

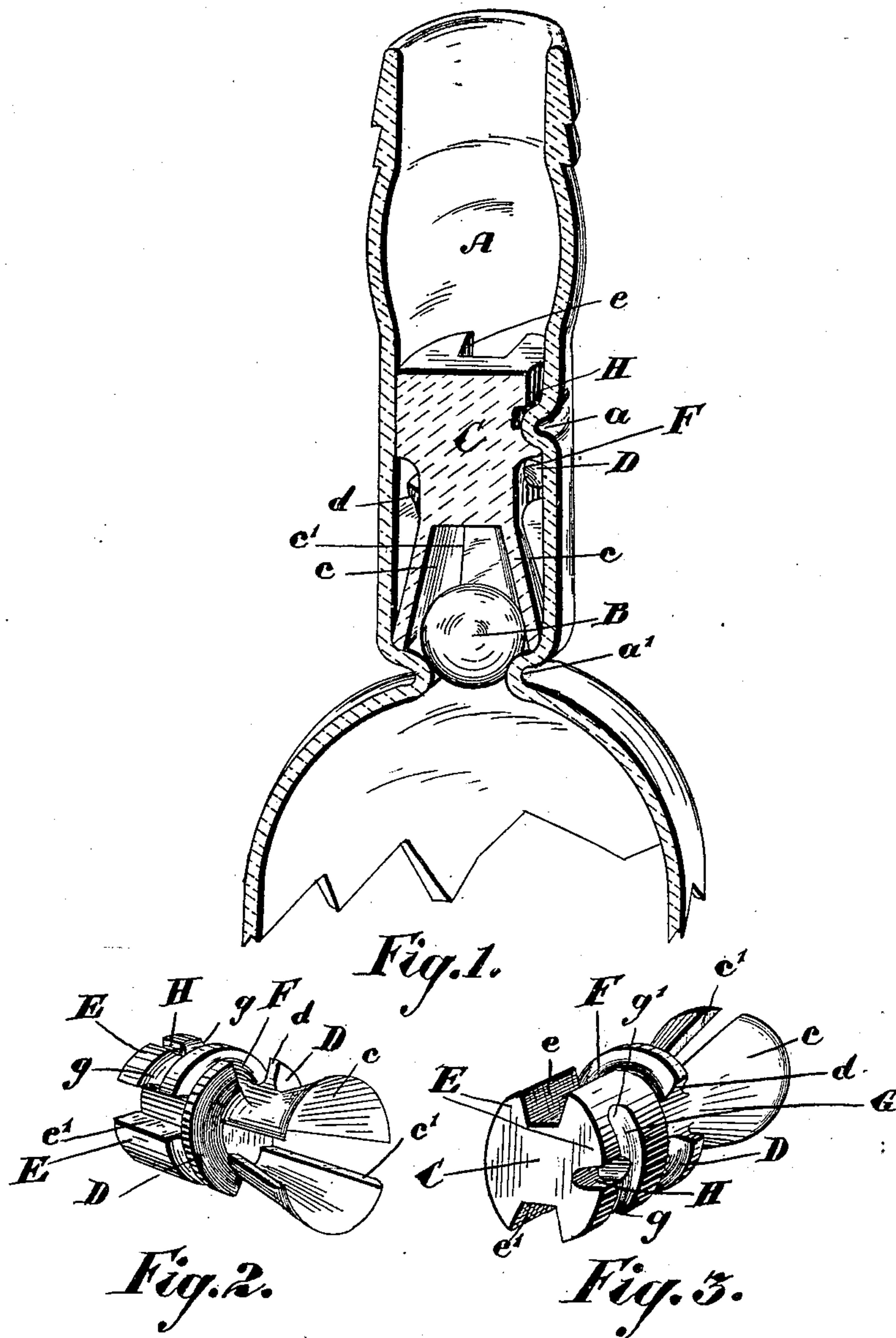
No. 680,220.

Patented Aug. 13, 1901.

W. S. BOWNESS.  
NON-REFILLABLE BOTTLE.

(Application filed Jan. 19, 1901.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

WALTER SCOTT BOWNESS, OF MONCTON, CANADA.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 680,220, dated August 13, 1901.

Application filed January 19, 1901. Serial No. 43,920. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER SCOTT BOWNESS, a subject of the Queen of Great Britain, residing at Moncton, in the county of Westmoreland, in the Province of New Brunswick, Canada, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to improvements in non-refillable bottles; and the object of the invention is to design a simple device to be inserted in the neck of a bottle or the like whereby it will be impossible for any one to refill the bottle after emptying a portion or all its contents; and it consists, essentially, of a stopper or plug covering and protecting a ball-valve seated on an annular shoulder at the base of the neck and an inwardly-projecting knob intermediate of the height of the neck and being part thereof, designed to fit in a groove in the plug and be irremovably fixed therein, with a cement filling let in through a slot in the upper face of the stopper and suitable indirect passages through the stopper, and an obstructing ledge or rim immediately above its outwardly-flaring downward projections, the various parts being constructed in detail, as hereinafter more particularly described.

