

No. 613,222.

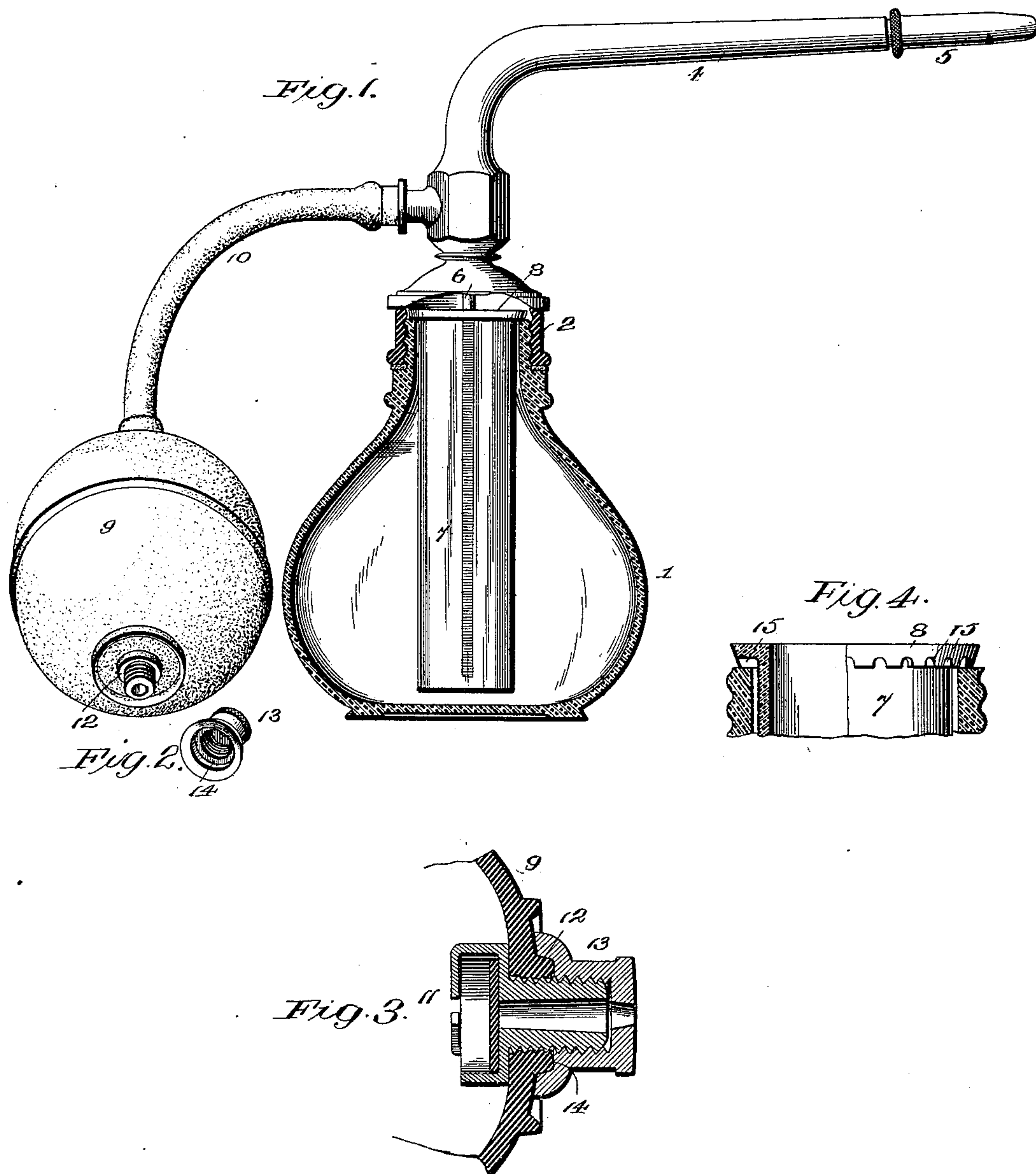
Patented Oct. 25, 1898.

C. M. BLACKMAN.

ATOMIZER.

(Application filed Feb. 19, 1898.)

(No Model.)



WITNESSES

Jos. C. Stack.  
Edwin K. Rudy.

INVENTOR

Charles M. Blackman,  
by Fulton B. Brock



# UNITED STATES PATENT OFFICE.

CHARLES M. BLACKMAN, OF NEW YORK, N. Y.

## ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 613,222, dated October 25, 1898.

Application filed February 19, 1898. Serial No. 670,932. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. BLACKMAN, a citizen of the United States, residing at New York, in the county of Kings and State of New York, have invented and produced a new and useful Improvement in Atomizers and Syringes; and I do 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, reference being had to the figures marked on the accompanying drawings, which form a part of this specification.

My invention relates to atomizers and syringes.

The object of my improvements is to provide the bulb with a valve and vent device which will be absolutely sealed against any escape of air between the valve and the exterior of the bulb.

A further object of my invention is to provide a supplementary removable liquid-vial to be carried within the vial or liquid-receptacle proper.

My invention consists in the combination of a plurality of liquid-reservoirs disposed one within the other, the outer reservoir having a neck and the inner reservoir being provided at its top with a ledge and supported thereby upon the neck of the outer reservoir, a cap common to and covering the top of both reservoirs, and a fluid-forcing device secured to the cap.

To attain these ends, my invention consists in the following construction and combination of parts, which will first be fully described, and the features of novelty then set forth and claimed.

Figure 1 represents a partial elevation, section, and perspective of an atomizer or syringe to which my invention has been applied. Fig. 2 represents a detail perspective of the valve-cap. Fig. 3 represents a detail section, on an enlarged scale, of the valve and vent, showing the bulb broken away. Fig. 4 is a detail view of a modified form of the supplementary vial.

In the drawings, 1 represents the usual liquid-receptacle of an atomizer or syringe. It has preferably a threaded neck 2, upon which a threaded cap is removably secured.

4 is the atomizer or syringe tube of the

usual construction, terminating in a tip 5. This tip may be of any of the known and approved forms. It may be an atomizer-tip or a syringe-tip or a combination atomizer and syringe tip. An example of the latter is shown in Patent No. 601,564, granted to I. Q. Gurnee March 29, 1898. The tube 4 is an air-tube. Tube 6 is the liquid-tube extending into the bottom of the receptacle 1 or the supplementary flask or vial, hereinafter described, and extends upwardly through tube 4 into the tip 5 in the well-known manner.

Where liquids have been sprayed from an atomizer heretofore, they have been placed directly in the reservoir or bottle 1, and where it has been desired to change the liquid for another at intervals this bottle had to be washed out and cleaned. This operation took considerable time and has been a source of annoyance. My invention has been designed to obviate this trouble; and it consists in introducing into the reservoir or bottle a supplementary flask or vial 7 in line with the liquid-tube when the cap 3 is replaced. This vial 7 may be supported from the bottom of the bottle 1 or from the top by means of a flange 8, seating on the top of the bottle-neck, the mouth of the latter serving as a guide for the vial. A number of these flasks or vials may be used. Each one containing its separate liquid may be rapidly introduced into the atomizer by unscrewing and replacing the cap 3. The vials may be cleansed at leisure after the several spraying operations.

9 is the bulb, and 10 the flexible tube leading therefrom to the atomizer.

11 is the usual valve device located in the outer end of the bulb and provided with a valve opening inwardly and closing against pressure in the bulb.

I form an annular collar 12, of rubber, around the bulb-aperture and correspondingly recess the complementary clamping-cap 13 of the valve-casing 11. The collar 12 is thereby projected into the recess 14 of the cap 13, and when the latter is screwed home the collar and bulb are compressed to the requisite degree, and an effectual air-tight packing between the valve and bulb is provided.

Fig. 4 shows a modified form of the flask 7, in which the flange 8 is serrated or formed

with passages 15 to insure air connection between the main and supplementary vial. Instead of the passages 15 being formed in the flange 8 they may be formed in the neck 5 of the bottle and secure the same result. If the flange 8 is plain and oil is used in the reservoir, there is a danger of the oil forming a film on the under side of the flange and obstructing the air-passages between the vials. 10 The valve and vent device described in this application is the subject-matter of another application filed by me June 20, 1898, Serial No. 683,897.

Having described my invention, what I 15 claim, and desire to secure by Letters Patent, is—

In an atomizer or syringe, the combination of a plurality of liquid-reservoirs disposed one within the other, the outer reservoir having a neck, and the inner reservoir being provided at its top with a ledge and supported thereby upon the neck of the outer reservoir, a cap common to and covering the top of both reservoirs, and a fluid-forcing device secured to the cap. 20 25

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES M. BLACKMAN.

Witnesses:

FLORA A. COOPER,  
VIRA E. THORNE.