MOUTH REFLECTOR WITH LIGHT

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

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MOUTH REFLECTOR WITH LIGHT

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1 Claim. (Cl. 128—22)

The invention, in general, relates to dentistry and more particularly relates to an instrument in the nature of a speculum for affording accessibility to and illumination of the mouth.

In the gradual evolution of oral instruments for facilitating the practice of dental and surgical operations there have been devised numerous devices for spreading and holding the jaws or the cheeks of a patient in fixed open position as well as simultaneously illuminating the interior of the mouth. Many of these instruments heretofore devised are cumbersome and in use subject a patient to undue discomfort and pain. In addition, many of these prior devices are of complex construction and, in general, are difficult to assemble and position properly. The present invention is directed to obviating inherent disadvantages of prior specula and similar devices.

A primary object of the present invention is to provide an improved mouth reflector and light unit which is easily applied and as easily removed, and which is highly efficacious in accomplishing the dual function of spreading the cheeks of a patient to retain them in a fixed position and of illuminating the interior of the mouth.

Another important object of my invention is to provide an improved mouth reflector and light of the indicated nature which is additionally characterized by its simplicity of construction from a minimum of parts, and which is relatively inexpensive to manufacture.

A still further object of the invention is to provide an improved mouth reflector and light of the aforementioned character which is free of obstructing elements and parts which otherwise would render discomfort to a patient and impediments to facile operations, and which is appreciably compact in construction so as to lie snugly against the cheek both inside and out.

Other objects of the invention, together with some of the advantageous features thereof, will appear from the following description of a preferred embodiment of my invention which is illustrated in the accompanying drawings. It is to be understood that I am not to be limited to the precise embodiment shown, nor to the precise arrangement of the various elements thereof, as my invention, as defined in the appended claim, can be embodied in a plurality and variety of forms.

Referring to the drawings:

Figure 1 is a side elevational view of a preferred embodiment of the invention.

Figure 2 is a plan view of the inside of the preferred embodiment of the invention with dotted lines showing the ear attachment connection and the latter foreshortened by broken lines to indicate length.

Figure 3 is a sectional elevational view of a preferred embodiment of the invention, with ear attachment removed.

Figure 4 is a fragmentary plan view of the outside of the preferred embodiment of the invention.

Figure 5 is a perspective view of the lamp-containing clip of the preferred embodiment of the invention.

In its preferred form, the improved mouth reflector and light of the present invention preferably comprises a reflector element having a polished concave inner face, means for removably fastening an ear attachment thereto, together with a detachable socket clip for removably mounting a lamp and having a channel therethrough for passing an electrical conductor.

As particularly illustrated in Figures 1, 2 and 4 of the annexed drawings, I provide a reflector plate 11 which preferably is fabricated from a polishable metal of relatively thin section and which is formed with a concave inner surface 12. A portion of such inner surface 12 is recessed or off-set, as indicated by the reference numeral 13, to afford a seat for a lamp casing 14. Formed integral with the plate 11 is an exterior cheek-engaging member 16 having its free extremity 17 bent upon itself to provide a finger clasp 18 which is used in positioning the device within the mouth and when removing the same. A suitable, relatively small hook 19 is provided on the member 16 to afford the removable fastening of an ear attachment 21 to the device whereby the reflector unit is firmly held in proper position within the mouth with the loop portion 22 of the ear attachment encircling the ear. In order to accommodate variable sizes of patients' heads, as to distances between the mouth and the ear, I provide a series of perforations 23 in the strap portion 24 of the ear attachment so that the attachment can be variably fastened to the hook 19 using any selected one of the perforations 23.

In accordance with my invention, my improved mouth reflector and light includes a clip 26 which cooperates with the reflector plate 11 to hold the lamp casing 14 firmly in engagement with the inner surface of the plate. The clip 26 is provided with a channel or groove 27 through which a suitable electrical cord 28 housing electrical conductors may be passed for connecting the lamp 29 of lamp casing 14 to a source of electrical
energy, not shown. As indicated in Figure 3, the cord 28 is provided with a conventional electrical plug 31 for connecting the unit to a standard floor outlet of an electrical circuit.

In using the improved reflector and light combination, the unit is picked up or grasped with a finger encircling the finger grasp 18 and the reflector plate 11 inserted into the mouth between the teeth and the cheek of the patient with the cheek-engaging member 16 fitting along the outside of the cheek. With the ear attachment 21 fastened to small hook 19, the loop portion 22 of the attachment is passed around the patient’s ear and the unit is thus positioned. If a long cord 29 is provided, it may be convenient to have a switch, not shown, interposed in the circuit or cord so that by merely throwing the switch the lamp 29 can be energized or de-energized at will, with the plug 31 of course connected to the floor outlet of the electrical circuit. With the lamp 29 lighted, the polished inner concave surface of the reflector plate 11 effectively will illuminate the interior of the mouth. The construction of the lamp-retaining clip 25 furnishes a positive interlock with the cheek-engaging member 16 of the reflector to insure an effective clamp on the lamp casing 14 and to this end I provide down-turned ears 25 on the inner extremity of the clip which interlock, when slipped into place, with shoulders afforded on a reduced portion of the cheek-engaging member 16, as clearly depicted in Figures 4 and 5 of the annexed drawings. The present embodiment of the invention illustrated in the accompanying drawings is compact, economical to manufacture, requires little, if any, maintenance and fits the mouth with no obstruction to interfere with operations conducted in treating the teeth or performing dental or surgical operations within the mouth.

It is to be understood that the appended claim is to be accorded a range of equivalents commensurate in scope with the advance made over the prior art.

I claim:

A mouth reflector and light combination comprising a reflector element having an inner polished surface and a channel in said surface, a lamp casing removably fitting said channel; said lamp casing being adapted to removably hold a lamp therein, a cheek-engaging member integral with said reflector element, and a retaining clip partially overlying said lamp casing as well as partially overlying a portion of said cheek-engaging member and interlocking therewith to hold said lamp casing in the channel of said reflector element.

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