

No. 702,532.

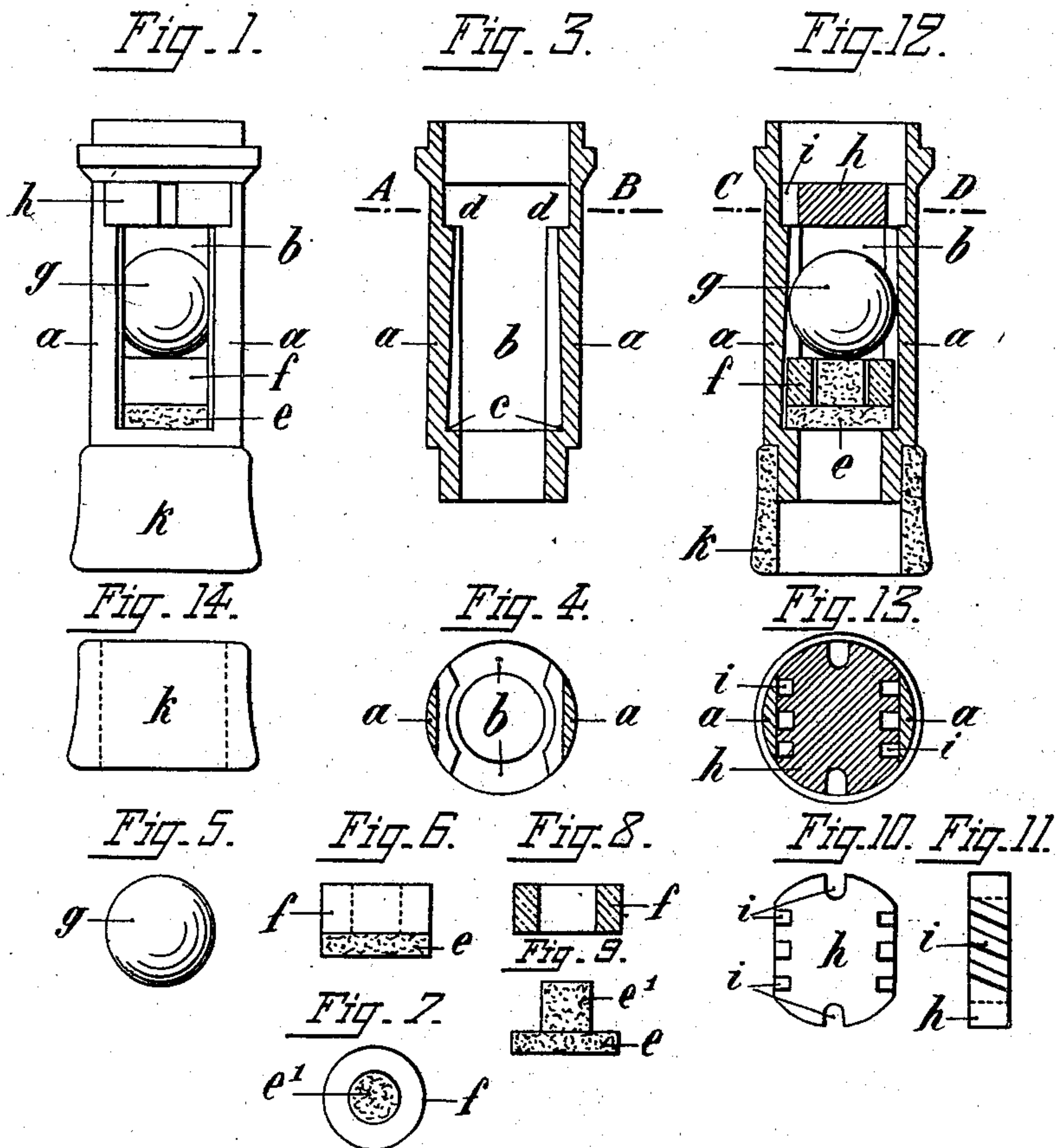
Patented June 17, 1902.

F. J. BRACONNIER.
NON-REFILLABLE BOTTLE.

(Application filed Jan. 24, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Adelaide Claire Gleason.

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Fig. 2.

