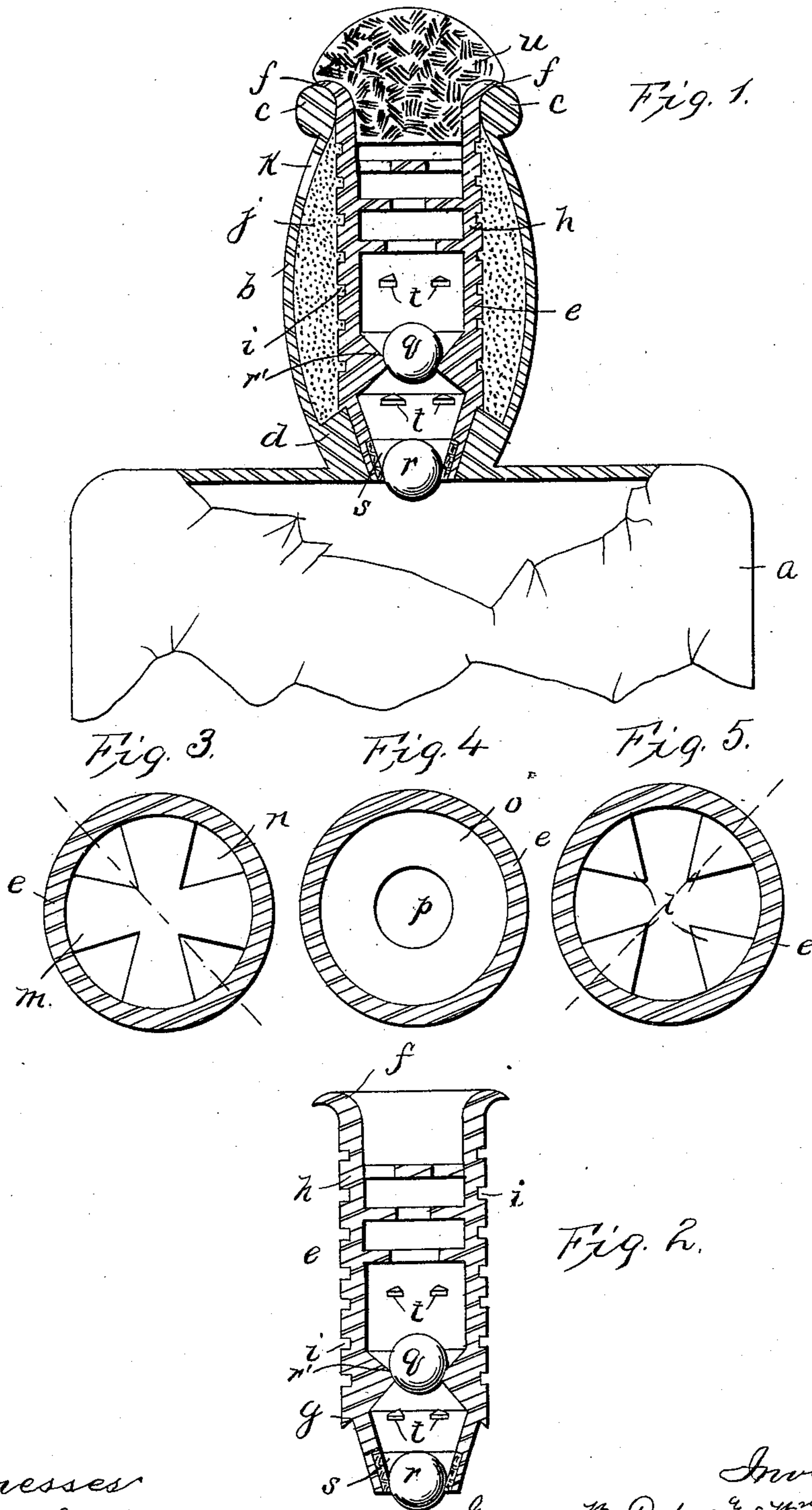


(No Model.)

G. W. DEPRO & W. H. BAKER.
NON-REFILLABLE BOTTLE.

No. 567,081.

Patented Sept. 1, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. DEPRO AND WILLIAM H. BAKER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNORS OF ONE-THIRD TO CHAS. P. GREENE, OF SAME PLACE.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 567,081, dated September 1, 1896.

Application filed December 26, 1895. Serial No. 573,315. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. DEPRO and WILLIAM H. BAKER, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Non-Fillable Bottles; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in non-fillable bottles.

The object of the invention is to provide a non-fillable bottle very simple and cheap in construction and one in which the parts are so arranged and constructed that it will be practically impossible to refill the same after once being emptied.

The invention consists in certain novel feature of construction and in combinations and arrangements of parts more fully described hereinafter, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a vertical section showing our improved bottle as in use. Fig. 2 is a sectional view of the supplemental neck removed from the bottle. Figs. 3, 4, and 5 are detail views of different forms of baffle-plates.

