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1,930,993

LAMP SUPPORT

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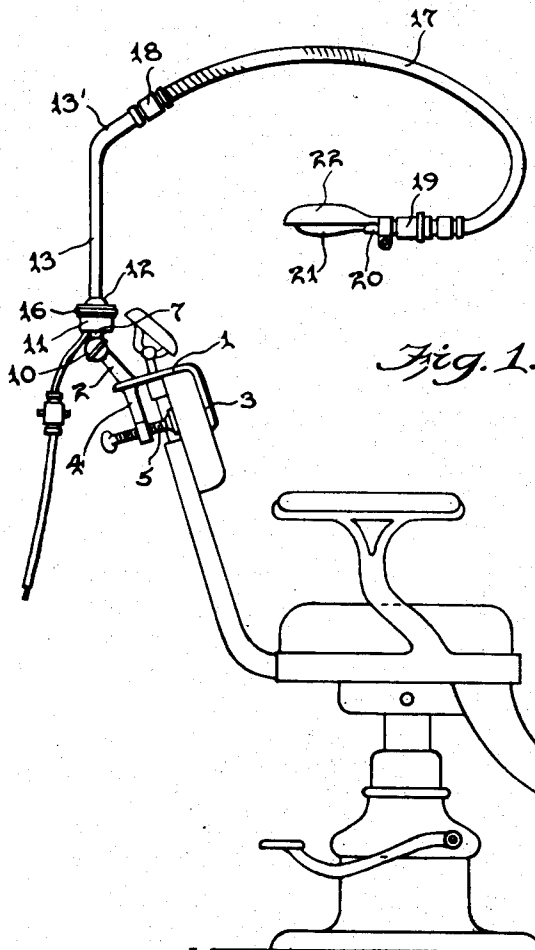


Fig. 1.

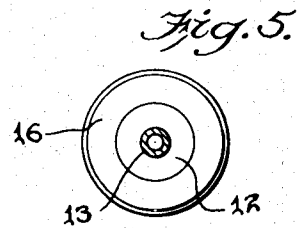


Fig. 5.

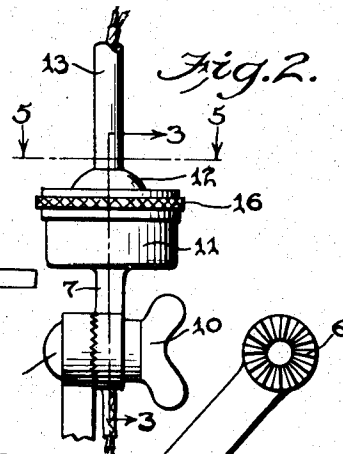


Fig. 2.

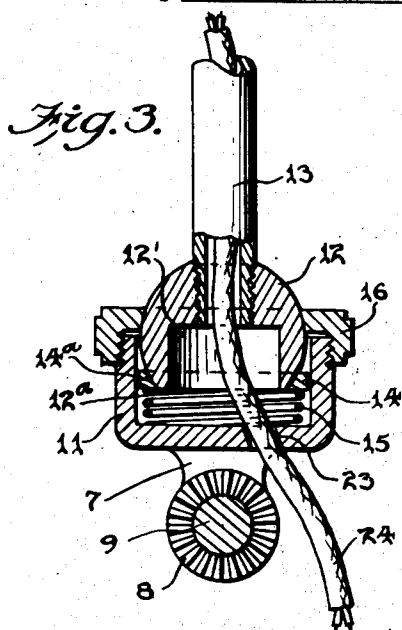


Fig. 3.