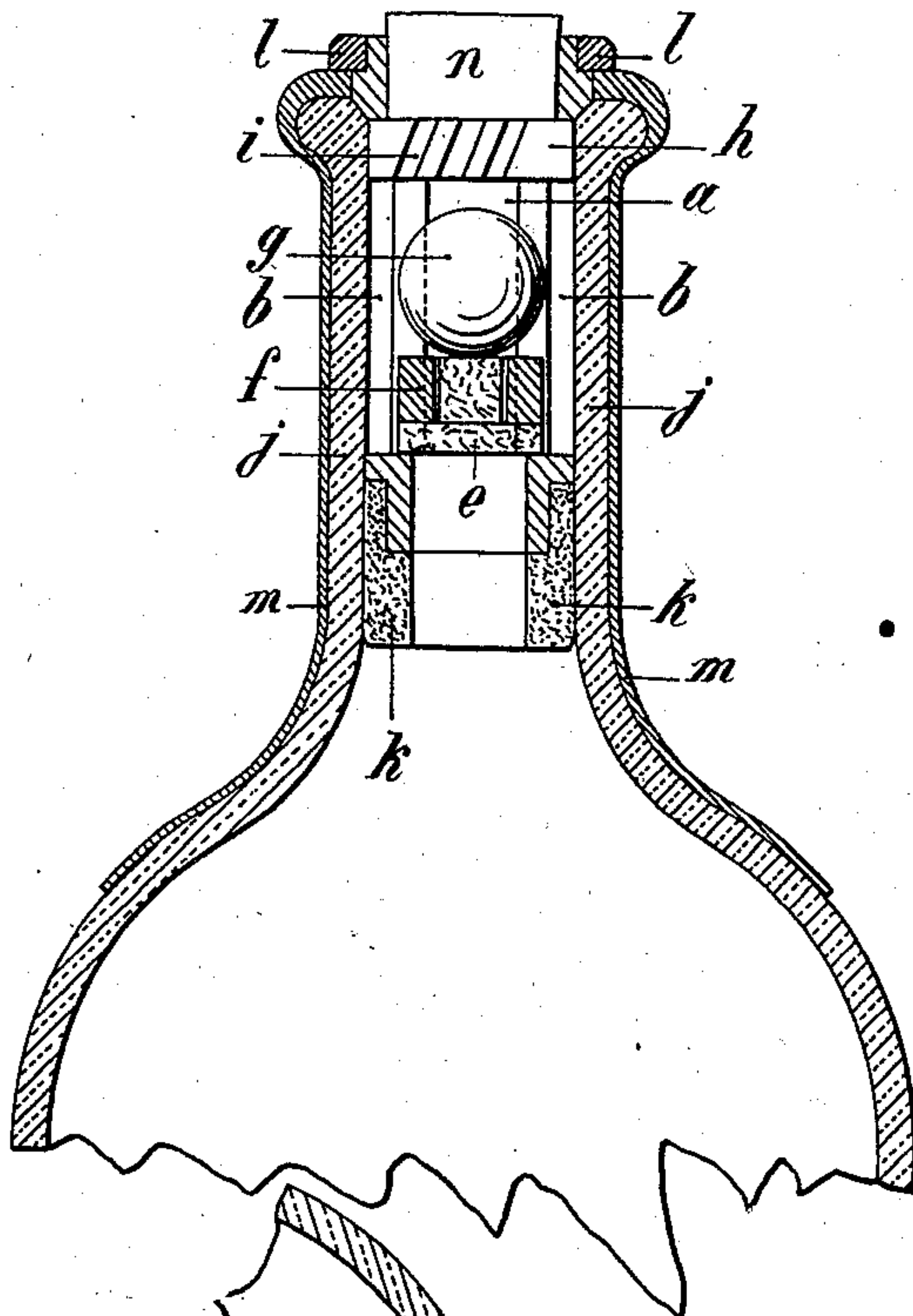
