Dec. 27, 1927. 1,654,313

R. X. TUTTLE

THERAPEUTIC LAMP

Filed Nov. 27, 1926

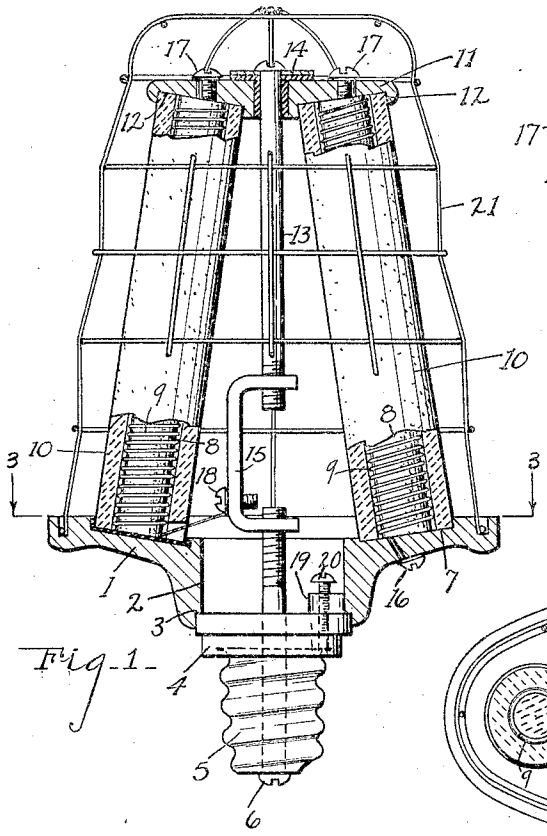


Fig. 1.

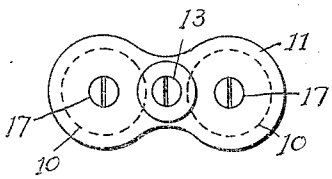


Fig. 2.

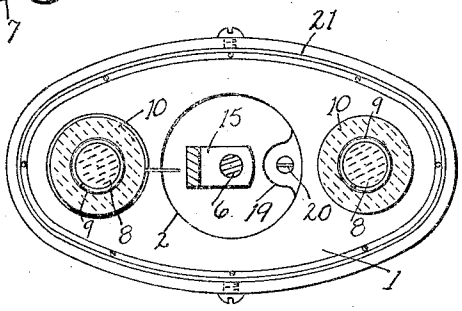


Fig. 3.

INVENTOR
Roy X. Tuttle
BY Chappell & Earl
ATTORNEYS

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UNITED STATES PATENT OFFICE.

ROY X. TUTTLE, OF BATTLE CREEK, MICHIGAN.

THERAPEUTIC LAMP.

Application filed November 27, 1926. Serial No. 151,157.

The main object of this invention is to provide an improved therapeutic lamp for the production of infra red rays which is highly efficient, durable and not likely to get out of repair.

A further object is to provide a lamp having these advantages which is comparatively economical in structure.

Objects pertaining to details and economies of my invention will definitely appear from the detailed description to follow. The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing forming a part of this application, in which:

Fig. 1 is a side view of a lamp or generator embodying the features of my invention, parts being shown in vertical section.

Fig. 2 is a plan view of the top member.

Fig. 3 is a horizontal section on a line corresponding to line 3—3 of Fig. 1.

Referring to the drawing, I provide a base casting 1 having a central opening 2 therein shouldered at 3 to provide a seat for the socket plug 4. This socket plug is of the standard type having a metal shell 5, the central terminal 6, however, being longer than that commonly provided.

The base has upwardly facing seats 7 having heating or generating units comprising the scores 8 having coils 9 wound thereon. These cores of the coils are surrounded by tubes 10 lying in close proximity to the coils to be heated thereby. The cores of the tubes are preferably of lava.

The upper ends of the heating or generating elements are supported by the top member 11 which is also of metal, this top member having downwardly facing seats 12 receiving the upper ends of the units. The parts are clamped together by the tie rod 13 which is arranged through the top plate and insulated therefrom, the insulation being indicated at 14 and the lower end being threaded to engage the yoke-like coupling 15 which has threaded engagement with the post 6. This coupling is preferably yoke-shaped as illustrated to provide resilience in the connection, thereby permitting the expansion of the cores and tubes.

One of the resistance elements is electrically connected to the base by means of the screw 16 while the other ends of the resistance elements are electrically connected to the top plate by means of the screws 17. The resistance element not grounded in the base is electrically connected to the yoke 15 by means of the screw 18.

To prevent the turning of the plug and also to ground its shell in the base, the base is provided with an inwardly projecting lug 19 carrying the screw 20 which engages the shell as indicated in the drawing, the screw thereby serving a double function.

The wire guard 21 is mounted on the base to surround the heating or generating elements, protecting them from injury and also guarding against contact therewith.

