

Dec. 4, 1928.

1,694,067

W. T. LEWIS

THERAPEUTIC LAMP

Filed Oct. 27, 1927

2 Sheets-Sheet 1

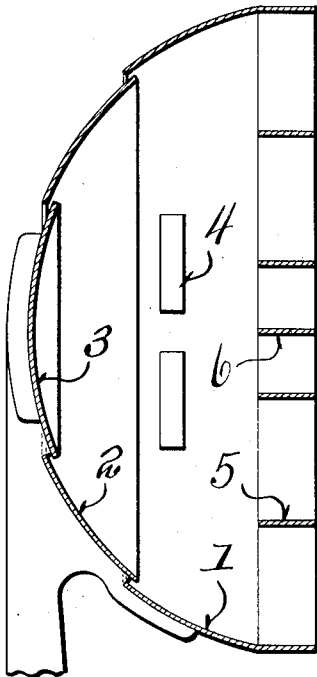


Fig. 1

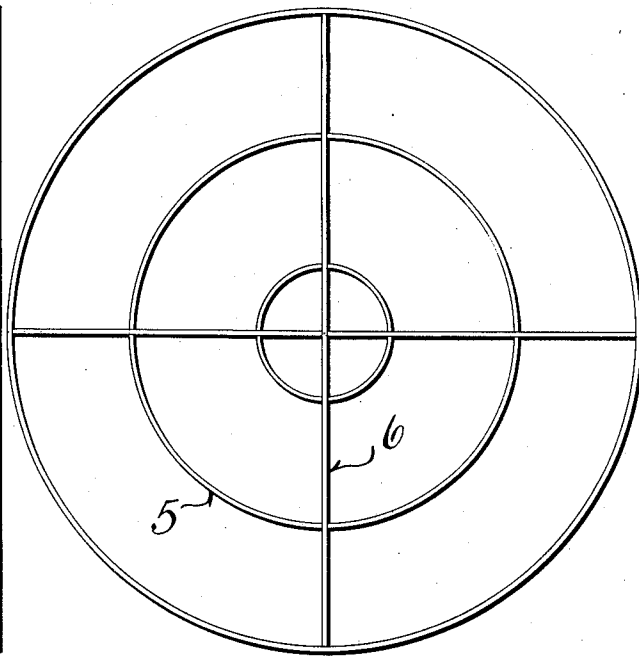


Fig. 2

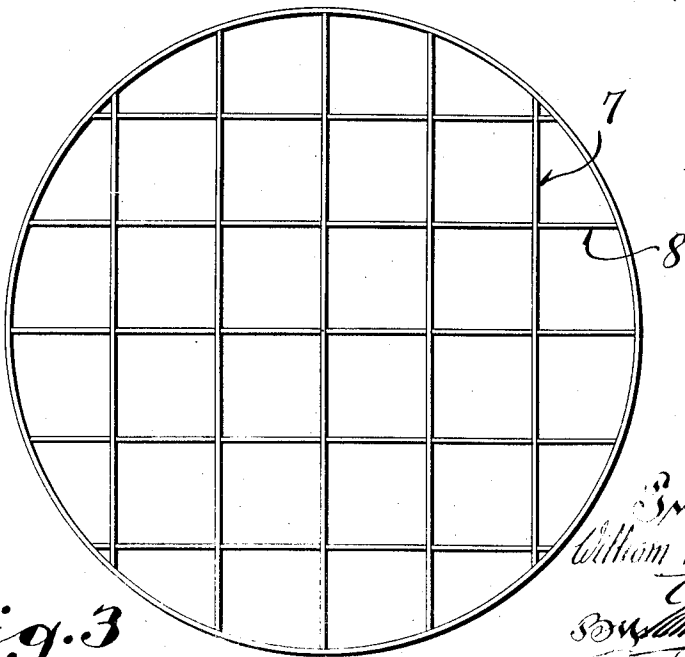


Fig. 3

Inventor:
William Turner Lewis
W. T. Lewis
By *William T. Lewis*
Attorney

Dec. 4, 1928.

