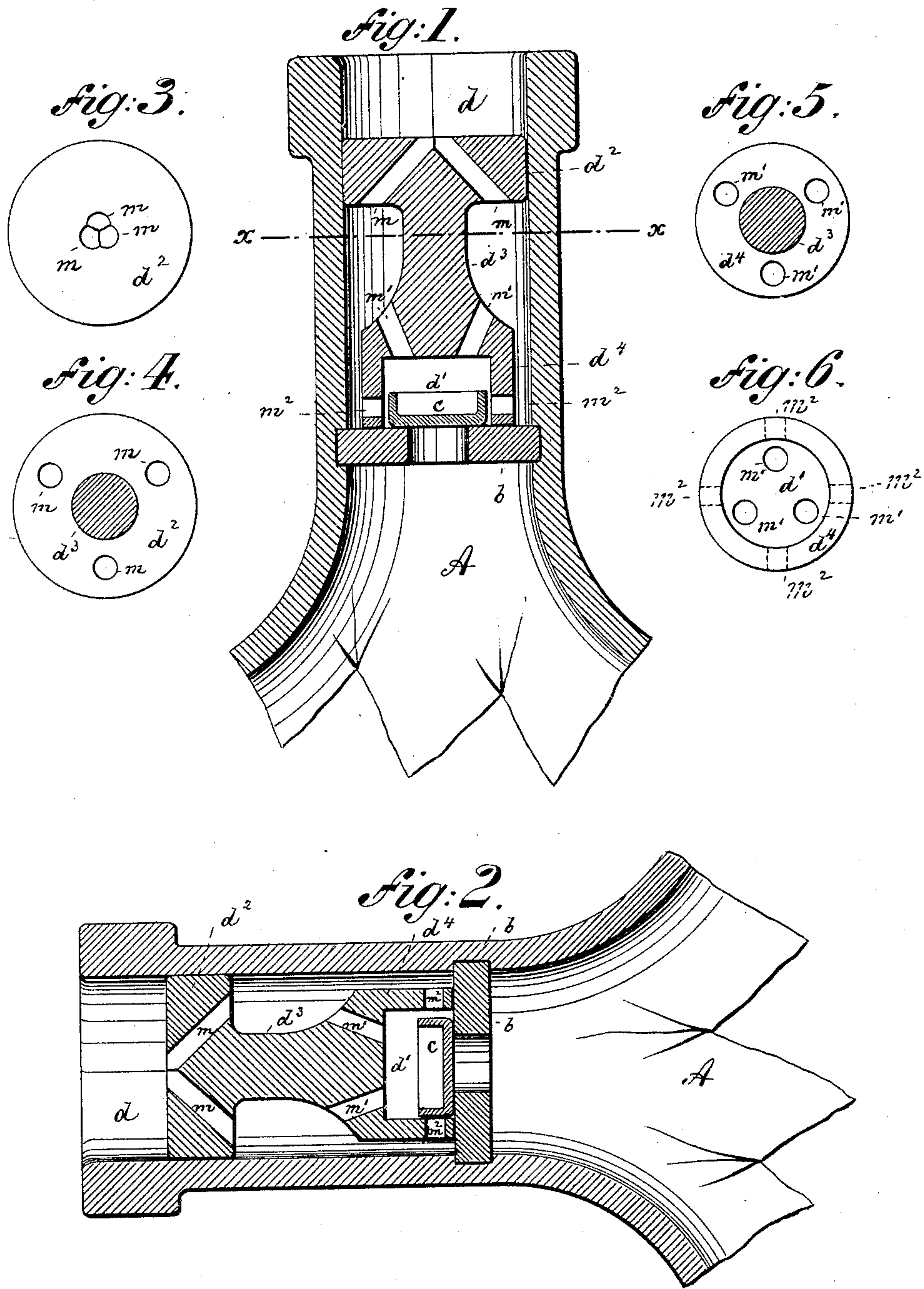


(No Model.)

L. A. EBERHARDT.
BOTTLE STOPPER.

No. 477,202.

Patented June 21, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

LOUIS A. EBERHARDT, OF BROOKLYN, NEW YORK.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 477,202, dated June 21, 1892.

Application filed March 10, 1892. Serial No. 424,389. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. EBERHARDT, of Brooklyn, Kings county, New York, have invented an Improved Bottle-Stopper, of which the following is a specification.

This invention relates to a bottle-stopper which permits a free discharge from the bottle, but prevents refilling. Thus spurious replenishing of genuine bottles is avoided.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical central section of the bottle-stopper. Fig. 2 is a similar section showing the bottle in a horizontal position; Fig. 3, a top view of the stopper; Fig. 4, a section on line xx , Fig. 1, looking up; Fig. 5, a similar section looking down, and Fig. 6 a bottom view of the stopper.

The letter A represents a bottle, within the neck of which there is secured an annular valve-seat b . This seat engages a groove formed on the inner side of the bottle-neck, and is thus held in place. Upon this valve-seat is supported the cup-shaped valve c . This valve is confined within a chamber d' of a plug d , fastened within the upper part of the bottle-neck. The plug d is composed, essentially, of an upper head d^2 , a central contracted neck d^3 , and a lower head d^4 . The upper head d^2 is wider than the lower head d^4 and is tightly fitted or cemented into the neck to hold the device in place. Through the head d^2 there extend three (more or less) ports m , which converge, preferably, from the bottom toward the top to constitute one common central discharge-orifice, Fig. 3. Through the neck d^3 there extend into the chamber d' three (more or less) upright ports m' . Through the head d^4 there extend into the chamber d' four (more or less) horizontal ports m^2 .

The operation of the device is as follows:

When the bottle is tilted in the usual manner for giving up its contents, the valve c is thrown off its seat b . The liquid now passes freely through the opening in the valve-seat b , ports m^2 and m , and out of the bottle. During this operation the ports m' are entirely out of action. If it is intended to spuriously refill the bottle, it will be seen that when the bottle is held upright the valve c closes upon its seat b and prevents any liquid from being poured in. If the bottle is laid horizontally, Fig. 2, into a reservoir filled with the liquid, the latter will flow through ports m and m' into the cup-shaped valve and hold the latter to its seat, thus again preventing the bottle from refilling. Moreover, it will be observed that all the ports m m' m^2 are out of line, so that the valve cannot be temporarily engaged and held up by a bent wire introduced into chamber d' .

What I claim is—

1. The combination of a bottle with a valve-seat b , a valve c , and a plug having a chamber d' , laterally-projecting ports m^2 , entering the chamber, and upwardly-projecting ports m , substantially as specified.

2. The combination of a bottle with a valve-seat b , a valve c , and a plug having a valve-chamber, an upper and a lower head, a central neck, and three sets of ports, substantially as specified.

3. The combination of a bottle with a valve-seat b , a cup-shaped valve c , and a plug having a valve-chamber, an upper and a lower head, a central neck, and three sets of ports, of which two sets extend through the neck and lower head into the chamber, while the third set extends through the upper head, substantially as specified.

LOUIS A. EBERHARDT.

Witnesses:

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