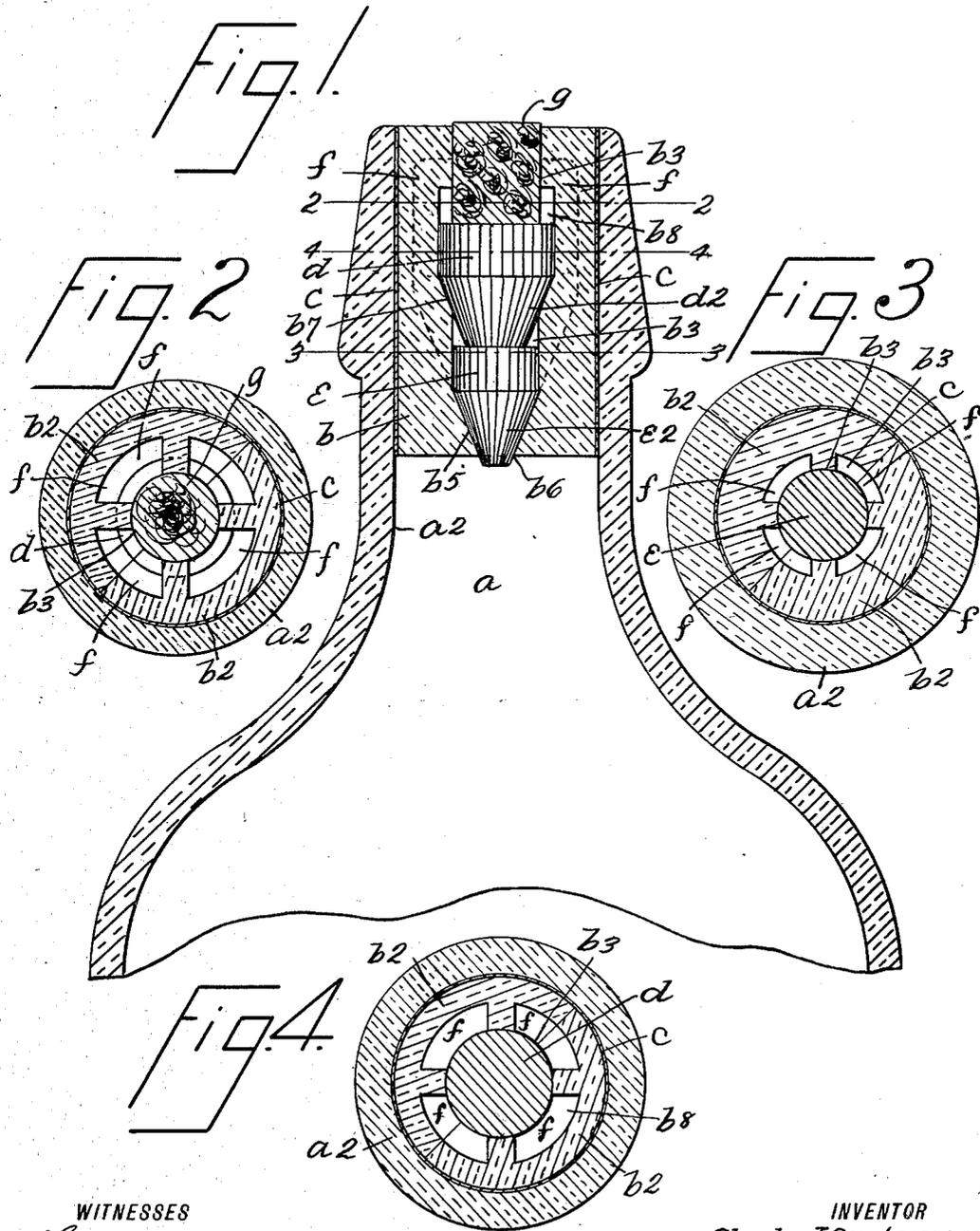


No. 731,773.

PATENTED JUNE 23, 1903.

C. J. GUSTAVESON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 22, 1902.

NO MODEL.



WITNESSES
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CHARLES JOHN GUSTAVESON, OF SALT LAKE CITY, UTAH.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 731,773, dated June 23, 1903.

