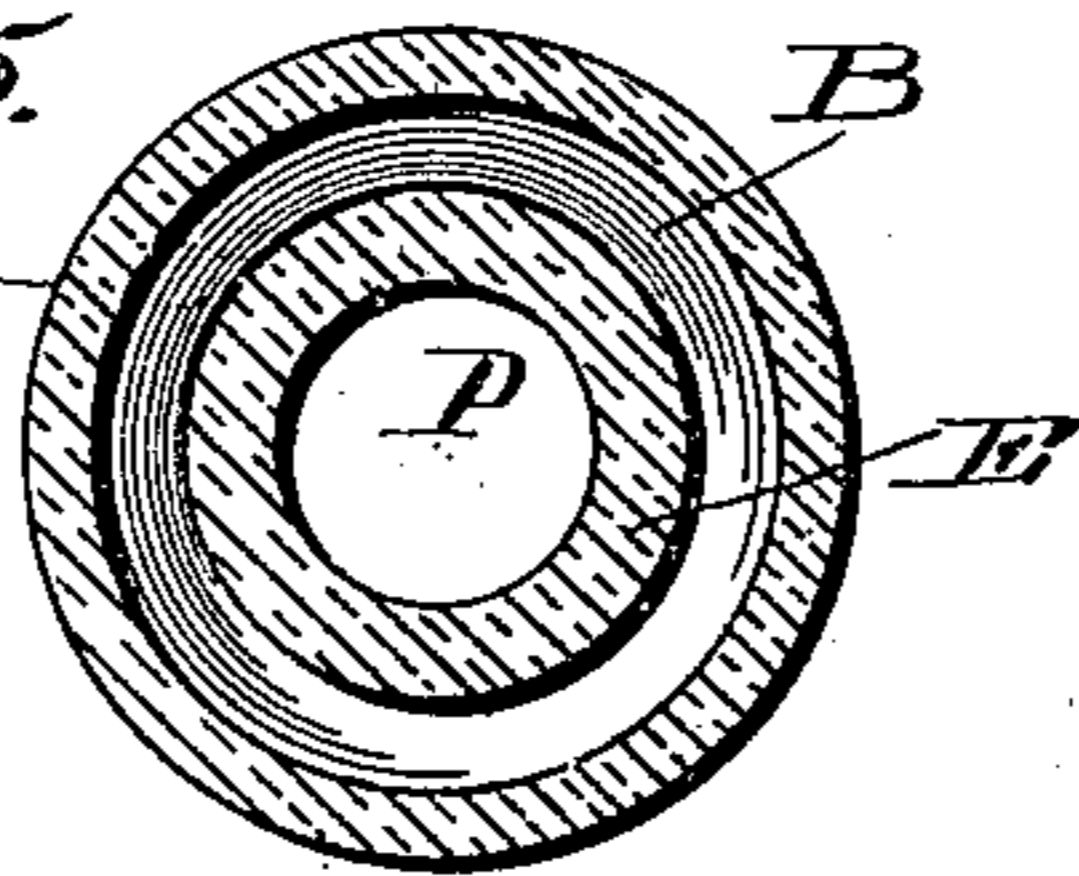


Fig. 6.

