

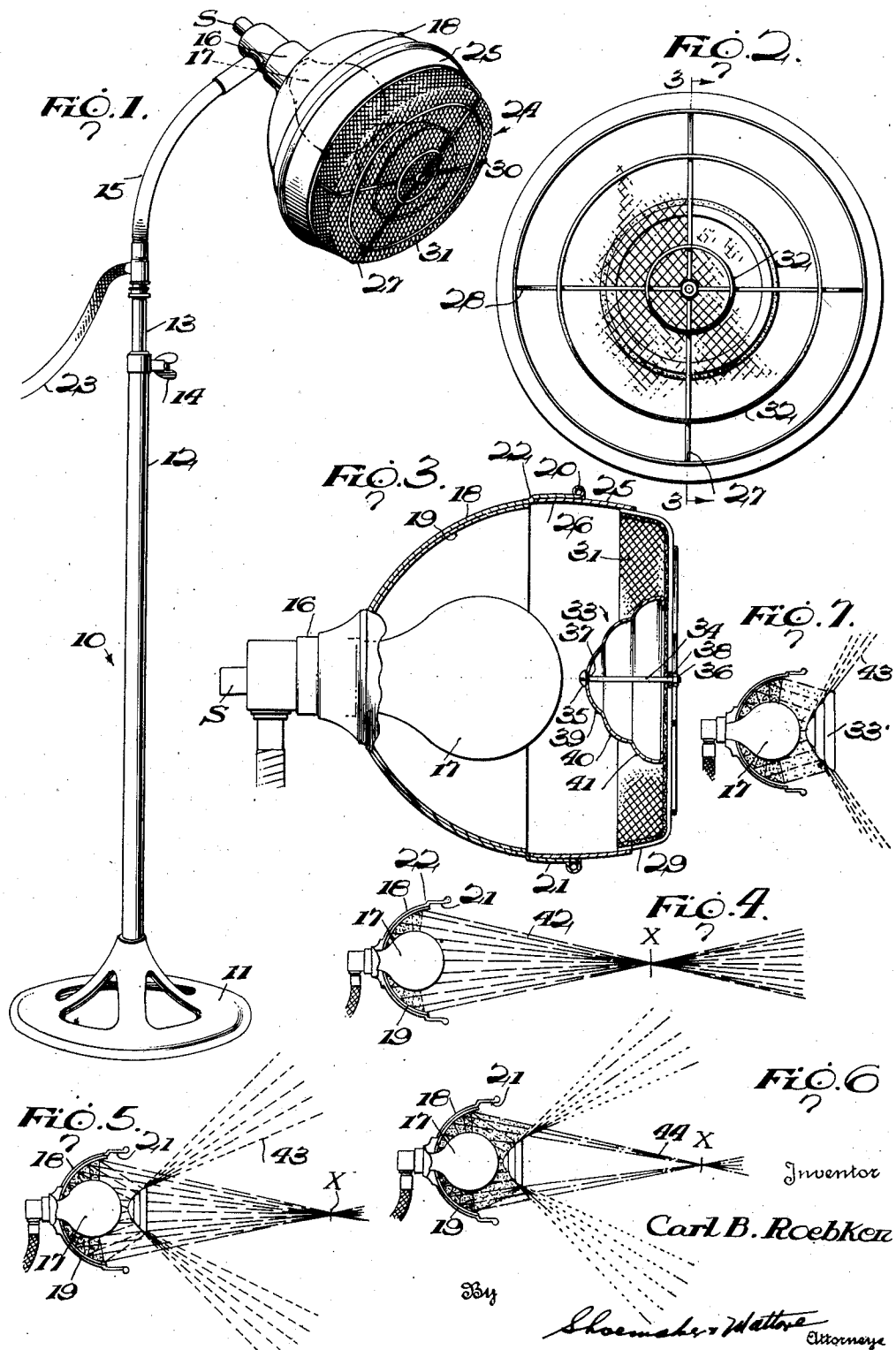
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C. B. ROEBKEN

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THERAPEUTIC LAMP

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Inventor

Carl B. Roebken

By

Shoemaker & Wetmore
Attorneys

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THERAPEUTIC LAMP

Carl B. Roebken, Washington, D. C.

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This invention relates to therapeutic lamps.

