Sept. 15, 1964 J. J. POTYE 3,148,836

TABLE LAMPS

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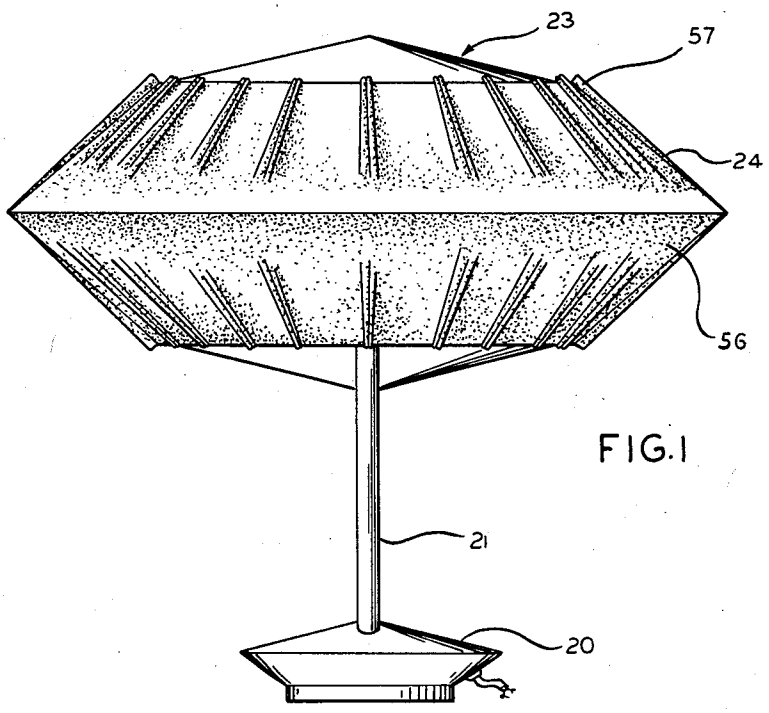


