No. 750,585. PATENTED JAN. 26, 1904.

J. J. BROWN.

BOTTLE VALVE.

APPLICATION FILED MAY 23, 1903.

NO MODEL.

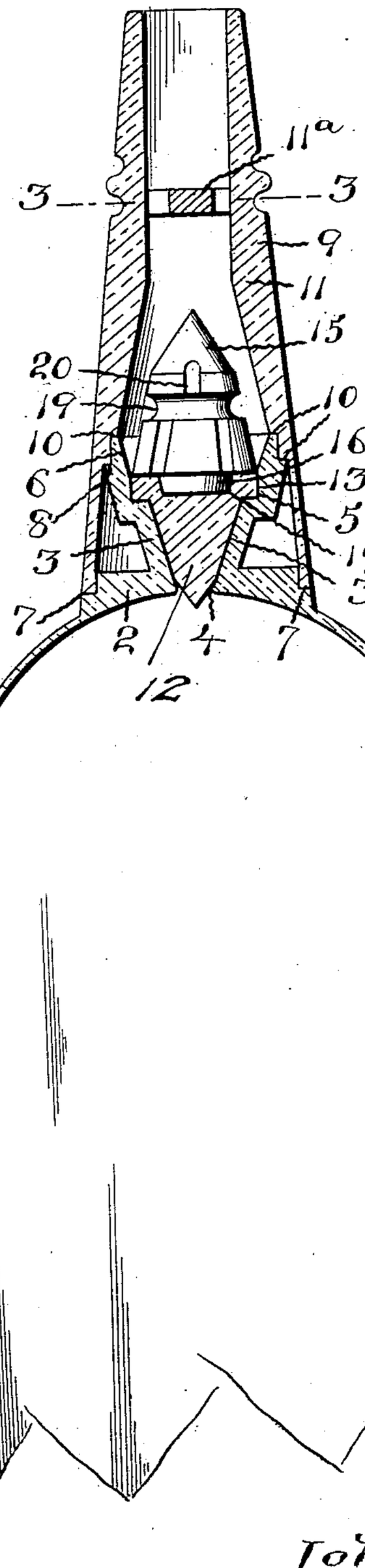

Fig. 2.

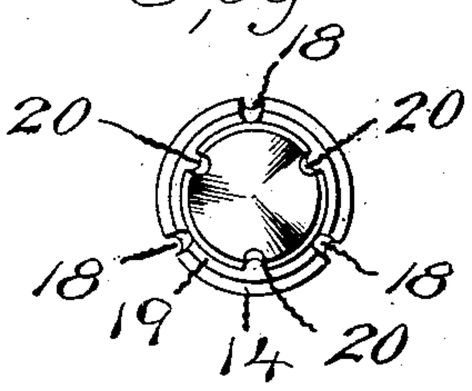

Fig. 3.

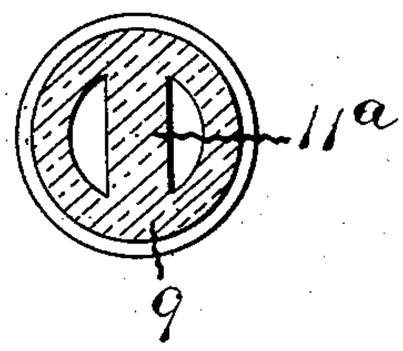

Fig. 1.

Witnesses

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No. 750,585. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

JOHN J. BROWN, OF TOLEDO, OHIO.

BOTTLE-VALVE.

SPECIFICATION forming part of Letters Patent No. 750,585, dated January 26, 1904.

Application filed May 23, 1903. Serial No. 158,503. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BROWN, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented new and useful Improvements in Bottle-Valves, of which the following is a specification.

My invention relates to new and useful improvements in bottle-valves; and the object is to provide a valve which is simple in construction, durable and efficient in operation, and which will effectually prevent the refilling of the bottle after the original contents have been withdrawn.

Further objects of the invention will appear as the nature of the invention is more fully understood from the following description and accompanying drawings.

The invention embodies the construction, combination, and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal sectional view of a bottle constructed in accordance with my invention. Fig. 2 is a top plan view of the valve-weight. Fig. 3 is a sectional view on the line 3 3, Fig. 1.

