

(No Model.)

J. G. JUSTIN.
ATOMIZER.

No. 398,513.

Patented Feb. 26, 1889.

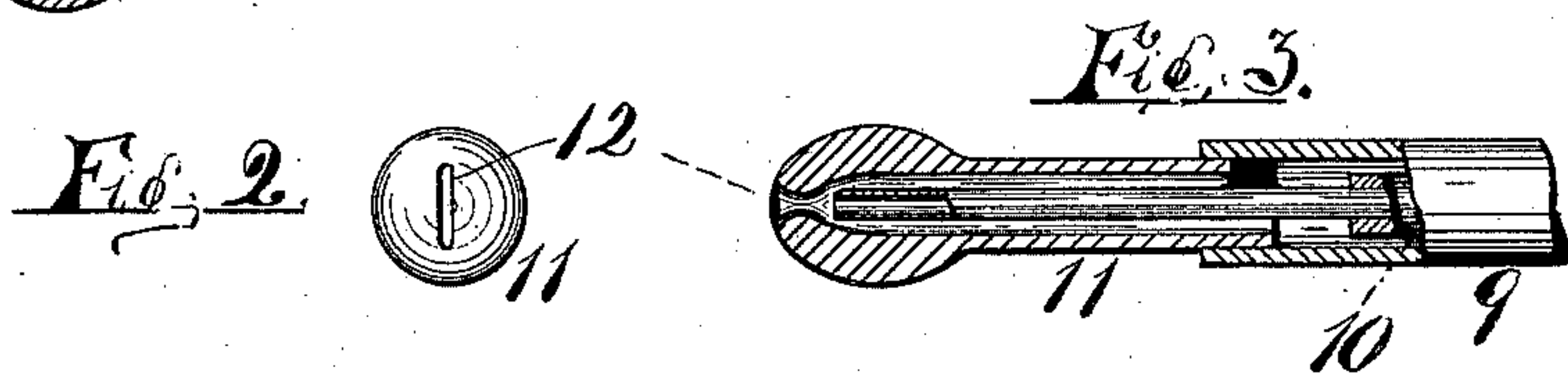
