

(No Model.)

J. SIMONSON.  
DENTAL SALIVA SIPHON.

No. 540,562.

Patented June 4, 1895.

Fig 1.

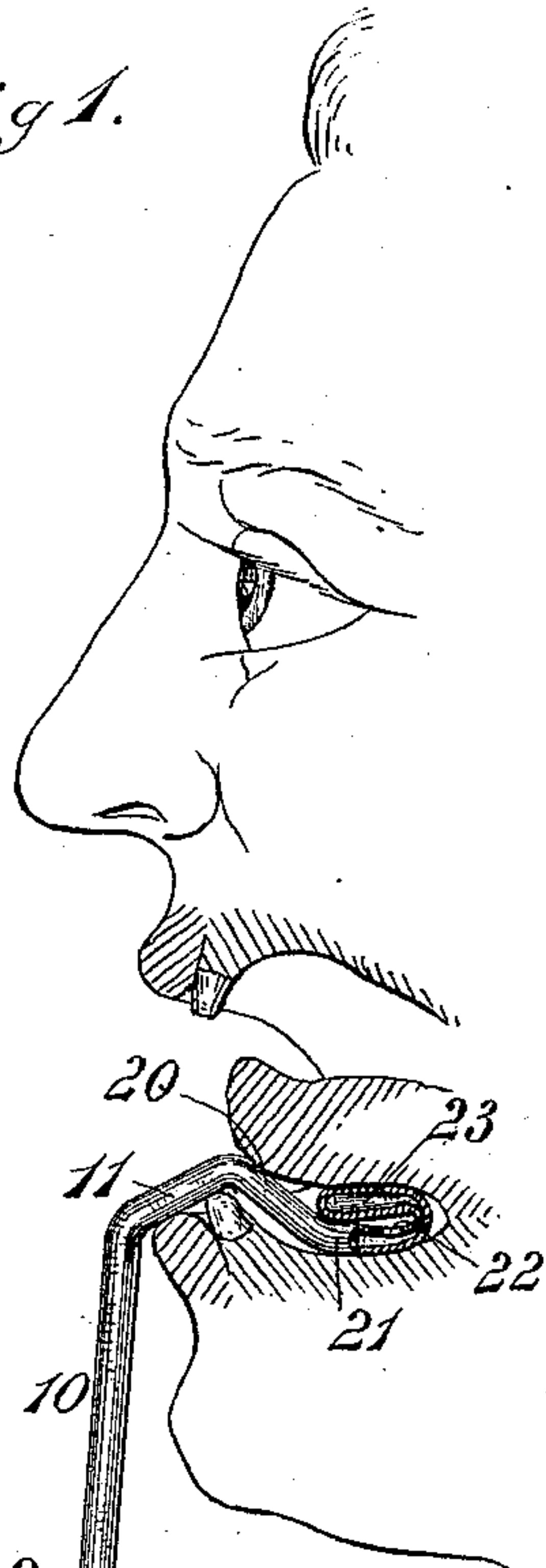


Fig 2.

