

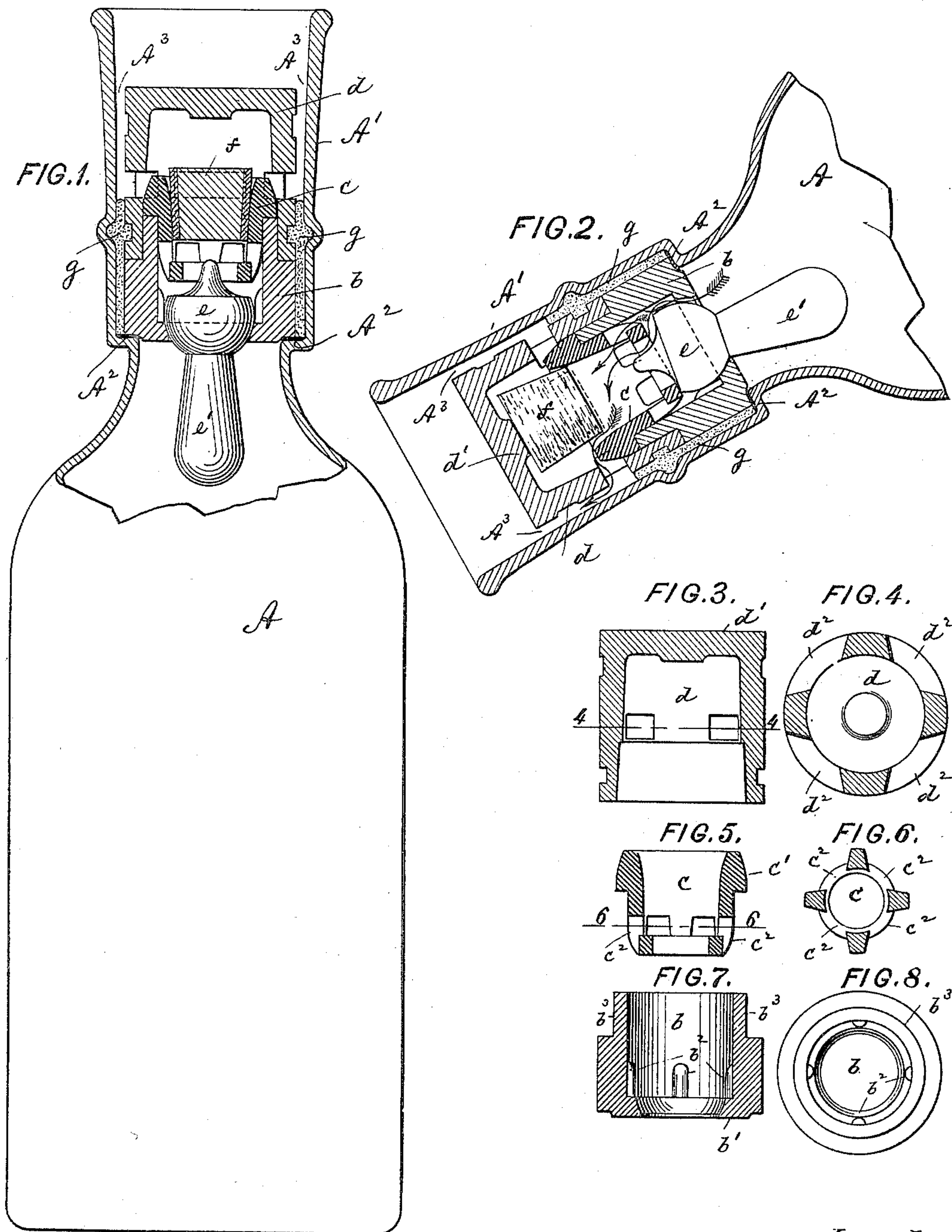
No. 640,461.

Patented Jan. 2, 1900.

