

No. 657,863.

Patented Sept. 11, 1900.

S. DAVIS.
NON-REFILLABLE BOTTLE.

(Application filed Sept. 27, 1899.)

(No Model.)

Fig. 1.

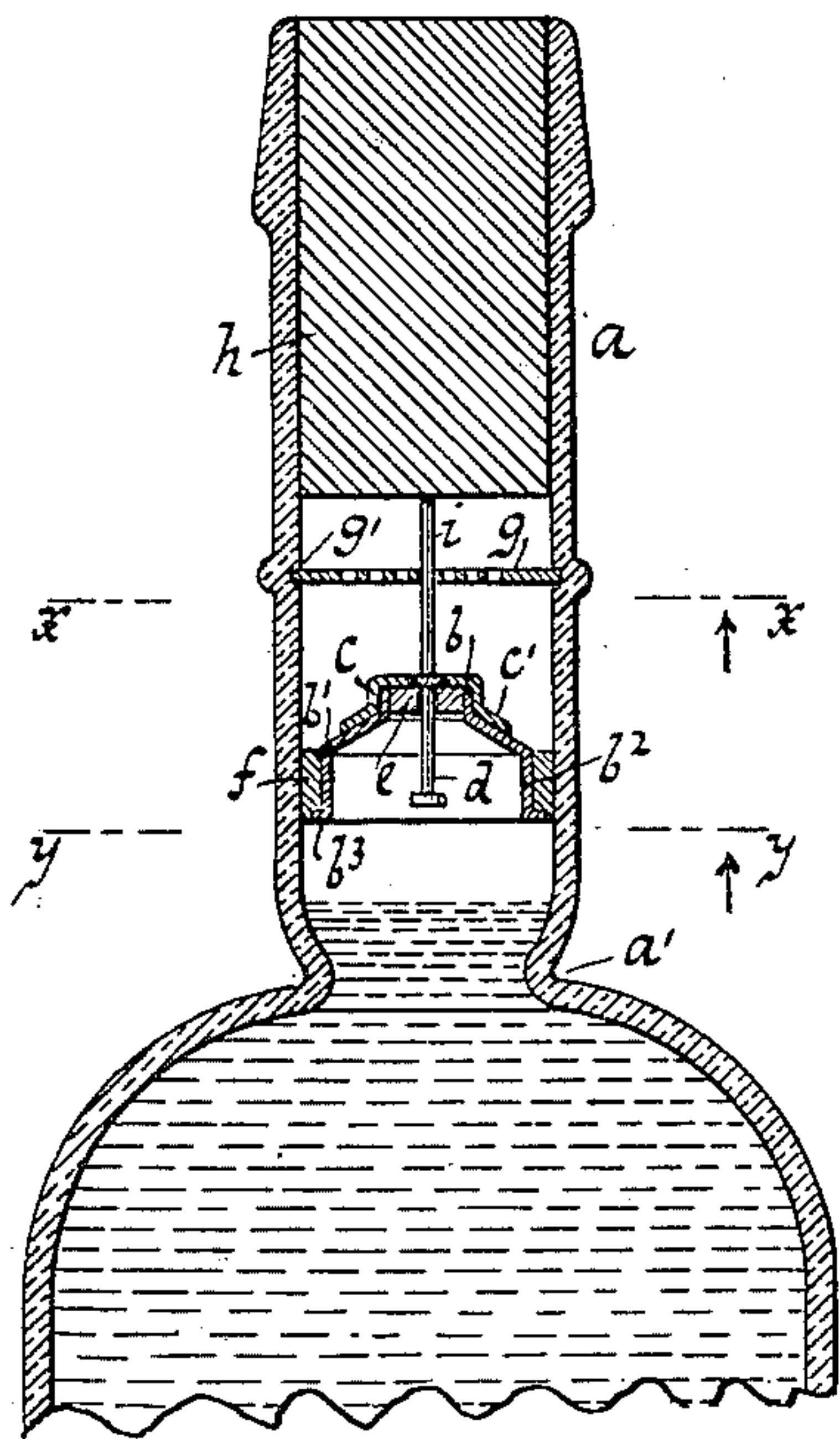


Fig. 2.

