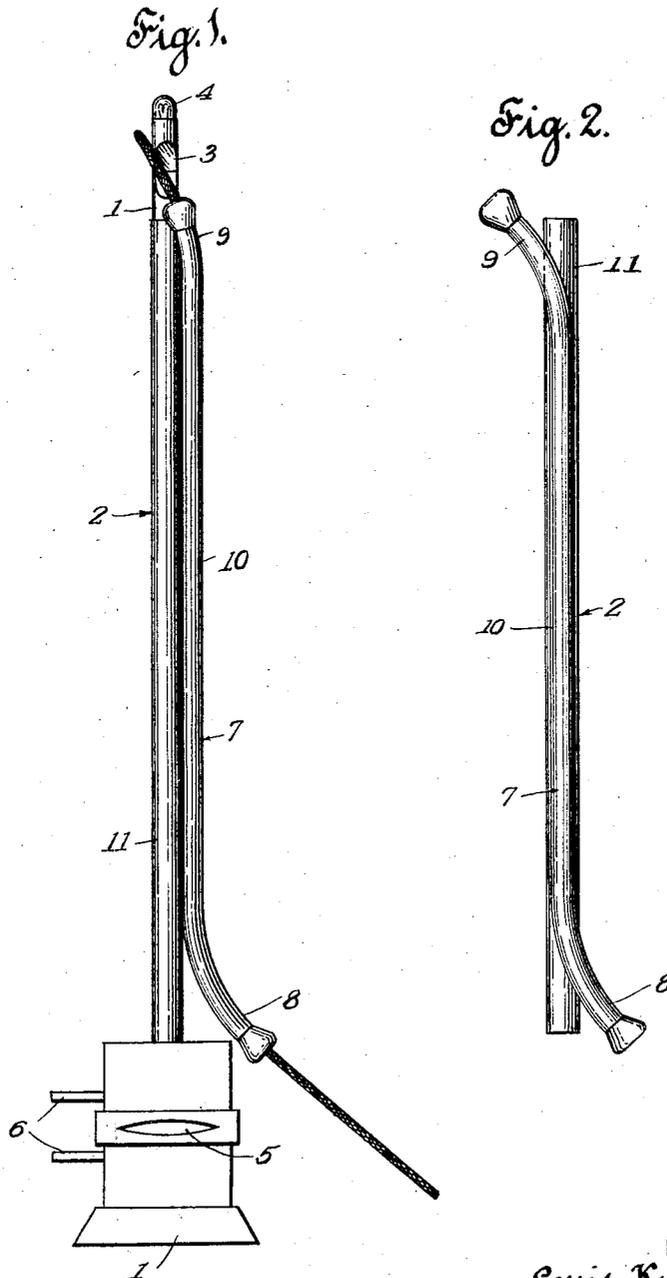


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SURGICAL INSTRUMENT
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SURGICAL INSTRUMENT.

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Heretofore, in treating affections of the middle ear, it has been usual to puncture the ear drum in order to provide access to the middle ear.

5 It is the purpose of my invention to introduce and provide a means for treating the middle ear and Eustachian tube without puncturing the ear drum or any other membrane. As is well known, the Eustachian
10 tube connects directly with the nasal part of the pharynx. It is therefore possible to reach the middle ear by way of the nose and a catheter, bougie, filiform, etc. may be introduced through the nose and manipulated
15 to enter the Eustachian tube and the middle ear.

It is an object of my invention to provide a simple instrument for facilitating and making certain treatments of this nature
20 such as the catheterization of the middle ear, dilation treatment of the Eustachian tube, etc.

Other and further objects of my invention will become apparent from the following
25 description, together with the drawings, of a preferred embodiment of my invention.

In the drawings:

Fig. 1 is a view in elevation of my instrument in condition for use.

30 Fig. 2 is a view in elevation of the guide taken at ninety degrees to that of Fig. 1.

The instrument that I have found most adapted for the purposes above mentioned consists, essentially, of a naso-pharyngoscope
35 1 and a guide 2. The naso-pharyngoscope may be of a well known type and comprises a tube 1, a mirror 3, a lamp 4, a sight opening 5 and terminals 6 for the lamp.

40 The guide 2 consists of a bent tube 7 having an ingress portion 8, a straight portion 10 and an exit portion 9, the portions 8 and 9, being in planes parallel to each other.

Attached to portion 10 of the tube are means for mounting the guide on tube 1.
45 In the preferred embodiment this consists of a cylinder 11 of a size adapted to fit over 1. It is obvious that this cylinder 11 may take the form of one or more rings. In any event the mounting must be such that the
50 guide may be moved along and around the tube 1. The ingress portion 8 is extended in order to form a handle which may be grasped by the operator to turn or rotate

the cylinder 11 about the axis of the naso-pharyngoscope 1. 55

In operation the guide is placed on the tube 1 so that the egress portion 9 extends alongside the mirror. In this position it will easily enter the limited opening provided by the nostril of the patient. A flexible catheter of a well known type is passed through
60 the guide so that the free end projects. The instrument is then inserted up the nostril; the guide is given a slight turn to increase the visibility of the catheter; and the catheter and guide are then manipulated under the illumination afforded by the lamp until the free end enters the Eustachian tube and reaches the middle ear. Medicaments may
65 then be introduced by way of the catheter. In the same manner, a bougie, filiform or similar instrument may be introduced to the Eustachian tube or the middle ear. 70

The guide shown in the drawings is suitable of course only for the right nostril. Both middle ears, however may be reached from either nostril. Nevertheless, I have found it more convenient to provide one for each nostril as the manipulation is considerably simplified thereby. Of course, by
75 omitting the curvature of the terminal portion 9, it is practicable to provide a single guide adaptable for both nostrils. The form I have shown is preferable as it takes full advantage of the mirror. It is obvious that a flap or other similar means may be added to guide the free end of the catheter, etc., if desired, I have found, however, that the simple form shown is sufficient for all practical purposes. 80 90

I claim:

1. In combination a straight exploring tube carrying illuminating means and a mirror, an instrument guide comprising a tube having an end bent towards the mirror, and a sleeve secured to the guide and adapted to fit over the exploring tube. 95

2. In combination an exploring tube carrying illuminating means and a mirror, an instrument guide comprising a tube having
100 an end bent towards the mirror, and a sleeve secured to the guide and adapted to fit over the exploring tube.

3. In combination an exploring tube carrying illuminating means and a mirror, an instrument guide comprising a tube having
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a bent end, a sleeve secured to the guide and adapted to fit over the exploring tube in such manner as to permit rotating the sleeve on the tube so as to position the said bent
5 end in front of the mirror.

4. In combination a straight exploring tube carrying illuminating means and a mirror, an instrument guide comprising a tube

having a bent end, means for mounting the guide upon the exploring tube with the bent
10 end alongside of the mirror in such manner as to permit rotating the guide about the exploring tube to position the bent end towards the mirror.

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