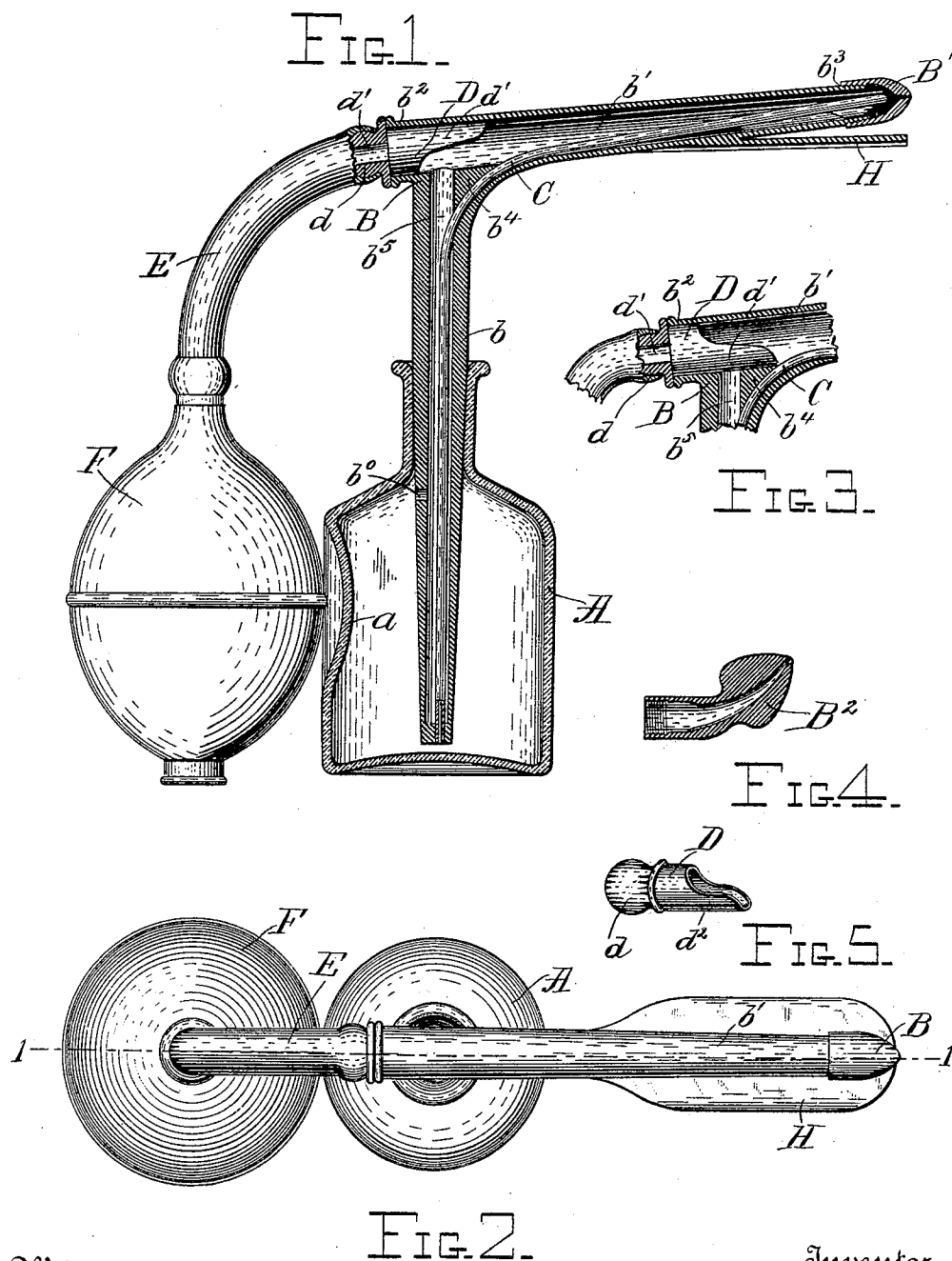


(No Model)

W. L. STEVENSON.
ATOMIZER.

No. 583,341.

Patented May 25, 1897.



Witnesses

John H. Holt,
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FIG. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM LAURENCE STEVENSON, OF NEW ORLEANS, LOUISIANA.

ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 583,341, dated May 25, 1897.

Application filed January 19, 1897. Serial No. 619,818. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LAURENCE STEVENSON, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Atomizers and Insufflators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in atomizers, and more particularly to a special form of atomizer which embodies the combination of an atomizer, powder-blower, and tongue-depressor, and possesses the novel features, advantages, and combination of parts hereinafter more particularly described.

To more clearly describe my invention, reference is had to the accompanying drawings, in which similar parts are indicated by similar letters throughout the several views.

Figure 1 represents a vertical central sectional view of my improved instrument, taken along the line 1 1, Fig. 2. Fig. 2 represents a plan view of the same instrument. Fig. 3 represents a fragmentary sectional detail, showing the position of the powder-scoop when the instrument is used as a powder-blower. Fig. 4 represents a sectional view of the powder-nozzle, and Fig. 5 represents a perspective view of the powder-scoop.

In the drawings of my improved atomizer, powder-blower, and tongue-depressor, A represents a bottle or receptacle for holding the liquid and having the depression *a* in its side.

B represents an L-shaped body made preferably of hard rubber, and having the cylindrical tubular members *b* and *b'* and the short arm *b²*. The member *b* is inserted into the bottle through the ground neck thereof, into which it fits snugly, and extends well down into the bottle to a point near the bottom thereof. One end of the member *b'* is screw-threaded, as at *b³*, for the purpose of receiving the nozzle B' when used as an atomizer and B² when used as a powder-blower, which latter will be more particularly described hereinafter.