Figure 1 is a sectional perspective view of my device as applied to a bottle. Fig. 2 is a detail of the stopper from the bottom. Fig. 3 is a detail of the stopper from the top.

Like letters of reference indicate corresponding parts in each figure.

A is the neck of the bottle, which has an inwardly-projecting knob *a* intermediate of its height and an annular shoulder or valve seat *a'* at the base of the neck.

B is a ball-valve, preferably of glass, which is designed to rest on the shoulder *a'* and is slightly ground, as is also the inner wall of the shoulder *a'*.

C is the plug, which has outwardly-flaring legs *c*, leaving the free passages *c'*.

D is a rim extending around the plug immediately above the legs *c* and provided with the passages *d*, these passages being out of line with the passages *c'*.

The upper portion E of the plug is pro-

vided with the passages *e* and *e'*, which are diametrically in line with the passages *c'* and out of line with the passages *d*.

Above the rim D the groove F encircles the plug, and immediately above the groove F is a circumferential groove G, which is cut out of the upper portion of the plug on one side only, between the passages *e* and *e'*, entering the latter at *g* and at its other end closing abruptly at *g'* before it reaches the passage *e*. The slot H leads down from the upper face of the plug into the groove G at a point intermediate of the length of the said groove G.

Having now described the parts involved in my invention, I shall more fully explain the application thereof.

The bottle, with the projection *a* in the neck A and the annular shoulder *a'* at the base of the neck, is filled with whatever liquid may be desired, and the ball B is dropped in, so that it will rest on the annular shoulder *a'*, and as both surfaces are preferably ground any more liquid is prevented from entering the bottle; but in order to prevent the ball B from being tampered with I insert the plug C, and in order to do this and at the same time pass the projection *a* it is necessary to first allow the plug to drop gently, with one of the passages *c'* in line with the projection *a*. The further progress downward of the plug is then obstructed by the rim D coming in contact with the projection *a*, so that a slight turn is necessary in order to bring one of the passages *d* in line with the said projection. The projection *a* is now resting in the annular groove F, and by a turn, so as to bring the projection in line with the passage *e'*, the legs *c* of the plug are allowed to rest on the annular shoulder *a'*. The projection *a* is now in the passage *e'* and is directly opposite the open end *g* of the groove G, and by turning the stopper the projection enters the said groove G, and continuing to turn it passes the slot H to the closed end *g'*, wherefrom the stopper is in position. A suitable glass cement is now dropped through the slot H into the groove G and against the projection *a*, thus firmly locking the plug in position and preventing all chance of the said plug being removed without breaking the neck of the bot-



tle. The plug C being now in position over the ball B, the liquid can be readily poured from the bottle, as when the bottle is up-  
5 turned the ball B rolls away from the annular shoulder  $a'$  and allows the liquid to flow through the passages  $c'$ ,  $d$ , and  $e$  or  $e'$ , thereby obtaining a constant and steady flow from the bottle when desired, and on replacing the  
10 bottle in an upright position the ball B settles back on its seat and absolutely prevents any liquid from entering the body portion of the bottle. It is impossible to tamper with the ball, as the passages for the outflow of the liquid are so arranged as to prevent a  
15 wire or instrument of any kind reaching the ball. It will now be seen that I have provided a sure and safe means of preventing the refilling of a bottle after it has been emptied or partially emptied. The growth of the  
20 fraudulent practices demands some protection for the manufacturers for the prevention of substituting one liquid for another in a bottle or the like, and as my invention is such that all the parts can be constructed of glass  
25 or the same material as the bottle or jar the trouble frequently experienced in such devices from the corrosion incident to the introduction of rubber, metal, or other foreign

materials in the neck of the bottle is entirely overcome. 30

What I claim as my invention is—

In a non-refillable bottle, the combination with the neck portion thereof, provided with an inwardly-projecting knob or teat intermediate of its height, and the annular shoulder or valve seat at the base thereof, and the ball-valve, of a stopper or plug having downwardly-extending projections from its body portion, designed to rest on the annular  
35 shoulder to each side of the ball-valve, and forming passage-ways diametrically in line with passage-ways in the body portion, an intervening rim or ledge on the stopper between the body and lower projections, having passage-ways out of line with the afore-  
40 said passage-ways, the encircling groove F and the recess H leading into the groove G, and suitable cement filling to lock the knob  $a$  into the closed end of the groove G, as and  
45 for the purpose specified. 50

Signed at Moncton this 16th day of January, 1901.

WALTER SCOTT BOWNESS.

Witnesses:

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