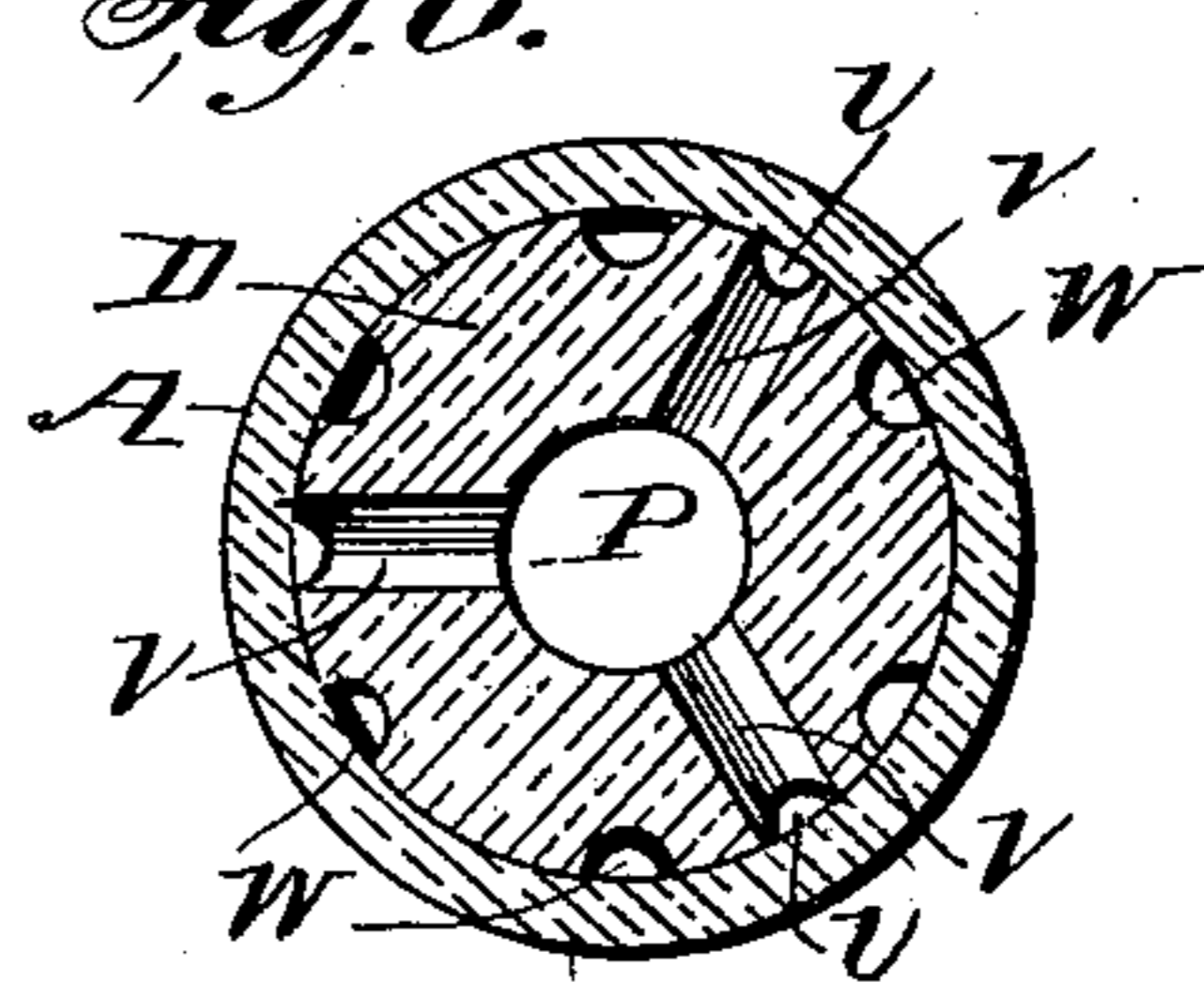
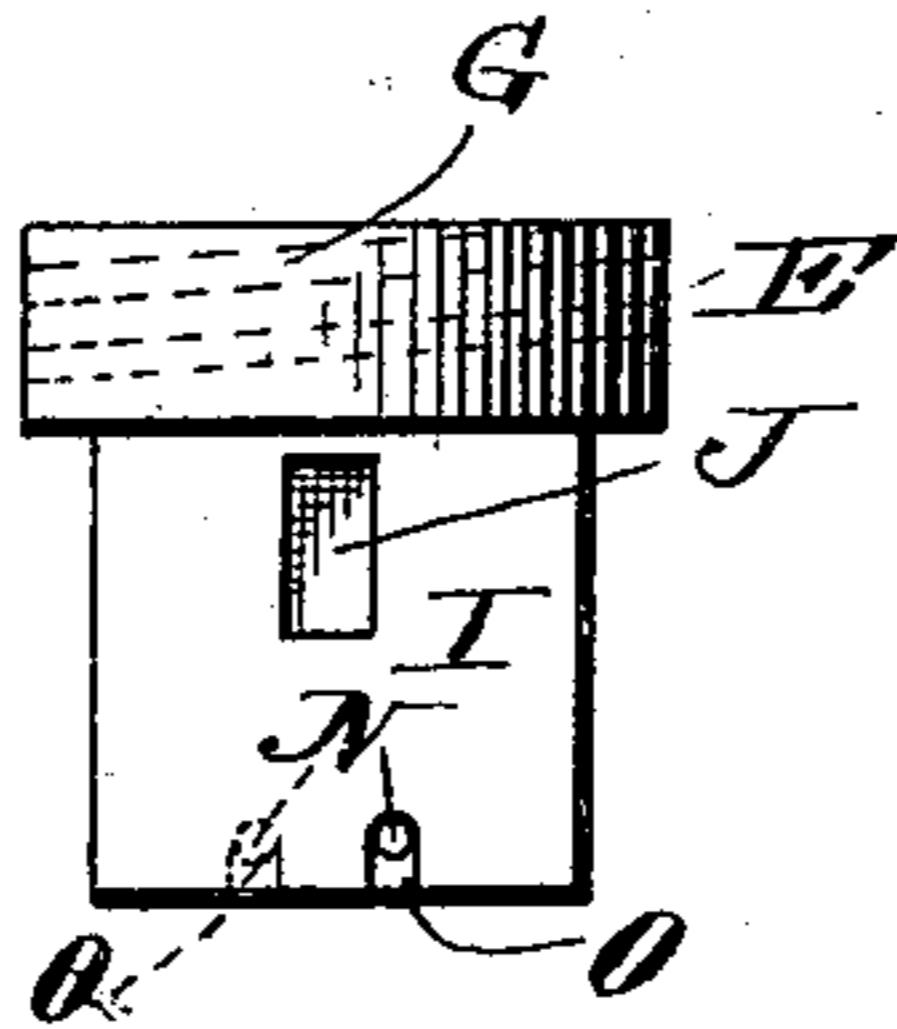


