

No. 637,970.

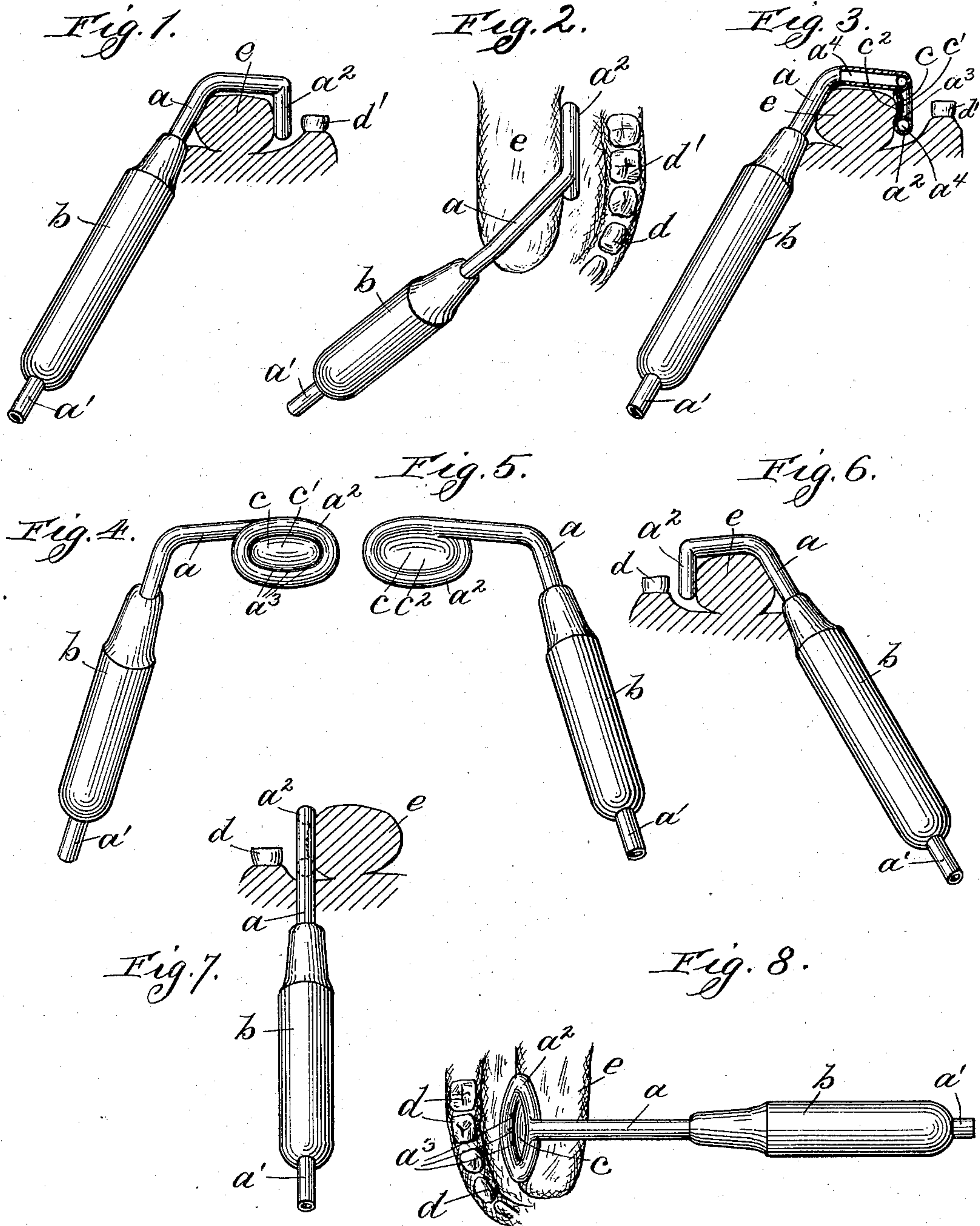
Patented Nov. 28, 1899.

J. E. NYMAN.

DENTAL SALIVA EJECTOR AND TONGUE DEPRESSOR.

(Application filed Dec. 27, 1897.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN EGBERT NYMAN, OF OAK PARK, ILLINOIS.

DENTAL SALIVA-EJECTOR AND TONGUE-DEPRESSOR.

SPECIFICATION forming part of Letters Patent No. 637,970, dated November 28, 1899.

Application filed December 27, 1897. Serial No. 663,673. (No model.)

To all whom it may concern:

Be it known that I, JOHN EGBERT NYMAN, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dental Saliva-Ejectors and Tongue-Depressors, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improved dental saliva-ejector and tongue-depressor, my object being to provide a simple, cheap, efficient, and compact instrument for deflecting and depressing the tongue and for removing or ejecting the saliva.

