F. F. BURDICK.

THERAPY LAMP.

APPLICATION FILED APR. 24, 1920.

1,430,354. Patented Sept. 26, 1922.

Fig. 1.

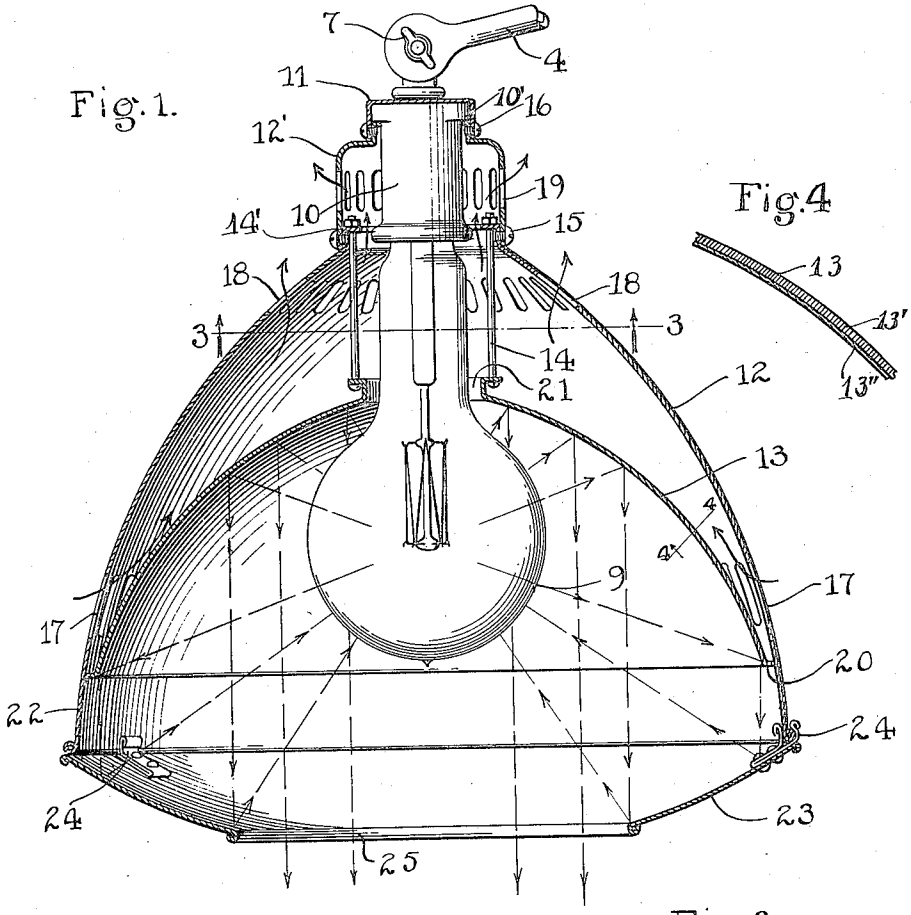


Fig. 4

Fig. 3.

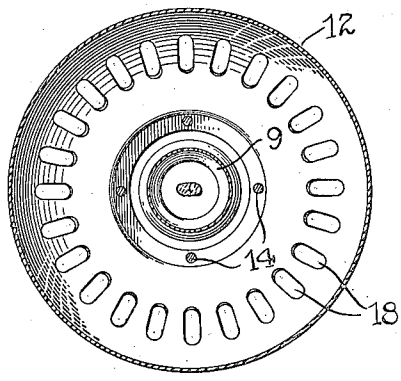
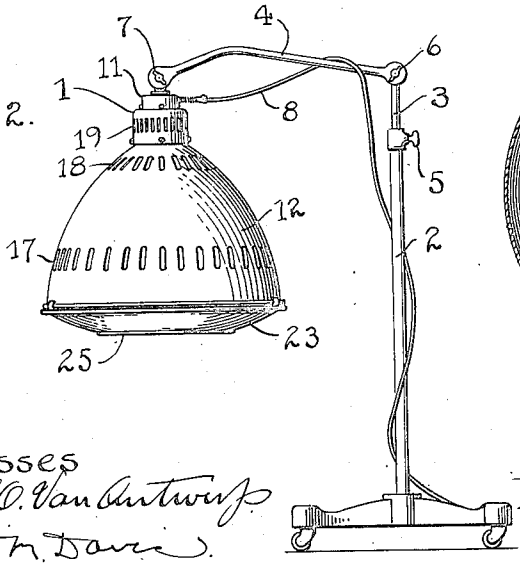


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

FRED F. BURDICK, OF MILTON, WISCONSIN.

THERAPY LAMP.

Application filed April 24, 1920. Serial No. 376,374.