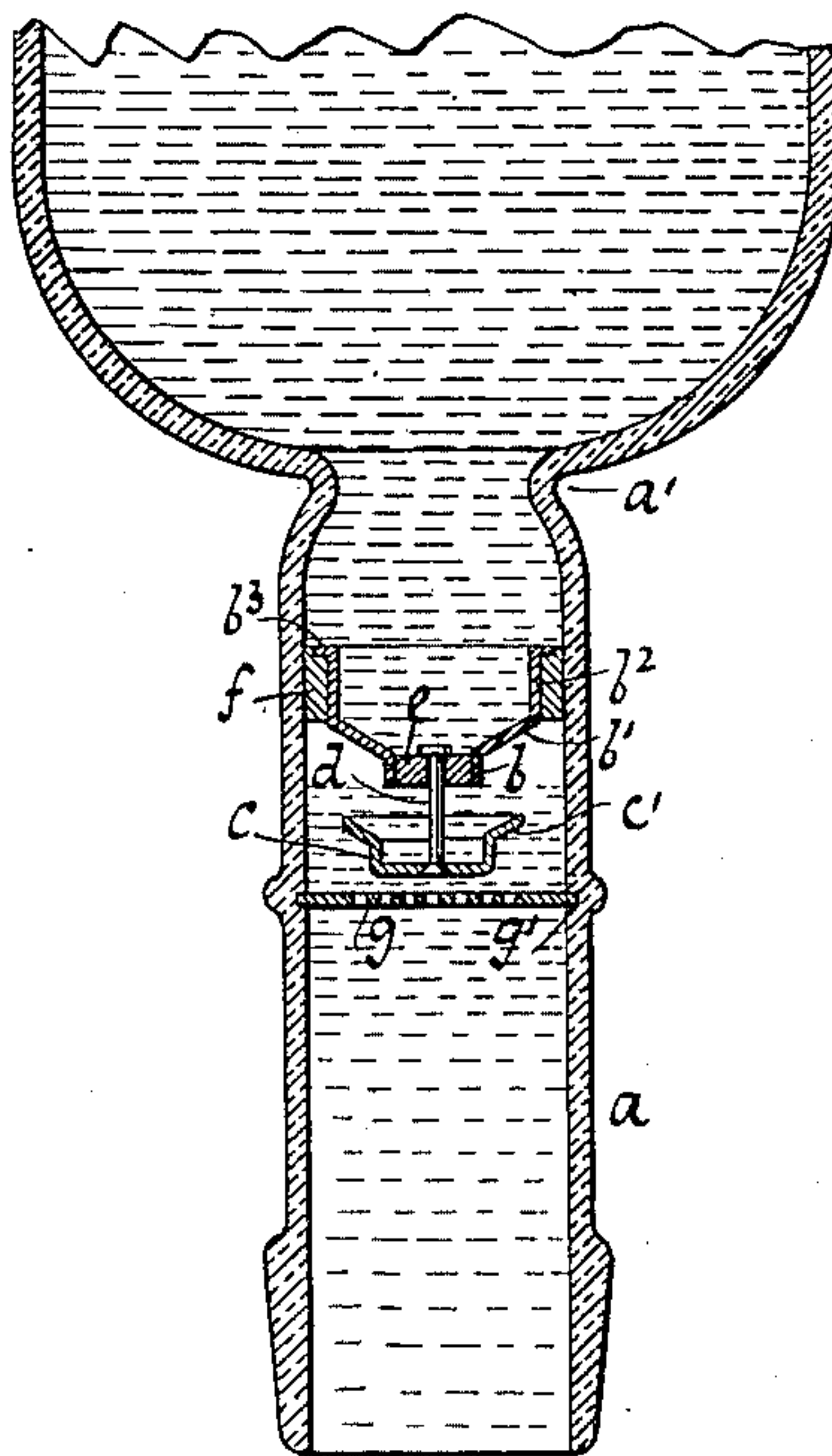


Fig. 3.

