

**T. J. HOLMES.**

## ATOMIZER.

No. 176,311.

Patented April 18, 1876.

Fig: 1.

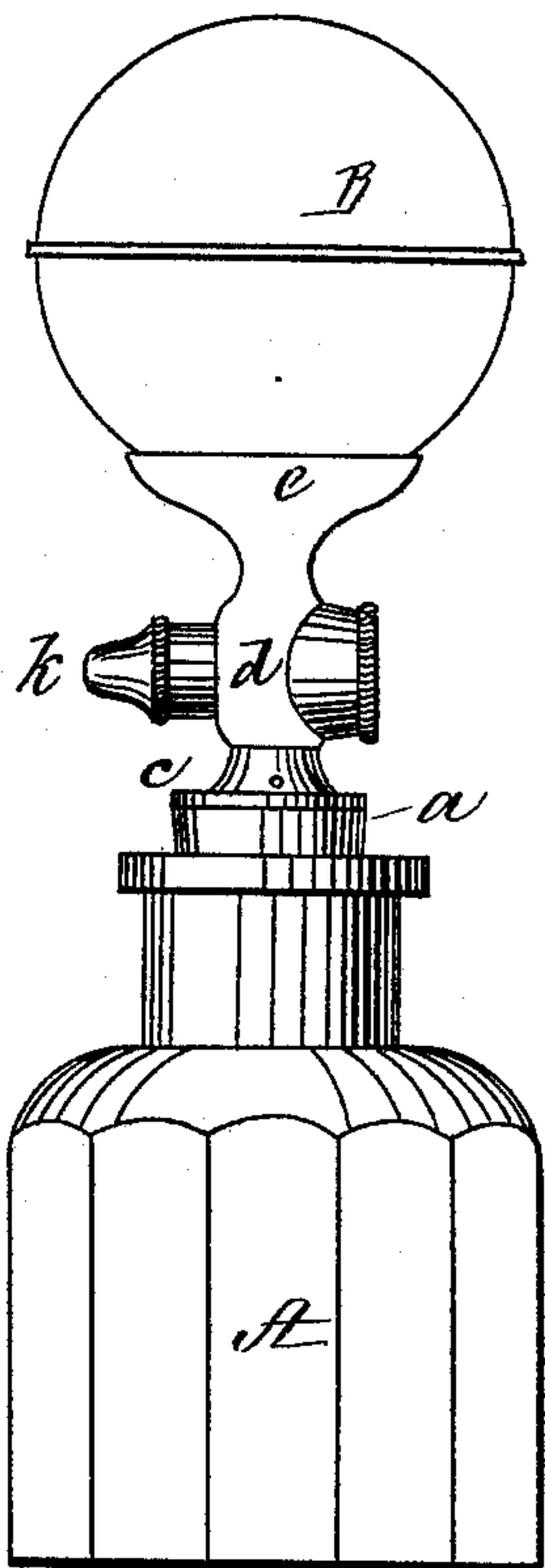
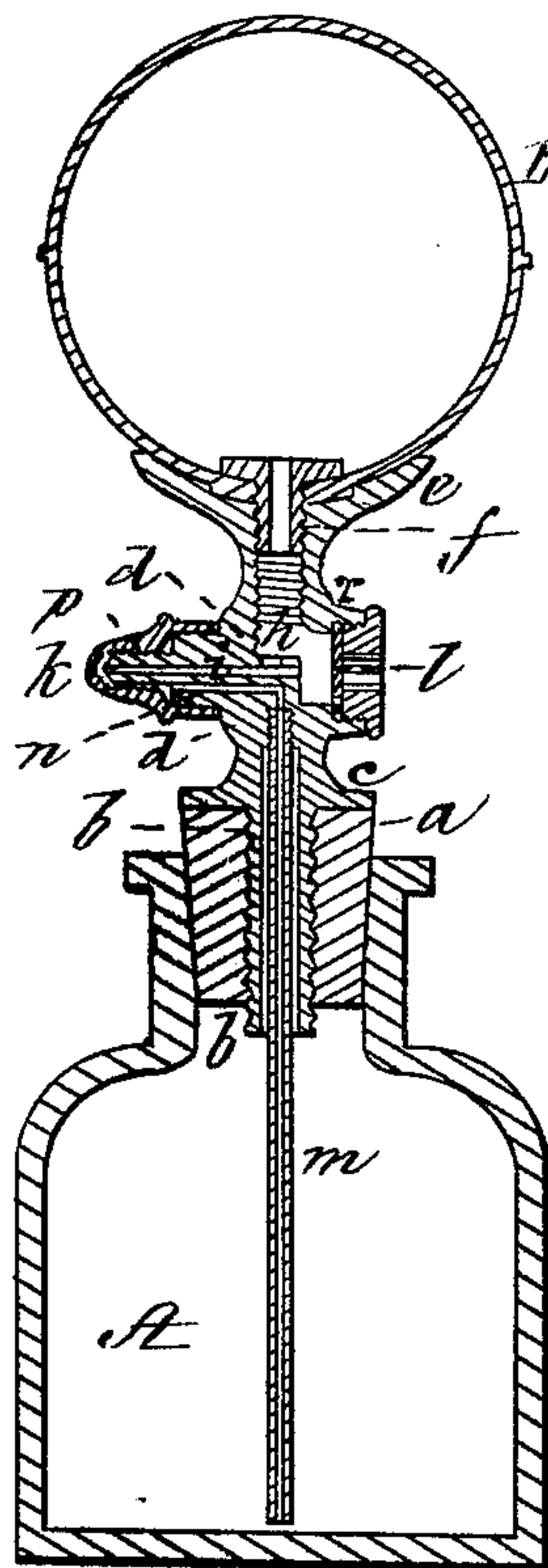