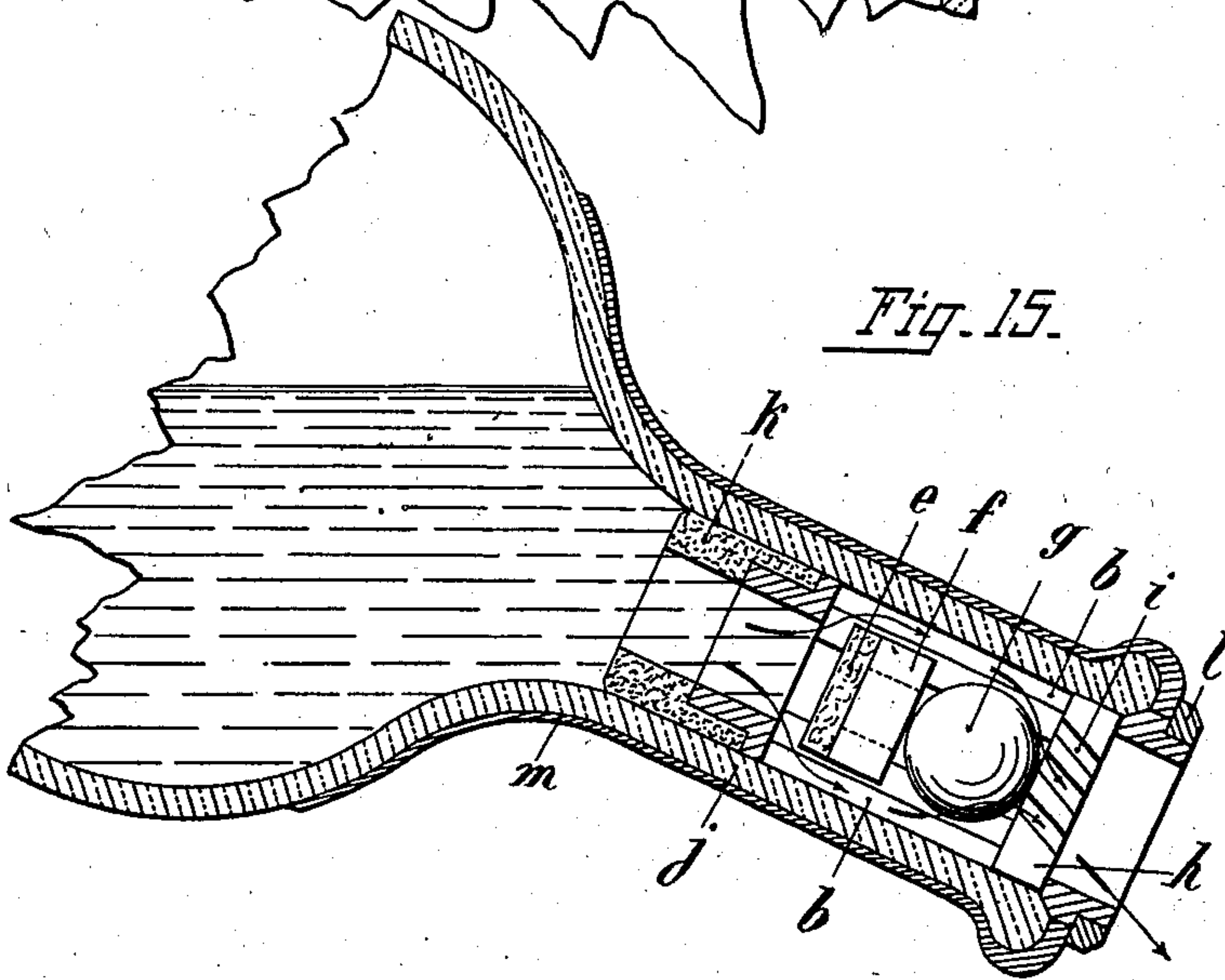


