

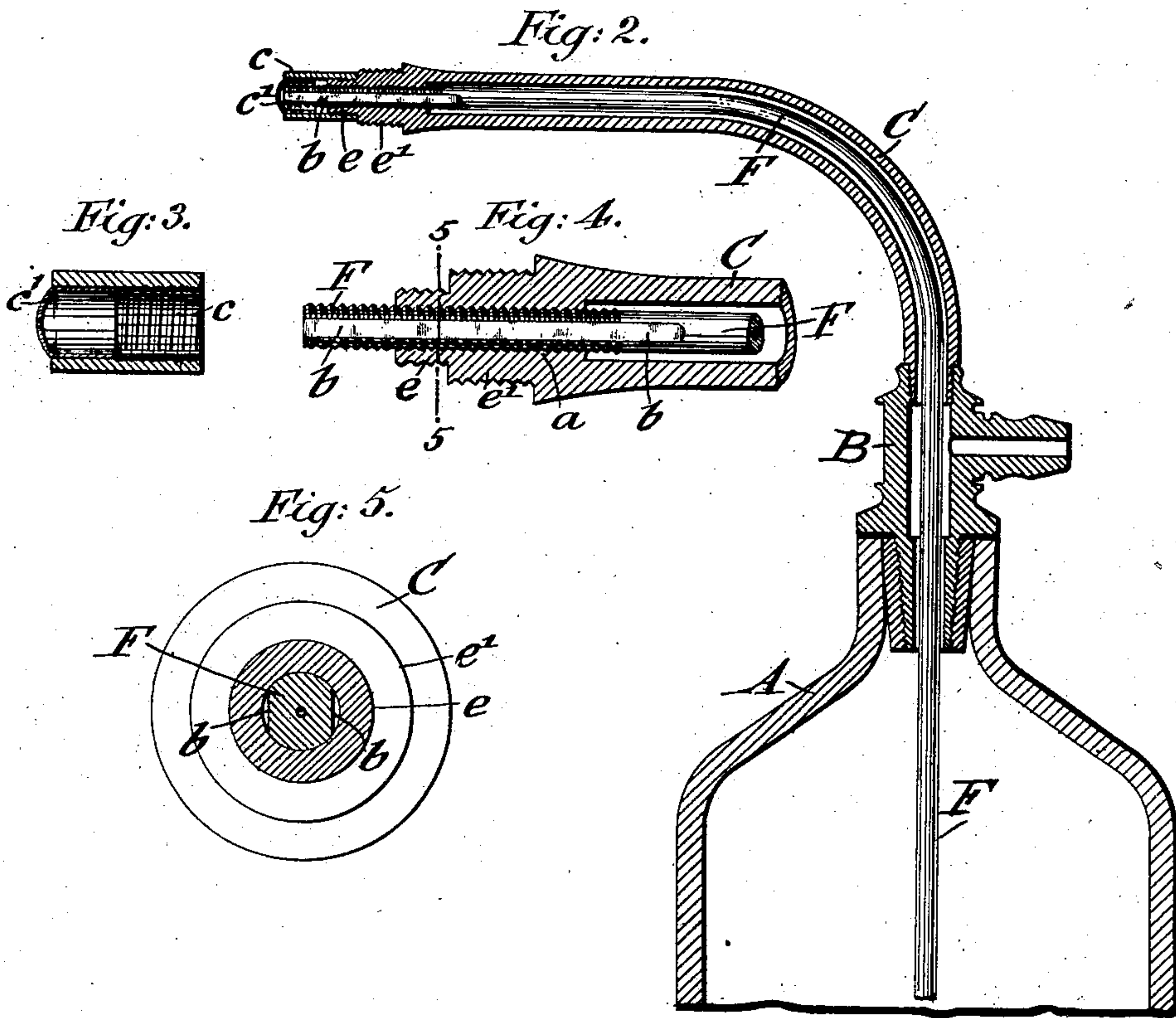