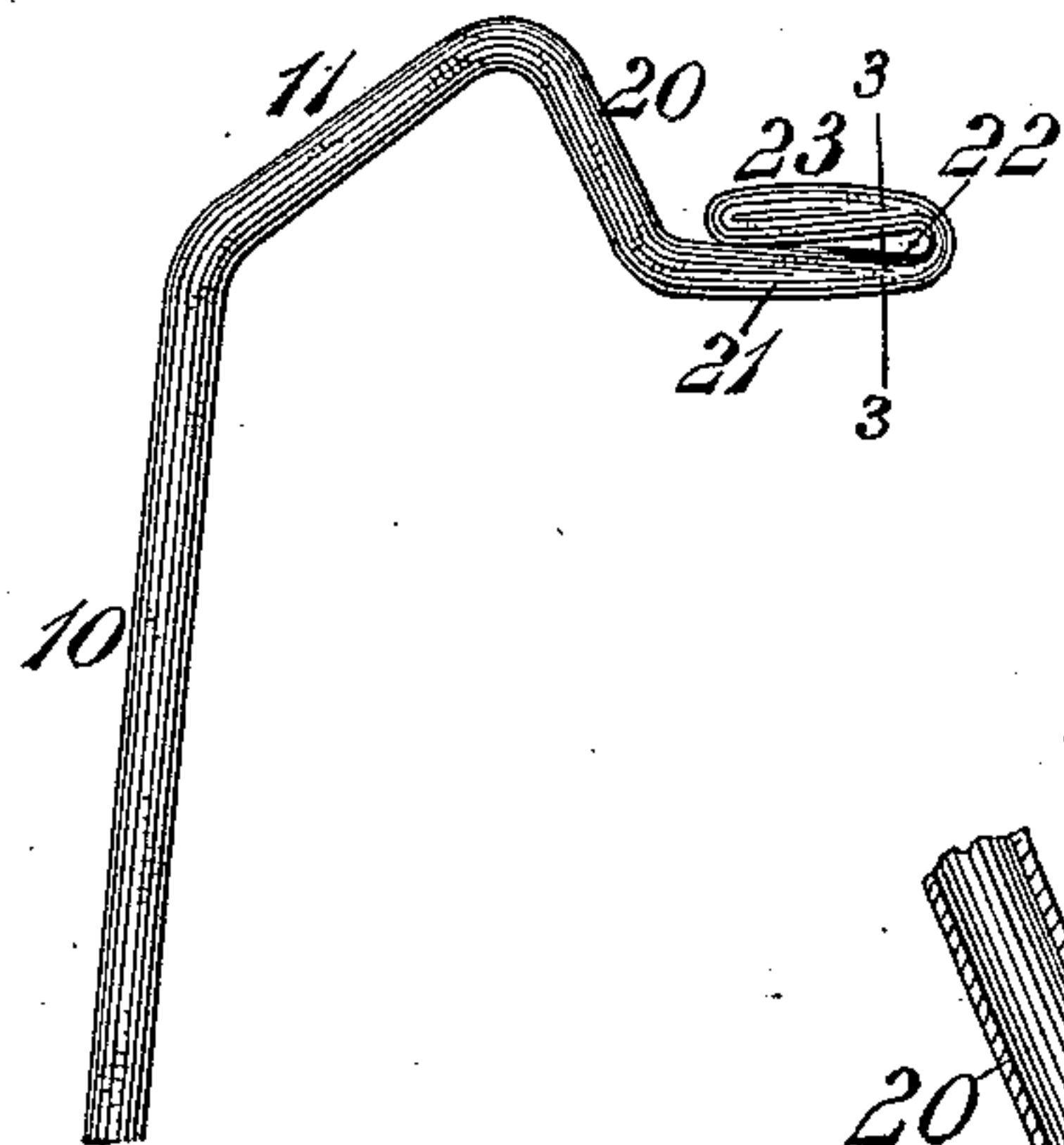


Fig 3.