Referring to the drawings by reference-numerals, 1 designates the body of a bottle formed at its upper end with a flange 2, from which projects a hollow cylindrical extension 3. This extension is provided with a conically-shaped valve-seat 3^a, which terminates at its lower end in a contracted throat 4 and at its upper end in an annular shoulder 5, above which the inner wall of the extension tapers outwardly, as indicated at 6. The flange 2 is provided with an annular shoulder 7, and the extension 3 is provided at a point adjacent its upper end with a similar shoulder 8.

9 designates the bottle-neck, which is made separately and secured in applied position by means of cement or fusion. The lower end of the neck is adapted to rest upon the shoulder 7 and is provided on a point on its interior with shoulders 10 to engage the upper extremity of the extension 2 and shoulders 8. To secure the neck in applied position, cement may be applied at the points of contact between the neck, flange 2, and extension 3, or said points may be connected by fusion. The neck has the inner wall thereof tapered from a point adjacent the shoulders 10 to a point midway of its length to provide a chamber in which is mounted a valve weight or controller and a contracted throat 11 to limit the outward movement of said weight or controller. The neck is provided with a vertical inner wall from the throat 11 to its upper extremity. Situated at a point above the throat 11 is a guard 11^a, the same consisting of a strip formed integral with the bottle-neck and so disposed as to leave openings through which the contents of the bottle may be decanted.

12 designates a conically-shaped valve inverted to permit of its occupying the valve-seat 3^a, in which position it prevents the entrance of liquid into the body of the bottle. The base of the valve is provided with an annular flange 13, adapted to rest upon the shoulder 5, and the vertical wall of which is adapted to lie in close engagement with the vertical wall extending from the shoulder 5. This manner of seating the valve—that is, through virtue of the conical seat and valve and the shoulder 5 and flange 13—provides a valve which when seated will not permit the entrance of liquid to the bottle or permit the unseating of the valve by means of a wire, as it is impossible to insert a wire or other object between the flange 13 and the above-mentioned vertical wall of the extension 3.

A valve weight or controller 14 is situated within the above-mentioned chamber to normally rest upon the valve to retain the same seated against displacement when the bottle is in normal position. The base of the weight or controller is provided with a depending lug 16, adapted to be received by a recess 17, located in the base of the valve. The connection of the weight or controller and valve obviate a casual displacement of the weight and the consequent unseating of the valve when the bottle is tilted or roughly handled. The weight is adapted to have a limited movement within the chamber, and when the bottle is inverted it is caused to approach the throat

11 and close the entrance to the bottle sufficiently to prevent the insertion of any foreign article beyond said weight, the outward movement of which is limited by the guard 11ª. This closing of the entrance will not permit the introduction of an article into the neck to prevent the seating of the valve, as any attempt in that direction will cause the valve to be securely seated by the article coming into contact with the valve weight or controller. The valve-weight is provided with, to permit the liquid being canted, circumferential grooves 18, communicating with an annular recess 19, and arranged above said recess in staggered relation to grooves 18 are grooves 20. The relative relation of the grooves 18 and 20 prevents the introduction of an article beyond the recess 19, as the article after being passed through one of the grooves 20 will abut against the recess 19 and cause the valve to be seated.

The bottle may be supplied with liquid in the following manner: The neck, valve, and weight being free to be removed at any time prior to cementing or fusioning the neck in applied position liquid may be poured into the bottle. After the bottle has been supplied with the desired quantity of liquid the valve, weight, and neck may be secured in applied position to permit the decanting of the contents of the bottle but not the refilling of the same.

It is presumed that the above description, taken in connection with the accompanying drawings, is sufficient to fully explain the novelty, advantages, and operation of the invention without a further extended description thereof.

Having thus described the invention, what is claimed as new is—

1. The combination of a bottle having the upper end thereof provided with an extension having a conically-shaped valve-seat, a shoulder adjacent the upper end of the valve-seat, a conically-shaped valve provided with a flange, a separable neck secured to the bottle and provided with a tapered chamber, and a valve weight or controller adapted to retain the valve normally seated and provided with grooves arranged in staggered relation and a recess interposed between the grooves.

2. The combination of a bottle having the upper end thereof provided with a flange provided with a shoulder and from which projects a hollow extension, said extension being provided with a conical valve-seat, a shoulder communicating with the upper end of the valve-seat, a conical valve provided with a recess and flange, a weight or controller provided with grooves and a recess situated between the grooves, a lug carried by the weight or controller and adapted to be received by the recess in the valve, a neck provided with a tapered chamber, and a guard situated in the upper end of the neck.

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

JOHN J. BROWN.

Witnesses:
ETHEL C. HINDS,
B. F. BROUGH.