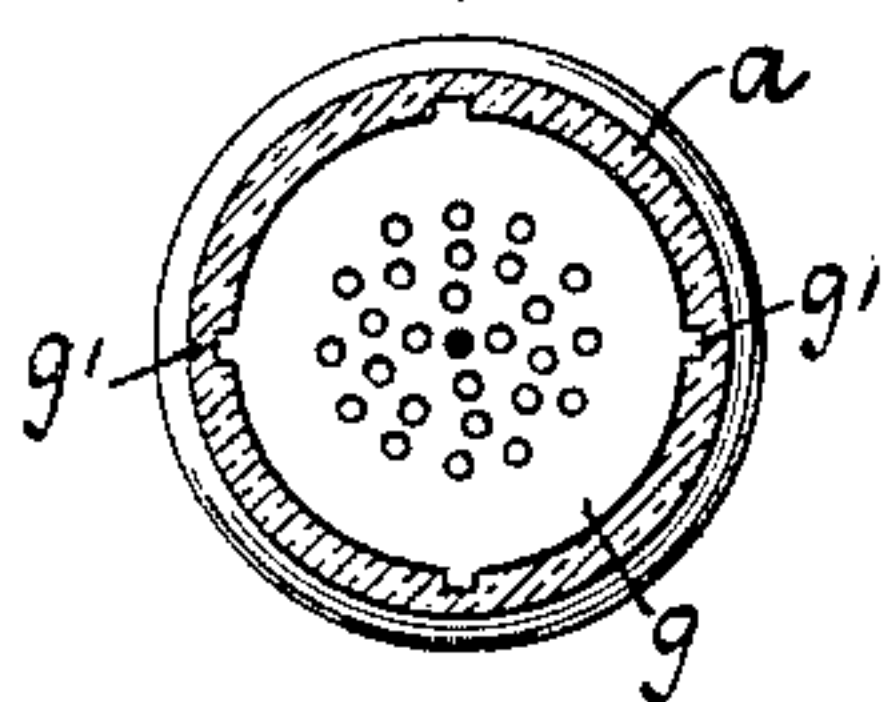


Fig. 4.

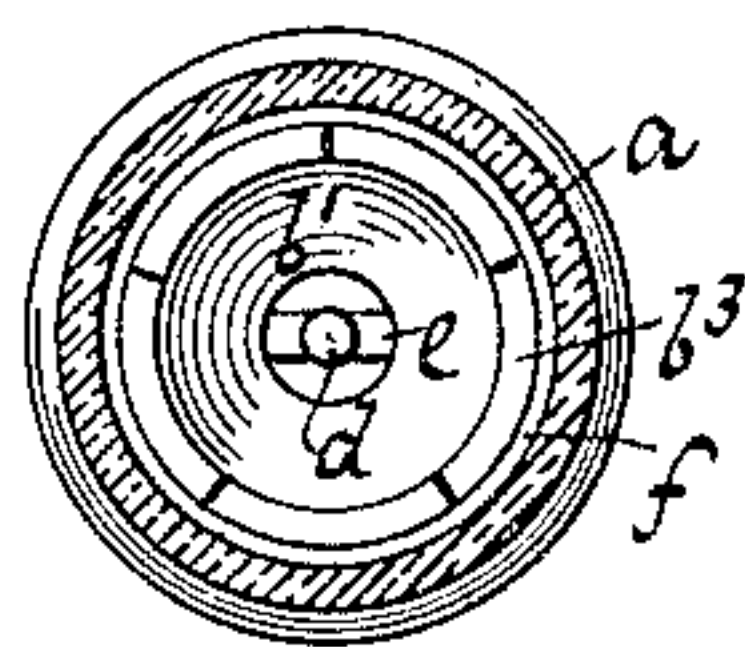


Fig. 5.

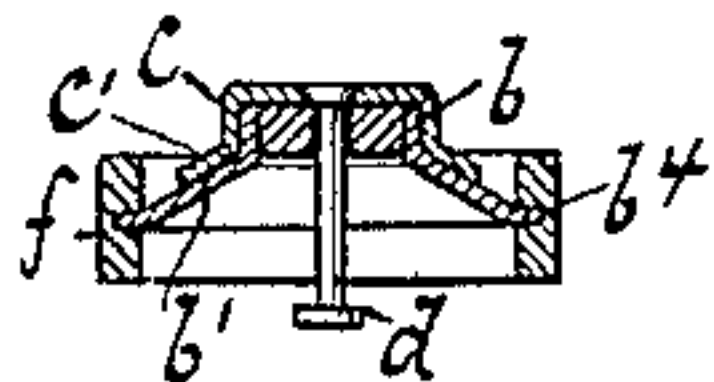
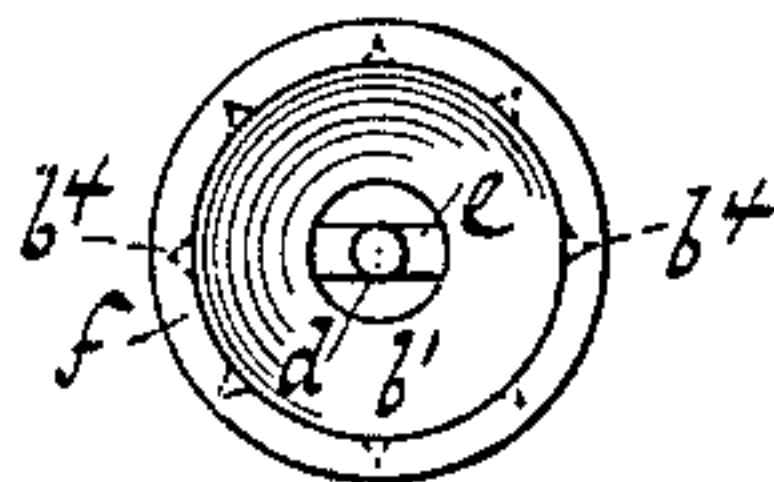


Fig. 6.