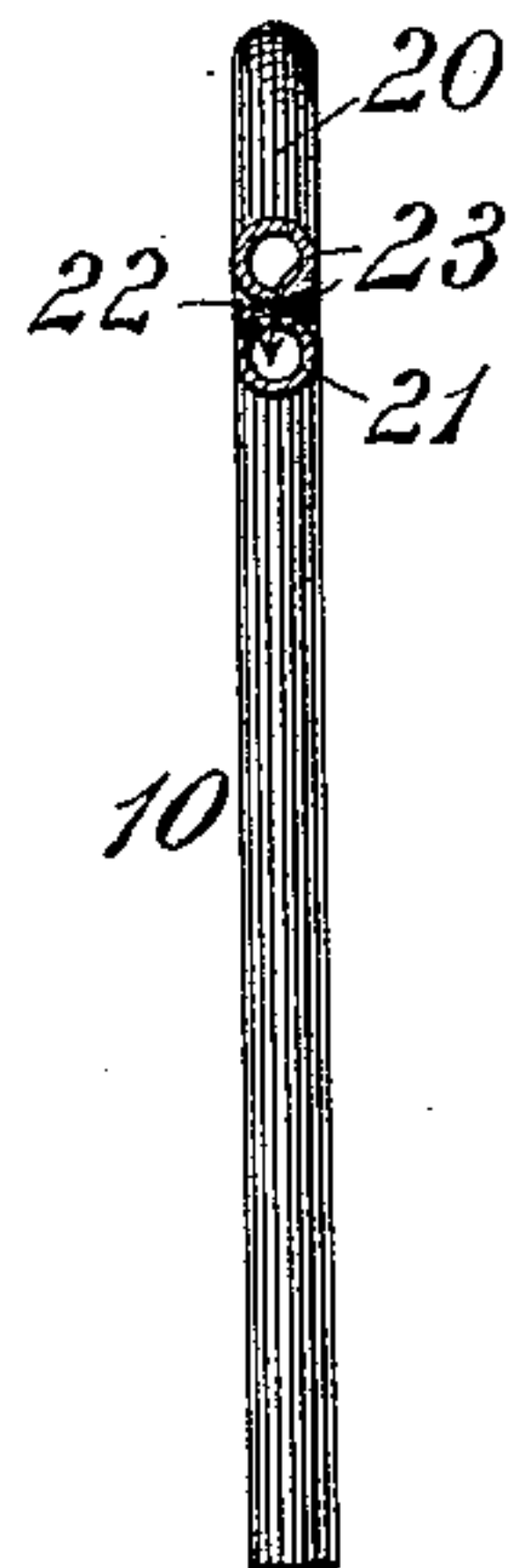


Fig 4.

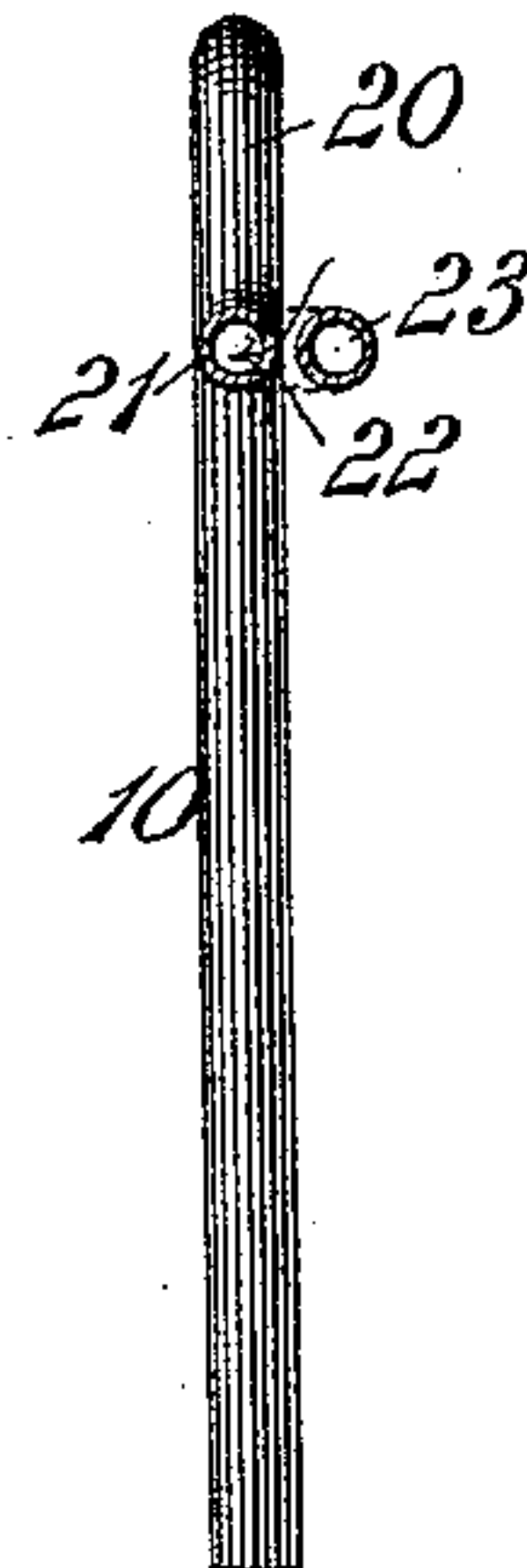


Fig 5.

