

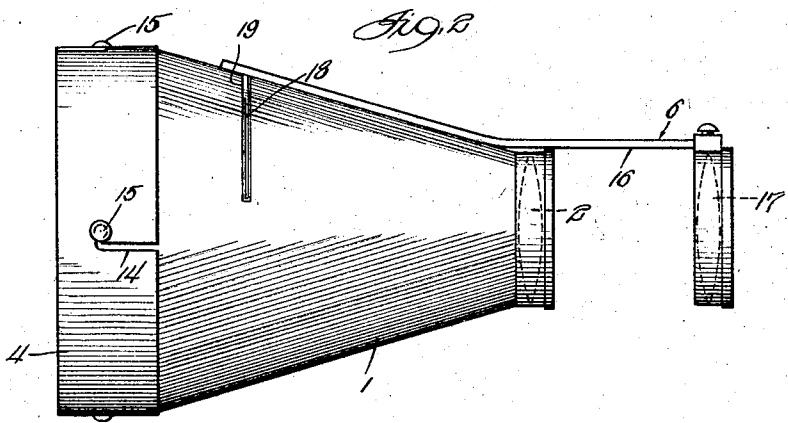
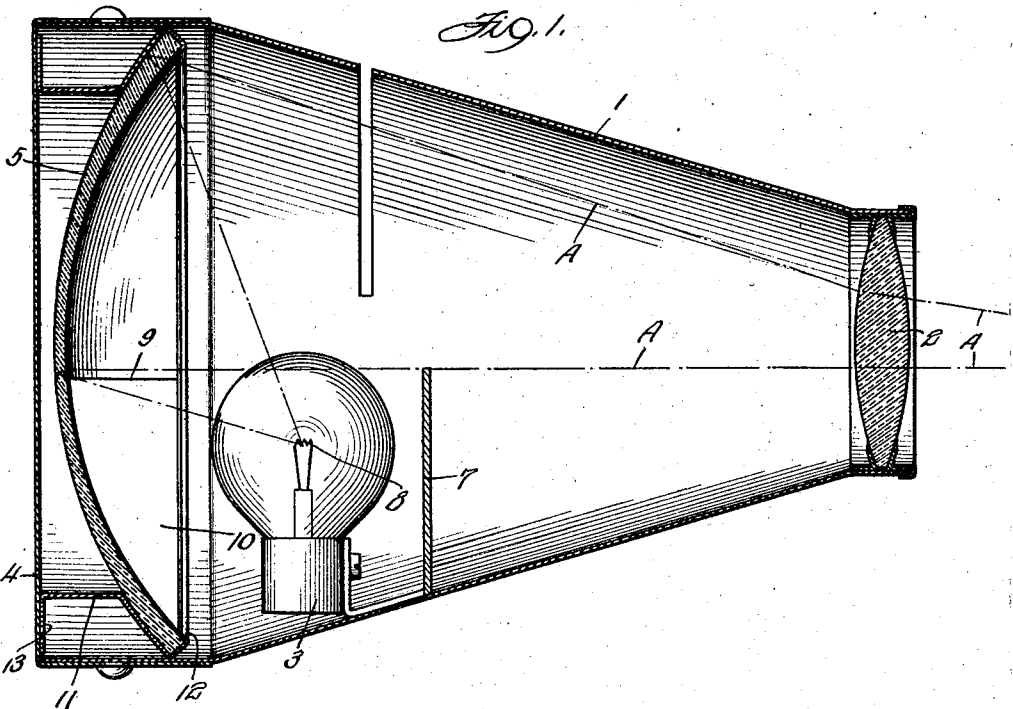
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R. A. MULLANEY

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LAMP CONSTRUCTION

Filed March 19, 1931



Witness:  
*W. H. Olson*

Inventor:  
*Ralph A. Mullaney*  
*By Jones, Addington, Ames & Seiberg*  
*Attys.*

## UNITED STATES PATENT OFFICE

RALPH A. MULLANEY, OF CHICAGO, ILLINOIS

## LAMP CONSTRUCTION

Application filed March 19, 1931. Serial No. 524,125.

My invention relates to lamp construction.

One of the objects of my invention is to provide an improved lamp construction for dental use or the like, which will confine the light to a definite beam so that there will be no glare in the eyes of the person operated on.

A further object of my invention is to provide an improved dental light having means for projecting a film.

Further objects will appear from the description and claim.

In the drawings, in which my invention is illustrated—

Figure 1 is an axial section through the lamp; and

Fig. 2 is a side elevation showing the film projecting attachment in place.

Referring to the drawings in detail, the construction shown comprises a conical casing 1, a lens 2 mounted at the front end of the casing, a lamp socket 3 mounted at the rear end of the casing, a cap 4 detachably secured to close the rear end of the casing, a reflector 5 mounted on this cap and detachable therewith, and a film projecting attachment 6 readily attachable and detachable with respect to the lamp. A screen 7 is provided in front of the lamp to prevent direct rays from the light source 8 from striking the eye of the person operated on and causing a glare. The lower edge of the effective reflecting surface of the reflector lies substantially in a horizontal plane 9, the lower portion of the reflector being rendered ineffective by means of a dead black coating 10. The reflector is mounted in a suitable annular support 11 flanged over the edge of the reflector as indicated at 12 and having a flanged portion 13 secured to the cap 4. The cap may be detachably secured to the main portion of the casing by a bayonet joint connection comprising the bayonet slots 14 in the cap and the bayonet pins 15 secured to the casing.

The film projector comprises a frame or bar 16, on the front end of which a condensing lens 17 is mounted and on the rear end of which a film holder 18 is secured. The casing may be provided with a slot 19 positioned and proportioned to receive the film holder so that when the frame is in position, as shown in

Fig. 2, the film holder will be properly positioned to hold a film in the path of the reflected rays A to cause an image of the film to be projected on a suitable screen.

As shown in Fig. 1, the light source is mounted so as to be in front of the focal point of rays reflected from parallel incident rays so that the reflected rays A from the light source converge and cross each other at some distance in front of the lamp so that the light pattern in front of this crossing point will be in the form of a semi-circle with a flattened upper edge. The lamp gives a very definite light pattern due to the non-diffusing character of the reflector and the manner in which the reflected rays are directed and also due to the effect of the screen in front of the light source which cuts off the direct rays.

While I have shown and described but one embodiment of the present invention, it will be apparent to those skilled in the art that various modifications thereof may be made without departing from the spirit and scope of this invention, and, therefore, I wish to be limited only by the prior art and the scope of the appended claim.

I claim:

A lamp construction comprising a reflector having a reflecting surface of revolution and a light source in front of said reflector, the lower edge of the effective reflecting surface lying substantially in a horizontal plane and the light source being in front of the focal point whereby the rays from the reflector will be convergent and the upper edge of the light pattern beyond the focal point of the reflected rays from the light source will be substantially horizontal, a condensing lens in front of said light source in the path of the reflected rays, said light source being below the lowermost reflected rays whereby bulb absorption is eliminated and an undistorted light pattern is secured, and a light screen in front of said light source to prevent direct rays from the light source from striking the condensing lens.

In witness whereof, I have hereunto subscribed my name.

RALPH A. MULLANEY.