To all whom it may concern:

Be it known that I, FRED F. BURDICK, a citizen of the United States of America, and a resident of Milton, county of Rock, and State of Wisconsin, have invented certain new and useful Improvements in Therapy Lamps, of which the following is a specification.

This invention relates to radio-therapeutic apparatus and especially to shades and reflectors for ray generators or lamps used for therapeutic purposes.

The main objects of the invention are to provide an improved form of lamp shade and casing, having nearly a parabolic reflecting face and adapted especially for use in connection with deep therapy filament lamps, such for instance, as shown in the drawings; to provide for efficient ventilation of the device; to provide a dished annular attachment adapted for readily detachable connection to the lower edge of the main body of the shade for collecting the normally divergent rays, as may at times be required, and causing them to be discharged centrally with the main body or beam of rays; and to provide a reflecting surface of polished metallic character on said attachment and a non-absorbent ray-diffusing surface on the reflecting side of the main reflector or shade proper.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which—

Fig. 1 is a vertical axial section through the lamp socket, casing and reflector.

Fig. 2 is a side elevation of the complete device assembled and mounted on a portable supporting bracket of adjustable character.

Fig. 3 is a section at 3—3 on Fig. 1.

Fig. 4 is an enlarged section of the main reflector wall, as at 4—4 on Fig. 1.

In the construction shown in the drawings, the lamp device 1 as a whole is mounted on an upright portable bracket 2 having a telescopic extension 3 and a vertically swinging lateral arm 4, the adjustment of the lamp being secured by means of clamps or set screws 5, 6 and 7 at the several joints, as will be understood. Electric current is supplied to the lamp by means of the cord 8.

The electric bulb 9, is secured in a socket 10, held in the cap 11, which is secured to the arm 4, by the connection at 10′.

The shade or casing comprises mainly a dome-shaped outer wall 12, and an inner wall 13, spaced somewhat therefrom and secured thereto by means of bolts 14, secured to their upper edges. The outer wall 12, includes a separately formed cup member 12′, the parts being fastened together by screws 15. The part 12′ is secured to the member 11 by means of screws 16.

Ventilation is provided by means of three horizontal circumferential series of apertures 17, 18 and 19. The holes 17, are near the lower edge of the outer wall 12 and just above the lower edge of the inner wall 13, the latter fitting tightly against the outer wall along its lower rim as at 20. The medial row of holes 18, is just below the line where the parts 12 and 12′ are connected by the screws 15, and the uppermost holes 19, are disposed in a medial zone of the part 12′. As a result of this arrangement of openings, air enters the casing at the lower apertures or inlets 17, and is mainly discharged at the medial apertures 18, though part of the air passes on upward and out through the uppermost apertures 19, clearance being provided for this purpose between the socket 10 and the casing, particularly at zone of connection marked by screws 15, and the lugs 14′ supporting the bolts 14. Clearance is also provided between the bulb 9, and the upper edge of the inner wall 13, as at 21, so that the bulb may be appreciably cooled by air entering at the main and lowermost opening of the casing and passing up through the inner casing and out at holes 18 and 19.

In order to provide for the best general efficiency of the lamp the inner surface of the wall 13, and the lowermost zone 22, of the outer wall are formed to provide a substantially parabolic reflecting surface. In order that these surfaces may serve to diffuse as well as reflect the rays, the backing 13′ is provided with a surface coating 13″ of vitreous material of the nature of porcelain enamel.

Whenever it is desired to limit the beam or concentrate the rays, a reflecting diaphragm or hood 23, is secured to the lower edge of wall 12, spring clips 24 being provided for this purpose on the upper edge of the attachment. The member 23 is in the form of an annulus of somewhat conoidal shape the surface being concave upward and adapted to reflect the rays falling thereon upward against the inner wall 13, from whence they are again reflected downward

in a diffused form through the apertures 25 in the reflector 23. The upper face of reflector 23 is polished aluminum, which is highly efficient, whereas in this particular instance diffusion is not desired.

Although but one specific embodiment of this invention is herein shown and described, it is to be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claim.

I claim:

A radio-therapeutic lamp casing comprising a conoidal outer wall formed and adapted to enclose the lamp as a whole to prevent side radiation, in combination with a conoidal inner reflecting wall open at the top and nesting therein, said inner wall being formed and adapted to enclose the lower bulging part of the lamp wherein the light is generated and having its lower edge turned outward against the lower part of said outer wall and the upward part being increasingly spaced toward the top, and threaded tension means for securing said walls together, the outer wall having ventilation apertures adjacent to the lower and upper edges of said inner wall whereby over-heating is prevented.

Signed at Chicago this 22d day of April, 1920.

FRED F. BURDICK.