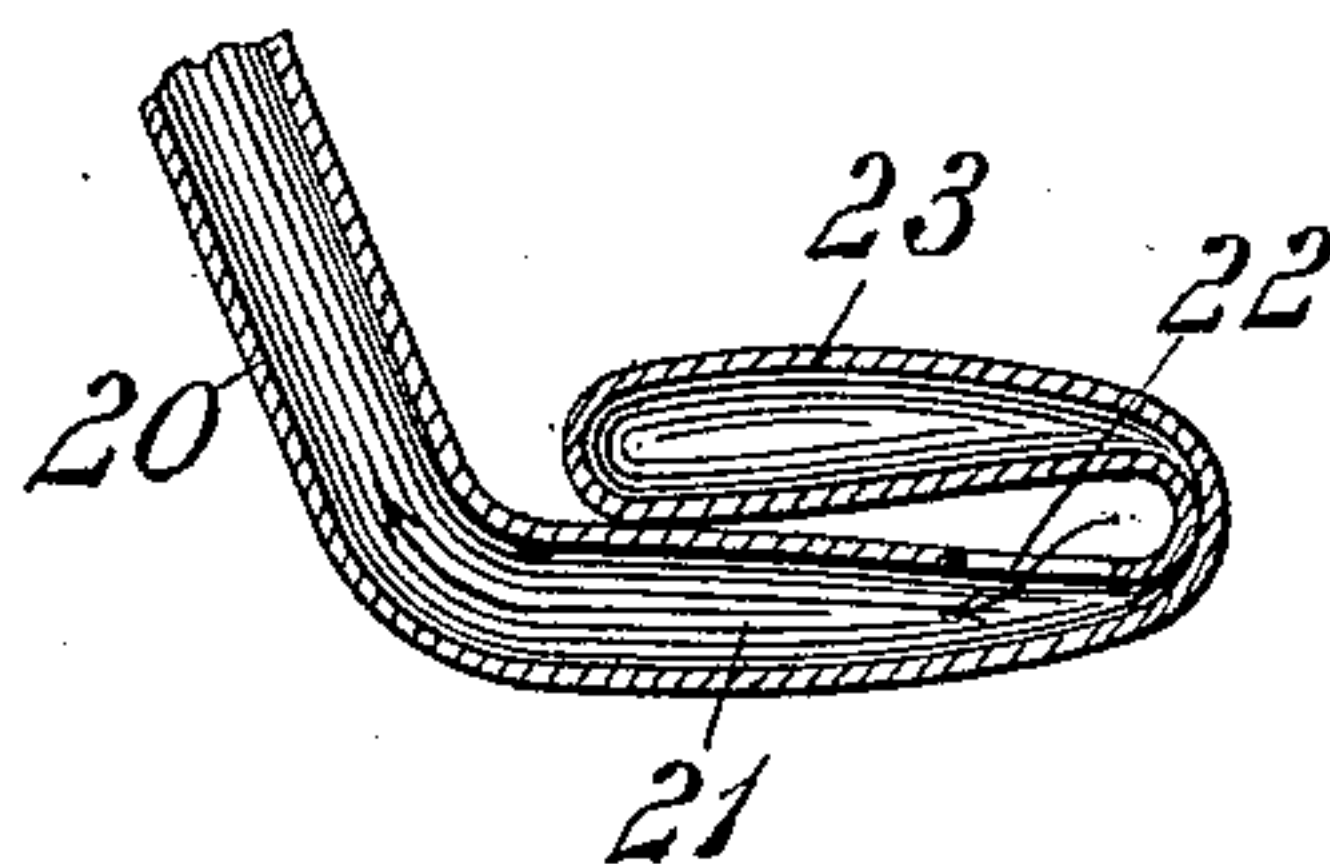
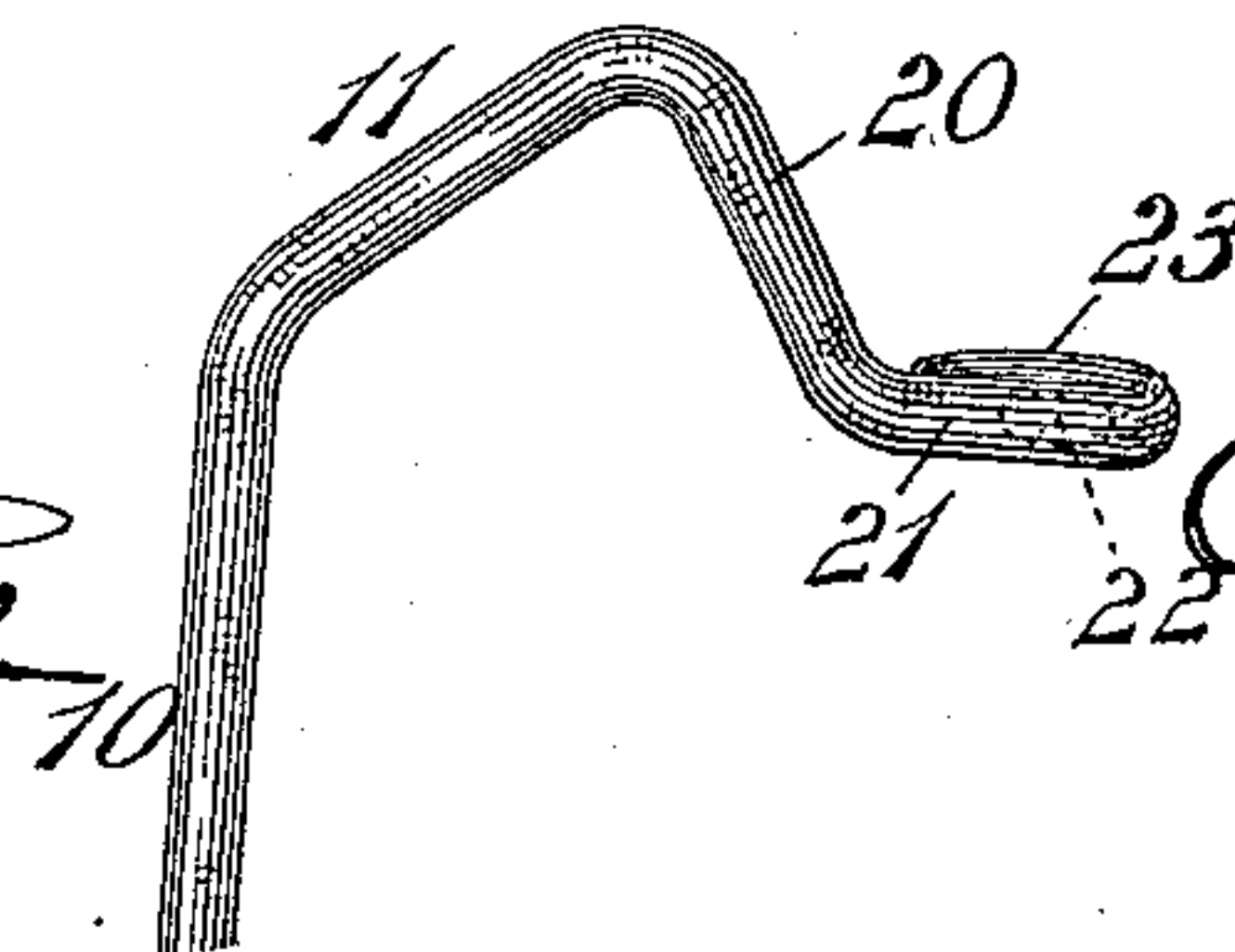


