

(No Model.)

T. W. HOUCHIN, C. B. RIKER & W. P. HOUCHIN.

ATOMIZER AND INSECT DESTROYER.

No. 361,010.

Patented Apr. 12, 1887.

FIG. 1.

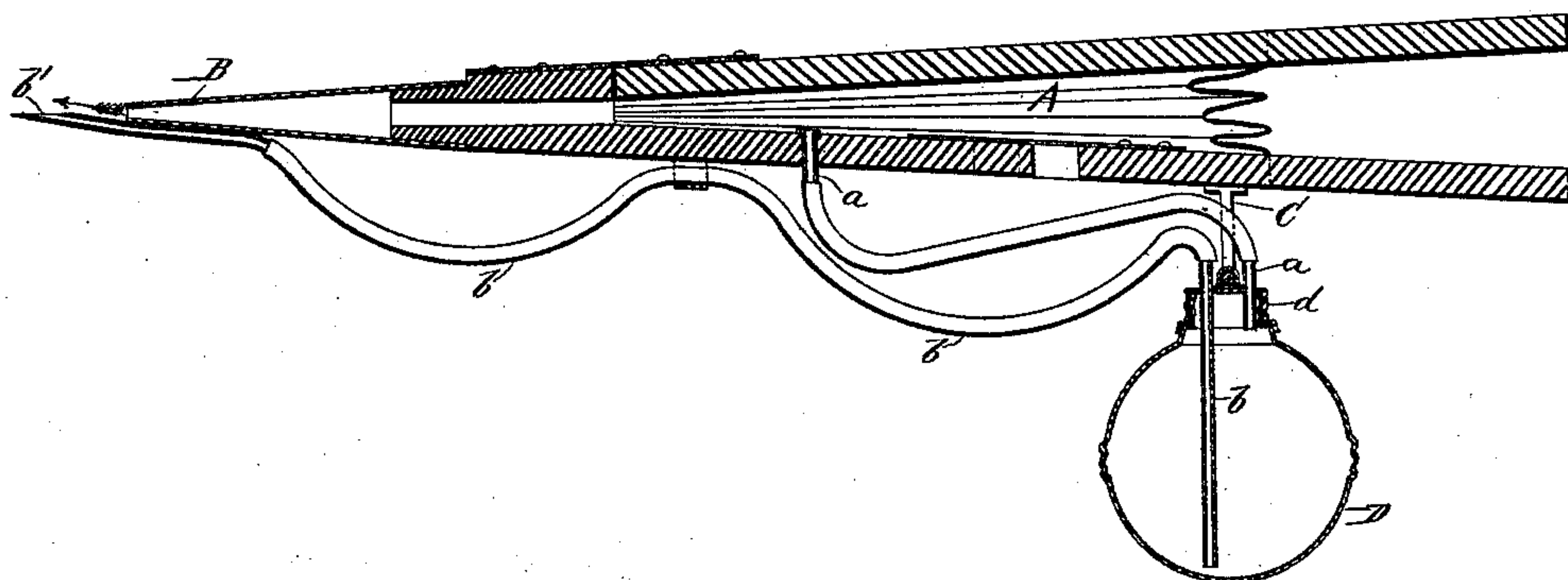
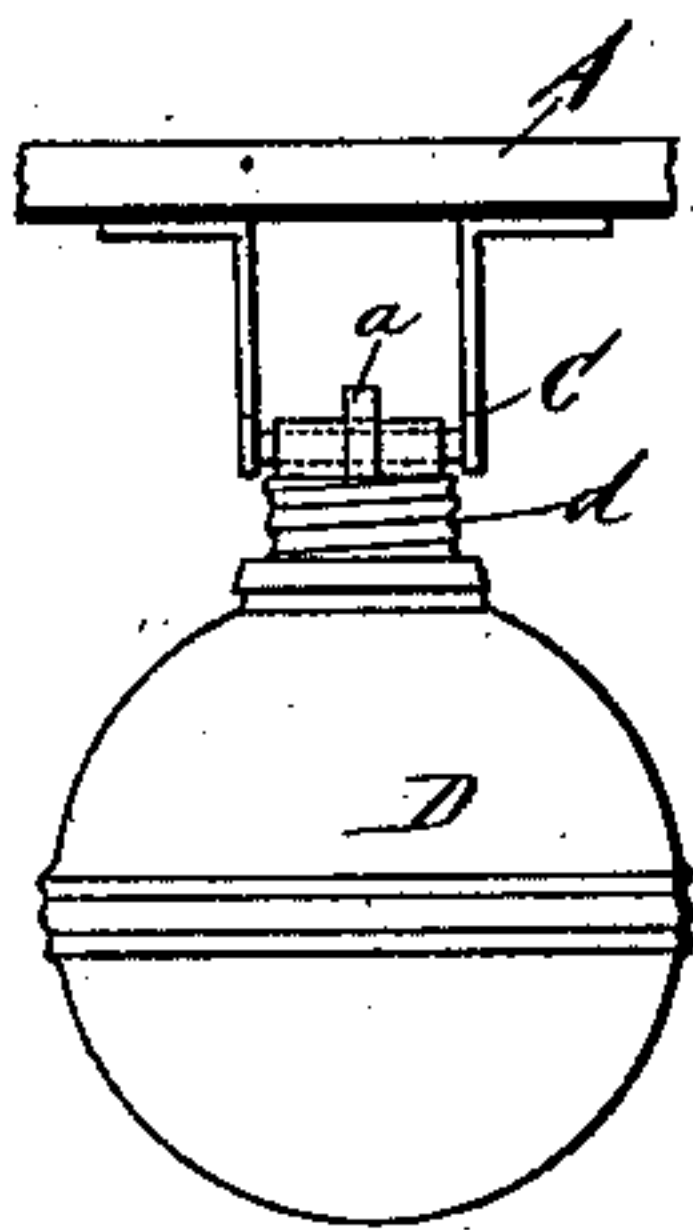