Fig. 7.



Witnesses
C. H. Walmsley,
Jas P. Hargreaves

Inventor
Henry K. Prosser,
By James W. Bevans
his Attorney

UNITED STATES PATENT OFFICE.

HENRY K. PROSSER, OF WASHINGTON, DISTRICT OF COLUMBIA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 680,073, dated August 6, 1901.

Application filed April 17, 1901. Serial No. 56,283. (No model.)

To all whom it may concern:

Be it known that I, HENRY K. PROSSER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in non-refillable bottles; and the object is to provide a simple and improved construction which will permit the contents of the bottle to be readily removed therefrom, but absolutely prevent the refilling or partial refilling thereof, and at the same time not materially increase the cost of production of the bottle relatively to that of the ordinary construction of bottle, and also to so construct the same that the valve mechanism cannot be tampered with by the insertion of a wire or in any manner, as by weakening or destroying the spring holding the valve to its seat by the use of acids.

A further object is to provide a construction for the purposes set forth which may be readily positioned in the neck of the bottle, but which when once in position therein cannot be withdrawn without breaking the bottle.

With the above objects in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated by the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view through the neck of a bottle, showing my invention applied thereto and illustrated in side elevation. Fig. 2 is a longitudinal sectional view through the neck of a bottle provided with my invention, the latter being also in longitudinal section; Fig. 3, a view of the upper portion of the stopper, illustrating the passages formed therein; Fig. 4, a transverse section on the line 4 4 of Fig. 1; Fig. 5, a transverse section on the line 5 5 of the same figure; Fig. 6, a similar view on the line 6 6 of the same figure, and Fig. 7 an elevation of the lower portion of the stopper.

Referring now more particularly to the accompanying drawings, A indicates the neck

of the bottle, formed intermediately of its ends with an interior annular shoulder or bead B and adapted at its outer end to receive an ordinary cork or stopper C.