FIG. 1

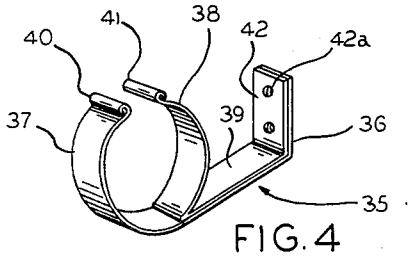


FIG. 4

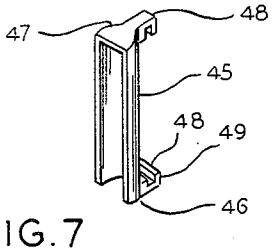


FIG. 7

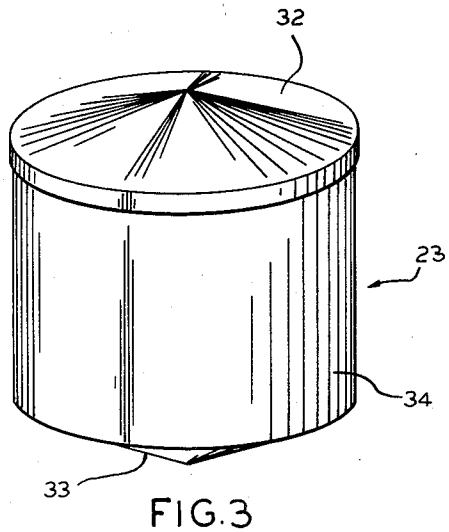


FIG. 3

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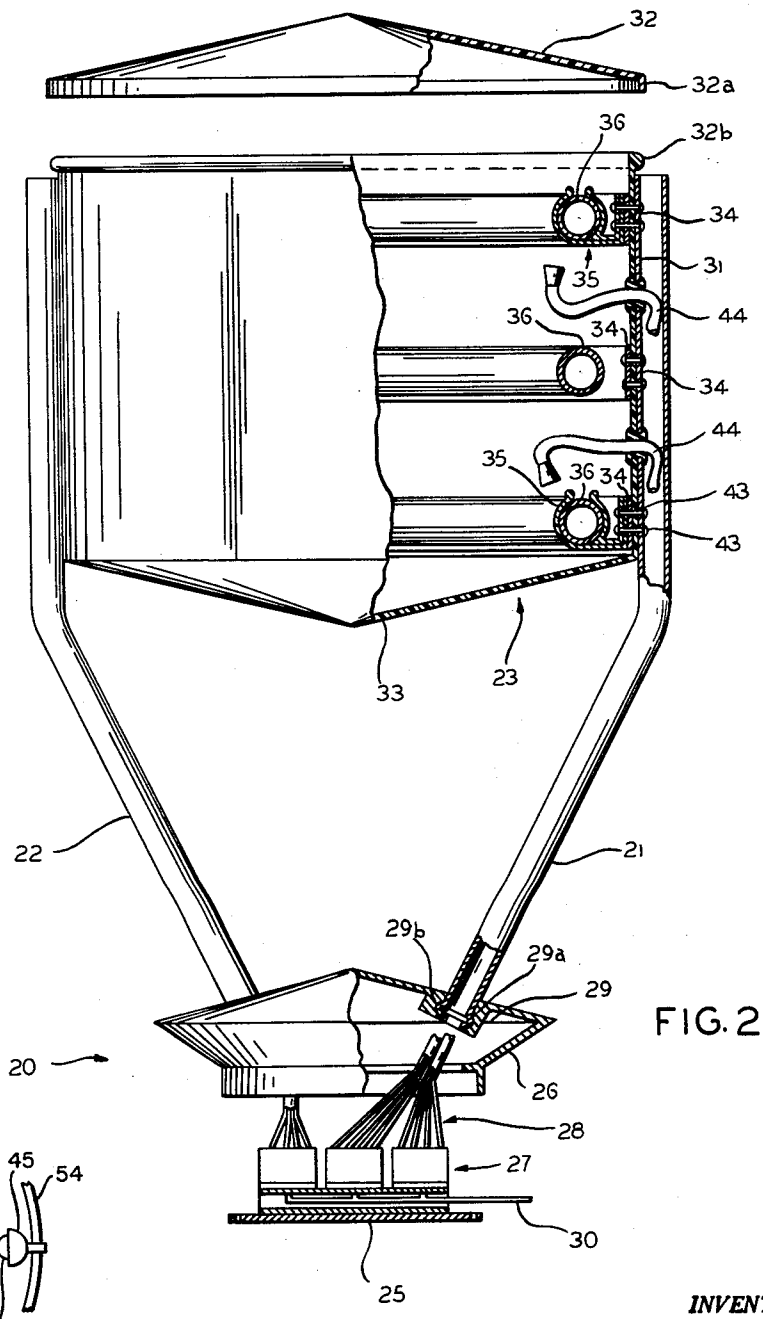


FIG. 2

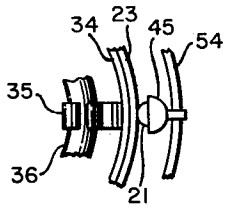


FIG. 8

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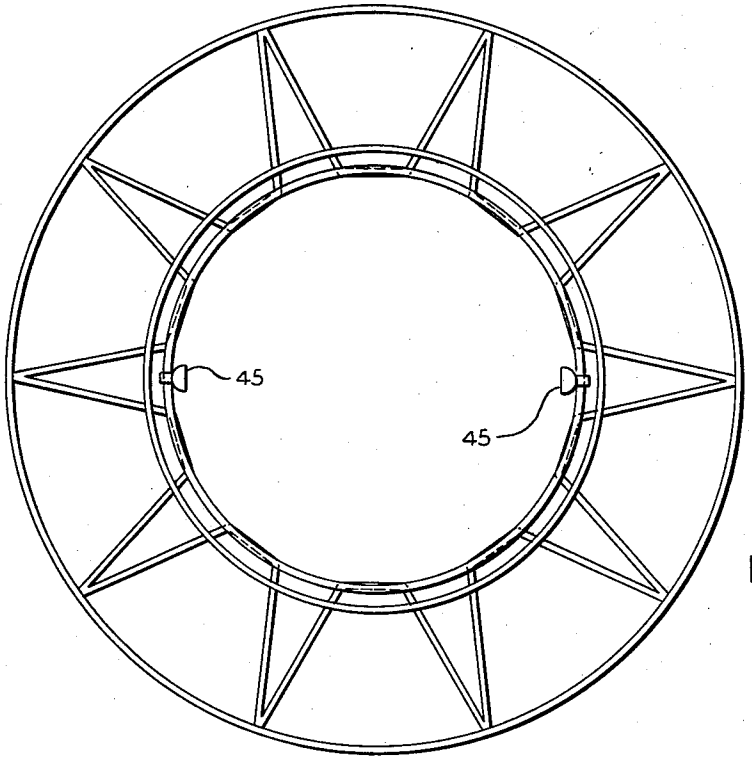


