E. B. TIZZARD.

SURGICAL INSTRUMENT.

APPLICATION FILED MAY 17, 1911.

1,166,495.

Patented Jan. 4, 1916.

Fig. 1.

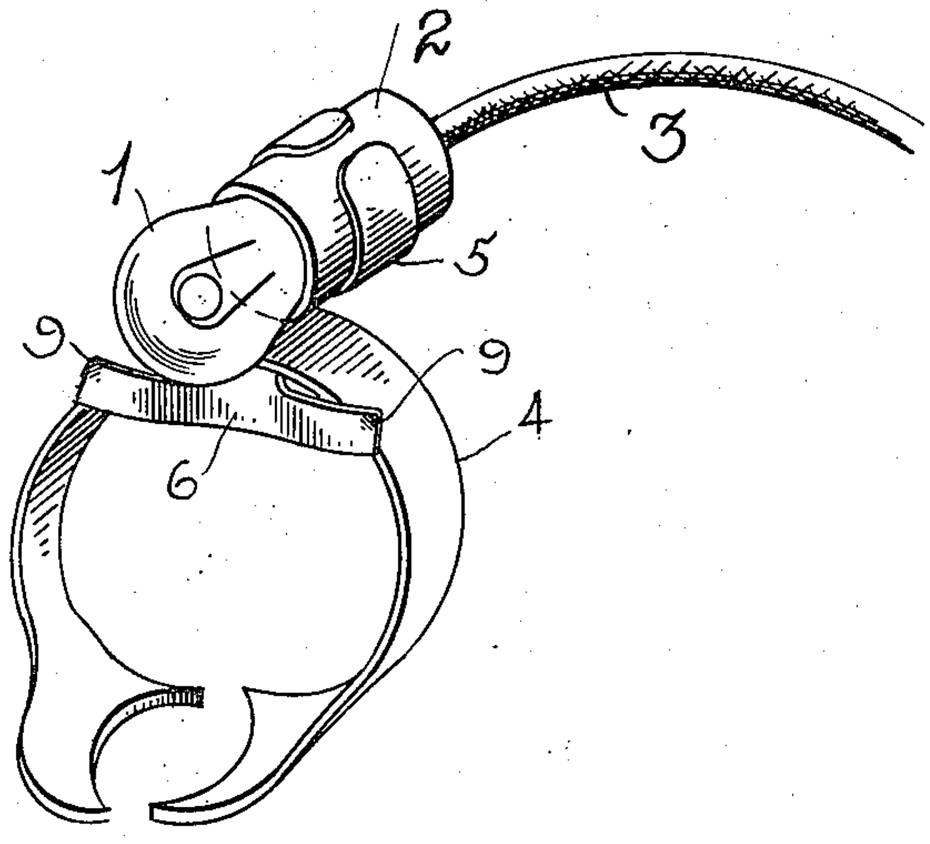



Fig. 2

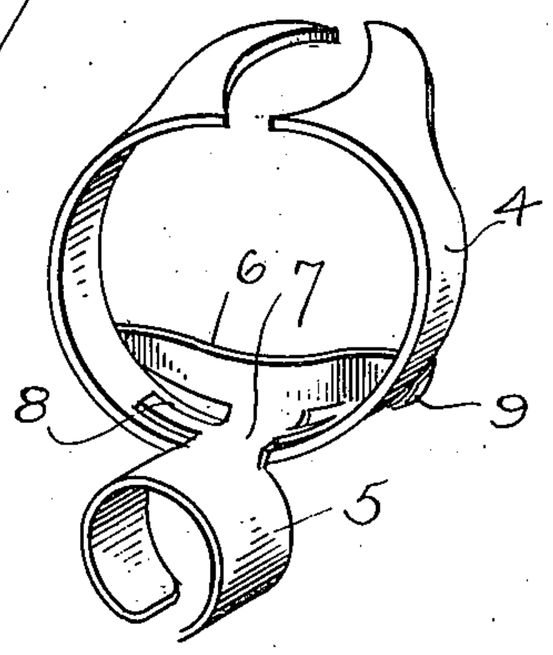
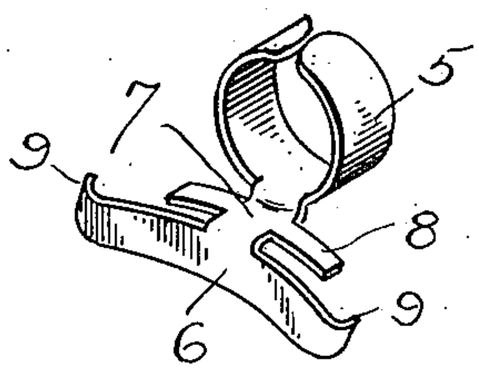



Fig. 3




Witnesses.
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# UNITED STATES PATENT OFFICE.

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## SURGICAL INSTRUMENT.

1,166,495. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed May 17, 1911. Serial No. 627,695.

*To all whom it may concern:*

Be it known that I, EDWIN B. TIZZARD, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Surgical Instruments, of which the following is a specification.

