

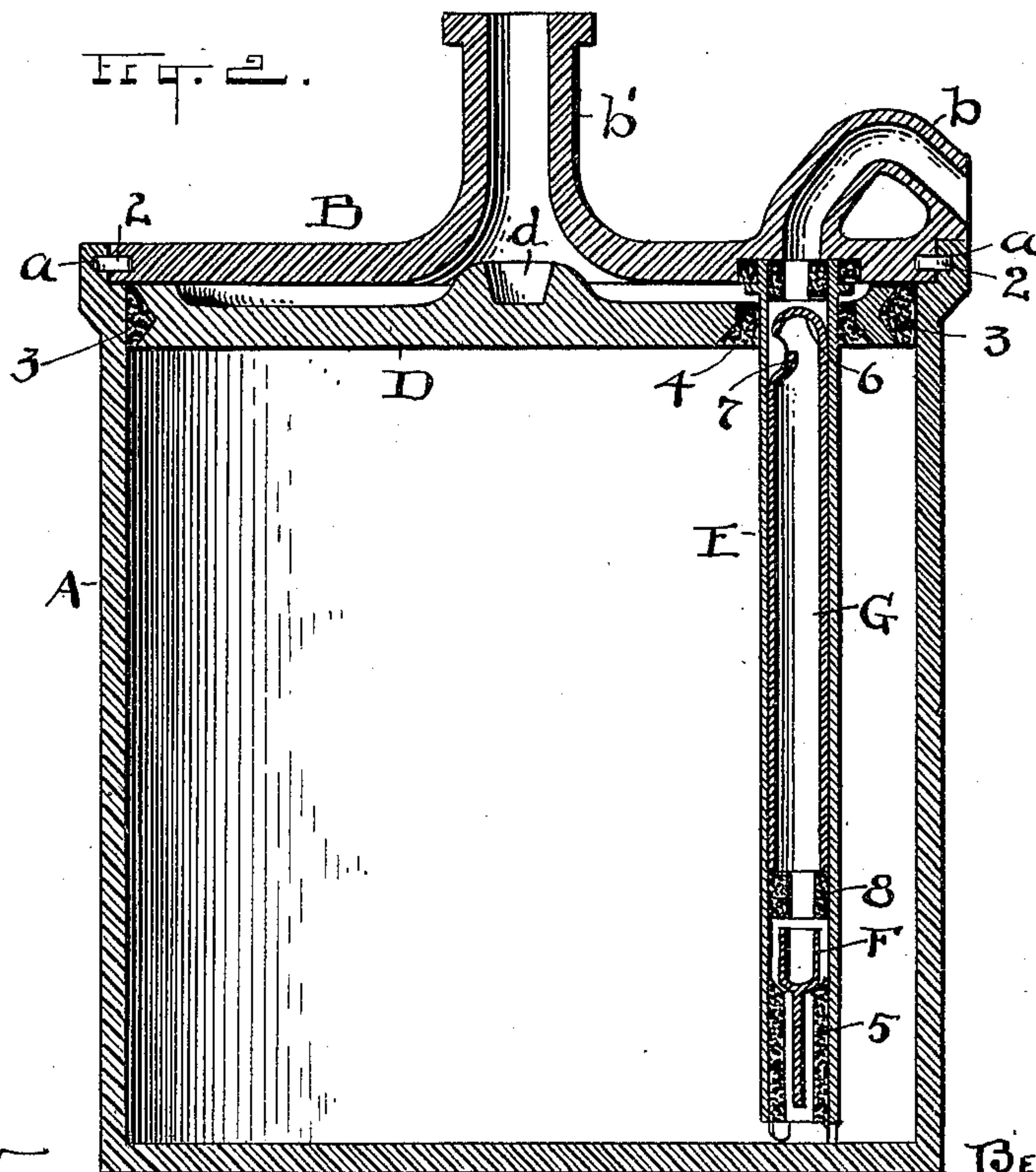
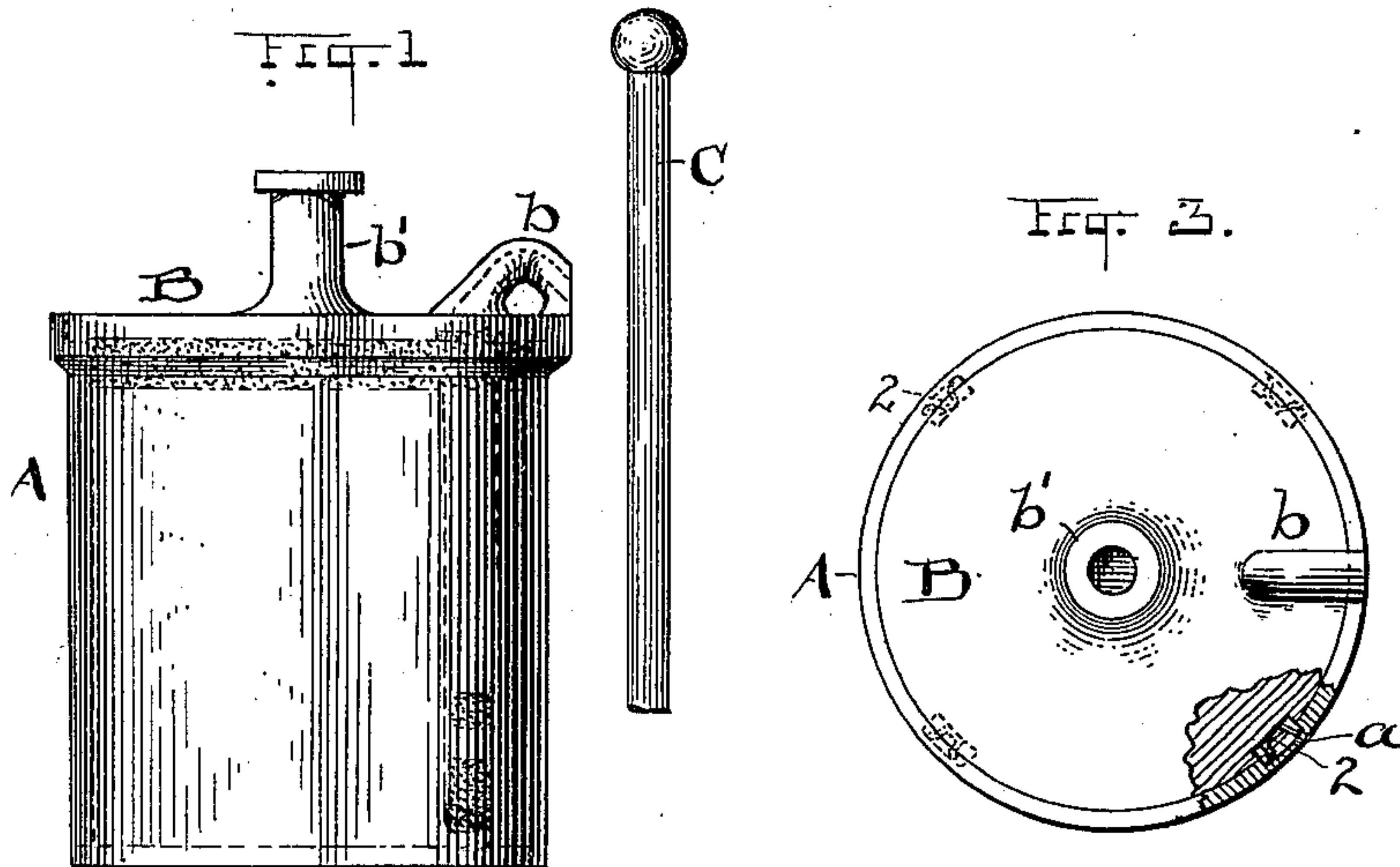
No. 685,619.

