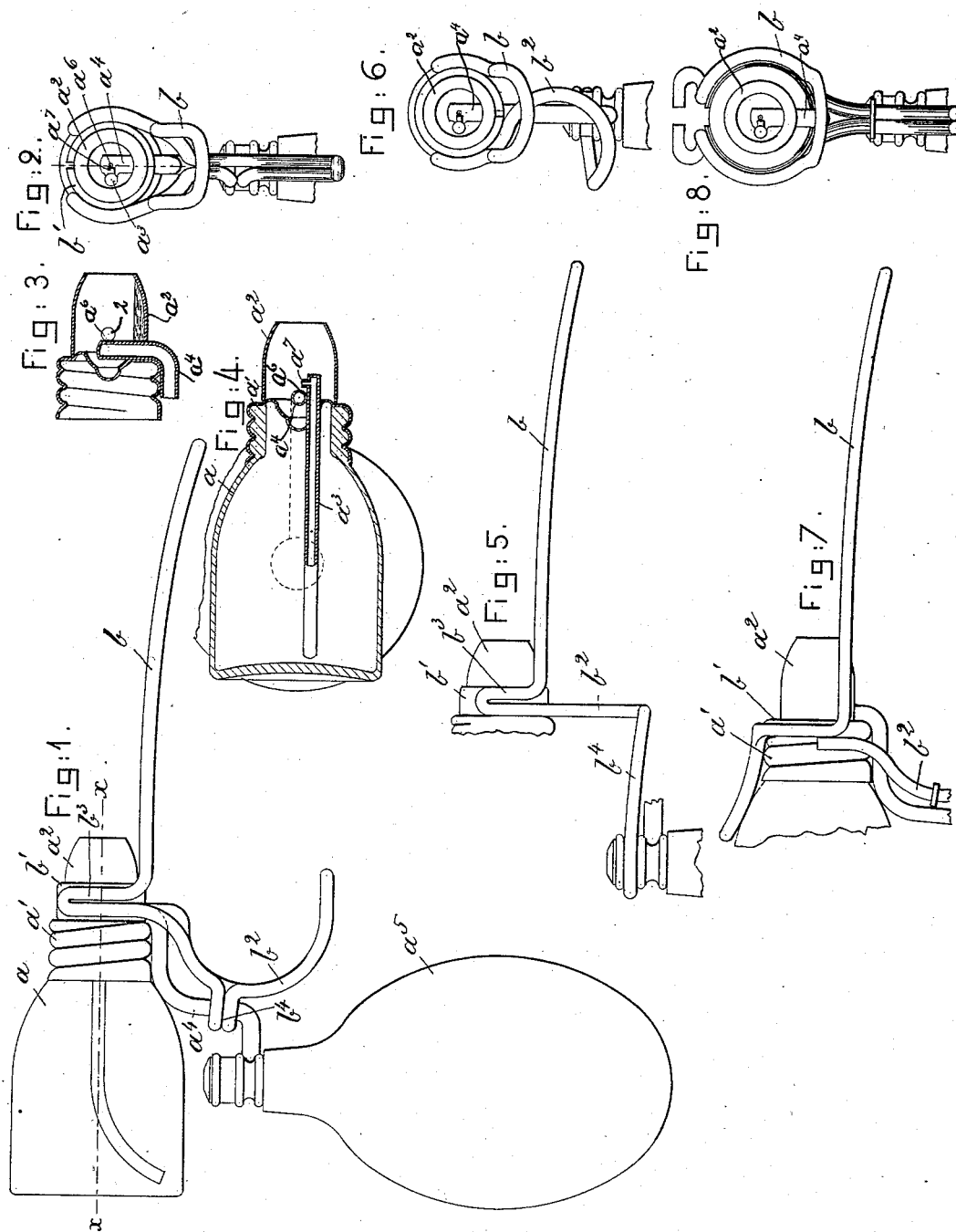


(No Model.)

A. M. SHURTLEFF.
ATOMIZER.

No. 524,958.

Patented Aug. 21, 1894.



Witnesses.

Edward F. Allen.
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UNITED STATES PATENT OFFICE.

ASAHEL M. SHURTLEFF, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
CODMAN & SHURTLEFF, OF SAME PLACE.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 524,958, dated August 21, 1894.

Application filed November 12, 1891. Serial No. 411,691. (No model.)

To all whom it may concern:

Be it known that I, ASAHEL M. SHURTLEFF, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Atomizers, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve the construction of atomizers, having particular reference to a novel form of tongue-depressor.

In accordance with this invention, the tongue-depressor comprises a tongue-holding portion, a supporting ring or equivalent to which it is attached and by means of which it is supported on the atomizer; and a finger piece or equivalent is provided, which may be used with equally good results as a finger piece, or as a thumb piece, according to circumstances,—that is to say, whether one person is using the atomizer to spray the mouth or throat of another person, or whether the person is using the atomizer to spray his own mouth or throat.

The tongue-depressor is herein represented as made essentially of wire, in order that it may be cheaply manufactured, light, and at the same time durable, yet so far as the essential features of my invention are concerned, such particular construction is not important.

The atomizer to which the tongue-depressor is herein represented as applied, is substantially that shown in United States Patent No. 447,064, dated February 24, 1891; yet the construction of said atomizer has been changed in some particulars to insure a proper and successful operation of the apparatus.

