

(No Model.)

A. B. TUTTON.

ATOMIZER.

No. 347,750.

Patented Aug. 17, 1886.

Fig. 1.

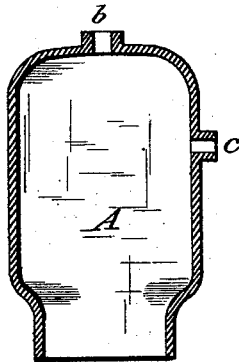


Fig. 3.

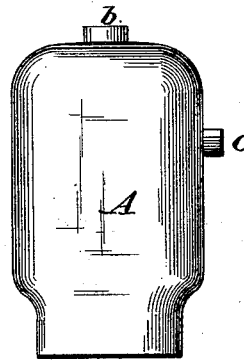
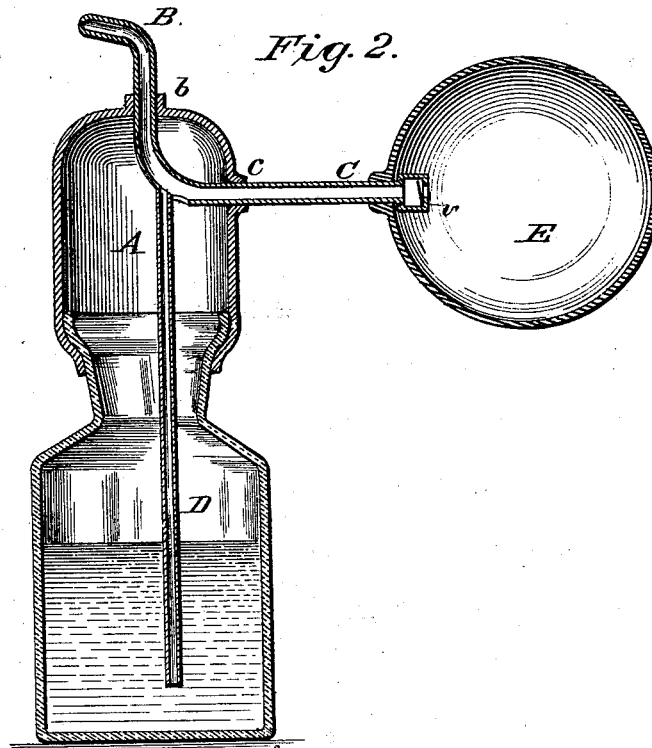


Fig. 2.



WITNESSES:

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ANAXIMANDER B. TUTTON, OF SIOUX FALLS, DAKOTA TERRITORY.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 347,750, dated August 17, 1886.

Application filed May 10, 1886. Serial No. 201,721. (No model.)

To all whom it may concern:

Be it known that I, ANAXIMANDER B. TUTTON, of Sioux Falls, in the county of Minnehaha, Dakota Territory, have invented a new and useful Improvement in Bulb - Joints for Atomizers, of which the following is a specification.

In the drawings, Figure 1 is a sectional view of the device; and Fig. 2 is a sectional view of the device when attached to the atomizer and to the bottle containing the liquid to be atomized or sprayed. Fig. 3 is a perspective view of the device.

My invention relates to an improvement in bulb-joints for atomizers, for the purpose of connecting the condensing apparatus and the tubes of an atomizer to and with the bottles containing the liquid to be atomized or sprayed.

The object of my invention is to furnish a device which may be attached to ordinary bottles or vials of any size, and when so attached to a bottle or vial containing fluid to be atomized or sprayed, to furnish a joint or connection joining or connecting the bottle to and with the condensing apparatus and the tubes of an atomizer, for the purpose of dispersing the liquid from the bottle in the form of a spray and projecting the same onto wounds or morbid surfaces or other surfaces, and also which shall at the same time furnish a device for the production of a continuous or non-intermittent flow of the spray from the bottle through the discharge-tube.

In the drawings, A represents a thin elastic soft-rubber bulb whose one end or lower end is provided with an opening adapted to be stretched over the neck of any bottle or vial. Through the wall of this bulb, preferably through the wall of the other end or upper end, there passes a hole, *b*, adapted to receive and be closed by the discharge-tube B of an atomizer. Through the wall of this bulb, preferably through a side wall, there passes a hole, *c*, adapted to receive and be closed by the air-tube C of the compressor of an atomizer.

In an atomizer there is a pendent tube, D. The lower end of this tube is immersed in the liquid in the bottle, and its upper end is in position to discharge the liquid into the current of air which is set in motion by the compression

of the compressor E. In using my device with such atomizers this tube D is pendent within my device and from that into the bottle containing the liquid.

It will be seen from the foregoing that when the lower end of my device is stretched over the neck of a bottle or vial it forms a joint to receive and hold in the hole *b* the discharge-tube B of an atomizer, and to receive and hold in the hole *c* the air-tube C of the condensing apparatus of an atomizer, thus furnishing a joint or connection joining or connecting the bottle to and with the condensing apparatus and tubes of an atomizer, and in such a manner as to allow the lower end of the pendent tube D of the atomizer to be immersed in liquid within the bottle and to allow the upper end of said pendent tube D to open into the current of air which is established by the compression of the compressor E of the atomizer; and from the foregoing it will be seen that when a bottle or vial containing liquid for atomization is by my device joined, as above described, to the condensing apparatus and tubes of an atomizer my device furnishes a dilatable and contractible air-chamber for the purpose of producing a flow from the discharge-tube of the atomizer alternate with such flow as produced directly by the compression of the compressor of the atomizer, and thus producing a continuous or non-intermittent flow from said discharge-tube, for upon compression of the compressor E and the consequent propulsion of the air therefrom through the air-tube C into bulb A and into the unoccupied space within the bottle, the air being unable to escape through the discharge-tube B as fast as it is supplied through air-tube C, and its return to compressor E being prevented by a valve, *v*, it is confined in bulb A in greater volume than the capacity of the bulb A in its undilated condition. The air thus confined does by its elasticity forcibly dilate the bulb A, and this dilation of bulb A continues as long as air is being forced into bulb A. Now, when compression upon the compressor E is relaxed, in order that expansion of that compressor may take place to provide for an immediately-succeeding compression, the dilated bulb A, by

reason of its elasticity, contracts with such force as to continue the discharge throughout the time of such contraction, the liquid being raised through the tube D by pressure on its surface, and thus the current of air and the discharge of spray from tube B is maintained throughout the time occupied by the expansion of the compressor E, as above described.

In the use of an atomizer not provided with a dilatable and contractible air-chamber, there is in the flow of the spray an intermission nearly equal to the time occupied by the re-expansion of the compressor, and this intermission is hurtful, in that it is a loss of time, and as in the case of the use of anæsthetics locally a loss of the remedy occurs during the intermission.

Having thus described my invention, what I claim as new is—

1. An elastic bulb, A, for an atomizer, hav-

ing an opening adapted to be distended over the neck of any bottle, and provided also with an inlet and outlet orifice for the atomizer-tube, substantially as described.

2. The soft-rubber bulb A, having an opening adapted to fit the neck of a bottle, and inlet and outlet orifices *c b* for the atomizer-tube, in combination with the valved tube B, compressor E, and pendent tube D, substantially as shown and described.

3. The soft-rubber bulb A, having an opening adapted to fit the neck of a bottle, and inlet and outlet orifices *c b* for the atomizer-tube, in combination with the valved tube B and pendent tube D, substantially as shown and described.

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Witnesses:

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