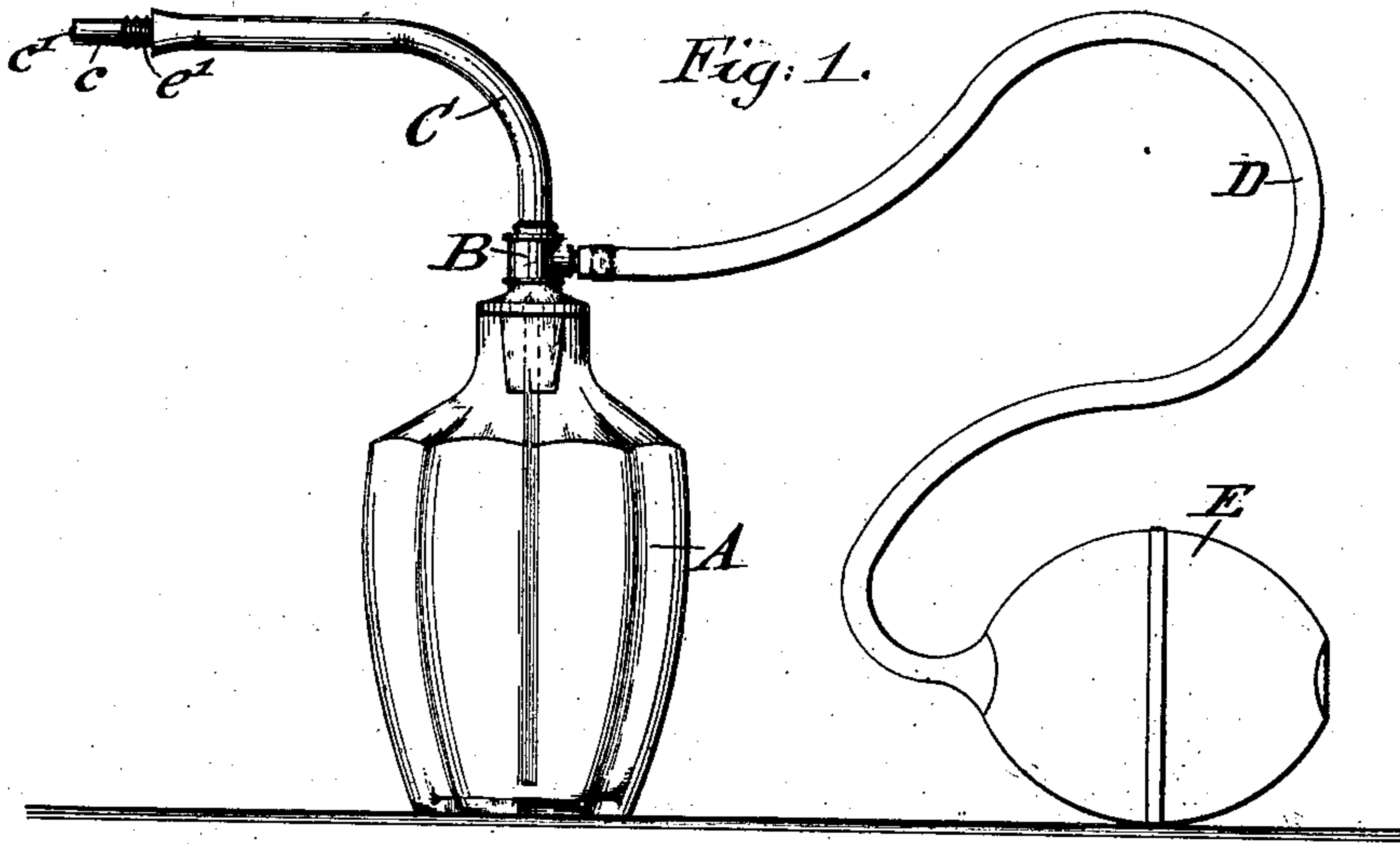
No. 701,711.