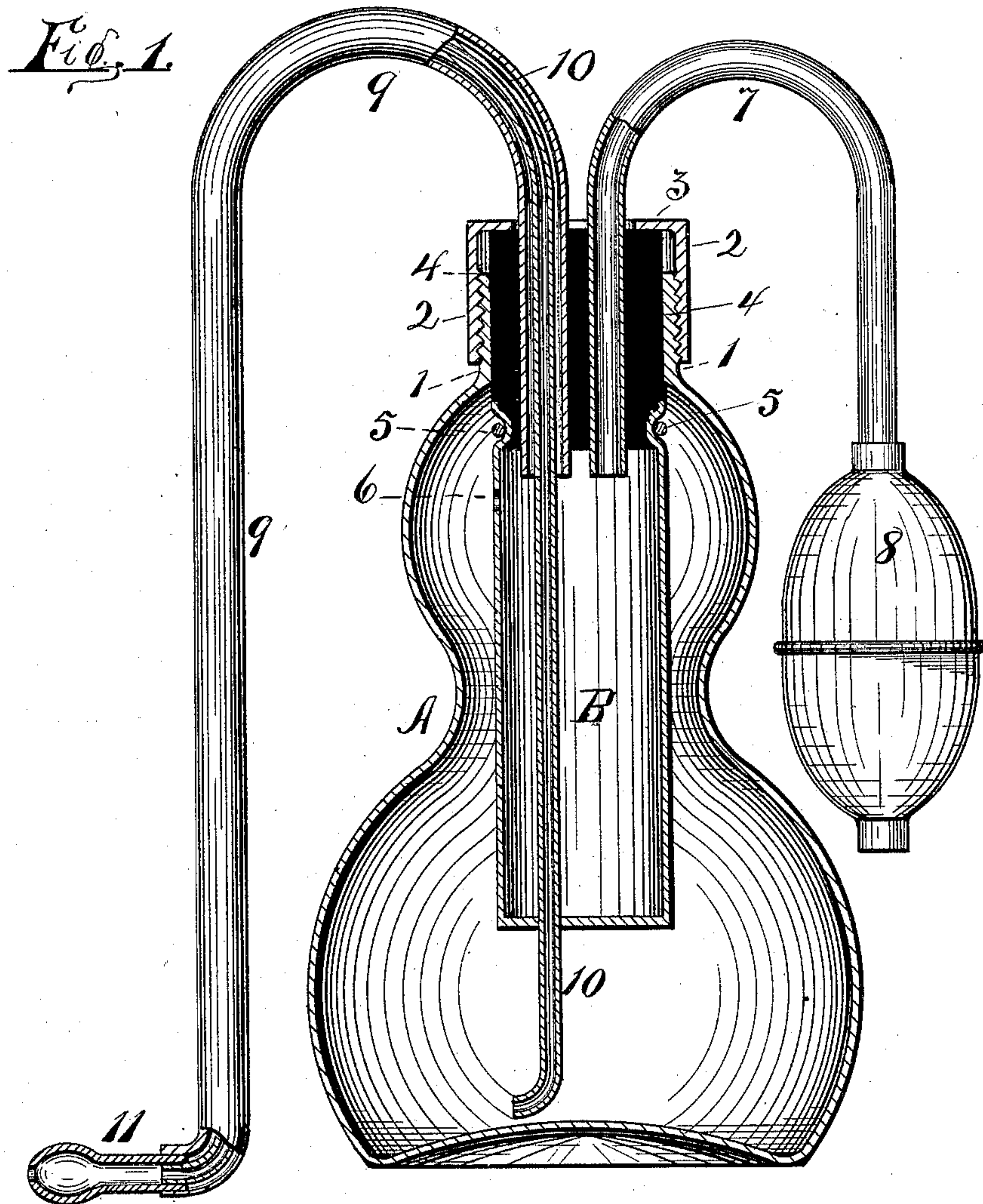
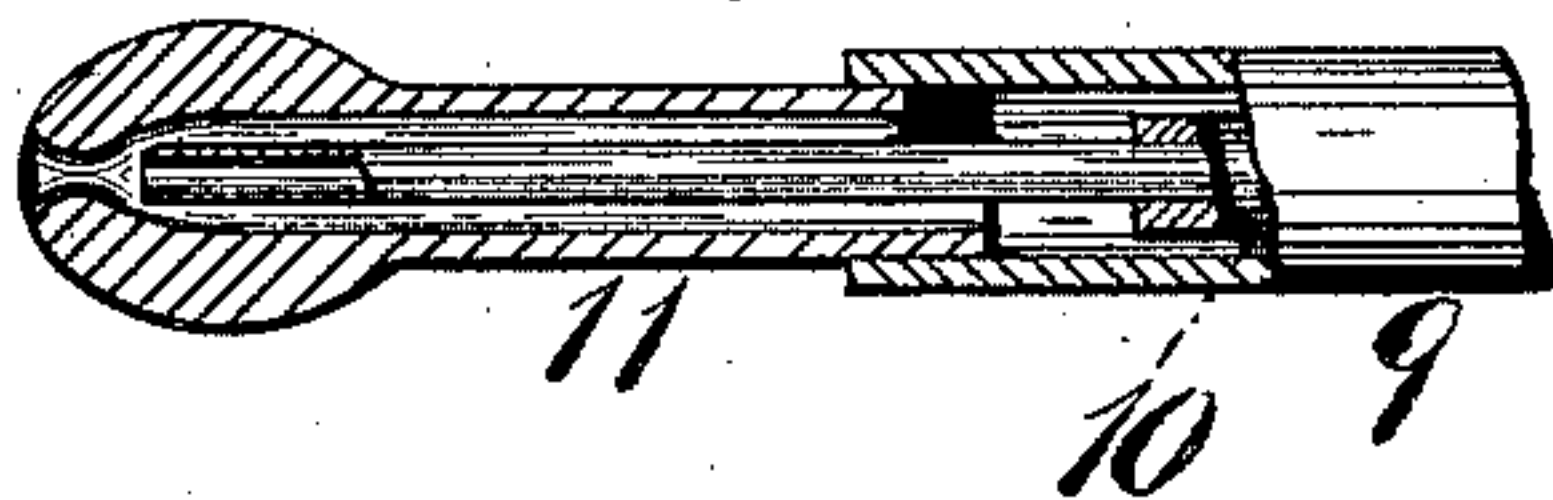