Fig. 2.



Witnesses,  
J. R. Turk  
W. J. Lambbridge

Inventor,  
Thomas J. Holmes,  
Per Teschemacher & Stearns,  
Attorneys.

# UNITED STATES PATENT OFFICE.

THOMAS J. HOLMES, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN ATOMIZERS.

Specification forming part of Letters Patent No. **176,311**, dated April 18, 1876; application filed March 3, 1876.

*To all whom it may concern:*

Be it known that I, THOMAS J. HOLMES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Atomizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of an atomizer constructed in accordance with my invention. Fig. 2 is a vertical section through the center of the same.

My invention relates to certain improvements in atomizers; and consists in the arrangement of the air-valve on the opposite side of the central portion to that in which the discharge-orifice is located, whereby the necessity of providing the air-bulb with a valve and the objections incident thereto are avoided.

My invention also consists in the combination of a hollow screw-shank with the central portion, the bulb-support, and the valve-support, all cast in the same piece, by which construction the stopper is securely held in place, and when worn out can be readily removed from the screw-shank and replaced by a new one.

My invention also consists in providing the central portion with a screw-thread for the reception of the upper end of the liquid-tube, in combination with the hollow stopper-screw, which construction admits of the ready connection and removal of the liquid-tube.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a bottle, in the mouth of which is fitted the stopper *a*, provided with a central hole extending vertically through it for the passage of a screw-shank, *b*, projecting down from the under side of a metallic cap, *c*, formed at the base of a central portion, *d*, at the top of which is formed the cap-shaped support *e*, to which the air-bulb B is secured by means of a hollow screw,

*f*, which communicates with a vertical passage, *h*, leading into the horizontal air-passage *i*, at one end of which is located the atomizing point or discharge-orifice *k*, and at the other end the valve *l*, through which the air for supplying the bulb is admitted, the valve being situated within the part *r* of the central portion *d* which forms the valve-support. The bottom of the central portion *d* is provided with a screw-thread, into which is screwed the upper end of the tube *m*, through which the liquid in the bottle is forced into a horizontal passage, *n*, thence through a channel formed by cutting away the under side of the screw P to the atomizing-point or discharge-orifice *k*, where it is dissipated into spray by the current of air passing through the passage *i*, which creates a vacuum at this point, and thus causes the liquid to be forced up the tube *m* in a well-known manner.

The hollow screw-shank *b*, bulb-support *e*, and central portion *d* between them are cast in a single piece, whereby the construction is simplified, the cost reduced, and the liability to get out of order is diminished.

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

1. The arrangement of the air-valve *l* on the opposite side of the central portion *d* to that in which the discharge-orifice is located, substantially as and for the purpose set forth.

2. The hollow screw-shank *b*, in combination with the central portion *d*, bulb-support *e*, and valve-support *r*, all cast in the same piece, substantially as and for the purpose described.

3. The central portion *d*, provided with a screw-thread for the reception of the upper end of the liquid tube *m*, in combination with the hollow screw-shank *b*, substantially as and for the purpose described.

Witness my hand this 24th day of February, 1876.

THOS. J. HOLMES.

In presence of—

N. W. STEARNS,  
W. J. CAMBRIDGE.