Fig 6.

WITNESSES

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# UNITED STATES PATENT OFFICE.

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## DENTAL SALIVA-SIPHON.

SPECIFICATION forming part of Letters Patent No. 540,562, dated June 4, 1895.

Application filed January 25, 1895. Serial No. 536,266. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB SIMONSON, a citizen of the United States of America, residing at Newark, in the county of Essex, in the State of New Jersey, have invented certain new and useful Improvements in Mouthpieces for Saliva-Siphons, of which the following is a specification.

This invention relates to a mouth-piece for a saliva siphon for drawing off the saliva from the mouth of a patient during the practice of dental surgery.

By the aid of this instrument, many operations upon the teeth can be made without the use of the rubber dam which was heretofore required, and all dental operations within the mouth are facilitated. A siphon tube for this purpose has heretofore been employed in which the short leg of the siphon is provided with an enlarged perforated bulb which rests under the tongue and through which the saliva enters the tube. This construction is found to be objectionable because the mucous membrane is drawn into the openings in the bulb, closing them and stopping the outflow of the saliva from the mouth. Besides this objection, the sucking of the mucous membrane into the openings, causes annoyance to the patient and frequently results in the formation of blood blisters under the tongue, so that the patient objects to the use of the tube.

The object of this invention is to avoid the defects above noted and provide a siphonic tube which will readily draw off the saliva during dental operations without any injurious or disagreeable action upon the patient.

