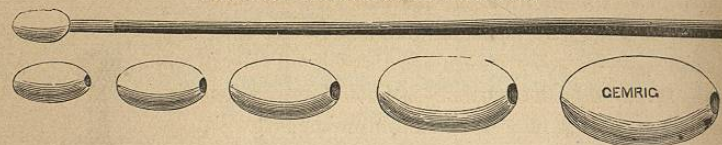


destination by means of a bougie or flexible probe. Fig. 408 represents such a probe having bulbs of varying size; these are used also in strictures of the œsophagus. Bodies in the trachea will almost certainly require for their removal opening of that tube.

In considering the subject of foreign bodies about the throat it is always to be borne in mind that feeling is not evidence of presence. Lives have

FIG. 408.—ŒSOPHAGEAL BOUGIE.



been destroyed in efforts to dislodge bodies which dissection showed to be absent. It is in the experience of the author to have a patient maintain for days the existence of presence where certainty existed as to absence.

Sharp and jagged bodies in the œsophagus may occasion speedy death by being forced through a blood-vessel, or, if remaining some length of time, a similar result may be brought about through ulceration.

NASO-PHARYNGOSCOPY.

Examination of the naso-pharynx is made by employing the means known as posterior rhinoscopy. Rhinoscopy is the manipulation designed by Czermak for exposure and illumination of the naso-pharyngeal space.

A rhinoscope differs nothing from the mouth mirror used in dentistry. Adjuncts used with the mirror are: 1, the flame of an argand burner; 2, a glass of concave face.

To make a naso-pharyngoscopic examination implies lighting up of the space together with an ability to see into it when looking directly into the mouth.

Recognizing the double requirement of reflecting a flame and catching an image, the operation is ordinarily commenced by placing a light to the back and side of the patient. This light is variously modified to suit the convenience or views of the surgeon. Tobold, Voltilini, Czermak, Morrel Mackenzie have each devised apparatus. (See works on the Laryngoscope.)

A simple means of illumination consists of an argand flame enveloped by a cone made of tin, which cone is so fenestrated as to allow of its being slipped in a horizontal direction over the glass; the base of this cone is a common circular mirror; the apex, which is cut off so as to give a diameter of two inches, is open. The instrument stands upon a pedestal, which raises and lowers to suit examinations made standing or sitting.

Light and patient in relation, a succeeding step considers reflection of the flame. To accomplish this the operator uses a concave mirror; this being

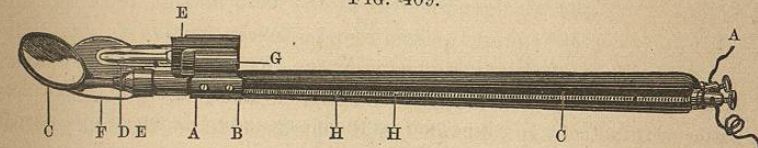
employed attached to the forehead, or otherwise held. Catching the ray upon this glass it is appreciated that it can be directed at will.

Step three refers to the employment of the throat mirror: Here is the difficulty of the operation. A deep velum associated with irritability of the region seriously complicates the matter; rendering, indeed, in occasional instances, the performance an impossibility. A short velum and an unirritable throat favor in every way the examination, exposure of the parts being secured without even discomfort to the patient.

A throat lined with tenacious glairy secretions is to be preliminarily treated by gargles of Watson's chlorine-water diluted to suit requirements. An irritable throat may be partially schooled into hebetude through frequent handling, or by use of a potassium bromide gargle.

Electric Illuminator.—The conspicuousness of separate mention is made of this illuminator because of special merit; the design is by J. S. Dicken, L.D.S., of Southport, England; introduction of the light into America was by M. H. Cryer, M.D. Employment of the instrument relates alike with mouth, throat, and naso-pharyngeal surgery. It illumines perfectly. A too frequent absence of battery conveniences is the single offset.

FIG. 409.



DESCRIPTION OF DIAGRAM.—C C, an ordinary mouth mirror, or laryngoscope. A B, two binding-posts. D E, a small Swan's electric lamp. H H, two wires running in grooves along the handle C, from A B, to a silver sleeve, G, made in two sections, insulated from each other, in which the lamp is held. E, a brass plate on each side of the insulated portion of the lamp; from these plates run the platinum wire into the lamp D and back when the lamp is held in the sleeve, and the wires of a battery, consisting of two Bunsen's cells, attached at A and B; the current is then formed from A to sleeve G on one side, connecting with E through the platinum wire, back again to E and G on the other side, thence to B, or *vice versa*. F is a silver shield and reflector combined, highly polished, to protect the cheeks or any portion of the mouth coming in contact with the instrument.

