

(No Model.)

2 Sheets—Sheet 1.

B. P. EVANS.
NON-FILLABLE BOTTLE.

No. 545,276.

Patented Aug. 27, 1895.

Fig. 1.

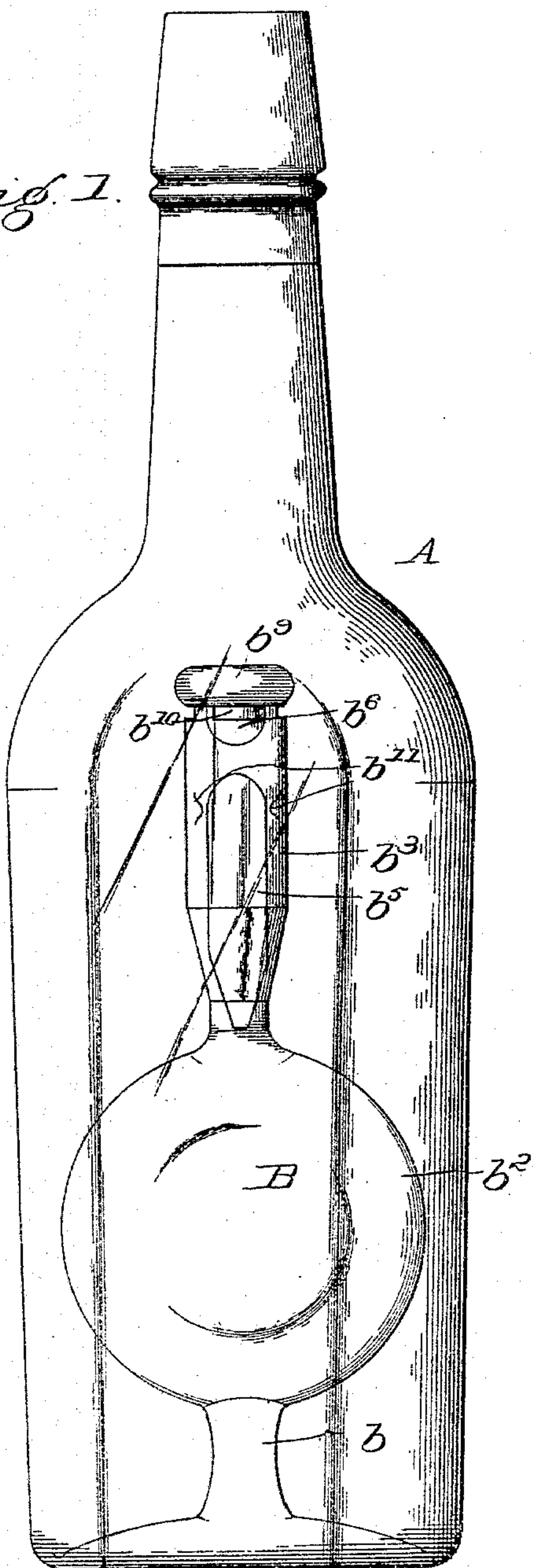
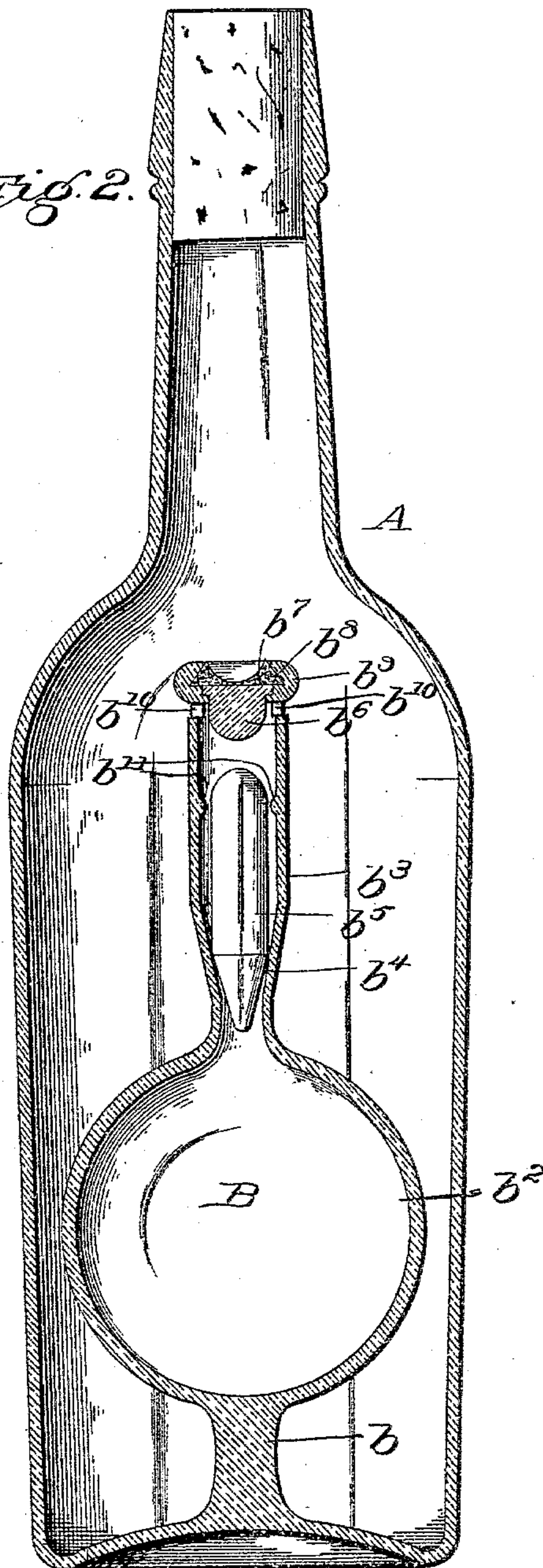