In the art to which the present invention relates tongue-depressors have been employed adapted to be placed upon the upper surface of the tongue to depress the same. Tongue-deflectors have also been employed comprising a plate adapted to be pressed against the side of the tongue to separate the same from the teeth. In operating upon the inferior teeth without the use of the rubber dam it is necessary in order that the operation may be performed as perfectly and satisfactorily as possible to deflect and depress the tongue by some such instruments and in addition to provide means for ejecting or withdrawing the saliva which would otherwise rapidly accumulate in the mouth and flood the parts to be operated upon, rendering a perfect operation impossible. This saliva-ejector has usually consisted of a hooked tube which hangs over the teeth, with the short end resting near the bottom wall of the jaw, while the other end is connected with a suction-pump or other device for creating suction. A number of instruments are thus necessitated, rendering the operation more or less cumbersome and unsatisfactory. Furthermore, there is a tendency for the ejector to draw the delicate mucous membrane into the opening thereof, thereby stopping the flow and irritating the patient. Instruments have also been employed wherein the deflector and ejector have been combined; but these have usually comprised a tubing, one part of which is adapted

to rest on the outside of the teeth and another part between the tongue and the teeth, whereas the instrument of the present invention is designed to be interposed wholly between the teeth and the tongue, whereby the teeth are entirely free and may be readily operated upon without interference.

In accordance with the present invention the tongue depressor and deflector and the saliva-ejector are combined into a single instrument mounted upon a common handle which may be held by the patient, thus relieving the operator and giving him the free use of both hands. In the preferred construction I provide a tube having one end formed into a loop, upon one side of which is mounted a deflecting-plate to present a smooth surface against the side of the tongue to be deflected and depressed. On the inner side of the loop are provided inlets into which the saliva passes and from which it is carried by suction through the tubing and out of the patient's mouth. I preferably form the loop so that all parts thereof lie in a common plane, as thereby the same may be readily inserted between the teeth and the tongue and is thus effective in performing its work while wholly out of the way of the operator. A transverse portion of the tubing upon the end of which the loop is mounted is adapted to rest upon the top of the tongue to serve as a tongue-depressor. The handle being provided at the other end of this transverse tube may be readily held by the patient at the opposite side of the mouth from that being operated upon. As the tubing extends around the lower edge of the plate and lies in the plane thereof the mucous membrane and tissues are not injured as the instrument rests in position, and the location of the saliva-inlet on the side of the plate away from the tongue prevents the surface of the tongue from being drawn into the same by suction.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a view of the instrument of the present invention shown in position in the mouth. Fig. 2 is a view looking down from above. Fig. 3 is a view partially in section.

Fig. 4 is a view from one side. Fig. 5 is a view from the opposite side. Fig. 6 is a view of the instrument for the right side of the mouth. Fig. 7 is a view of a modification. 5 Fig. 8 is a view of a further modification.

Like letters refer to like parts in the several figures.

The tubing *a*, carrying the handle *b* and adapted to be connected at its lower end *a'* 10 to any of the present dental suction apparatus, has on the other end a loop *a*², preferably of oval shape. On one side of this loop is mounted the plate *c*, slightly convex on the side *c'* toward the center of the loop and concave on the other side *c*². On the upper side 15 of the lower bend of the loop *a*² are the inlets *a*³ *a*³, which connect with the opening or bore *a*⁴, extending the length of the tube *a*. I have illustrated the use of the instrument in connection with the tongue *e* and the teeth *d* *d'*. 20

In the operation of the device of my invention the instrument is introduced into the mouth, with the plate *c* and loop *a*² between the teeth *d* or *d'* and the tongue *e*, and the 25 tongue is then pulled away from the teeth to be operated upon, leaving the opening or inlets *a*³ *a*³ on the side toward the teeth. The tubing *a* rests upon the tongue and serves to depress the same. Any saliva accumulating 30 in the space between the teeth and the tongue is carried off through the ducts *a*³ *a*³.

It will be readily observed that greater ease of operation can be obtained by having right and left instruments, as shown in Figs. 35 1 and 6. For this purpose I have found that by having the tubing *a* bent laterally and downwardly a short distance from the loop *a*², as shown in Figs. 1 and 6, the most comfortable construction for efficient operation 40 is secured.

In Figs. 7 and 8 are shown two modifications. Fig. 7 shows an instrument for operating on the right side of the mouth, having only a downward bend, while Fig. 8 shows an 45 instrument which may be used on either side

of the mouth and in which there is no downward bend above the handle *b*.

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

1. A dental instrument comprising a plate adapted to stand vertically between the teeth and the tongue, a tube surrounding the same at all edges and having an inlet for the saliva in the upper wall of the lower bend thereof, 55 and a handle upon the end of which the same are mounted, whereby the plate and inclosing tube may be readily interposed between the teeth and the tongue, substantially as described. 60

2. A dental instrument comprising a handle, a plate mounted upon the end thereof in position to be readily inserted in a vertical position between the tongue and the teeth, and a tube lying wholly in the plane thereof 65 and having a portion extending around the lower edge of said plate and carrying a saliva-inlet in the upper wall thereof near the face of said plate, substantially as described.

3. A combined saliva-ejector and tongue 70 deflector and depressor comprising a tube having a saliva-inlet and adapted to stand in a vertical position between the teeth and the tongue to deflect the tongue, a tube communicating therewith and extending trans- 75 versely thereto and adapted to lie upon the top of the tongue to depress the same, and a handle upon the end of which said transverse tube is mounted whereby the handle 80 may be held at the opposite side of the patient's mouth from that of the teeth being operated upon, substantially as described.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

JOHN EGBERT NYMAN.

Witnesses:

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