Referring to the diagram, complete understanding of the apparatus is received in recognizing that it consists simply of an ordinary mouth, or laryngeal, mirror, to the handle of which is attached a circular glass lantern holding the platinum points of an electric light. Associate fixtures refer to transmission of wires from battery, to reflection, and to lifting and protecting surrounding parts. The heat evolved is so trifling that the writer has allowed the uvula to rest against the lantern, the patient being unconscious of the fact; it is yet sufficient to keep the glass entirely free from moisture however long it be continued in the mouth.

Dental practice is perfectly served by this illuminator. Placed back of the teeth, these organs are rendered nearly transparent. Pulp-canals can be seen almost to their apices.

In connection with Mr. Dicken's apparatus attention is directed to Trouvè's polyscope, an instrument differing nothing at all in principle from the former but not comparable with it in adaptability to oral requirements, the light in the latter being exposed in a porcelain saucer. An illuminator of similar signification is a design by Mr. Margetson, a surgeon of Dewsbury, England. This gentleman uses carbon filaments varying in size from one by half an inch to one-eighth by one-quarter inch. Mr. Stern, of the Swan Electric Company, has brought out an instrument of this same class, while still another, concerning which large confidence is entertained, is at the present time in course of construction by the Messrs. Queen & Co., opticians, of Philadelphia.

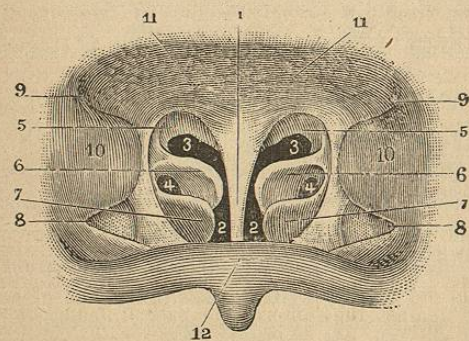
To employ a rhinoscope requires depression of the tongue and relaxation of the velum. The first is accomplished by means of an instrument known as the depressor; the handle of a spoon practically represents this. The second is secured by directing the patient to breathe entirely through the nostrils; in which act the veil falls towards the tongue.

A common rhinoscope is to be introduced warm; this with the double purpose of avoiding moisture upon its face and sparing irritation to the throat.

Everything being ready the glass is passed gently into the pharynx, the face being directed at a proper angle toward the space to be examined. Upon this glass is received the light reflected by the hand mirror; to be cast by it in turn into the naso-pharynx; and still in turn to give to the eye of the looker an image of the part illuminated by it. Practice is required to afford proficiency. Dicken's instrument is complete in itself.

What will be seen in naso-pharyngoscopy depends on the manipulative tact of the surgeon. What should be seen, the parts being healthy, is beautifully outlined in the accompanying diagram.

FIG. 410 (after Cohen).



1, septum; 2, free space of nasal passage; 3, superior meatus; 4, middle meatus; 5, superior turbinated bone; 6, middle turbinated bone; 7, inferior turbinated bone; 8, position of the opening into Eustachian tube; 9, fossa of Rosenmüller; 10, lateral wall of pharynx; 11, superior wall of pharynx; 12, posterior surface of velum.

CHAPTER XLI.

PALATINE DEFECTS, AND THEIR TREATMENT BY OPERATION.

In the treatment of palatine defects, the first consideration refers necessarily to cause and condition. Thus, it is found that such defects or deficiencies may, by influencing circumstances, require treatment so modified or changed as to seem, in cases apparently similar, quite at variance with each other. For example, take two perforations exposing the nares; one congenital, the other the result of disease. In the first of these cases any operation or appliance which would seem to promise relief might be adopted; in the second we might justly pause at any interference. No one would attempt staphyloraphy on a patient laboring under acute syphilis, or where a mercurial course had so broken down the crisis of the blood as to make a union by the first intention impossible, or even doubtful. No more would one be justified in attempting this or any other of the operations of expediency, with the constitutional conditions adverse to success, than he would be justified in avoiding the responsibility where such influencing associations were favorable.

Cleft Palate.—The condition known as cleft palate, to which we at once pass, may, from its exceeding frequency, be the first to claim attention. A cleft may be partial or complete; that is, there may be a simple lengthwise division in that portion of the mouth known as the soft palate, or the cleft may be so extensive as to extend from the uvula to the lip, a fissure separating both hard and soft parts. The first of these conditions is found sometimes as the result of disease; the latter is always congenital. Fissures produced by syphilis are constantly treated where there are breaks both in the bone and in the soft palate, but never where there is a coexistent one in the continuity of the lip.

Fissure of the hard palate, a result of disease, differs from the congenital form in a particular which would scarcely allow of the surgeon's being deceived. A fissure the result of disease exhibits an irregular break in the continuity of one or both palatine processes; a fissure having congenital origin exhibits the deficiency harmonious to the line of contiguity; that is, to the palatine raphé.

Let first be considered the condition and treatment of a congenital cleft. A child is born, toward whose mouth attention is directed either by the nasal character of the cry, or, a little later, by inability to take the breast properly; or the condition is marked, perhaps, by the break continuing through the lip, giving the deformity known as hare-lip.