Fig. 15.



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UNITED STATES PATENT OFFICE.

FRANÇOIS JOSEPH BRACONNIER, OF ST. GERMAIN, FRANCE.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 702,532, dated June 17, 1902.

Application filed January 24, 1902. Serial No. 91,089. (No model.)

To all whom it may concern:

Be it known that I, FRANÇOIS JOSEPH BRACONNIER, professor, of 31 Rue Voltaire, in the city of St. Germain, Seine-et-Oise, Republic of France, have invented a Non-Refillable Bottle, of which the following is a full, clear, and exact description.

My invention relates to an improved safety-stopper for preventing the fraudulent refilling of bottles provided with good labels or marks.

My invention will be readily understood from the following description on reference to the accompanying specimen drawings, in which—

Figure 1 shows in elevation the arrangement which I mount in the neck of bottles to render them non-refillable. Fig. 2 shows the arrangement in section applied to the neck of a bottle. Fig. 3 shows separately in section the frame or lantern in which my arrangement is mounted. Fig. 4 is a horizontal section of the frame or lantern on the line A B, Fig. 3. Figs. 5, 6, 7, 8, 9, 10, 11, and 14 are detail views showing the parts of my arrangement. Fig. 12 is a vertical section of my complete apparatus. Fig. 13 is a horizontal section of this same arrangement on the line C D, Fig. 12. Fig. 15 shows the position of the parts of my arrangement when the contents of the bottle are being poured out.

In the various figures like letters of reference indicate the same parts.

As shown in the drawings, my improved safety-stopper comprises a frame or lantern *a*, of any suitable material, having a passage extending from one end to the other and in which are formed two diametrically opposite apertures *b*. The internal space of the frame or lantern *a* is made slightly conical and has a shoulder *c* at its lower part and a transverse slot *d* at its upper part. In the interior of the said frame or lantern I arrange a valve *e*, of cork, having a stem *e'*, on which loosely fits a ring *f*. Above the valve *e* is a ball *g*, which is sufficiently heavy to close this valve when the bottle is returned to its upright position. Above the ball *g* is a kind of obturator *h*, provided with oblique grooves *i* for the passage of the liquid. This piece *h* serves to prevent the introduction into the apparatus of an iron or other wire for holding the valve open. The

whole arrangement is fixed in the neck *j* of the bottle by the aid of a cork washer *k* and a ring *l*, provided with retaining-strips *m*, which engage the outside of the bottle. A cork *n* closes the bottle and can receive a wax seal.

The operation of my arrangement above described is as follows: After having withdrawn the stopper *n* if the bottle be inclined, as shown in Fig. 15 of the drawings, the liquid passes beneath the float *e*, enters the apertures *b*, goes around the ball *g*, and escapes through the grooves *i*, as indicated by the arrows. Immediately the bottle is returned to its upright position the ball *g* and ring *f* operate to replace the float *e* on its seat, which float then forms a valve and resists the refilling of the bottle. The interior of the frame or lantern being conical, the ball *g* has a tendency to move back and to replace the valve on its seat immediately the bottle reaches the horizontal position. The closure of the valve *e* taking place before the whole of the liquid in the arrangement has returned into the interior of the bottle, it follows that the seat of the valve is always submerged in the liquid. Thus in the case of liquors there is no fear of the drying, which would glue the valve and prevent it from operating. If attempts be made to refill the bottle fraudulently, the float-valve *e*, under the action of the liquid, will always press on its seat, whether the bottle be turned upside down or held horizontally, so that the bottle is non-refillable.

The strips *m* above mentioned can be dispensed with and the arrangement fixed in the neck of the bottle by cement or the like. In this case the arrangement cannot be withdrawn without breaking the bottle.

The forms, details, accessories, materials, and dimensions of the various parts which constitute my arrangement can obviously be somewhat varied without departing from the principle of my invention.

I claim—

A non-refillable bottle comprising a float-valve *e*, a ball *g* and guide-ring *f* for reseating the valve when the bottle is held vertically or substantially so, an obturator *h* above the valve, ball and ring, a frame *a* carrying all the said parts and having also, openings *b*

for the passage of the liquid, a cork, washer
k within the neck of the bottle engaging the
said frame *a*, a ring *l* engaging the top of said
frame and strips *m* connected with said ring
5 and secured to the outside of the bottle, sub-
stantially as described.

The foregoing specification of my improved

means for preventing the fraudulent refilling
of bottles signed by me this 10th day of Janu-
ary, 1902.

FRANÇOIS JOSEPH BRACONNIER.

Witnesses:

EDWARD P. MACLEAN,
MAURICE H. PIGNET.