Patented Oct. 29, 1901.

B. LEV.
NON-REFILLABLE BOTTLE.

(Application filed Mar. 15, 1900.)

(No Model.)



ATTEST
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UNITED STATES PATENT OFFICE.

BENJAMIN LEV, OF CLEVELAND, OHIO.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 685,619, dated October 29, 1901.

Application filed March 15, 1900. Serial No. 8,725. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN LEV, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to non-refillable bottles; and the invention consists in the construction of a bottle substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plain elevation of a complete bottle and a stem or rod at the side thereof designed to be used to promote the discharge or emptying of the bottle, substantially as hereinafter described. Fig. 2 is a vertical central section of the bottle enlarged as compared with Fig. 1. Fig. 3 is a plan view of the bottle, showing especially the springs by which the cover is held unremovably in position.

The bottle thus shown is of the non-refillable type, so that it cannot be filled again without being broken in some essential part and which will render the bottle further useless for its original purposes, so that when the contents of the bottle have been removed it cannot again be filled with any liquid whatsoever and the integrity of the original package is broken and destroyed.

A represents the body of the bottle, and B the cover. It will be noticed, as a departure from bottles generally of this kind, that the body of the bottle has the shape more particularly of a jar, with a full-width opening at the top, and the cover extends entirely across the top of the bottle and has recesses in its edge which are designed to match recesses *a* in the rim of the bottle and in which are placed confining or locking springs 2. One or more of these recessed springs may be used; but in the event that one alone be used there would necessarily be an engaging portion on the cover and in the rim of the bottle, respectively, to take the place of the springs, so that when the spring-lock came into position the cover would thus be ren-

dered permanent and unremovable, except by breakage.