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

J. GILBERT JUSTIN, OF SYRACUSE, NEW YORK, ASSIGNOR TO HELEN DE WITT JUSTIN, OF SAME PLACE.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 398,513, dated February 26, 1889.

Application filed April 7, 1888. Serial No. 269,903. (No model.)

To all whom it may concern:

Be it known that I, J. GILBERT JUSTIN, of Syracuse, county of Onondaga, in the State of New York, a citizen of the United States, have invented certain new and useful Improvements in Atomizers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional elevation. Fig. 2 is an end view of the nozzle. Fig. 3 is an enlarged detail of the nozzle.

My invention relates to that class of atomizers which are designed to and do create a continuous spray.

My object is to produce an improved implement of that class adapted to use in the arts in which a much larger volume of spray is required.

My invention consists in the several novel features of construction and operation, which are hereinafter described, and which are specifically set forth in the claim hereto annexed. It is constructed as follows:

A is the outer (and in this implement the liquid-holding) bottle, provided with an externally-threaded neck, 1, upon which the cap 2 is screwed, provided with an inward flange, 3. Into this neck I insert the cork 4, which cork is provided with a circumferential groove adjacent to the bottom, and when the cap is screwed down the flange forces the cork down tightly into the neck of the bottle.

B is an air-chamber within the bottle, consisting of a flexible tube of rubber or other elastic material, closed at the bottom and having its upper end secured by the cord or wire 5 in the groove around the lower end of the cork, substantially as shown. In the side adjacent to the top of said tube is a small perforation, 6, connecting the air-chamber directly to the air-space in the upper part of the bottle.

The cork 4 is provided with two vertical openings—one to receive the air-tube 7, which is connected to the pressure-bulb 8, and the inner end of which opens into the air-chamber B, and the other opening receives the

double pipe or tube 9, consisting of a small tube fitting loosely within the other, leaving an air-space between the inner and outer tube. The inner tube, 10, is the liquid-tube, extending from the bottom of the bottle upward through the bottom of the air-chamber and thence extends to the nozzle 11.

In the drawings I show the spray-opening as consisting of a slit or slot, 12, through the outer end and communicating with the air and liquid space in the head of the nozzle in the ordinary manner.

Both of the tubes constituting the double discharge-tube are flexible, and are designed to be of at least sufficient length that the nozzle can naturally hang down at least as far as the bottom of the bottle, or below it, and on account of this flexibility the nozzle can be directed to any point desired.

By the use of this elongated and flexible double-tube discharge-pipe the bottle A can be of large size, and the discharge-tube, so long as the nozzle is held down substantially to the bottom of the bottle, will act as a siphon, and thus when once started the atomizer will work easier and produce better effect and with less air-pressure than when the nozzle is in a plane above the top of the bottle.

What I claim as my invention, and desire to secure by Letters Patent, is—

An atomizer consisting of a liquid-holder provided with a cork to close the same, a flexible air-chamber secured to the bottom of the cork, an air-supply tube connected to the air-chamber, a flexible discharge-pipe passing through the air-chamber into the liquid-chamber and inclosed within a discharge-pipe for air, and a spray-nozzle at the end of the discharge-pipe, substantially as described.

In witness whereof I have hereunto set my hand this 21st day of March, 1888.

J. GILBERT JUSTIN.

In presence of—

C. W. SMITH,

H. P. DENISON.