

E. G. HOUCK,
 COMBINED DENTIST'S LAMP HOLDER AND MIRROR.
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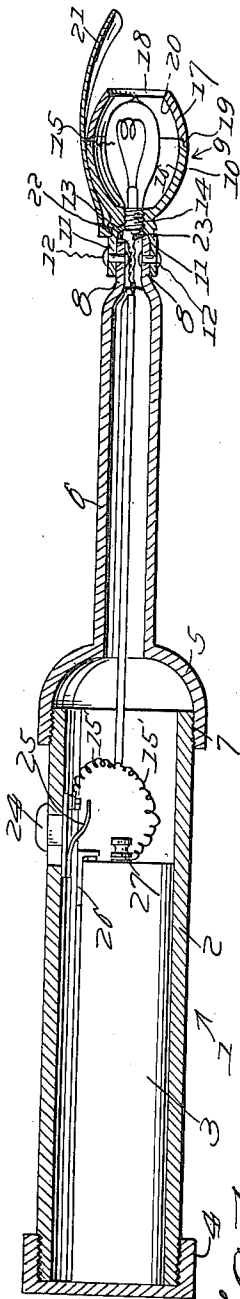


Fig. 1.

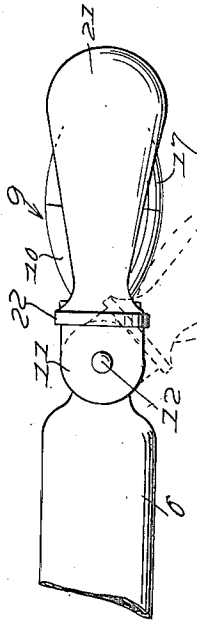


Fig. 2.

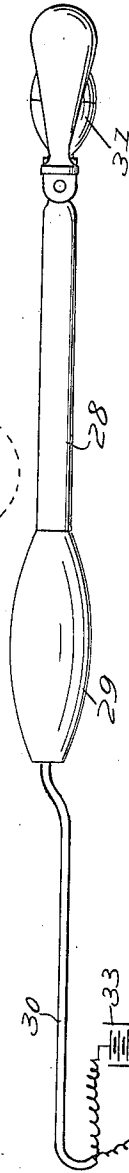


Fig. 3.

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COMBINED DENTIST'S LAMP-HOLDER AND MIRROR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDGAR G. HOUCK, a citizen of the United States of America, residing at La Grande, in the county of Union and State of Oregon, have invented new and useful Improvements in Combined Dentists' Lamp-Holders and Mirrors, of which the following is a specification.

The invention has reference generally to improvements in dentistry and more particularly relates to a combined dentist's lamp holder and mirror.

This invention has for its principal aim and object to provide a device of the above character designed to concentrate the light rays on a tooth or a cavity in a tooth to enable the dentist to easily examine the tooth and in addition serve as a cheek distender for assisting the dentist in treating the tooth or teeth.

It is an equally important object of this invention to provide a device of the above character wherein the mirror is of novel construction so as to reflect the cavity even while the lamp holder proper illuminates the cavity and incidentally this mirror is capable of being held adjusted to assume various positions with respect to the lamp holder.

More particularly the present invention contemplates the provision of a device of the above mentioned character designed so as to be capable of being adjusted to assume various positions with respect to the supporting stem while the lamp holder proper is constructed in sections to permit of the quick replacing of the lamp bulb when desired and in addition concentrates the light rays.

Among the other aims and objects of this invention may be recited the provision of a device of the character described with a view to compactness, and in which the number of parts are few, the construction simple, the cost of production low and the efficiency high.

Other objects as well as the nature, characteristic features and scope of this invention will be more readily apparent from the following description taken in connection with the accompanying drawings and pointed out in the claims forming a part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal section of the invention;

Fig. 2 is an elevational detail thereof;

Fig. 3 is a side elevation of a modified form of the invention.

Similar characters of reference are employed in all the above described views to indicate corresponding parts.

Referring now, more particularly, to the accompanying drawings, there is provided a supporting handle, indicated in its entirety by the numeral 1. This handle preferably consists of a tubular body 2 for accommodating a battery 3 and is removably held from displacement at the outer end of the body through the instrumentality of an interiorly threaded cap 4 removably engaged on the correspondingly formed reduced end of the body while the battery is held from displacement at the opposite end through the instrumentality of a cup-like enlargement 5 formed on the inner end of the tubular supporting tube 6. This cup is threaded interiorly and is designed for removable engagement with the correspondingly reduced end 7 of the body, as indicated in Fig. 1. Spaced ears 8 are formed on the outer end of the tube 6 for a purpose that will presently appear.

