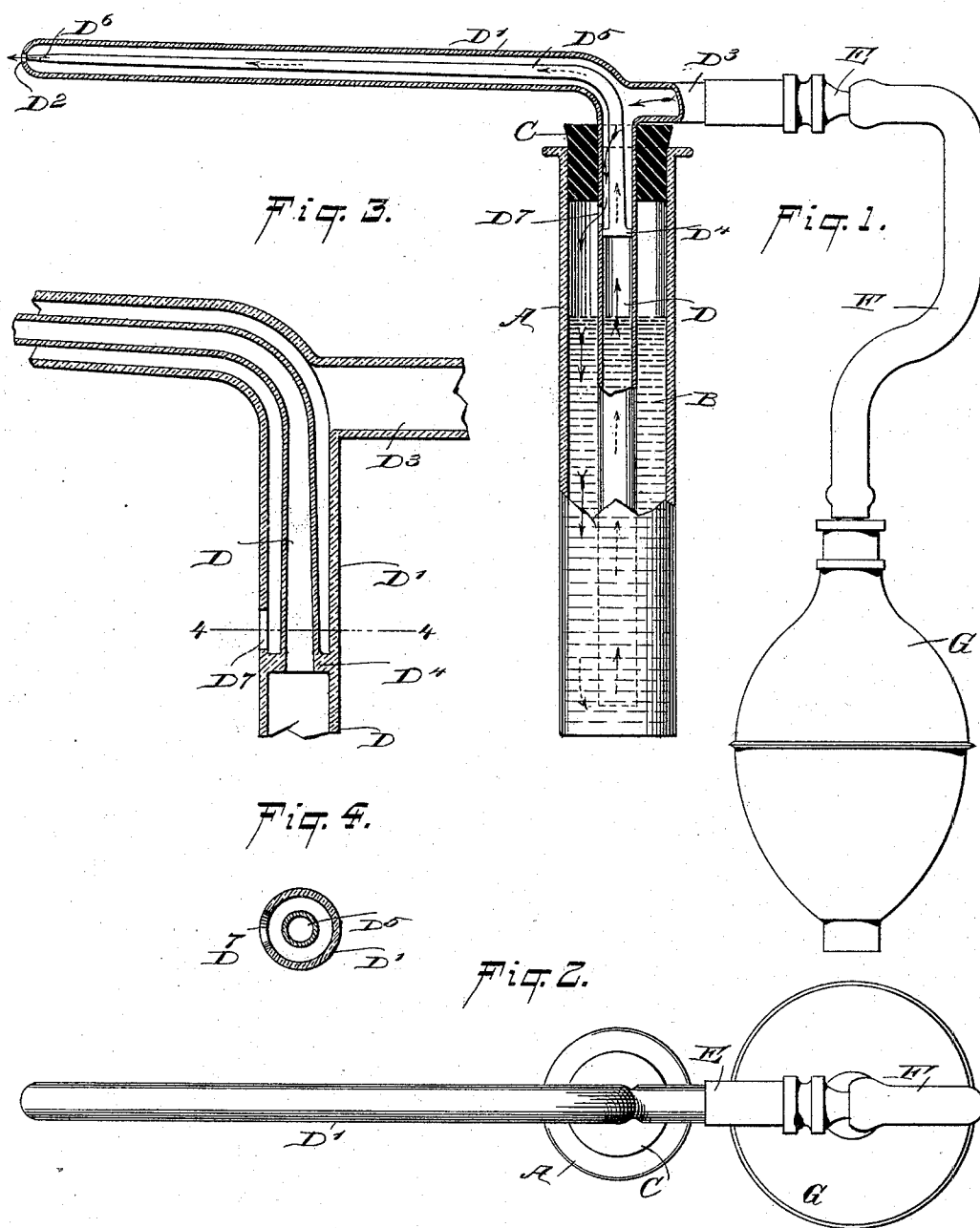


(No Model.)

A. HEINZ.
ATOMIZER.

No. 534,882.

Patented Feb. 26, 1895.