E. FREESE.
NON-REFILLABLE BOTTLE.

(Application filed Aug. 9, 1899.)

(No Model.)



Witnesses:

John Becker.
William Schulz.

Inventor:

Edward Freese
by his attorneys
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UNITED STATES PATENT OFFICE.

EDWARD FREESE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
HERMAN MÜNDHEIM, OF SAME PLACE.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 640,461, dated January 2, 1900.

Application filed August 9, 1899. Serial No. 726,644. (No model.)

To all whom it may concern:

Be it known that I, EDWARD FREESE, a citizen of the United States, and a resident of New York city, county and State of New York, have
5 invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to a non-refillable bottle of novel construction which constitutes
10 a reliable safeguard against fraudulent refilling.

In the accompanying drawings, Figure 1 is a longitudinal section of my improved non-refillable bottle, showing stopper *f* seated;
15 Fig. 2, a similar view with the stopper unseated; Fig. 3, a longitudinal section of cap *d*; Fig. 4, a cross-section on line 4 4, Fig. 3; Fig. 5, a longitudinal section of ring *c*; Fig. 6, a cross-section on line 6 6, Fig. 5; Fig. 7, a
20 longitudinal section of valve-chamber *b*, and Fig. 8 a plan of the same.

The letter A represents a bottle having a wide tubular neck A', in which is contained a lower valve-chamber *b*, an intermediate
25 ring *c*, and an upper cap *d*. The valve-chamber *b*, Fig. 7, is seated upon an internal flange A² of neck A'. It has a centrally-perforated bottom *b'*, internal ribs *b*², and a contracted neck *b*³. The bottom *b'* constitutes the seat
30 for a ball-valve *e*, having a depending stem *e'*, which when pointing downward tends to draw the valve to its seat. The upper edge of valve-chamber *b* is engaged by the upper flange *c'* of ring *c*, Fig. 5, the body of which
35 projects into the valve-chamber and has lateral inlet-orifices *c*². The ring *c* has a tapering bore or valve-seat adapted for the reception of a correspondingly-tapered but slightly wider flexible stopper or plug *f*, arranged
40 above the ring. Normally the plug plays loosely upon the upper flaring end of the ring; but when the plug is forced down in manner hereinafter described it will be compressed

and jammed bodily into the ring, so as to permanently close the same.

The contracted neck *b*³ forms the seat for the cap *d*, Fig. 3, having a closed top *d'* and lateral outlet-orifices *d*². The ring *c* opens
45 into this cap, and the latter is made of less exterior diameter than the interior diameter 50 of neck A', so that an outlet A³ is formed between them. The parts *b* and *d* are secured within the neck by a cement packing *g*.

The operation is as follows: When the bottle is in an upright position, the valve *e* and
55 stopper *f* are seated and close the discharge-orifices. When the bottle is tilted, the valve and stopper are unseated, and the liquid will be discharged as follows: through perforated
60 bottom *b'*, past the ribs *b*² into chamber *b*, thence inward through orifices *c*² into ring *c* and past stopper *f* into cap *d*, and thence outwardly through orifices *d*² into passage A³.

If any liquid is forced into the bottle by the use of a vacuum-pump, the cork *f* will immediately upon the cessation of the suction be
65 driven tightly into the ring *c* by atmospheric pressure. Inasmuch as the stopper is inaccessible, owing to the closed top of cap *d*, any liquid thus introduced cannot be withdrawn,
70 and therefore a fraudulent refilling of the bottle is rendered impracticable.

What I claim is—

In a non-refillable bottle, the combination of a valve-chamber *b*, having internal ribbed
75 valve-seat *b*², with inclosed ball-valve *e*, a ring *c*, that projects into the valve-chamber and has lower inlet-orifices, a wedge-shaped flexible plug *f*, engaging the upper flaring bore of the ring, and an upper cap *d*, having lateral
80 discharge-orifices *d*², substantially as specified.

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Witnesses:

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