1,694,067

W. T. LEWIS

THERAPEUTIC LAMP

Filed Oct. 27, 1927

2 Sheets-Sheet 2

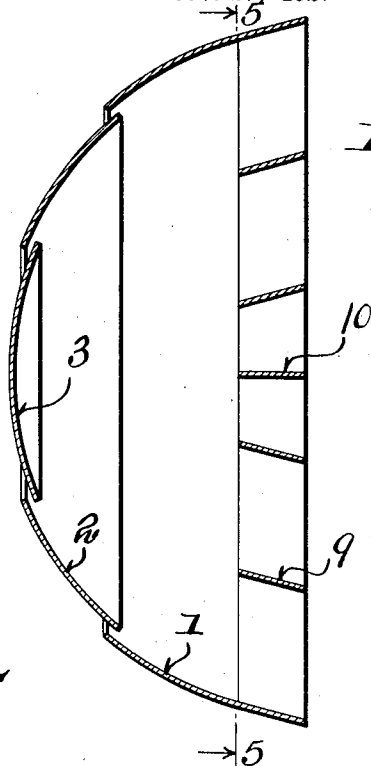
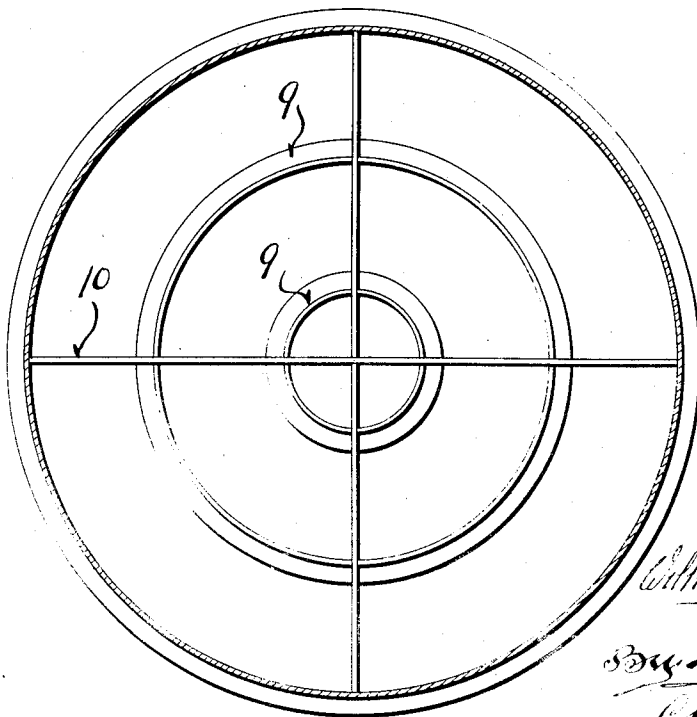


Fig. 4

Fig. 5



Inventor:
William Turner Lewis
W. T. Lewis
By *Harry Lewis*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM TURNOR LEWIS, OF RACINE, WISCONSIN, ASSIGNOR TO WESTERN COIL & ELECTRICAL CO., OF RACINE, WISCONSIN.

THERAPEUTIC LAMP.

Application filed October 27, 1927. Serial No. 229,082.

This invention relates to therapeutic lamps. Objects of this invention are to provide a therapeutic lamp in which an excellent diffusion of the light heat rays or other active rays employed, is secured, and at the same time scattering or side radiation is avoided.

Further objects are to provide a novel form of therapeutic lamp in which the lamp is so constructed that it is freely ventilated and consequently large current values may be employed without excessively heating the lamp, and which nevertheless correctly focuses the arc light or other source for the radiant energy.

This invention may employ sources of radiant energy such as disclosed in my copending application Serial No. 193,244, filed May 21, 1927, for therapeutic lamps, and Serial No. 232,412 filed Nov. 10, 1927 for therapeutic lamps.