C represents a capillary tube, preferably of hard rubber, secured to the inside of the mem-

ber *b'* at a point near its nozzle end and passing through the shoulder *b⁴* into the passage *b⁵* of the vertical member *b* and extending down to the end thereof. A vent *b⁰* passes through the wall of the tube *b*, communicating with the passage *b⁵* therethrough.

D represents a powder-scoop inserted in the short member *b²* of the body B. This scoop may be made of hard rubber or any material suitable for such purposes, and is provided with a rearwardly-extending head *d*, to which is secured one end of the tube E, carrying the bulb F, and is further provided with a lip *d²*, the function of which is to close the duct through the member *b'* in certain cases, hereinafter more fully described.

d' represents a duct passing through the head *d* of the powder-scoop. The scoop D fits within the member *b²* with sufficient friction to enable its holding the bulb, but sufficiently loose to be withdrawn from the member *b²* without injuring the same.

H represents the tongue-depressor blade, made slightly convex superiorly and integral with the member *b'* and expanding beyond the sides thereof, as shown.

When the instrument is used as an atomizer, the powder-scoop D, attached to the bulb-tube E, is placed in the short member *b²* in the position as shown in Fig. 1—that is, in an inverted position—which leaves the top of the passage *b⁵* of the vertical member *b* open, and the nozzle B' is screwed in the end of the member *b'*. Then by depressing the bulb the liquid is drawn up through the capillary tube C and issues from the nozzle in the form of a spray. The volume of the spray may be regulated by varying the size of the opening between the members or tubes *b* and *b'*, and this is accomplished by varying the position of the scoop D above that opening, the opening being entirely opened or entirely closed or partially opened, depending upon the position of the said scoop. The bottle is depressed, as at *a*, so that the device may be used with one hand, the bulb being adapted to fit in the said depression when the device is so operated.

When it is desired to use the instrument as a powder-blower, the scoop D is partly or entirely withdrawn and filled with powder and

the latter is inserted in the tube b^2 , as shown in Fig. 3, the nozzle B^2 being screwed on the end of the member b' , though if found more convenient the nozzle may be left off entirely and the powder blown through the open end of the member b' . The nozzle B^2 is especially well adapted to direct the powder into the nasal passages. In this latter case—that is, when the device is employed as a powder-blower and the scoop D occupying the position as shown in Fig. 3—the passage b^5 will be closed at its upper end by the scoop and upon depressing the bulb the powder will be blown through the nozzle or the open end of the tube, as desired. At the same time if the device is accidentally upset the contents cannot escape into the bulb or member b' , as the orifice of the duct b^5 is hermetically sealed by the scoop. For the same reason volatile liquids cannot lose their strength, as in other atomizers. The inclination of the tongue to rise and deflect from its intended course the spray when one attempts to spray the throat with an ordinary atomizer is an ever-occurring source of annoyance and very often instead of the spray being directed against the portion of the throat intended to be sprayed the spray is not only misdirected by the tongue, but is also greatly impeded thereby. This difficulty is overcome by the tongue-depressing blade which is made a part of my atomizer.

Again, the fact that my atomizer and powder-blower may be used with one hand is an advantage which will be appreciated by every one who labors under the disability of having one hand or having one hand injured or engaged in supporting the head of the recipient of the spray or powder, and, lastly, the combining of the atomizer and powder-blower in one compact instrument renders the device especially applicable in those treatments where the application of a powder is made to follow the spray, in which cases it is usually the practice for the patient to provide himself with two instruments, an atomizer and a powder-blower, whereas with my device both powder-blower and atomizer are combined in one.

The hereinafter-described invention possesses various other advantages, which will readily suggest themselves to any one skilled in the art to which the said invention relates.

It is furthermore obvious that the said invention is capable of various modifications without departing from the spirit of the invention; but

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In an atomizer the combination with a bottle, of a tube extending into said bottle or reservoir, a second tube across the top of the first tube and communicating therewith, a powder-scoop inserted in second tube for the insufflation of powders, and means for blowing air into the said tube through the powder-scoop, substantially as described.

2. In an atomizer, the combination with a bottle, of a tube extending into the said bottle and a second tube extending across the top of the first and communicating therewith, a powder-scoop inserted in the second tube, means for blowing air into the said tubes through the said scoop and an expanded blade forming an integral part of the upper tube for depressing the tongue, substantially as described.

3. In an atomizer, the combination with a bottle having a depression in its side, of a vertical tube extending into said bottle, a second tube extending across the top of the vertical tube and communicating therewith, a powder-scoop inserted in said second tube for the insufflation of powders and adapted to regulate the communication between the said tubes, a bulb attached to the said powder-scoop, a capillary tube passing from the nozzle end of said top tube to the lower extremity of said vertical tube, and detachable nozzles for said top tube, substantially as described.

4. In an atomizer, the combination with a bottle having a depression in its side, of a vertical tube extending into said bottle, a second tube extending across the top of the vertical tube and communicating therewith, a powder-scoop inserted in said second tube for the insufflation of powders and adapted to regulate the communication between the said tubes, a bulb attached to the said powder-scoop, a capillary tube passing from the nozzle end of said top tube to the lower extremity of said vertical tube and detachable nozzles for said top tube, and an expanded blade forming an integral part of said tube for depressing the tongue, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM LAURENCE STEVENSON.

Witnesses:

J. H. FERGUSON,
JOHN J. SAUCIER.