Fig. 2.



WITNESSES:

Edw. A. Carran
J. Minitree

INVENTOR

Burd P. Evans
BY
Pumphrey & Johnson
ATTORNEYS,

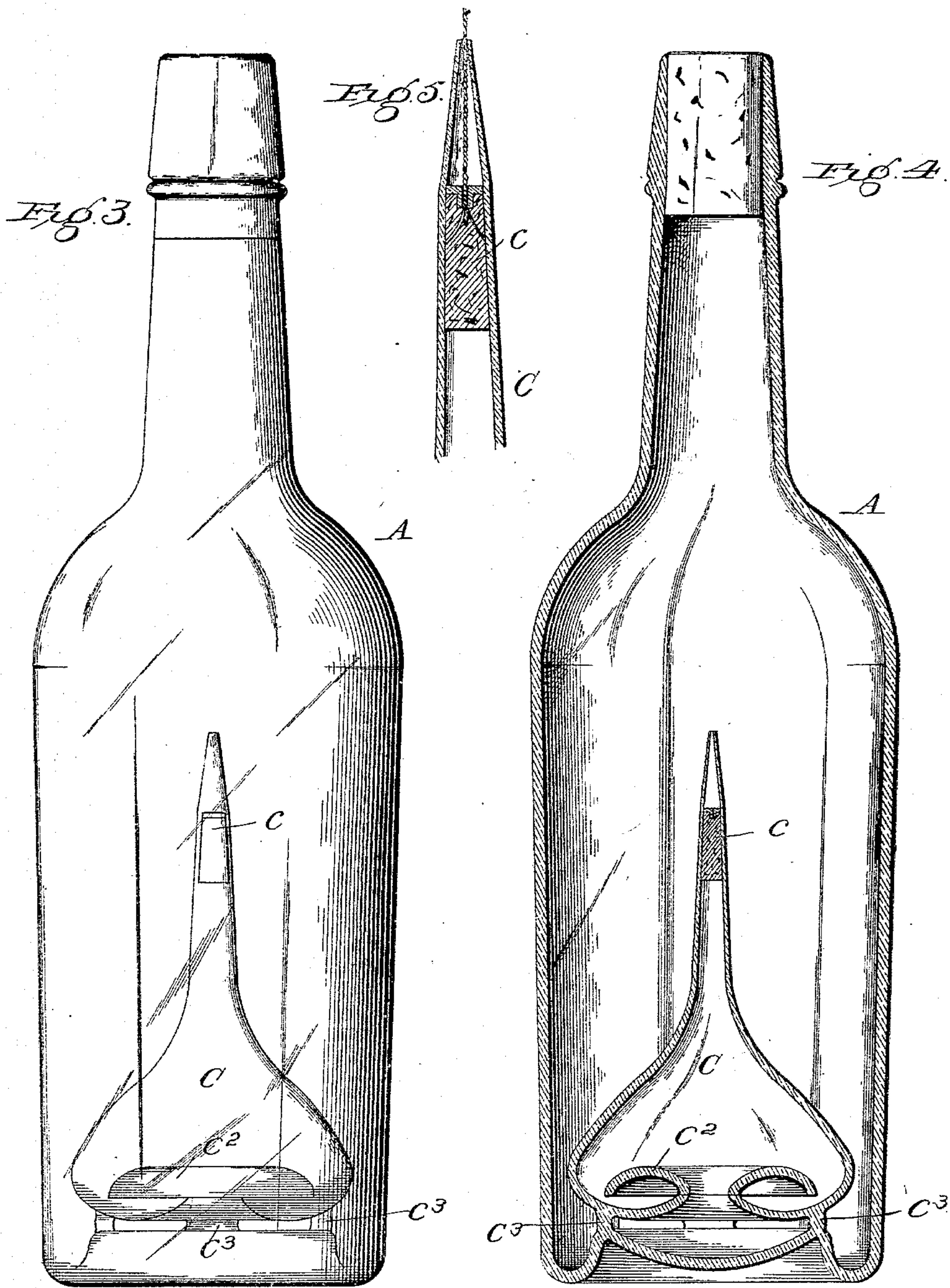
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Edw. S. Barrar
J. Minitree

INVENTOR

Burd P. Evans,

BY

Ramphrey Johnson
ATTORNEYS

UNITED STATES PATENT OFFICE.

BURD PATTERSON EVANS, OF PHILADELPHIA, PENNSYLVANIA.

NON-FILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 545,276, dated August 27, 1895.

Application filed May 25, 1895. Serial No. 550,614. (No model.)

To all whom it may concern:

Be it known that I, BURD PATTERSON EVANS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement 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.

The invention relates to non-refillable bottles.

The object is to produce a device which shall serve effectually as a telltale in exposing the unauthorized use of bottles and other receptacles, thereby protecting the public in the purchase of liquid preparations by enabling buyers to readily detect and avoid imitations.

With this and other objects in view the invention consists in certain novel features of construction and an arrangement of parts hereinafter fully described and claimed.

The invention is illustrated in the accompanying drawings, forming part of this specification, wherein like letters of reference indicate corresponding parts in the several views, in which—

Figure 1 is a view in elevation of one embodiment of the invention applied. Fig. 2 is a central vertical section of the same. Fig. 3 is a view in elevation of a modification. Fig. 4 is a central vertical section of the same, and Fig. 5 is an enlarged view in detail of the upper tapered end of the receptacle.

In the drawings, A represents a bottle of well-known construction and such as is now in common use.