Embodiments of the invention are shown in the accompanying drawings in which:

Figure 1 is a sectional view through the lamp;

Figure 2 is a front view thereof;

Figure 3 is a view of a modified form of lamp;

Figure 4 is a sectional view through a still further form;

Figure 5 is a sectional view on the line 5—5 of Figure 4.

Referring to Figures 1 and 2, it will be seen that the lamp comprises a plurality of overlapping parabolic sections 1, 2, and 3. Although three sections only have been shown, it is to be distinctly understood that any number of sections may be employed. These sections as stated are parabolic and preferably have their focal points the same, that is, at the center of the electric arc formed between the electrodes 4. If desired, a heater coil may be added for the infra-red rays, as shown in my copending applications.

The sections forming the parabolic reflector overlap and are spaced apart, as shown in Figure 1, to provide free ventilation under all conditions even when the light is used with its axis vertical.

Further, in reference to Figures 1 and 2, it will be seen that a plurality of circular fins 5 have been provided which are intersected by radial fins 6. These fins prevent lateral spreading of the light by securing a very even distribution thereof over the patient's body or such portion thereof which is to be treated.

It is obvious that other forms of fins may be employed, for example, as shown in Figure 3. Fins indicated by the reference characters 7 and 8 may be arranged in intersecting relation to form a plurality of squares through which the radiant energy passes.

In the form shown in Figure 4, the same parabolic sections 1, 2, and 3, are employed, but the fins are arranged as formed on the surface of cones and are indicated by the reference character 9. They are intersected by any number of radial fins 10. It is clear that the manner of forming the fins disclosed in Figures 4 and 5 will give a wider distribution of the light rays than the forms shown in the other figures.

It is apparent that very much larger current values may be employed with this lamp than has heretofore been possible due to the fact that it is freely ventilated. However, in spite of this free ventilation the focal relation between the arc light and the reflector is maintained by the peculiar arrangement of overlapping parabolic sections.

It will be seen that novel forms of therapeutic lamps have been shown which are of relatively simple construction, which may be easily produced, and which are highly efficient for the purposes set forth in detail above.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

1. A therapeutic lamp comprising a source of radiant energy, and a plurality of annular reflecting members having spaced adjacent edges, said lamp having annular open spaces between successive reflecting members.

2. A therapeutic lamp comprising a source of radiant energy, and a plurality of annular reflecting members having spaced, overlapping adjacent edges, said lamp having annular open spaces between successive reflecting members.

3. A therapeutic lamp comprising a source of radiant energy, and a plurality of spaced parabolic reflecting sections, said lamp having annular open spaces between successive reflecting sections.

4. A therapeutic lamp comprising a source of radiant energy, and a plurality of spaced parabolic reflecting sections, each section hav-

ing the source of radiant energy at approximately its focal point, said lamp having annular open spaces between successive reflecting sections.

5 5. A therapeutic lamp comprising a source of radiant energy, and a plurality of annular parabolic reflecting sections having their marginal edges overlapping and outwardly spaced from each other, said lamp having annular open spaces between successive reflecting sections.

10 6. A therapeutic lamp comprising a source of radiant energy, and a plurality of annular parabolic reflecting sections having their marginal edges overlapping and outwardly spaced from each other, each section having its focal point at approximately the center of the source of radiant energy.

15 7. A therapeutic lamp comprising a source of radiant energy, a plurality of spaced re-

reflecting members, and a plurality of fins at the front of the outermost reflecting member forming an open grating.

8. A therapeutic lamp having a source of ultra-violet light, a reflector surrounding said source, and a plurality of fins at the front of said reflector, said fins preventing undesirable scattering of the rays. 25

9. A therapeutic lamp comprising a source of radiant energy, a reflector surrounding said source, and a plurality of fins at the front of said reflector for preventing undesirable scattering of the rays and for securing an even distribution of said rays over a predetermined area. 30

In testimony that I claim the foregoing I have hereunto set my hand at Racine, in the county of Racine and State of Wisconsin. 35

WILLIAM TURNOR LEWIS.