Figure 1 shows in side elevation an atomizer provided with a tongue-depressor embodying this invention; Fig. 2, a right-hand end view of the atomizer shown in Fig. 1, the air bulb or forcing device being broken away; Fig. 3, a vertical section of the cap and nozzle shown in Fig. 1; Fig. 4, a horizontal section of the atomizer shown in Fig. 1, taken on the dotted line $x-x$, the tongue-depressor being omitted; Figs. 5 and 6, side and end views respectively of a modified form of tongue-depressor, and Figs. 7 and 8, side and

end views respectively of another modified form of tongue-depressor.

The bottle a , cap a' , nozzle a^2 erected thereon, liquid tube a^3 , air tube a^4 , and air forcing device a^5 , are all substantially as shown in United States Patent No. 447,064, before referred to. As this form of atomizer is herein represented as designed to be used in connection with a tongue-depressor, I have reconstructed some of the parts for purposes to be set forth.

The air tube a^4 within the nozzle a^2 is closed at the end and provided with a small orifice a^6 , and the liquid tube a^3 is also closed at the end and provided with an orifice a^7 , and said liquid tube is located at one side of the air tube, instead of at the end as shown in said patent, so that its orifice a^7 is extended at right angles to the air tube, instead of in parallelism therewith. The nozzle a^2 is provided with a hole 2 opposite the orifice a^7 , for the purpose of allowing the said orifice to be cleaned by a suitable pointed instrument at any time.

By arranging the tubes as shown I am enabled to place the hole 2 at a point which will allow the condensed spray to collect and not escape from the nozzle through this hole 2, as it would do if constructed as shown in the patent referred to, and held in horizontal position with the air forcing device at the under side.

In Fig. 3, I have shown the manner in which the condensed spray may now collect and be retained until such time as the bottle is turned into its normal position, when said condensed spray will return to the bottle through the hole in the cap.

The tongue-depressor shown in Figs. 1 and 2 consists of a tongue-holding portion b , herein represented as composed of a loop of wire, said portion being rigidly connected to a ring b' , which is adapted to snugly fit upon the nozzle a^2 , and a finger piece b^2 is also provided, it being formed integral with the other parts of the tongue-depressor. As a means of rigidly connecting the tongue-holding portion b to the supporting ring b' , I have formed loops b^3 of wire, the parallel sides of which are in close proximity to each other to there-

by constitute arms which embrace said ring, and the finger piece b^3 is also made as a loop of wire, the parallel sides of which are in close proximity to each other, said loop being curved, as shown in Fig. 1. A hook b^4 is formed integral with the finger piece, which hook is adapted to engage the air tube a^4 , and as the tongue-depressor is represented as made of wire and said hook is formed integral with it, it is also composed of a loop, the parallel sides of which are in close proximity to each other. This form of tongue-depressor, it will be noticed may be easily manufactured, is light and durable, and may be readily and rigidly connected to the atomizer, yet I do not desire to limit myself to any particular construction of tongue-holding portion b , although I have shown it as made of wire.

Referring to Figs. 5 and 6, the modified form of tongue-depressor consists of the open loop-like tongue-holding portion b , having the loop-like arms b^3 , which are rigidly secured to the supporting ring b' , and the wire at one side of the supporting ring is downwardly extended to form the finger-piece b^2 , and is then rearwardly extended to form the hook b^4 , which, as shown, is adapted to engage a part of the air forcing device.

By referring to Figs. 7 and 8, the tongue-depressor is represented as a loop-like tongue-holding portion b , rigidly secured to a supporting ring b' , which is adapted to be sprung upon the cap a' , instead of resting upon the nozzle a^2 , and a finger piece b^2 is rigidly secured to said supporting ring to subserve the purpose of the finger-piece b^2 , shown in Fig. 1.

It will be seen that substantially the same principles are involved in each tongue-depressor represented.

I desire it to be understood that, while I consider the tongue-depressor shown in Fig. 1 as the best embodiment of my invention, yet I do not desire to limit my invention to

such construction; nor to any particular form of atomizer to which it may be adapted and attached.

I claim—

1. In an atomizer, the bottle, a cap or stopper therefor, a nozzle erected on said cap or stopper, and atomizing orifices contained in said nozzle, combined with a detachable tongue-depressor or holder arranged and supported on the exterior of said nozzle, substantially as described.

2. In an atomizer, the bottle, a cap or stopper therefor, a nozzle erected on said cap or stopper, and atomizing orifices contained in said nozzle, combined with a tongue-depressor having a finger piece, substantially as described.

3. In an atomizer, a bottle, a cap or stopper therefor, a nozzle erected on said cap or stopper, and atomizing orifices contained in said nozzle, combined with a tongue-depressor comprising a tongue-holding portion, and a supporting ring, substantially as described.

4. In an atomizer, a bottle, a cap or stopper therefor, and a nozzle erected on said cap or stopper, and atomizing orifices contained in said cap or stopper, combined with a tongue-depressor comprising a tongue-holding portion, a supporting ring, and a finger piece, substantially as described.

5. In an atomizer, a bottle, a cap or stopper therefor, a nozzle erected on said cap or stopper, and atomizing orifices contained in said nozzle, combined with a tongue-depressor comprising a tongue-holding portion, a supporting ring, a finger piece, and a hook, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ASAHEL M. SHURTLEFF.

Witnesses:

BERNICE J. NOYES,
EMMA J. BENNETT.