WITNESSES:

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ALBERT HEINZ, OF BROOKLYN, NEW YORK, ASSIGNOR TO CHARLES BESELER, OF JERSEY CITY, NEW JERSEY.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 534,882, dated February 26, 1895.

Application filed June 18, 1894. Serial No. 514,952. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HEINZ, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Atomizer, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved atomizer, which is comparatively simple and durable in construction, and arranged to cause the spray to cease immediately, whenever the operator releases the pressure on the bulb.

The invention consists in certain parts and details, and combinations of the same, which will be hereinafter fully described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged sectional side elevation of part of the improvement; and Fig. 4 is a sectional plan view of the same on the line 4—4 of Fig. 3.

The bottle or other vessel A containing the liquid B to be sprayed, is closed at its mouth by a suitable stopper C, supporting the liquid raising, air and liquid discharge pipes, all formed integral one with the other and preferably made of glass, but other suitable material may be employed. The liquid raising pipe D extends at its lower end within a short distance of the bottom of the vessel A, and continues at its upper end into the air pipe D', extending through the stopper C, and curved at its outer end into a horizontal part, as illustrated in Fig. 1.

The outer end of the air pipe D' is contracted and formed with a discharge opening D² for the escape of the spray. A branch D³ is formed on the air pipe D', at or near its bend and outside of the stopper C, and this branch D³ is connected by a suitable coupling E with the flexible tube F connected with the bulb G.

In the upper end of the liquid raising pipe D is formed a transverse partition D⁴, dividing the said pipe from the air pipe D⁵ opening into the branch D³ and extending cen-

trally within the air pipe D', to be formed at its outer end with a nozzle D⁶ arranged in close proximity to the opening D² in the air pipe D'. A port D⁷ is formed directly above the partition D⁴ in the air pipe D', so that a part of the air passing into the said air pipe from the bulb G, at the time the latter is actuated, also passes through the port D⁷ into the upper end of the vessel A, to press upon the liquid B, to force the latter into and through the liquid raising pipe D and the liquid discharge pipe D⁵.

Now, it will be seen that in order to use the atomizer the operator has to press the bulb G in the usual manner so as to force air through the branch pipe D³ into the air pipe D', part of the air passing into the vessel A through the port D⁷ as above described, and part passes along the pipe D' to the opening D², to meet and press on the liquid passing through the discharge pipe D⁵, so that the liquid is atomized and leaves the opening D² in a spray. When the operator releases the pressure on the bulb G, then the air in the upper part of the vessel A can readily recede through the port D⁷, part of the pipe D' and branch pipe D³, back into the coupling E, tube F and bulb G, so that the pressure on the liquid in the liquid raising pipe D is released and somewhat diminished, to cause a back-flow of the liquid in the discharge pipe D⁵. Thus, as soon as the pressure is released, spraying at the outer end of the air pipe D ceases. The liquid in the discharge nozzle D⁶ recedes about one eighth to one quarter of an inch in an apparatus of the size shown in Fig. 1, whenever the operator releases the pressure on the bulb G.

This atomizer is especially serviceable for the use of physicians and others desiring to spray an affected part of the human body for a short time only, in cases where only a single spray is required or desirable.

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

1. An atomizer, comprising a pipe formed with a branch adapted for connection with an air bulb, and with an annular transverse partition whereby the said pipe is divided into a lower part adapted to serve as a liquid

raising pipe, and an upper part adapted to serve as an air pipe, the air pipe being provided with an opening above the said partition, and an interior pipe arranged in the
5 said air pipe and communicating with the liquid raising pipe to form a liquid discharge pipe, substantially as described.

2. The combination of the liquid raising pipe, the air pipe located in the continuation
10 thereof and having essentially the same diameter, the annular partition separating the

liquid raising pipe from the air pipe, the latter being provided with an opening above the partition, and the liquid discharge pipe arranged within the air pipe and communicating with the liquid raising pipe, substantially
15 as described.

ALBERT HEINZ.

Witnesses:

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