Therapeutic lamps or so-called "sun lamps" which deliver most of their ultra-violet radiation within the erythmal range, 3350 to 2800 Angstrom units now on the market merely produce sunburn and tan and develop vitamin D. These lamps are of varied types and designs but all produce the aforesaid results.

There is also another type of ultra-violet lamp which duplicates the ultra-violet rays of the sun for speedily killing surface and air-borne bacteria, viruses and mold spores. This lamp is known commercially as the "Sterilamp." Then, too, there is another type of lamp for producing infra-red rays.

My invention is broadly directed to a therapeutic lamp which produces combined penetrating light and heat waves or rays, which are comparable to infra-red rays, and utilizing such combined rays for therapeutic purposes, or for any other desirable use.

Further, I accomplish the formation of the combined waves or rays by means of light and heat reflection.

In view of the foregoing it is an object of my invention to provide a therapeutic lamp for discharging waves or rays which are combined from at least two separate reflected sources of individual light and heat waves or rays.

Another object of my invention is to produce combined penetrating and sterilizing therapeutic light and heat waves or rays by reflection.

Another object of my invention is to provide an attachment for a therapeutic lamp in the form of a guard, the latter carrying reflecting means in association with other suitable reflecting means for producing two sources of combined reflected waves or rays.

Another object of my invention is to provide an attachment for known heat lamps now on the market, for producing combined light and heat waves or rays.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing the advantages of the invention.

In the drawings:

Fig. 1 is a perspective view depicting a com-

plete stand type therapeutic lamp with my invention applied thereto;

Fig. 2 is a front elevation of the lamp housing and reflector shown in Fig. 1 with my attachment applied thereto;

Fig. 3 is a vertical sectional view of the lamp housing on the lines 3—3 of Fig. 2;

Fig. 4 is a vertical sectional view of a lamp housing and reflector without my attachment and showing the light and heat penetrating waves or rays emanating or projecting to a focal area;

Fig. 5 is a view similar to Fig. 4, showing the reflector attachment and the emanation or projection of the light and heat waves or rays;

Fig. 6 is a view similar to Fig. 5, showing the reflector attachment of Figs. 3 and 4, in close proximity to the light source for emanating or projecting combined light and heat waves or rays to a focal area forwardly of the lamp; and

Fig. 7 is a modification of my invention showing a larger reflector in front of the light source and the dimensions of the reflector being such that only radial light and heat rays or waves emanating or projecting from the lamp.

The invention will be more readily understood by referring to the drawings in detail where in Fig. 1 a telescoping stand 10 consisting of a suitable base 11, a hollow standard 12 and a telescoping bar or rod 13 are shown. A wing-bolt 14 secures the rod 13 in any desired adjusted position. A hollow flexible extension 15 of known construction is suitably secured at one end to the upper end of the rod 13. The other end of the flexible extension carries a casing 16 for a conventional socket, not shown, in which is secured a floodlight or heat lamp 17 of suitable wattage, for instance a 250 watt bulb. A reflector housing 18 is secured to and carried by the casing 16. The interior of the housing 18 is such as to receive therein a main concavo-convex reflector 19 which is rather highly polished on its interior surface thus providing an effective reflecting surface. The outer or open end of the housing 18 is preferably beaded as at 20. The outer end of the casing is flanged or offset slightly to provide a circular recess 21 and a shoulder or abutment 22 for my attachment, presently described. An electrical conductor 23 extends into the hollow flexible extension 15 and is electrically connected with the lamp socket and has the usual plug, not shown, at its free end and may be provided with a switch, not shown, for controlling the source of electricity to the lamp 17, or the switch may be associated with the casing 16, as denoted at S.

My invention producing the aforesaid combined

light and heat waves or rays consists of what may be called a guard attachment denoted generally at 24. This attachment consists of a substantially cylindrical ring or band 25 a portion of which 26 fits into the recess 21 in the housing 18. Crossed wires 27 and 28 have their bent over ends 29 and 30, respectively, welded or otherwise attached or secured to the ring 25 and form a support for a substantially cup-shaped mesh wire screen or the like 31. Concentrically disposed wire rings 32 are spot welded or otherwise secured to the crossed wires 27 and 28 all of which protect and serve to support and reinforce the wire screen or the like 31. The aforementioned wires and rings may be spot welded or otherwise attached to the wire screen.