With a view toward providing improved means for concentrating light rays an improved lamp holder, indicated in its entirety by the numeral 9, is employed. This holder consists of a substantially semi-globular section 10 on the inner end of which is formed spaced ears 11 designed for pivotal engagement with the ears 8 through the instrumentality of pintles 12. The inner end of the section 10, between the ears, is formed with an opening 13 and also formed about the opening is a lamp socket 14 designed for removably receiving an electric lamp bulb 15 of a conventional type. Current is preferably supplied through the medium of conducting wires 15' electrically connected to the bulb and its socket and to the battery being trained through the stem 6 which serves as a support therefor. The inner surface of the section 10 is provided with a coating of quick silver 16 which in effect constitutes a reflecting surface for a purpose that will

readily become apparent. The outer section 17 of the lamp holder is of frusto conical formation the outer end thereof being provided with an opening 18 through which light rays are projected, while the inner end is reduced and threaded for removable engagement with the correspondingly formed outer end of the inner section 10 the construction being indicated by the numeral 19 in Fig. 1. The inner surface of the section 17 is also designed to serve as a reflecting surface 20 preferably having a coating of quick silver thereon and this surface serves to concentrate the light rays by first reflecting the rays from the bulb on the reflecting surface 16 which in turn reflects the rays in a concentrated manner through the opening 18.

Coöperating with the concentrated light rays is an elongated mirror 21 the inner end of which is curved to conform substantially to the outer surface of the inner section 10 and is connected at such end to a split ring 22 swiveled in the groove 23 formed on the outer surface of the section adjacent the inner end thereof. As indicated in the drawings, the outer end of the mirror projects beyond the outer end of the section 17 and when the holder is adjusted on its pivots 12 so as to direct the concentrated rays at the desired angle, the mirror is designed to be positioned so as to reflect the illuminated cavity thus assisting the dentist in treating the cavity.

The preferred means for controlling the current from the battery to the bulb consists of a sliding switch 24 on the tubular body 2 of the handle. This switch is formed with a leaf spring contact 25 designed for removable engagement with the metal plate 26 electrically connected to one pole of the battery, as indicated in Fig. 1, and inasmuch as the adjacent ends of the conducting wires 15' are respectively connected to the center pole 27 of the battery upon sliding movement of the switch the leaf spring contact will engage the metal plate to close the circuit and allow current to flow and consequently illuminate the bulb.

In Fig. 3 there is shown a modified form of the invention. Instead of connecting the handle and the stem the stem 28 is elongated

and receives a tubular cork handle 29 while the conducting wires 30 extend through the stem electrically connected within the lamp holder 31, similar in construction to the lamp holder 9, and are also extended from the handle 20 and connected to batteries 32 arranged in series and contained in a box 33. A switch 34 serves as a means for controlling the flow of current through the wires.

It is believed that in view of the foregoing description a further detailed description of the operation of the invention is entirely unnecessary. Likewise it is believed that the advantages of the invention will be readily apparent.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A device of the character described including a supporting stem, a handle thereon, a lamp holder removably connected to the outer end of the stem and composed of an inner section and an outer section removably connected thereto, a lamp bulb supported on the inner section and inclosed by both of the sections, both of the sections being provided with mirrored surfaces for concentrating the light rays preparatory to projecting them.

2. A device of the character described with a removably mounted lamp holder composed of an inner semi-circular section having a reflecting inner surface and an outer frusto-conical section having a reflective inner surface and provided with an opening in its outer end and also designed for removable engagement at the inner end with the inner section, a lamp bulb mounted in the inner section the rays of which are concentrated by the reflecting surfaces of the outer section preparatory to being reflected by the inner surface of the inner section through the opening in the outer section, the inner section being also provided with a groove at its inner end, a mirror, a split ring on the inner end of the mirror for movable and swiveled engagement with the groove, and the outer end of the mirror terminating in the opening in the outer section.

In testimony whereof I affix my signature.
EDGAR GARLIN HOUCK.