Structures embodying my improvements are highly efficient in the production of infra red rays and heat. The structure is economical to produce and very durable.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a device of the class described, the combination of a metal base having a central opening therein with a downwardly facing shoulder and upwardly facing heating unit seats, a top member of metal having downwardly facing heating unit seats, heating units comprising cores of lava having coils of resistance wire thereon and surrounding tubes of lava disposed with their ends in said seats in said base and top members, a socket plug disposed on said downwardly facing shoulder in said central opening of said base member and provided with a threaded post constituting a contact member of the plug, said plug having a metal shell, a tie rod engaged with said top member and insulated therefrom, a resilient coupling yoke for said post and tie rod, said resistance coils being electrically connected to said top plate and one of them to said base plate, the other being connected to said coupling yoke, a lug on said base projecting into said opening thereof, a screw carried by said lug engaging the shell of the plug providing an electrical connection for the base member thereto, and securing the plug against rotation, and a guard mounted on said base.

2. In a device of the class described, the combination of a metal base having a central opening therein with a downwardly facing shoulder and upwardly facing heating unit seats, a top member of metal having downwardly facing heating unit seats, heating units comprising cores of lava having

coils of resistance wire thereon and surrounding tubes of lava disposed with their ends in said seats in said base and top members, a socket plug disposed on said downwardly facing shoulder in said central opening of said base member and provided with a threaded post constituting a contact member of the plug, said plug having a metal shell, a tie rod engaged with said top member and insulated therefrom, a resilient coupling yoke for said post and tie rod, said resistance coils being electrically connected to said top plate and one of them to said base plate, the other being connected to said coupling yoke, a lug on said base projecting into said opening thereof, a screw carried by said lug engaging the shell of the plug providing an electrical connection for the base member thereto, and securing the plug against rotation.

3. In a device of the class described, the combination of a metal base having a central opening therein with a downwardly facing shoulder and upwardly facing heating unit seats, a top member of metal having downwardly facing heating unit seats, heating units comprising cores of lava having coils of resistance wire thereon and surrounding tubes of lava disposed with their ends in said seats in said base and top members, a socket plug disposed on said downwardly facing shoulder in said central opening of said base member and provided with a threaded post constituting a contact member of the plug, said plug having a metal shell electrically connected to said base, a tie rod engaged with said top member and insulated therefrom, and a resilient coupling yoke for said post and tie rod, said resistance coils being electrically connected to said top plate and one of them in said base plate, the other being connected to said coupling yoke.

4. In a device of the class described, the combination of a base member having a central opening therein with a downwardly facing shoulder and upwardly facing heating unit seats, a top member having downwardly facing heating unit seats, heating units comprising cores of lava having resistance elements thereon and surrounding tubes of lava disposed with their ends in said seats in said base and top members, a socket plug disposed on said downwardly facing shoulder in said central opening of said base member and provided with a central threaded post, a tie rod engaged with said top member, and a resilient coupling yoke for said post and tie rod.

5. In a device of the class described, the combination of a metal base having a downwardly facing socket plug seat and upwardly facing heating unit seats, a top member of metal having downwardly facing heating unit seats, heating units comprising cores with resistance elements thereon and surrounding tubes of earthy material disposed with their ends in said seats in said base and top members, a socket plug disposed in said downwardly facing seat in said base member and provided with a post constituting a contact member of the plug, the plug having a metal shell electrically connected to said base, a tie rod engaged with said top member and insulated therefrom, and a coupling for said post and tie rod, said resistance elements being electrically connected to said top plate and one of them to said base plate, the other being electrically connected to said socket plug post.

6. In a device of the class described, the combination of a base having a downwardly facing socket plug seat and upwardly facing heating unit seats, a top member having downwardly facing heating unit seats, heating units comprising cores with resistance elements thereon and surrounding tubes of earthy material disposed with their ends in said seats in said base and top members, a socket plug disposed in said downwardly facing seat in said base member and operatively connected to said resistance elements, and means connecting said top plate and plug whereby the parts are secured in assembled relation.

7. In a device of the class described, the combination of a base having a socket plug mounted thereon, said socket plug being provided with a metal shell electrically connected to said base, a top member, and heating units comprising cores with resistance elements thereon, said cores and resistance elements being surrounded by tubes, said cores and tubes being of lava, and one of said resistance elements being electrically connected to said base and the other in said socket plug terminal, said elements being connected at their upper ends.

8. In a device of the class described, the combination of a base having a socket plug mounted thereon, said socket plug being provided with a metal shell grounded in said base, a top member, and heating units comprising cores with resistance elements thereon, said cores and resistance elements being surrounded by tubes and one of said resistance elements being electrically connected to said base and the other in said socket plug terminal, said elements being connected at their upper ends.

9. In a device of the class described, the combination of a base having a socket plug mounted thereon, a top member, heating units comprising cores with resistance elements thereon, said cores and resistance elements being surrounded by tubular radiating elements, said cores and tubes being of lava, means for clamping said heating units between said top and base, and a guard for said elements carried by said base.

10. In a device of the class described, the combination of a base having a socket plug mounted thereon, a top member, heating units comprising cores with resistance elements thereon, said cores and resistance elements being surrounded by tubular radiating elements, said cores and tubes being of lava, and means for clamping said heating units between said top and base.

11. In a device of the class described, the combination of a metal base having a socket plug mounted thereon, said socket plug being provided with a metal shell grounded in said base, a metal top member, and heating units comprising cores with resistance elements thereon, said cores and resistance elements being surrounded by tubes, said elements being grounded at their upper ends in said top member, one of said resistance elements being grounded in said base and the other in a terminal of said socket plug.

In witness whereof I have hereunto set my hand.

ROY X. TUTTLE.