B represents a receptacle, preferably of glass, which is secured centrally within the bottle upon a stud b , projecting from the bottom thereof. The body of the receptacle is a hollow sphere or globe b^2 , and forming a continuation thereof is a tubular neck b^3 , which is contracted at the junction with the body, then flared to form an internal conical seat b^4 for the reception of a needle-valve b^5 . The lateral play of the valve is limited by the wall of the tube or neck and the vertical movement by the rounded projecting extremity of a stopper b^6 , which closes the mouth of

the tube and is secured and sealed by an amalgam filling b^7 in a seat b^8 . At the upper end or the mouth of the tube an outward-projecting rounded flange b^9 is formed, and serves as a guard in deflecting the point of a tool or other instrument and preventing it from entering any one of the exit-openings b^{10} formed immediately beneath the flange should it be attempted to refill the receptacle. As a further means of increasing the difficulty of such an operation, a series of lugs b^{11} is formed within the tube adjacent to the openings.

In filling the bottle the mouth of the inner receptacle is open and entirely free and clear of all obstructions, and after a sufficient quantity of the liquid has entered to fill the inner receptacle to a point above the valve-seat the needle-valve is inserted and drops by its own weight into its seat. The stopper is then placed in position and sealed by the amalgam, which is placed upon it and packed in the annular groove beneath the inwardly-projecting lip at the mouth of the neck.

In use, when the bottle is partially or wholly inverted, the valve drops out of its seat and is caught and held by the projecting extremity of the stopper in a position to permit a proportionate quantity of the liquid contents to escape from the inner receptacle and flow out with that contained in the bottle proper. Upon being emptied, however, it will be found impossible to inject an appreciable quantity of liquid into the inner receptacle, and as a result a perceptible air space or bubble will appear and remain as a warning to intending purchasers that the contained preparation is not genuine. The neck of the receptacle may be made so thin and delicate as to break readily should it be attempted to insert and refill by means of a small tube or other device.

Referring to Figs. 3, 4, and 5, wherein a modified form of the device is illustrated, C represents the receptacle, which is approximately an inverted glass funnel, provided with a tapering cork c , closing its upper smaller end, the wall, at the larger end, being extended inward and under to form an approximately C-shaped flange c^2 . This receptacle is secured in the bottle upon studs or lugs c^3 projecting upward from the bottom.

In filling the bottle the cork, by means of

an attached wire c^4 , is held near the larger end of the funnel, so as to permit the liquid to rise in the neck and force the air out, and upon inclining the bottle slightly any air which may have been caught beneath the C-shaped flange will at once ascend and escape by way of the tubular neck. After the liquid has reached a point above the upper end of the funnel the cork is drawn well up into the tapered extremity of the neck by means of the wire, which latter is then entirely drawn out or severed at a point adjacent to the mouth of the tube. The upper end of this receptacle being sealed air-tight by the conical cork, the escape of the liquid is by way of the open bottom, and therefore, should it be attempted to refill the bottle, an air-bubble will form in the receptacle, which it will be found impossible to displace owing to the guard formed by the C-shaped flange. The removal of the conical stopper would require such care and labor as to make it impracticable and expensive, and at the same time would very likely result in breaking the mouth or neck of the device.

It will be understood I do not wish to limit myself to the exact construction, shape, or arrangement of parts as here illustrated and described, as various changes may be made without departing from the spirit of the invention.

Having thus fully described my invention, what I claim as new is—

1. The combination with a bottle, of an enclosed communicating receptacle provided with means for trapping a quantity of air, for the purpose described.

2. The combination with a bottle, of an enclosed non-removable communicating receptacle provided with an air egress and means for trapping the contained air, for the purpose described.

3. The combination with a bottle, of an enclosed device having requisite inlets and outlets, and a valve controlling the outlet, for the purpose described.

4. The combination with a bottle, of an enclosed non-removable receptacle having requisite inlets and outlets and an inaccessible valve controlling the outlet, for the purpose described.

5. The combination with a bottle, of an enclosed receptacle, consisting of a hollow body, a tubular continuation provided at or adjacent its end with a series of openings, a sealed stopper closing one of the openings, and a valve within the tube controlling the outlet, for the purpose described.

In testimony whereof I have signed this specification in presence of two subscribing witnesses.

BURD PATTERSON EVANS.

Witnesses:

ANDREW ZANE,
GEO. A. HINCKEN.