Like letters of reference refer to the same parts throughout the different views.

a indicates a bottle having the usual neck *b* and flaring mouth *c*.

d is a shoulder formed around the lower portion of the neck near the entrance of the bottle proper. *e* represents a supplemental neck made of glass and adapted to enter the main neck of the bottle. This supplemental neck has its upper ends converging outwardly, as shown at *f*, so as to embrace the flaring mouth *c* when placed in position, and its lower tapering portion at a point above the opening of the body portion of the bottle is provided with an offset *g*, adapted to rest upon the shoulder *d*.

h represents the outer wall of the supplemental neck, having the circular grooves *i*. In the space between the supplemental and

outer necks is inserted a quantity of cement or molten glass *j* through the gate or opening *k*. As this sealing composition is poured into this space, it will enter the circular grooves *i*, thereby permanently closing said space and holding the supplemental neck in the desired position.

l are a series of teats or projections formed on the interior of the supplemental neck near its upper portion at the desired distances apart. Below these projections and formed integral with the interior of the supplemental neck is a plate *m*, having the series of openings *n*, as shown.

o indicates a glass disk located below the plate *m* and having the opening *p*. These plates and openings are so arranged that there will be no continuous vertical opening therethrough, as the opening *n* in the plate *m* will be directly underneath the teats or projections *l*.

q *r* indicate ball-valves, the former resting on the annular seat *r'* and the latter in the lower tapering portion of the supplemental neck.

s is a cup-shaped seat, preferably formed of cork, in which the ball-valve *r* rests.

Suitable lugs *t* *t* are formed on the interior of the supplemental neck, as shown, to limit the upward movement of the ball-valve.

u is an ordinary stopper closing the mouth of the bottle.

The operation of our device is as follows: When it is desired to fill the bottle, the liquid is poured in through the mouth *c*. The supplemental neck *c*, containing the ball-valves, &c., is then inserted in the main neck, the lower offset *c* fitting over the shoulder *d*, formed around the lower portion of the main neck of the bottle. Cement or molten glass is then poured through the opening *k* until the space between the several necks is completely filled. The sealing mixture will enter the circular grooves *i*, and as it becomes hardened the supplemental neck will be securely held in place against withdrawal. The stopper *u* is then inserted in the mouth of the bottle and the vessel is ready for shipment. The baffle-plates *l* *m* *o* are so arranged that it would be impossible for any one to withdraw the ball-valves by means of the well-

known extractors now in use, as the openings and teats are located in such a way that a direct vertical opening to the ball-valves cannot be had.

5 It will be noticed that the teats or projections in the upper part of the bottle close communication from the mouth of the bottle proper to the openings *m* in the plate *n*, as there is no continuous direct vertical opening there-
10 through, and by reason of the solid disk *o*, having only the central opening, should an attempt be made to refill the bottle by laying the bottle on its side, free ingress of the liquid would be retarded by the baffle-plates, and
15 any liquid that might flow down to the disk *o* would immediately rush through the small opening *p* and force the ball-valves to their seats, thus preventing entrance of the liquid into the bottle.

20 In this class of bottles heretofore in use attempts have been made to fill them by laying the bottles flat in a tub of liquid, thereby allowing the liquid to slowly enter the neck of the bottle and pass by the ball-valves into the
25 vessel. By employing two ball-valves and the cup-shaped cork-seat this is prevented, for if such an attempt were made the liquid entering the supplemental neck would force the ball-valves *q* *r* into their seats, as shown
30 in Fig. 1, and even should a small quantity of liquid drip past the shoulder *h* it would immediately come into contact with the cork-seat *s*, which would at once expand, and thereby securely hold the ball-valve *r* in po-
35 sition and prevent entrance of the liquid into the bottle.

The device is very simple and cheap in construction, besides being effective in operation.

40 It is evident that our invention can be used in other connections than bottles, and that various slight changes might be made in the forms, constructions, and arrangements of the parts described without departing from the spirit and scope of our invention. Hence
45 we do not wish to limit ourselves to the exact construction herein set forth, but consider ourselves entitled to all such changes as fall within the spirit and scope of our invention.

50 What we claim as new, and desire to secure by Letters Patent of the United States, is—

1. A bottle having its neck provided with an interior lower shoulder, a supplemental neck therefor having its upper edges turned over and on its lower portion provided with
55 an annular offset or groove to rest on the

shoulder of the main neck, an open space between the outer and inner necks for the reception of a sealing composition, a series of baffle-plates within the supplemental neck so arranged that the openings of each are out of
60 line with each other, the interior lower shoulder or projection, and the ball-valves located within said inner neck, one resting on the interior lower shoulder and the other closing the opening to the bottle proper, as set forth. 65

2. A bottle having its neck provided with an interior lower shoulder, in combination with a supplemental neck having the turned-over portion resting on the mouth of the main neck, the lower offset on its lower outer por-
70 tion adapted to rest on the shoulder of the main neck, the sealing composition uniting the two necks, an opening in the outer neck for the insertion of the sealing composition, the ball-valves and seats within said inner
75 neck, one of said ball-valves being seated on the shoulder *r'* and the other closing the bottle proper, a cork seat surrounding the opening to the bottle proper in which the lower ball-valve rests, a series of baffle-plates within
80 said inner neck having openings out of line with each other, the series of grooves around the exterior neck, and the lugs or projections above the ball-valves for the purpose set forth.

3. A bottle having its neck provided with
85 an interior lower shoulder, a supplemental neck therefor having its upper edges turned over, and on its lower portion provided with an annular offset or groove to rest on the shoulder of the main neck, an open space be-
90 tween the outer and inner necks, the sealing composition within said necks and uniting the same, a series of baffle-plates within the inner neck, the upper plate having open-
95 ings directly above the closed portion of the intermediate plate, the lower plate having a circular opening out of alinement with the others, the interior lower shoulder or projec-
100 tion and the ball-valves located within said inner neck, one resting on the interior lower shoulder and the other closing the opening to the bottle proper for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

GEORGE W. DEPRO.
WILLIAM H. BAKER.

Witnesses:

EDWARD RINHARD,
HENRY L. BALLENTINE.