FIG. 2.



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# UNITED STATES PATENT OFFICE.

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## ATOMIZER AND INSECT-DESTROYER.

SPECIFICATION forming part of Letters Patent No. 361,010, dated April 12, 1887.

Application filed October 28, 1886. Serial No. 217,904. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS W. HOUCHIN, CHARLES B. RIKER, and WALDO P. HOUCHIN, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Atomizers and Insect-Destroyers, of which the following is a description.

Our invention relates to atomizers, and is a new and improved atomizer whereby we are able to thoroughly separate the atoms of liquid and discharge them with great force.

Our invention is chiefly adapted for disinfectants and insect-destroying liquid.

Our invention consists of a bellows of ordinary construction and having attached to it an independent reservoir or case to hold whatever substance is to be forced out. The reservoir is provided with a tube leading from its top and terminating in the bellows at about the center of one of its sides, and also another tube leading from its bottom and passing through its top or side and terminating at a point just in front of the end of the nozzle of the bellows.

In the accompanying drawings, Figure 1 is a sectional view of our improved atomizer. Fig. 2 is a view of the swivel and top of the reservoir.

Referring to Fig. 1, A is a bellows of ordinary construction, having the nozzle B. On the under side of the bellows is suspended, by means of the swivel C, the reservoir D, having the movable top or cap *d* screwed on it. Leading from the bottom A, at about the point indicated in the drawings, is the tube *a*, terminating in the top of the reservoir. The reservoir is also provided with the tube *b*, leading from the bottom thereof and terminating at a point just in front of the nozzle of the bellows, as shown. Some part of the tubes just described

must be flexible, as they must adapt themselves to the position of the reservoir, which is governed by the position of the bellows, the swivel C allowing it to swing; but the tube should be rigid where it terminates at the nozzle of the bellows and from the point where it enters reservoir to the bottom thereof. The liquid is placed in the reservoir and the latter screwed into the cap *d*, and the bellows worked in the usual manner, which causes the air to pass out through the nozzle B and the tube *a*, as indicated by the arrows. The air that passes through the tube *a*, and also the suction caused by the force of the air coming from the nozzle of the bellows, forces the contents of the reservoir through the tube *b* and out through the opening *b'*, where it is met by the stream of air coming from the nozzle of the bellows, which separates its atoms and forms it into a spray.

What we claim is—

In an atomizer or insect-destroyer, the combination of the bellows *a*, the reservoir D, attached to the under side of the bellows, the tube *a*, leading from the air-chamber of the bellows to the reservoir D and terminating within the same at or near the top thereof, the tube *b*, extending from near the bottom of the reservoir D and terminating at or near the extremity of the nozzle of the bellows, and the swivel C in the connection between the reservoir D and the bellows, substantially as described, and for the purposes set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

THOS. W. HOUCHIN.  
CHAS. B. RIKER.  
WALDO P. HOUCHIN.

Witnesses:

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