Figure 1 of the accompanying drawings represents this saliva-siphon in position in the mouth, the terminal of the short leg thereof being shown in vertical section and the main body of the siphon in side elevation. Fig. 2 represents a side elevation of this mouth-piece, showing the guard for the inlet-orifice disposed vertically over said orifice. Fig. 3 represents a rear elevation thereof, the terminal of the short leg being in vertical transverse section on line 3 3 of Fig. 2. Fig. 4 represents a rear elevation of the mouthpiece and a vertical transverse section of the inner end or terminal of the short leg thereof, the inlet-orifice and the guard therefor being at one side of said terminal. Fig. 5 represents a ver-

tical longitudinal section of the short leg of the siphonic mouthpiece on an enlarged scale. Fig. 6 represents a side elevation of the form in which the orifice and guard are disposed at one side of the short-leg terminal.

The same reference numbers indicate the same parts in all the figures.

This mouth-piece for a saliva siphon is preferably constructed entirely of glass in one piece and it comprises a long leg 10 and a short leg 20. The upper end 11 of the long leg 10 is preferably bent at an incline to throw said leg beyond the lower lip and yet permit the saliva to flow downward when started by a water tube, pump or bulb. The short leg 20 has an inlet orifice 22 for the entrance of the saliva into the tube from the mouth, and it is provided with a guard 23 overlying said orifice at some little distance therefrom. The orifice is of any suitable form and size, preferably in the form of an elongated slot, say one-sixteenth of an inch in width and one quarter of an inch long, more or less. The guard 23 is imperforate and of any suitable construction adapted to prevent contact of the mucous membrane with said inlet orifice, and it preferably constitutes an integral part of the siphon. The terminal 21 of the short leg is preferably bent into horizontal position to fit under the tongue.

When constructed as shown in the drawings the guard 23 consists of one end of the glass tube folded upon the terminal of the short leg, and leaving a space between the folded end constituting the guard and said terminal, the orifice being on the side adjacent to the guard.

In the manufacture of the mouth-piece for a saliva siphon, an ordinary glass tube is bent into the desired shape for the long and short legs, and the inlet orifice 22 is formed at some distance from the end of the tube, preferably by means of a diamond disk. Then this end of the tube is folded to form the guard 23, the tube being preferably closed at the folding point by the flattening thereof during the folding operation, so as to prevent any saliva from running into the guard. In Figs. 1, 2, 3, and 5 the tube is folded vertically and a guard is formed which lies directly over the orifice. In Figs. 4 and 6 the tube is folded horizontally and the guard is disposed side by side with



the horizontal terminal 21 of the short leg, and in that case the orifice is disposed on one side of said terminal.

In the use of this invention the long leg 10  
5 may be connected by means of a rubber tube 30 with the water supply tube of a fountain spittoon for dentists use, or it may be connected with a pump or its outlet tube provided with a bulb. The short leg 20 of the siphon is placed in the mouth and the terminal  
10 21 thereof extends under the tongue near the saliva ducts, the tongue resting upon the guard 23 as shown in Fig. 1. The saliva from the mouth enters the space between the terminal  
15 of the short leg 20 and the guard 23 and flows through the orifice 22 into the tube and the flow of said saliva is started by the use of the water tube, pump or bulb and soon fills the short leg sufficiently to rise over the bend  
20 in the siphon. The saliva then passes down the long leg and continues to flow through the siphon during the operation of filling or treating a tooth. The lower end of the long leg 10 is preferably connected by means of a rubber  
25 tube 30 or otherwise with a cuspidor or other suitable receptacle or place of discharge.

The saliva ducts of the upper jaw discharge much less saliva into the mouth than those of the lower jaw. In many cases the flow of the saliva from the ducts of the lower jaw is so  
30 profuse as to quickly saturate a cloth and in case the siphon is not used, the dental operation is frequently interrupted owing to the necessity of the patient to discharge the saliva into the spittoon. By the use of this instru-  
35 ment, the saliva is freely carried off and no interruption of the work ensues, and owing to the position of the orifice, the mucous membrane cannot touch it, so that no annoyance or injury to the patient occurs.  
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The device may be used either with or without the rubber cloth.

I claim as my invention—

A mouth-piece for a saliva siphon consisting of a siphonic tube provided with an orifice  
45 in its short leg, and a guard for said orifice consisting of a folded end of said tube.

JACOB SIMONSON.

Witnesses:

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