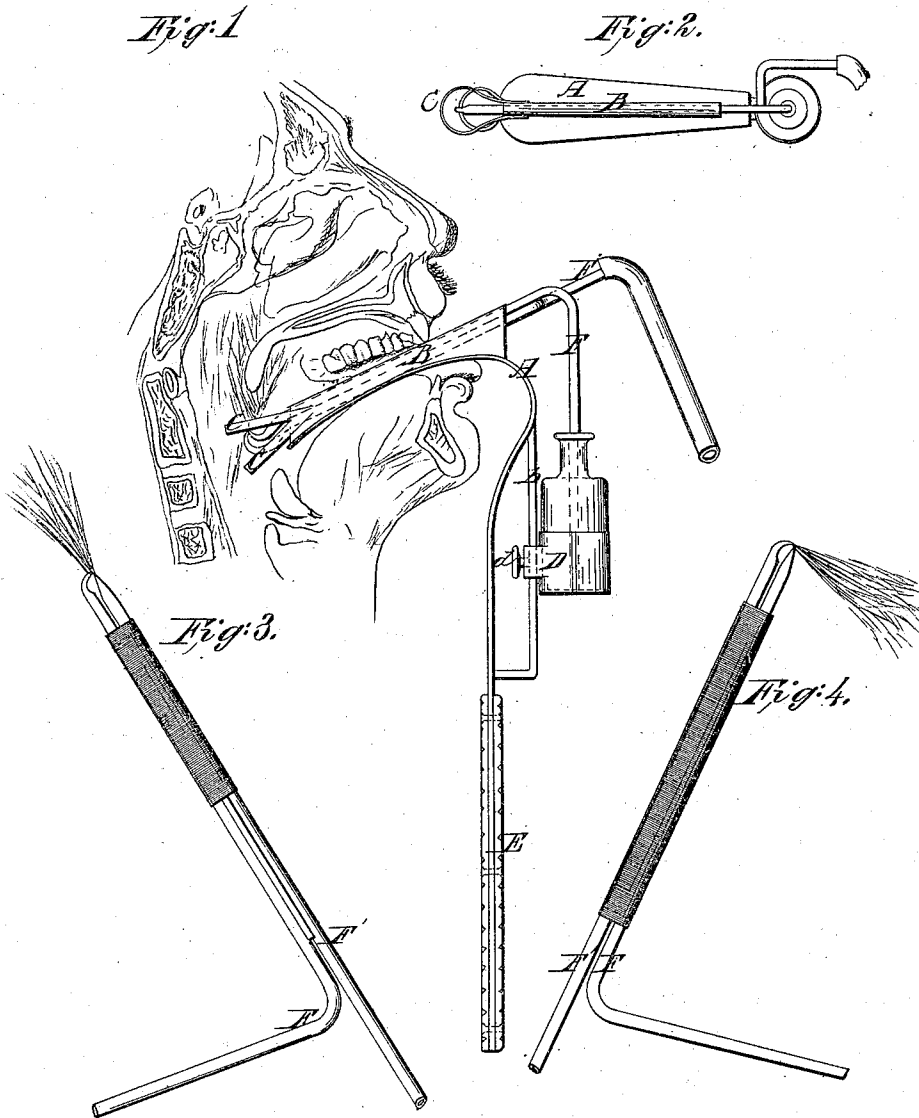


O. A. SCHULZ.
TONGUE DEPRESSOR AND ATOMIZER.

No. 79,015.

Patented June 16, 1868.



Witnesses:
J. S. Furbush
H. L. Krueber

Inventor:
Otto A. Schulz

United States Patent Office.

OTTO A. SCHULZ, OF CHICAGO, ILLINOIS.

Letters Patent No. 79,015, dated June 16, 1868.

TONGUE-DEPRESSER AND ATOMIZER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, OTTO A. SCHULZ, of the city of Chicago, in the county of Cook, and State of Illinois, have invented certain new and useful Combined Tongue-Depresser and Atomizer; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

Figure 1 is the side elevation, and

Figure 2 is the top view of the apparatus.

Figures 3 and 4, the atomizing-tubes.

The nature of my invention consists in providing an apparatus containing the atomizing-tubes, and so constructed and arranged that by introducing it into the mouth of a patient the medicated spray can be passed readily in any direction, and cover the membranes of interior passages, as will be hereinafter fully explained.

The apparatus consists of a tongue-depresser, A, provided with atomizing-tube holder B, to which guard or guards C are secured. The lower part of the tongue-depresser is provided with wire, *b*, on which sets and slides up and down, a bottle-holder, D, which can be adjusted in place by set-screw *d*. The apparatus is provided also with a handle, E. The atomizing glass tubes F F' are made of different shapes and sizes, to suit different purposes. On fig. 1 their points are turned upward, to throw the medicated spray into nasal passages. On fig. 3 their ends are made straight, to throw the spray directly forward, while on fig. 4 they are turned downward, to throw the spray into the trachea and its surrounding parts. The holder B protects the atomizing-tubes from being pressed and broken by the teeth of the patient, while guard C prevents the ends of the tubes from coming in contact with the membranes of the mouth and pharynx. The apparatus may be made of metal or other suitable material.

The operation consists in this, that a proper set of atomizing-tubes is inserted into the holder B, one of them, F, introduced into the bottle *b*, containing the medicated fluid, which bottle is adjusted in place by a set-screw, *d*, while the other tube, F', is connected with an air-pump. The apparatus then is introduced into the mouth, and is held with one hand, while the pump is worked with the other hand, and the atomizing operation is performed.

It is evident, from the above description, that with this apparatus, and different sets of atomizing-tubes, all the parts of the mouth and different interior passages can be readily reached by the atomized fluid, with much more convenience to the patient, and more speed and safety, not causing nausea, as is the case in the use of a probang. Its peculiar shape is such that it presses the tongue downwards, at the same time brings it forward, raising the epiglottis, so that the medicated spray from the atomizer passes readily into the trachea, covering the membranes surrounding the hyoid and thyroid bones, and the entire larynx, descending the trachea to its bifurcation or bronchia, and affecting them. On the other hand, with another set of the atomizing-tubes, the spray can be thrown in any other direction, covering the esophagus, the entire pharynx, anterior and posterior pillars of the fauces, tonsils, and uvula, as also can be passed behind the palate or uvula, and throw its stream directly back and over the palatal arch, and on to the mouths of the eustachian tubes, and forward from this position, through the posterior nares to the nasal-bone, covering the entire nasal passage, including the inferior and middle spongy bones.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the atomizer and tongue-depresser, provided with atomizing-tube holder B, guard C, and bottle-holder D, arranged and operating in the manner as herein described and specified, or in any other manner producing substantially the same result.

OTTO A. SCHULZ.

Witnesses:

J. B. TURCHIN,
N. K. KROEBER.