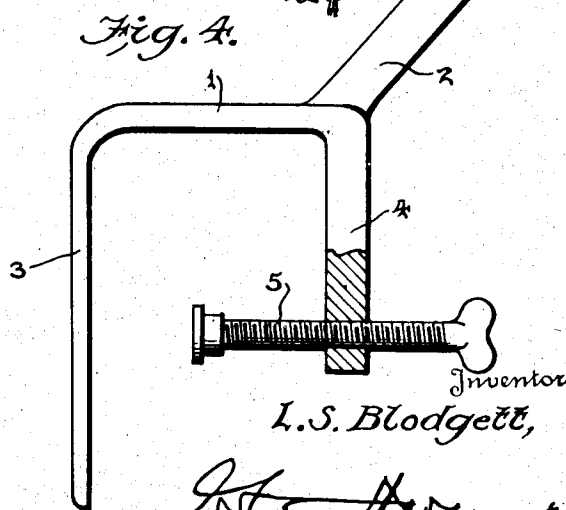


Fig. 4.

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UNITED STATES PATENT OFFICE

1,930,993

LAMP SUPPORT

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1 Claim. (Cl. 240—4)

My invention relates to a lamp support, more particularly to an adjustable support for use in connection with dental chairs and surgical tables and chairs.

It is accordingly an object of the invention to provide an improved adjustable support for electric lamps of simple and efficient construction which is readily adjustable to seat the lamp in any desired position.

Another object of the invention is to provide a simple and compact lamp support which may be easily attached to any portion of a chair or table or to various types of chairs.

According to the invention I provide a lamp support which may be attached directly to the chair itself in such manner that it does not interfere with the operator. It is in most part flexible and can be adjusted in a position about the patient's head by a simple movement of the operator's hand and if the chair is adjusted in any manner, the lamp necessarily moves with it and always remains in the same relative position to the working area. I have furthermore provided a soft floodlight which can be used without interfering shadows from the movement of the operator's hand and which can be used from over a foot away or relatively close to the working area as may be required without heat or glare bothering either the patient or the operator.

The novel features that I consider characteristic of my invention are set forth with particularity in the appended claim. The invention itself both as to its construction and method of operation, together with additional objects and advantages thereof will be understood from the following description when read in connection with the accompanying drawing in which:—

Figure 1 illustrates diagrammatically a dental chair having my improved lamp support applied thereto.

Fig. 2 is an enlarged view in elevation of the universal joint and its connection to the attaching bracket taken on a line at right angles to Fig. 1.

Fig. 3 is a section through the universal joint taken on the line 3—3 of Fig. 2.

Fig. 4 is a side view of the attaching bracket and socket supporting clamp with part broken away.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 2.

Referring to the drawing in detail wherein is shown a preferred form of my invention, 1 designates an attaching or clamping bracket which may be of any suitable shape or size but as here

shown comprises a longitudinally extending body member having at the upper portion thereof an inclined arm 2 which slopes upwardly and rearwardly, and having at each end thereof depending arms 3 and 4 which extend vertically downward and are adapted to cooperate with the adjustable screw member 5 carried at the lower end of the rear arm 4 and arranged for adjusting and for holding the bracket in a fixed position. The inclined arm 2 has at the upper end thereof a toothed face portion 6 that surrounds a transversely extending bolt-receiving opening and which has a general extent in a vertical and transverse direction. This clamp affords a simple means of accomplishing practically universal application to all types and models of chairs.

The reference character 7 designates a socket supporting arm having on one end thereof a toothed face portion 8 as best shown in Fig. 3, adapted to fit corresponding teeth on the toothed face portion 6. The toothed face portions 6 and 8 are adjustably connected by means of a bolt 9 and a thumb nut 10 which allows the socket 11 which is carried on the other end of the arm 7 to be adjusted in angular relation to the chair and fixed in any position within its arc by manipulation of the thumb nut 10.

A ball like member 12 having a chamber 12' therein resulting in an annular portion 12^a is carried on the end of a hollow arm 13 and is adapted to fit in the socket member 11.

A ring 14 having a tapered portion 14^a rests on a spring 15 confined within the socket member 11. The tapered portion 14^a is adapted to receive the annular portion 12^a to provide a spring supported seat for the ball like member 12.