Positioned in the neck of the bottle is what may be termed a "stopper," carrying a valve mechanism, the stopper C being an auxiliary stopper, said valve-carrying stopper being formed of an upper portion D and a lower portion E, said upper and lower portions having overlapping flanges F and G, having a threaded connection, by means of which the two portions of the stopper are united. The lower portion E is in the form of a collar having a central tapered valve-seat H and depending lugs I. Each of said lugs is formed in its outer face with a depression J to receive a substantially V-shaped spring member K, one arm of which is seated in the depression, while the other is adapted to spring beneath and engage the under side of the bead B, so as to prevent withdrawal of the stopper when the same has once been positioned in the neck.

Adapted to engage the seat H is a funnel-shaped valve L, having a stem M depending between the lugs and formed with an eye or passage for the insertion of a spring N, which normally holds the valve to its seat. This spring is looped through the eye and has its legs extended in opposite directions and positioned in notches O, formed in opposite lugs I.

The upper portion D of the stopper is formed with a central passage P, closed at its upper or outer end and open at its lower or inner end. Said passage at its lower end is enlarged, as indicated by the letter Q, to form a valve-chamber in which the valve moves in unseating. Said chamber is enlarged upwardly or outwardly, as at R, to afford a free flow to the contents of the bottle when the valve is unseated. The movement of the valve in unseating is limited by lugs S, depending from the upper portion of the valve-chamber.

The upper portion of the stopper is formed upon its outer circumference intermediately of its ends with an annular groove or passage T, from which passages U extend upwardly or outwardly and communicate with the upper or outer end of passage P through transversely-extending passages V. Said

upper portion D of the stopper is also formed about its outer circumference with passages W, establishing communication between the annular groove T and the outer portion of the bottle-neck.

When the bottle is inverted, the auxiliary stopper having been removed, the contents thereof forces the valve from its seat, passes around said valve into passage P, through passages V and U to the annular groove T, and through passages W and from the bottle. By the arrangement of the passages and valve, as described, the contents of the bottle passes freely therefrom, and at the same time it is impossible to tamper with the valve by a wire or in any other manner or to reach the spring thereof by pouring acids into the bottle. It will also be seen that the device is not complicated in construction and therefore may be sold with the bottle without materially increasing the selling price of the latter.

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

1. In a non-refillable bottle, a stopper formed with a valve-chamber and longitudinally-extending passages arranged out of line with said chamber and communicating with each other, some of said passages leading to the exterior of the stopper and others communicating with said chamber by means of laterally-extending passages, and a valve in said chamber, substantially as described.

2. In a non-refillable bottle, a stopper formed with a valve-chamber, a passage communicating therewith at its inner end and closed at its outer end, passages extending transversely from and communicating with said passage at its outer end, an annular passage intermediately of its ends, longitudinal passages communicating with said annular passage and with the exterior of the stopper, and longitudinal passages communicat-

ing with the cross-passages and with the annular passage, and a valve in said chamber, substantially as described.

3. In a non-refillable bottle, a stopper formed with a valve-chamber and provided with depending notched lugs, a valve in said chamber having a perforated stem depending between said lugs, and a spring looped through said perforated stem and having its legs crossed and seated in said notches, substantially as described.

4. In a non-refillable bottle, a stopper formed with a valve-chamber closed at its outer end and with longitudinally-extending passages, one of said passages communicating at its outer end with the outer end of the valve-chamber and the other passage communicating at its outer end with the exterior of the stopper, said passages communicating with each other at their inner ends, and a valve in said chamber, substantially as described.

5. In a non-refillable bottle, a stopper formed with a central passage closed at its outer end, a valve-chamber at the inner end of said passage, and a plurality of longitudinally-extending passages disposed around said central passage, some of said passages communicating at their outer ends with the outer end of the central passage by means of transversely-extending passages, and others communicating at their outer ends with the exterior of the stopper, all of said passages communicating at their inner ends with an annular passage formed in the stopper, and a valve in said chamber, substantially as described.

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

HENRY K. PROSSER.

Witnesses:

L. H. WINDSOR,
JAMES M. LEITCH.