The cover B has, besides, a discharge spout or neck *b*, of gooseneck pattern, through which the contents of the bottle are discharged, and the said spout is so constructed as to be practically right-angled between its ends, so as to prevent the introduction of an instrument through it into the bottle. It will of course be understood that both the body and cover are preferably of glass, but may be made of other refractory material. At the center of the cover is a tubular bearing or neck *b'*, through which the stem or rod C is introduced and guided for depressing the so-called "piston" or "follower" D. This particular part, here called a "piston," is designed when the vessel is full to hold its place at the top under the cover B, as here shown, and it has a recessed edge with a cork or equivalent packing 3, which fills the recess and makes the bottle fluid-tight, so far as the top is concerned, and serves in that respect as a cork in the absence of other means for closing the top, but leaves the piston free to be depressed when liquid is to be drawn from the bottle and as it is withdrawn. Any ordinary rod, of metal, hard wood, glass, or the like, may be introduced through the neck *b'* for depressing the piston, and in order that the said rod may be centered and possible tilting of the piston prevented I have formed a socket or boss *d* in the center of the piston, into which the rod C projects and through which loose engagement is made.

Another feature of the invention is the tube E, which extends the full length of the bottle from the cover B to the bottom thereof through the piston D, with cork 4 to pack the piston on the said tube and here again making fluid-tight connection. The said tube is set into a cork packing in the bottom of the cover B, and there is also in the lower portion thereof a valve F, which is adapted to open upward to promote the flow outward through the tube, but to prevent the flowing in of liquid, and which will seat upon the cork or other seating 5 in the lower part of the tube if there be liquid-pressure upon the valve from above. I also take the further precaution of inserting within the tube E a second-

ary tube G, which has an overhanging portion 6 at its top and an inwardly-inclined lip 7 beneath the same, so that there is allowed a free liquid-passage upward between these features 6 and 7 of the said inner tube and a practically undisturbed flow of the liquid outward when it is drawn, but which absolutely cuts off any possible introduction of an instrument through the neck *b* to tamper with the valve farther down in the said tubes. The tube G rests upon a cork 8 with a passage or passages for the liquid to flow through upward and which in this instance also serves as a stop for the valve F.

I have described cork packing or filling at all the points where a packing is employed, and cork is preferred. There might, however, be instances when I should prefer to use rubber or other material in lieu of cork, and the tubes E and G also are preferably of glass, though they might even be of metal if the contents of the bottle were such as not to be affected by their nature or as not to affect the tubes. The piston D, as stated, is designed to hold a raised position at all times when the bottle is full and awaiting tap, and it is the medium by which the discharge is effected, the rod C serving to introduce pressure on the said piston for that purpose; but when once depressed partially or wholly it remains down and there is no way of getting it back. The engagement of the rod C therewith is such as to prevent the withdrawal of the piston, and even if there were effective engagement to withdraw it the operation would suck the valve F to its seat, and thus seal the inlet-passage, so that no air could enter behind the piston, and this again would prevent the piston being raised. Hence when the piston is down the contained liquid must have been discharged, and thereupon the bottle has performed all its usefulness so far as its original contents are concerned, and thereafter it can serve no further useful purposes, if any, except merely as a plain glass or earthen jar.

I have distinctly referred to the part B as the "cover" of the bottle, which it is; but obviously the part D also is an essential part of the cover, because this part affords the liquid seal for the bottle and really is its seal as well as its piston. In a sense it takes the place of a cork; but yet it is more, for the cover is not otherwise liquid-tight, and hence it combines with the cover proper for effecting a complete seal both against admission into the bottle and against discharge of the contents through the cover of the bottle, and

the tube E is so sealed that no liquid can enter between the said parts B and D.

The rim of the bottle or jar A is flush with the top of the cover, and the springs 2 are therefore covered closely in when the cover has been sprung into position. Any suitable spring may be used.

What I claim is—

1. A bottle having a permanently-secured cover with a discharge-outlet off its center, and a packed disk-shaped piston in the bottle adapted to be depressed to force the contents out through said outlet, and a passage for the contents through said piston to said outlet, substantially as described.

2. In non-refillable bottles, the body thereof having a full-width opening at its top and a locked cover spanning said opening, in combination with a liquid-sealed piston within said cover, and means to depress the said piston through the top of the bottle and an outlet-passage through said piston, substantially as described.

3. The body of the bottle and the spring-confined cover having an outlet for the liquid, a tube extending from said cover to the bottom of the bottle and communicating at its top with said outlet, a valve in said tube arranged to close downward, and a liquid-tight piston adapted to force the liquid out of said bottle and slide on said tube, substantially as described.

4. In a non-refillable bottle, the body and the cover confined thereon and having a neck centrally and an outlet at one side, a sliding piston in said bottle, and a discharge-tube extending the full depth of the bottle from the cover passing through said piston, and means within said tube to prevent the introduction of an instrument down through the same, substantially as described.

5. The body of the bottle and the spring-confined cover having an outlet for the liquid, a tube extending from said cover to the bottom of the bottle and communicating at its top with said outlet, a valve in said tube arranged to close downward, and a liquid-tight piston adapted to force the liquid out of said bottle and slide on said tube, substantially as described.

Witness my hand to the foregoing specification this 17th day of January, 1900.

BENJAMIN LEV.

Witnesses:

H. E. MUDRA,
R. B. MOSER.