FIG.5

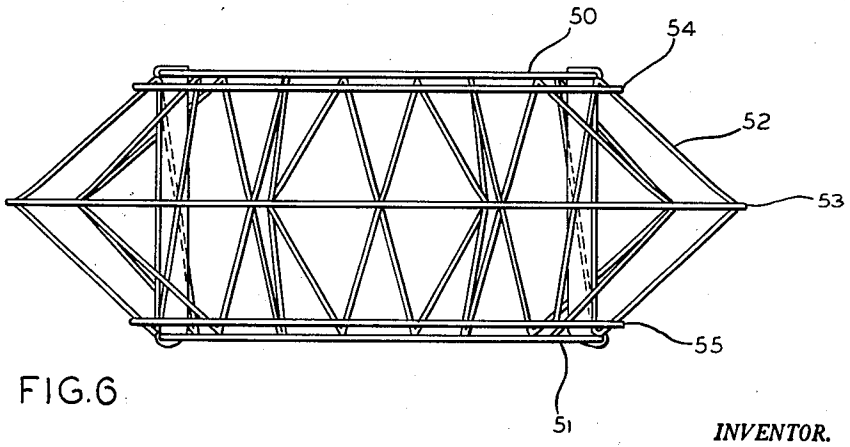


FIG.6

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3,148,836

TABLE LAMPS

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9 Claims. (Cl. 240—51.12)

The present invention is directed to new and useful improvements in table lamps, and is particularly concerned with improvements in such lamps utilizing fluorescent bulbs.

The major purposes of the present invention are to create a convenient and practical construction which enables the use of circular fluorescent bulbs in a table lamp assembly, to provide improved means for mounting the bulbs within the lamp proper, to provide means for convenient insertion of and removal of the bulbs of the lamp, and to provide a practical light diffusing and shade assembly in connection with the lamp as aforesaid.

A related purpose of the invention is to provide new and simplified means for making and supporting lamp shades.

Another purpose of the invention is to provide improved means for mounting a lamp shade on a support in a table lamp.

Another purpose is to provide a simple and practical table lamp support, light diffusing bowl and shade assembly.

Another purpose of the invention is to provide a simple means for grounding a fluorescent table lamp so as to minimize the possibility of shocks to a person utilizing the lamp.

Other purposes will appear from time to time in the course of the ensuing specification and claims when taken with the accompanying drawings in which:

FIGURE 1 is a side elevation view of a table lamp embodying the principles of the present invention;

FIGURE 2 is a side elevation view of the lamp illustrated in FIGURE 1, but with certain parts being shown in section and other parts being shown in exploded relation, so as to enable understanding of the several component parts of the lamp;

FIGURE 3 is a perspective view of a typical light diffusing bowl utilized in the lamp illustrated in FIGURES 1 and 2;

FIGURE 4 is a perspective view of a lamp holding bracket illustrated in FIGURE 2;

FIGURE 5 is a plan view of a framework for the lamp shade illustrated in FIGURE 1;

FIGURE 6 is a side elevation view of the framework illustrated in FIGURE 5;

FIGURE 7 is a perspective view of a shade mounting bracket utilized in the shade frame of FIGURE 5; and

FIGURE 8 is a fragmentary view illustrating the bulb supports, lamp supporting rod and shade support in assembled relation.

Like elements are designated by like characters throughout the specification and drawings.

With particular reference now to the drawings and in the first instance to FIGURE 1, the numeral 20 designates a lamp shade base which may be formed from a metal casting. A plurality of rod-like supports 21 and 22 are fixed to the base in upstanding relation thereto and serve to support a light diffusing bowl 23 and a shade

24 which surrounds the bowl 23. Fluorescent bulbs, as hereinafter described, are positioned in bowl 23.