My invention relates to improvements in dental and surgical appliances and particularly to an illuminating device especially adapted to the use of dentists but also suitable for use by other practitioners.

The object of the invention is to provide a simple form of lamp and support therefor by which the lamp may be readily supported in the mouth of the patient which will not only be cheap in construction but efficient in use, convenient in form, easily and readily adjusted, and unlikely to get out of repair.

While applicant is aware that it is not new to support mirrors or reflectors within the mouth of the patient, such devices are dependent upon an external source of light and the operator is hampered in his movements about the patient and in his use of instruments by the necessity of keeping his body, hands, and instruments out of line between the source of light and the reflector or mirror. Furthermore, when employing a reflector or mirror the lighted area is not constant in relation with the point being operated upon. When an external source of light is relied upon and the light reflected by a mirror in the mouth of the patient upon a particular spot, any movement of the patient will vary the angle of incidence and reflection thereby varying the direction of the reflected light.

The present invention is designed to overcome these difficulties by providing a source of light, *i. e.*, a small electric bulb and means for supporting the electric bulb at a convenient point within the mouth of the patient, fixed in relation with the point operated upon, thus permitting both the operator and patient unlimited freedom in their movements.

With the above primary and other incidental objects in view, as will more fully appear in the specification, the invention consists of the features of construction, the parts and combinations thereof, and the mode of operation, or their equivalents, as hereinafter described and set forth in the claims.

Referring to the drawings, Figure 1 is a perspective view of the assembled lamp and its support. Fig. 2 is a perspective view of the support in an inverted position. Fig. 3 is a perspective view of the lamp engaging member.

Like parts are indicated by similar characters of reference throughout the several views.

Referring to the drawings, 1 is a miniature electric bulb of any suitable type or construction adapted to be engaged within the socket 2. The lamp 1 is supplied with current from any suitable source with which it is connected by a suitable flexible conductor cable 3.

To stationarily support the lamp 1 in its adjusted position within the mouth of the patient, there is employed a tooth clamp 4 of ordinary form adapted to engage the opposite sides of a tooth conveniently located in relation with the point of operation.

A convenient and simple form of the lamp attaching means comprises an annular spring clip 5 from which projects a T shaped tongue, the head 6 of which is bent into a plane at right angles with that of the stem portion 7. Lateral wing portions 8 are preferably provided on the stem portion 7 and are curved to correspond with the interior of the arched portion of the tooth clamp 4. While it is not essential that the wing portions 8 be employed, such wing portions assist in securely anchoring the attachment device upon the tooth clamp.

The extremities of the head 6 of the T shaped tongue are bent substantially at right angles to the main portion of the head 6 to form tips or wings 9 which engage over the exterior of the arched portion of the tooth clamp, as is clearly shown in Figs. 1 and 2. In engaging the device with the tooth clamp the T shaped tongue portion is inserted beneath the arch of the clamp and elevated to a position at the top of the arch where the wing portions 8 will engage the interior of the arch and the device is drawn slightly laterally to engage the tips or wings 9 on the head 6 with the exterior of the arch. When in this position, the clip 5 is elevated above the top of the arch of the clamp where it is held while the socket 2 of the lamp 1 is inserted through such clip

5. When so engaged, the socket 2 will extend over and engage the exterior portion of the arch of the clamp while the stem of the T shaped tongue 7 engages the interior portion of said arch thereby preventing any vertical displacement of the attachment members. At the same time the head portion 6 of the T shaped tongue and the tips or wings 9 thereof engage one edge of the arch of the clamp while the upturned spring clip 5 engages the opposite edge of said arch thereby preventing lateral displacement. It is thus seen that the lamp is firmly and securely engaged with the tooth clamp which in turn is engaged with the selected tooth thereby maintaining the light in a convenient position to illuminate the point of operation.

Having thus described my invention, I claim:

1. A dental appliance comprising a tooth clamp to be engaged with a tooth of the patient, and an electric lamp secured to the tooth clamp affording a source of light located within the mouth of the patient.

2. A dental appliance comprising, a tooth clamp to be engaged with a tooth of the patient, a socket member carried thereby, and a lamp detachably engaged within the socket affording a source of illumination located within the mouth of the patient.

3. In an appliance of the character described, a lamp support adapted to be positioned within the mouth of a patient, and a lamp carried by the support within the mouth of the patient affording an original source of illumination therein.

4. In a surgical instrument, a dental tooth clamp, an illuminating member, a securing member comprising a receiver for the illuminating member projecting above the arch of the tooth clamp, a lateral projecting T shaped tongue carried by the receiver projecting beneath the arch of the clamp, angular tips on the extremities of the head of the T shaped tongue engaging the exterior of the arch at the edge opposite the receiver.

5. A dental appliance comprising an arch shaped tooth clamp and a substantially U shaped spring lamp clip, said arch shaped clamp and spring clip being engaged one with the other in reversed relation.

In testimony whereof, I have hereunto set my hand this 13th day of May, A. D. 1911.

EDWIN B. TIZZARD.

Witnesses:
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