The ball like member 12 is adapted to be clamped in different positions of adjustment within the socket member 11 by a nut 16 which embraces the ball and has screw threaded detachable connection with the socket member 11 and therefore may be utilized to adjust the tension of the spring 15 on the ball like member 12.

The ball like member 12 and the socket member 11 results in a frictional engagement because of the spring supported seat 14 which permits of the tubular arm 13 being moved to any desired position. The arm 13 has a deflected portion 13' which extends upwardly and forwardly. The tubular member 13 is straight for a substantial part or main section as it leaves the apertured portion of the ball member 12 and the deflected portion 13' is relatively short as compared with the main straight section just mentioned.

A hollow flexible but positionable metallic arm

17 is secured to the deflected portion 13' in any suitable manner, for instance, by means of a coupling 18. The other end of the flexible arm 17 is provided with a tubular member 19. A conventional lamp socket 20 is housed within the tubular member 19 and is adapted to receive the connecting plug of an electric lamp 21. The tubular arm 13 and the flexible metallic arm or tubular portion 17 constitutes what may be referred to as a goose-neck construction at the free end of which an electric bulb may be supported.

The flexible arm 17 may be bent in any desired manner to position the lamp 21 with respect to the working area and when so bent will of its own volition, retain its shape and support the lamp in its adjusted position.

A reflector 22 is removably secured to the tubular member 19 by any suitable means.

The socket 11 is provided with an opening 23 in offset relation with respect to the socket supporting arm 7 and the connection between the inclined arm 2 of the attaching bracket and the socket member 11 through which electrical conducting wire 24 is adapted to be passed through the socket member 11, and through the interior of the spring 15, upwardly through the chamber 12' of the ball like member 12 and thence through the arms 13 and 17 to the lamp socket 20.

Although I have shown and described certain specific embodiments of my invention I am fully aware that many modifications thereof are possible. My invention, therefore is not to be restricted except in so far as is necessitated by the prior art and by the scope of the appended claim.

What is claimed is:

In a lamp support, a clamping bracket comprising a horizontally and longitudinally extending body member having at the front end thereof a depending arm providing a clamping prong that extends in a vertical direction, at the rear thereof a depending arm having at the lower end portion thereof a screw-threaded opening with a horizontally and longitudinally extending clamping screw therein which is movable in respect to the clamping prong toward and from clamping position, and at the upper rear portion thereof an upwardly

and rearwardly extending arm the upper end of which is provided with a toothed faced portion that surrounds a horizontally and transversely extending bolt-receiving opening and which toothed faced portion has a general extent in a longitudinal and vertical direction; a ball and socket construction comprising a member providing a socket portion open at the top and a depending arm that provides a toothed faced portion that surrounds a horizontally and transversely extending bolt-receiving opening and which toothed faced portion of the socket member is constructed for cooperative engagement with the toothed faced portion of the clamping bracket, said ball and socket construction also comprising an apertured ball member mounted in said socket portion and clamping means for holding said ball member in the socket member but so that the ball member can be adjustably positioned in respect to the socket member, said socket member having an opening therein at one side of the depending arm thereof whereby an electrical cable can be passed into the ball and socket construction; a clamping bolt for securing the aforementioned toothed faced portions in operative relationship in respect to each other; a goose neck device for supporting an electric lamp at the free end thereof, which goose neck device comprises an upstanding relatively rigid tubular member the lower end of which is connected to and is in communication with the apertured portion of the ball member and the upper end of which relatively rigid tubular member is upwardly and forwardly inclined, and a flexible readily positionable tubular member one end of which is connected to and carried from the upper forward end of the rigid tubular member, the other or free end of which flexible and readily positionable tubular member carries means for holding an electric lamp; and an electrical cable which enters through the aperture in the socket member, which extends through the socket member, thence into the relatively rigid tubular member and into the flexible readily positionable tubular member to the means for carrying the electric lamp.

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