The base 20 preferably includes a base plate 25 which is received within an overlying cover 26 which may be formed from a metal casting. Plate 25 acts to support ballast generally designated at 27 for the fluorescent bulbs hereinafter described. The upstanding supports 21 and 22 are hollow so as to enable leading the proper electrical conduits generally designated at 28 therethrough for distributing electric power to the bulbs positioned within the bowl 23. The tube-like supports 21 and 22 are fixed to the upper surface of the base cover 26 by inserting the lower ends of these supports through apertures, which are formed through bosses 29, which extend downwardly from the upper surface of the cover.

The supports 21 and 22 are conveniently fixed to the base cover by forming circular recesses 29*a* in the internal walls of the bores in the bosses 29, then inserting the lower ends of the supports into the bosses and then expanding the material thereof outwardly into these circular recesses so as to define circular projections 29*b* on the supports and snugly fitting with the recesses in the respective bores of the bosses 29.

The base plate 25 may be secured to the base cover 26 through any suitable means as, for example, screws, bolts or the like (not shown).

Ballast 27 is supplied with electrical current through a cable 30 which may lead to any standard wall receptacle. The cable 30 may include a ground line leading from a metallic portion of the base to a ground connection in the same outlet.

The light diffusing bowl 23, which is supported on the upper portions of the rods 21 and 22, includes a cylindrical side wall portion 31, a removable top 32, and a bottom portion 33. The bowl thus formed completely encloses the bulbs hereinafter described. The bowl may be conveniently formed from a suitable and easily molded plastic material, such as polyethylene plastic, although the bowl may be formed from other material, such as glass. With any material, the bowl should be translucent so as to properly diffuse light radially, as well as upwardly and downwardly therefrom. The bottom portion 33 and cover portion 32 of the bowl may have conical shapes as illustrated in FIGURES 1 and 2. The cover 32 may have a downwardly projecting rim 32*a* which is adapted to be snugly received over a bead 32*b* formed on the upper end of the cylindrical side wall portion 31 of the bowl.

A plurality of annular re-enforcing straps, which may be made of metal, are fixed to the interior of the bowl 23 and vertically spaced within the bowl as is illustrated at 34. These straps serve to support upwardly open clamping members generally designated at 35. Each of the clamping members 35 is adapted to receive and support a circular fluorescent bulb 36. The clamping members 35 are preferably positioned at different angular positions with respect to the axis of the bowl 23 so as to minimize interference in removing the bulbs from the clamping members or inserting new bulbs within the clamping members.

Each of the clamping members 35, which are shown in detail in FIGURE 4, include a first strap 36 having an arcuately bend end portion 37, which cooperates with the arcuately bend end portion 38 of a second strap 39,

the two arcuate portions 37 and 38 defining the major portion of a circle on the order of the size of the bulbs to be retained therein. The portions 37 and 38 may include reversely bent ends 40 and 41 to facilitate the spreading of the portions 37 and 38 when a bulb is forced into the space between these portions or pulled outwardly therefrom. The intermediate portions of the two straps 36 and 39 are fixed together as by suitable welding or the like and include bent portions 42 at the other ends thereof, these portions having apertures therein to enable fixing of the clamping members thus defined to the bands 34, to the bowl 23 as well as the supporting rods 21. Rivets 43 are passed through the apertures 42*a* in the angular portion 42 of the clamping members, through the bands 34, through the wall of the bowl 23 and through the upstanding supports 21 and 22 thus affixing the clamping members, bands, bowl, and supports in the unitary relation illustrated in FIGURE 2. By so supporting the clamping members, the weight of the bulbs is transmitted directly to the supports 21 and 22, thus enabling the use of relatively lightweight or flexible material for the bowl 23. At the same time, the securing means thus defined provides a metallic connection between the clamping members and the supports 21, which connection may be used in grounding the entire lamp assembly.

Suitable connecting leads 44 extend into the bowl from the supports 21 and 22 and establish connection between the bulbs 36 and leads 28.