Application filed October 22, 1902. Serial No. 128,232. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOHN GUSTAVESON, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a bottle, jug, jar, or similar vessel with an improved closure device, whereby when the bottle or other vessel has been filled and the closure device applied said bottle or vessel may be emptied of its contents, but cannot be refilled or reused.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a central vertical section of the upper part of a bottle provided with my improvement; Fig. 2, a cross-section on the line 2 2 of Fig. 1; Fig. 3, a cross-section on the line 3 3 of Fig. 1, and Fig. 4 a similar section on the line 4 4 of Fig. 1.

In the drawings forming part of this specification, I have shown at *a* a part of a bottle having the usual neck *a*², and in the practice of my invention I provide a closure device comprising a circular plug *b*, composed of two small parts *b*², which is adapted to be inserted into the neck of a bottle and secured therein by cement, as shown at *c*, or in any other desired manner. The plug *b* is provided with a central, cylindrical, and longitudinal bore *b*³, which is contracted at its lower end to form a valve-seat *b*⁵ and a port or passage *b*⁶, and the bore *b*³ is enlarged centrally to form a supplemental valve-seat *b*⁷ and an enlarged supplemental chamber *b*⁸, in which is placed a cylindrical valve-block *d*, having a conical lower end *d*², and a valve *e*, similar in form to the block *d*, is placed in the lower end of the bore *b*³ and provided with a conical lower end *e*², which is adapted to close the port or passage *b*⁶.

Formed in the side walls of the central bore *b*³ and extending from the top of the valve-

seat *b*⁵ to and above the top of the enlarged chamber *b*⁸ are vertically-arranged passages or recesses *f*, (shown in dotted lines in Fig. 1 and in full lines in the remaining figures,) and these passages or recesses are enlarged at their upper and tapered at the lower ends, as indicated by the dotted lines in Fig. 1.

The upper end of the bore *b*³ is adapted to be closed by an ordinary cork or stopper *g* after the bottle or other vessel has been filled with the desired contents, and when this is done the cork or stopper *g* bears on the valve-block *d*, and the said valve-block *d* rests on the valve *e*, and the port or passage *b*⁶ is securely closed.

The recesses or passages *f* extend from the top of the valve *b*⁵ upwardly, and when the valve-block *d* is seated there is still open passages around the same, and whenever it is desired to empty the bottle or other vessel the cork or stopper *g* is removed in the usual manner and the bottle or vessel is tilted or inverted and the contents of the vessel are allowed to flow out around the valve *e* and block *d*, said valves leaving their seats and dropping downward or in the direction of the end of the neck of the bottle when the latter is inverted or tilted. This operation may be repeated until the bottle or other vessel is entirely empty, and if an attempt be made to refill the bottle or other vessel by pouring liquids therein the valves *d* and *e* will at once be seated and no liquids can enter the bottle, and this operation will be the same in any position in which the bottle may be held in an attempt to pour liquids thereinto. A valve *e* may also be made so as to serve as a float, in which event liquids cannot be forced into the neck of the bottle or other vessel; but the valve-block *d* should be made of glass or other material which will not corrode or be injuriously affected by liquids and which will prevent the picking out or destruction of the valve *e*.

Although I have shown the plug *b* as made of two pieces, it will be apparent that the said plug may be made of one piece if desired, and other changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what

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

5 A bottle or other vessel the neck of which is provided with a plug having a central longitudinal bore or passage contracted at the lower end to form a valve-seat and a port or passage and enlarged midway to form a supplemental chamber at the bottom of which is another valve-seat, a valve-block placed in
10 said chamber and adapted to rest on said valve-seat, and a valve placed in the bottom of the bore or passage and adapted to rest on the first-named valve-seat and to close said port or passage, said plug being also provided

in the side walls of the central bore or pas- 15
sage with vertically-arranged passages or recesses which extend from the valve-seat in the bottom thereof above the enlarged chamber in which the valve-block is placed, substantially as shown and described. 20

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 15th day of October, 1902.

CHARLES JOHN GUSTAVESON.

Witnesses:

JOHN N. ESLINGER,
ANNETTE N. MCINTOSH.