(No Model.)

H. B. BAYLES.

ELECTRIC LARYNGOSCOPE.

No. 341,873. Patented May 18, 1886.

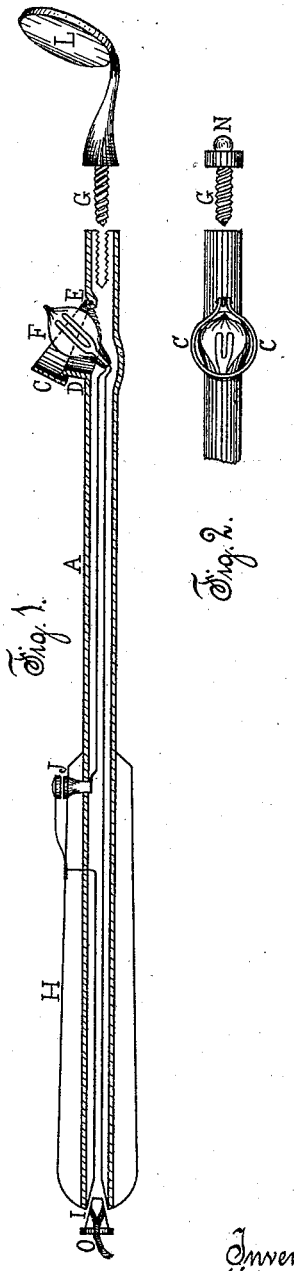

Fig. 1.

Fig. 2.

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ELECTRIC LARYNGOSCOPE.

SPECIFICATION forming part of Letters Patent No. 341,873, dated May 18, 1886.

Application filed October 17, 1885. Serial No. 180,130. (No model.)

To all whom it may concern:

Be it known that I, HAVENS B. BAYLES, of the city of Brooklyn, county of Kings, State of New York, have invented a certain new and useful Electric Laryngoscope, of which the following is a description sufficient to enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of the specification.

Figure 1 is a sectional view of the instrument, showing the means and method of the electric illumination. Fig. 2 is a plan of the portion shown.

The object of my invention is to construct a compact and cleanly, and therefore convenient and manageable, apparatus for illuminating the throat, eye, ear, &c., by electric light in medical examinations, and to provide means of controlling and directing the illumination while protecting the eyes of the operator. Suitable and useful attachments are also provided.

As shown most clearly in Fig. 1, it consists of a hollow handle, H, of polished hard rubber, and a hollow metal shaft, A, carrying the incandescent electric light F. The end of the shaft A is tapped at G to receive the attachments. Any of the well-known incandescent electric lamps now manufactured and on sale may be used, and its situation on the shaft is determined relative to the mirror used. The shaft is shaped and recessed to accommodate the lamp, as shown in the drawings.

L is an ordinary laryngoscope-mirror, mounted on an arm having a screw for insertion at G in the end of the shaft of the instrument. This means of attachment is particularly practical, because when once adjusted it brings about the same focal distance always. When the mirror L is affixed, the lamp F is located on the shaft A at the nearest point to the mirror, when its image will not be reflected therein, and where it least interferes with visions. The shaft has a hollow bulb or cavity, as shown, or may be recessed in any well-known equivalent way, according to the maker's judgment, to accommodate the lamp when its size would interfere with the manipulator's vision. The lamp is placed at an angle to the axis of the shaft whereby the direct and broad rays of the light are used for illumination. More gentle and diffused heat is also obtained to prevent moisture accumulating on the face of the mirror. Through the hollow metal shaft and rubber handle of the instrument run the insulated wires to connect the lamp and the battery. I prefer to fasten the upper terminal wire of the lamp to the metal shaft itself, and make a connection also between the bottom plate of the switch and the metal shaft, which thus becomes a conductor and dispenses with the wire, shown in Fig. 1, the lower insulated wire remaining. The connection with the battery is made, in the ordinary way, by means of a flexible double connecting-cord through the plug O. I prefer to make the plug O oblong in cross-section to insure perfect fitting and to have the double connecting-cord pass through the knob and then split to form the connection, as indicated in the drawings; but the construction may be varied as most convenient. The connection is controlled by a small switch, J, on the handle H, within easy reach. An extensible reflector surrounds the lamp, consisting, as shown, of two parts, of which D is the permanent reflector, and C a movable extension of the same, hinged or jointed to the shaft at E. The shape and size of the extensible reflector or its component parts must somewhat depend upon and vary with the shape and size of the incandescent light used; but its usual construction will be circular or semicircular in plan, as shown in Fig. 2, and triangular in elevation, as shown in Fig. 1. A stop or ledge (shown in Fig. 1) prevents the extensible reflector C passing beyond the permanent reflector D; or the lamp itself may be placed to prevent it.

Any useful attachments, as desired, may be inserted in the end of the shaft, such as a camel's hair-brush, or hard rubber suitable for application in cavities, a caustic or sponge holder of ordinary construction, and all fitted with suitable screws for insertion at G. The adaptation is too obvious to need illustration, being like that shown by the mirror L. I also provide a blunt screw-plug, N, (shown in Fig. 2,) to close the aperture G in the shaft A and fit the instrument for the purposes of simple illumination.

What I claim as new and useful, and desire to secure by Letters Patent, is—

1. A laryngoscope or similar optic instrument having a hollow metal shaft with a

hollow bulb or cavity, carrying a suitable incandescent electric light and mirror, attached thereto with reference to each other at the nearest focal distance together, where the lamp is not an obstruction to vision, in the manner and for the purpose substantially as specified.

2. A laryngoscope or similar optic instrument provided with a suitable mirror and incandescent electric light, placed at an angle to the length of the instrument, whereby the broad direct rays of light are used for illumination, in the manner and for the purposes substantially as specified.

3. In a laryngoscope or similar optic instrument provided with an incandescent electric light, an extensible reflector and shade, located and acting in the manner and for the purpose substantially as specified.

4. A laryngoscope or similar optic instrument having a hollow metal shaft with a hollow bulb or cavity, carrying an incandescent electric light, and a switch upon the handle to control the electric current, an extensible reflector, and removable mirror, all attached and operating in the manner and for the purposes substantially as specified.

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