

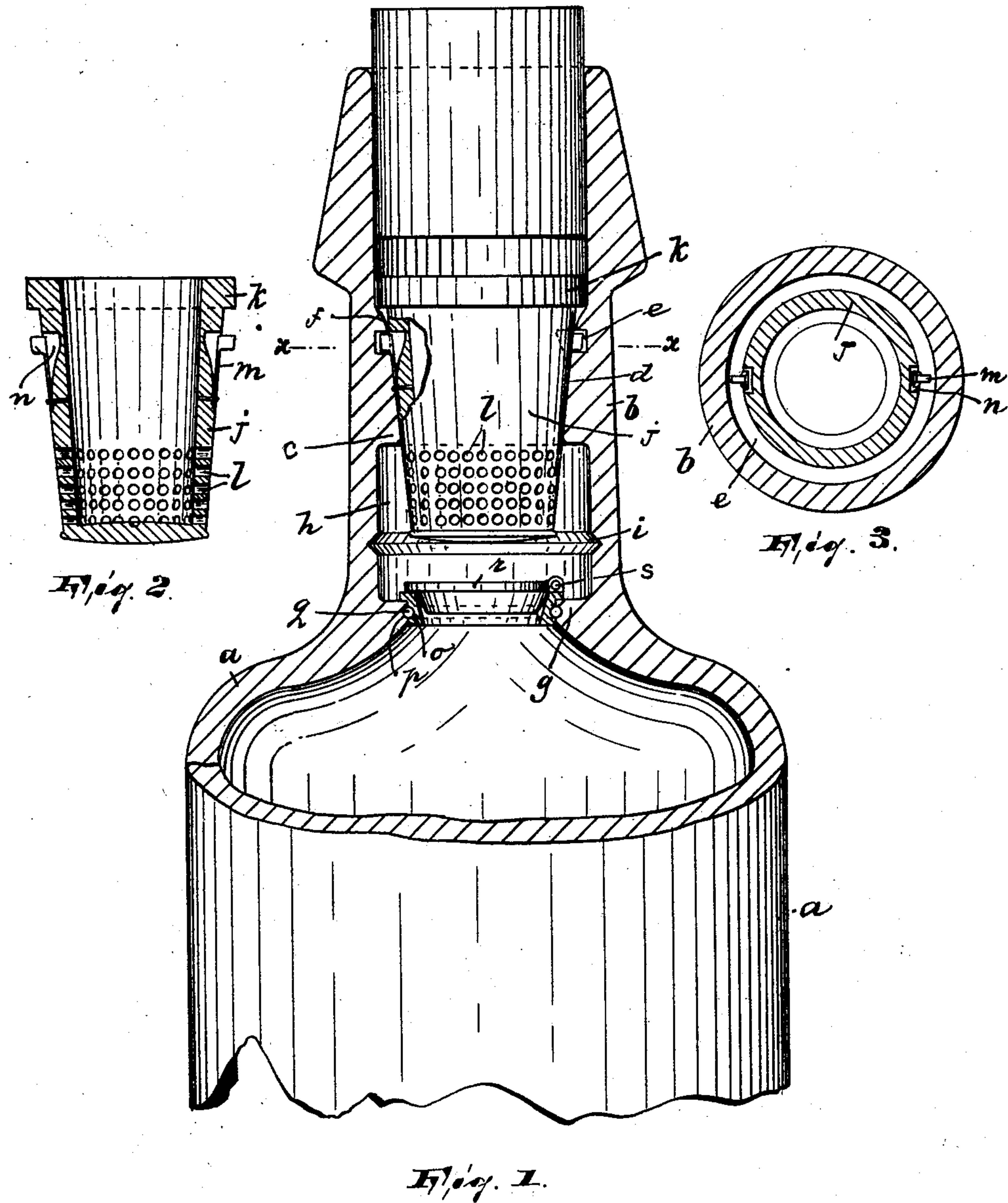
No. 705,481.

Patented July 22, 1902.