Patented June 3, 1902.

H. GOLTERMANN.
ATOMIZER.

(Application filed May 10, 1901.)

(No Model.)



WITNESSES:
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Fig. 6.

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HERMANN GOLTERMANN, OF NEW YORK, N. Y.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 701,711, dated June 3, 1902

Application filed May 10, 1901. Serial No. 59,606. (No model.)

To all whom it may concern:

Be it known that I, HERMANN GOLTERMANN, a citizen of the United States, residing in New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Atomizers, of which the following is a specification.

This invention relates to atomizers for the spraying of perfumery, oils, or other liquids for toilet or medical purposes; and the invention consists of an atomizer comprising a closed vessel containing the liquid to be atomized, an air-tube passing through the cap of the vessel, means for supplying air under pressure to said vessel and air-tube, a suction-tube located in said air-tube and having a threaded outer end screwed into the outer end of the air-tube, said suction-tube being provided with flattened sides for permitting the passage of air between the air-tube and suction-tube at their outer ends, and a nozzle screwed upon the air-tube; and the invention consists, further, of certain details of construction and combinations of parts, which will be fully described hereinafter and finally pointed out in the claim.

In the accompanying drawings, Figure 1 represents a side elevation of my improved atomizer. Fig. 2 is a vertical central section, on a larger scale than Fig. 1, through the air-tube and a portion of the liquid vessel. Fig. 3 is a longitudinal section through the nozzle. Fig. 4 is a similar section through the air and suction tubes at their outer ends, Figs. 3 and 4 being drawn on a larger scale than Fig. 2. Fig. 5 is a transverse section on line 5 5, Fig. 4, on a larger scale; and Fig. 6 is a side view of an auxiliary nozzle, together with the outer end of the air-tube and the nozzle thereon.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a glass or other suitable vessel in which the medicinal or other liquid to be atomized is placed. The mouth of the vessel is tightly closed by the hollow cap B, in which is secured the end of an air-tube C. The cap is connected with the bulb E by a flexible tube D for applying air under pressure to the air-tube and through the cap B to the interior of the vessel A. Through the air-tube passes a suction-tube F, which extends at its

inner end to the lower part of the vessel A, while the outer end is provided with a screw-thread engaging the contracted end portion *a* of the air-tube, said end portion being provided with a corresponding interior thread. The air-tube is provided at its outer end with two shoulders *e e'*, both of which are exteriorly threaded. The suction-tube passes through the bore of the air-tube to the outside of the same and is provided with flattened sides *b*, so as to permit the free passage of the air from the air-tube to the nozzle *c*. The nozzle *c* is made of cylindrical shape, and into the end of the same is secured a cup-shaped portion or cap *c'*, preferably of aluminium, which is provided with a central atomizing discharge-opening. The cap is firmly retained in position in the body of the nozzle by any suitable means, preferably, however, by friction produced by shrinking the nozzle-body upon the cap in the process of manufacture. The nozzle *c* is screwed over the first smaller exterior-threaded shoulder *e*. When in position, the atomizer is used in the usual manner, the air passing freely and unobstructedly along the flattened portions *b* of the end of the suction-tube into the nozzle and producing the suction of the liquid and the atomizing of the same as it passes through the central discharge-perforation of the cap *c'*.

When the atomizer is to be used for spraying the nose, mouth, or other parts, it is preferable to screw over the usual nozzle a separate auxiliary nozzle, the same being screwed over the shoulder *e'*, of greater diameter than the shoulder *e*, and fitting bodily over the nozzle *c*, as shown in Fig. 6, until it abuts against the end of the air-tube. The auxiliary nozzle shown consists of a cylindrical body *d*, provided with an interior screw-thread and with a suitable discharge-tube *d'*.

The advantages of the sheet-metal cap in the nozzle are that the breaking of the nozzle about the orifice, which often occurs in ordinary hard-rubber nozzles from inserting pins or other devices when the orifice is stopped up, is obviated, inasmuch as the metal can resist the action of the cleaning-pin without being injured. The hole or orifice should always be of proper size, and it is of importance to prevent any injury to the escape-orifice or splitting of the nozzle by careless hand-

ling. Another advantage is the free and unobstructed passage of the air required for the suction along the sides of the suction-tube to the nozzle. The passages are of sufficient size
5 to permit ready flow of a good quantity of air, so as to produce a powerful spray, and are not liable to become clogged.

Having thus described my invention, I claim as new and desire to secure by Letters
10 Patent—

The combination of a vessel containing liquid to be atomized, a cap for said vessel, an air-tube connected with said cap, means for supplying air under pressure to said vessel
15 and air-tube, said air-tube having a contracted and interiorly-threaded outer end, a suction-tube located in the air-tube and provided at its outer end with a screw-thread engaging

the contracted portion of the air-tube, and with flattened sides between the suction and
20 air tubes at their outer ends, said air-tube being provided with two exteriorly-threaded shoulders of different size, the smaller in front, a nozzle of less diameter than the larger
25 shoulder screwed upon the smaller shoulder, said nozzle being provided with a metallic perforated cap, and an auxiliary nozzle screwed upon said larger shoulder and inclosing the smaller nozzle, substantially as set forth.

In testimony that I claim the foregoing as
30 my invention I have signed my name in presence of two subscribing witnesses.

HERMANN GOLTERMANN.

Witnesses:

PAUL GOEPEL,
JOSEPH H. NILES.