An auxiliary reflector 33 is attached to the guard centrally thereof and directly in the same plane and in alignment with the light source 17. This reflector may be attached by any suitable means and I show as an example of one means of attaching a bolt 34 having a head 35 at one end and a removable nut 36 at its other end. This bolt passes through an opening 37 in the reflector and an opening 38 in the screen guard 24 and serves to effectively secure the reflector 33 in its proper position with respect to the guard and the source of light.

The auxiliary reflector 32 consists of three circular convex connected surfaces 39, 40 and 41 of progressively increasing diameters, which are superposed and merge into each other with the reflector surface of the largest diameter placed outwardly and the reflector surface of the smallest diameter placed inwardly and with the convex surfaces placed inwardly with respect to the main reflector and thus providing three separate and distinct reflecting surfaces or bands.

By referring to Fig. 4 where my invention is not applied to the lamp and reflector housing, it will be seen that rays or waves 42 of light and heat from the light source 17 engage the reflecting surface 19 and then emanate or are projected forwardly to a focal area denoted X. In Fig. 5, with the reflector 33 positioned before or in front of the light source 17, the reflected waves or rays striking this reflector from the reflector 19 and the source 17 are reflected between the two reflectors and fan radially outwardly in the form of waves or rays 43. It is to be understood that for illustrative purposes I show mainly one source of waves in Fig. 5. In Fig. 6, with the reflector 33 positioned before or in front of the light source 17, combined waves or rays are produced and some of the rays 42 are absorbed by the rays 43, or vice versa, and the combined light and heat rays or waves 44 emanate or are projected to the focal area denoted X, which ordinarily is approximately two feet from the light source.

Assuming that the focal area denoted X is the point where the combined, collected and projected and concentrated light and heat rays or waves are to be applied to the body for use, it will be understood that the penetrating waves or rays 42 will penetrate below the skin surface of the body and will carry along therewith some of the waves or rays 43.

In Fig. 7, I have provided a reflector 33' which is similar in all respects to reflector 33 except that it is of a larger diameter so that only one source of waves 43 will emanate from or be projected forwardly of the lamp housing.

My lamp provides a means for securing the safe and efficient application of thermal treatments not only to the superficies of the skin but

deeper into the tissues and bones and other vital interior organs, etc. of the body.

I claim:

1. A therapeutic lamp including a main concavo-convex reflector having an inner concave reflecting surface, a source of light in the form of an electric lamp disposed in the reflector centrally thereof, an auxiliary reflector of substantially less diameter than the main reflector and consisting of a series of connected concentric concavo-convex reflecting surfaces of progressively increasing diameters which are superposed with the reflector surface of the largest diameter placed outwardly and the reflector surface of the smallest diameter placed inwardly and with the convex surfaces placed inwardly with respect to the main reflector supported in front of and in spaced axial alignment with the electric lamp to reflect heat and light waves or rays between the main reflector and the series of reflector surfaces thus providing the reflection of two separate and distinct light and heat waves or rays which are projected beyond the lamp into two distinctively and separately formed bands or waves of light and heat waves or rays, one band of the light and heat waves or rays being projected to a focal area forwardly of the lamp and the other band of light and heat waves or rays being projected in an annular zone radially outwardly of the focal area.

2. A therapeutic lamp including a main concavo-convex reflector having an open end and an inner concave reflecting surface, a source of light in the form of an electric lamp disposed in the reflector centrally thereof, a wire guard supported at the open end of the reflector, an auxiliary reflector of substantially less diameter than the main reflector and consisting of a series of connected concentric concavo-convex reflecting surfaces of progressively increasing diameters which are superposed with the reflector surface of the largest diameter placed outwardly and the reflector surface of the smallest diameter placed inwardly and with the convex surfaces placed inwardly with respect to the main reflector and positioned substantially centrally of and secured to the wire guard and maintained in front of and in spaced axial alignment with the electric lamp to reflect heat and light waves or rays between the main reflector and the series of reflector surfaces thus providing the reflection of two separate and distinct light and heat waves or rays which are projected beyond the lamp into two distinctively and separately formed bands or waves of light and heat waves or rays, one band of the light and heat waves or rays being projected to a focal area forwardly of the lamp and the other band of light and heat waves or rays being projected in an annular zone radially outwardly of the focal area.

CARL B. ROEBKEN.

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