WITNESSES:

William Miller
Chas. E. Poesgen

INVENTOR

Samuel Davis

BY

Hauff & Hauff
ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL DAVIS, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 657,863, dated September 11, 1900.

Application filed September 27, 1899. Serial No. 731,849. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL DAVIS, a citizen of the United States, residing at New York, borough of Manhattan, county and State of New York, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention resides in certain novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a sectional view of a bottle upright and corked. Fig. 2 shows a bottle uncorked and tilted or upset for pouring out. Fig. 3 is a section along $x x$, Fig. 1. Fig. 4 is a section along $y y$, Fig. 1. Fig. 5 is a sectional view of a modification. Fig. 6 is an inverted plan view of Fig. 5.

The neck of a bottle is shown at a , said neck having its lower part contracted or constricted, as seen at a' . A valve-seat is shown with a vertical or mouth portion b and inclined portion b' . A valve or cap is of corresponding shape to fit both valve portions, this valve having the vertical portion c and inclined portion c' . This valve or cap is outside of the seat, and when the bottle is upright, Fig. 1, this valve will drop onto its seat to form a closure. The valve has a stem d , guided by the seat b . The seat is shown with a bar or cross-piece e , through which the stem d is passed or guided. This bar is a magnet and forms a holder for drawing or holding the valve to its seat. As long as liquid is in the bottle the weight of such liquid on the tilting of the bottle carries the valve from its seat, so that the bottle can be emptied. When, however, the bottle is empty and is reversed, the valve being held or attracted to its seat seals or closes the bottle against refilling. The valve when on its seat acts as a keeper for the magnet e .

The valve-seat is shown with a cylindrical part b^2 and flange b^3 . A packing or cork f between the valve-seat and the bottle-neck secures a tight joint and holds the seat in place in the neck. The seat having been provided with the packing f can be pushed or jammed into the neck a suitable distance, the contraction a' preventing the seat being forced into the bottle.

In Fig. 5 the seat is shown without parts b^2

and b^3 , but is provided with teeth b^4 , adapted to pierce or engage the packing f , so that the packing and valve-seat together can be forced or pushed into place in the bottle-neck. In Fig. 1 the flange b^3 forms a seat or holding device for supporting the packing f .

A guard or sleeve g protects the valve against tampering, as by the insertion of a wire or instrument intended to catch under incline c' to lift or move the valve from its seat. This guard is shown with a number of projections g' . Four such projections have been found satisfactory, but of course this number can be changed. The neck a has seats or depressions corresponding to projections g' , and the projections catching into the seats hold or secure the guard in place. A groove about the neck is not as satisfactory as individual seats at g' if a valve-seat with flange b^3 is employed, since such a groove is apt to catch or interfere with the insertion of the valve-seat or its flange b^3 . The guard or its projections g' are made of sufficiently springy or non-rigid material to be crowded down the neck a and then to expand or snap into the depressions to catch hold. When the cork h is in place, Fig. 1, a rod or wire i between the cork and valve c can lock or hold the latter to its seat, so that in shipping or storing the valve cannot drop or be jarred from its seat. No part of the bottle contents can thus settle between the valve and the

What I claim as new, and desire to secure by Letters Patent, is—

1. A valve-seat having an upper vertical mouth portion, an incline b' and a cross-bar fixed in the upper or mouth portion, the lower or enlarged portion of the seat being left unobstructed or without any cross-piece, a valve of corresponding shape to fit both portions of the valve-seat, a guiding-stem sliding in the cross-bar and depending from the under part of the valve and secured to the latter so as not to project above the same, and a guard g above the valve, the space between the valve-top and guard being left empty or unobstructed to leave the valve free to move back and forth, substantially as described.

2. A valve-seat having an upper vertical mouth portion, an incline b' and a cross-bar fixed in the upper or mouth portion, the lower

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obstructed or without any cross-piece, a valve
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of the valve and secured to the latter so as
not to project above the same, and a guard
above the valve, the space between the valve-
top and guard being left empty or unob-
10 structed to leave the valve free to move back

and forth, said cross-bar being magnetic to
hold or attract the valve to its seat, substan-
tially as described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing 15
witnesses.

SAMUEL DAVIS.

Witnesses:

W. C. HAUFF,

CHAS. E. POENSGEN.