J. TAMBOER.  
NON-REFILLABLE BOTTLE.

(Application filed Aug. 22, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN TAMBOER, OF PATERSON, NEW JERSEY.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 705,481, dated July 22, 1902.

Application filed August 22, 1901. Serial No. 72,876. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN TAMBOER, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 letters of reference marked thereon, which form a part of this specification.

15 This invention relates to non-refillable bottles; and it consists in the improved form of bottle of this nature constructed substantially as will be hereinafter described, and finally embodied in the claim.

20 Referring to the accompanying drawings, in which corresponding letters of reference designate like parts in the several figures, Figure 1 is a view of a bottle provided with my improvement and having its upper portion shown in section to properly illustrate the improvement. Fig. 2 is a vertical sectional view of a certain guard detached from the bottle, and Fig. 3 is a horizontal sectional view taken on the line *xx* in Fig. 1.

30 In said drawings, *a* designates a bottle of substantially ordinary construction except as to its neck portion *b*. The inside of said neck portion is formed with an integral annular projection *c*, the bore or channel in this part of the neck being gradually narrowed in diameter or tapered downwardly, as at *d*. In its upper portion this projection is formed with an annular recess or channel *e*, for a reason hereinafter explained, and having reference to the function for which this channel is designed the upper edge of the projection *c* is rounded or beveled off, as at *f*. Below the projection *c* is formed another annular projection *g*. Between the two is thus produced in the neck an annular cavity *h*. This cavity is formed with an annular channel *i*, designed to appreciably weaken the neck of the bottle at this point, though not to the extent of rendering the neck fracturable under ordinary handling.

50 *j* denotes one member of the guard. This

consists of a glass or other non-corrosive cup-shaped device, which being tapered is designed to fit in the annular projection *c*. Its top portion is formed with an annular external flange *k*, which takes against the top of the projection *c* to limit the downward movement of the guard when it is inserted into the neck. In its lower portion the side wall of this guard is formed with a series of perforations *l*.

*m* designates spring lugs or catches which are secured at diametrically opposite points in the guard, being adapted to recede into recesses *n* in the guard when the latter is introduced into the bottle-neck and when they reach the recess *e* to spring outwardly into the same to thus lock the guard in the bottle. Thus the guard cannot be removed. It is to facilitate the introduction of the catches *m* of the guard to the recesses that the upper edge of the projection *c* is rounded or beveled off.

*o* designates an annular valve-seat which fits into the projection *g*. The projection and the valve-seat have opposed grooves *p*, which receive a retaining-ring *q* for the valve-seat. Against this valve-seat seats an outwardly-opening valve *r*, which is pivoted in it, as at *s*, serving as an auxiliary guard.

In view of the foregoing it will be seen that after the guard *j* is in place the bottle will be rendered non-refillable by any practical methods. The auxiliary guard, though permitting the outflow of the liquid through the perforations of the guard *j*, stops the inflow. It cannot be reached by any implement, for the guard *j* protects it. Moreover, any undue efforts to reach the auxiliary guard by an implement would result in the breaking off of the neck either at the channel *i* or the channel *e*, which latter thus subserves a double function.

It will be noticed that the lower end of the guard is spaced from the valve *r* a distance but slightly greater than the thickness of said valve. Thus the valve can move only a distance sufficient to but just afford an opening so that the liquid will flow freely but not so far that said valve will not promptly reseal itself at the first inclination of the bottle toward its upright or normal standing position.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The combination of a bottle, an annular valve-seat fitted into the neck of said bottle, said valve-seat and the surrounding portion of the bottle having opposed grooves, a valve-seat-retaining ring fitted into said grooves, an outwardly-opening disk-like valve pivoted  
10 in said valve-seat, and a cup-shaped guard also arranged in said bottle-neck above the valve and having its lower end spaced from

the same a distance slightly greater than the thickness of said valve, said guard having openings in its side wall, substantially as de- 15 scribed.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of August, 1901.

JOHN TAMBOER.

Witnesses:

J. HOSAY OSBORN,  
J. ERNEAYHAM.