Shade 24 includes a plurality of inwardly facing, vertically extending channels 45 which are adapted to be received over the upper ends of the rod-like supports 21 and 22. These channels have a configuration in size conforming generally to the configuration and size of the upper ends of the supports 21 and 22 so that the side walls of these channels surround and embrace a majority of the periphery of the rods 21 and 22. The lower portions of these channels, as is seen at 46 in FIGURE 7, are open whereas the upper portions of these channels are closed as at 47. The closed ends of the channels provide stops which abut against the upper ends of the rods 21 and 22 when the shade is in the assembled position illustrated in FIGURE 1. The channels 45 act as guides in removing the shade or inserting the shade over the rod-like supports and at the same time are sufficiently long as to minimize any lateral swaying of the shade 24 on the supports. Each of the channels 45 includes an outwardly projecting flange 48 which has a recess 49 on the upper surface thereof. These flanges 48 are adapted to be secured to circularly extending stays or supporting wires 50 and 51 which define the inner opening of the framework for shade 24.

The shade 24 is formed around a supporting wire framework which includes circular wires 50 and 51. This framework is defined by bending a continuous length of wire outwardly with respect to the supporting wires 50 and 51 and angularly with respect to the axis of these wires. This continuous length of wire appears at 52 in FIGURES 5 and 6, and is so formed as to define upper and lower half sections of the lamp shade, the two sections each being of conical form while presenting the outwardly converging outline illustrated in FIGURE 6 and in FIGURE 1. This framework may be re-enforced by another circular wire 53 which is joined to the continuous length of wire 52 at the point of convergence of the upper and lower sections. A re-enforcing circular wire 54 may be positioned below the upper circular wire 50 while resting upon the downwardly divergent portions of the wire 52. An additional circular rod 55 may be positioned upwardly from the wire 51 and in contact with the upwardly divergent portion of the wire 52. The several re-enforcing wires 50, 51, 53, 54 and 55 may be fixed to the continuous length of wire framework 52 as by spot welding or the like. Similarly, the channels 45 may be fixed to the wires 50 and 51 by bringing the recesses in the flanges 48 and 49 into engagement with these wires 50 and 51 and then welding the flanges to these wires.

The framework thus defined serves as a support for a fabric covering which is illustrated at FIGURE 1. This fabric covering is sewn so as to define the external outline of the framework illustrated in FIGURE 6. The fabric proper 56 may have a generally cylindrical form of a height sufficient to span the continuous wire loops 52 between the rods 50, 53 and 51. Then, by pleating the upper and lower portions of the cylindrical form of the fabric, as illustrated at 57, the upper and lower diameters of the fabric are reduced to conform generally to the diameters of the wires 50 and 51.

Whereas I have shown and described an operative form of the invention, it should be understood that this showing and description thereof should be taken in an illustrative or diagrammatic sense only. There are many modifications in and to the invention which will fall within the scope and spirit thereof and which will be apparent to those skilled in the art. The scope of the invention should be limited only by the scope of the hereinafter appended claims.

I claim:

1. A table lamp including a base and a plurality of upstanding supports fixed to said base, a light diffusing bowl fixed to said supports, said bowl having a generally cylindrical side wall, a plurality of vertically spaced, annular metallic, re-enforcing bands positioned against and fixed to the interior of said bowl and to said supports, a plurality of upwardly open metallic clamping bands fixed to said re-enforcing members, said clamping members being adapted to receive a plurality of circularly formed bulbs therein, means establishing an electrical connection between said bulbs and said base, said base having a ground lead connected thereto.

2. The structure of claim 1 wherein said supports are in the form of tubular rods, and shade supports in the form of channels are received over the upper ends of said rods.

3. The structure of claim 1 wherein a shade is horizontally aligned with said bowl and held in position by said supports.

4. The structure of claim 1 wherein said bowl is formed from a lightweight plastic material, said supports are formed from a metallic material and rivets are passed through said clamping members, bands, bowl and supports thereby fixing the same together.

5. The structure of claim 1 wherein each clamping member includes a pair of strap members having intermediate portions fixed to one another, the ends of said strap members being of arcuate configuration so as to cooperatively define a circular bulb holding space therebetween.

6. The structure of claim 1 wherein a plurality of clamping members are positioned on each of a plurality of levels within said bowl, the members on one level having different angular spacing from the members on another level.

7. A table lamp assembly including a base and upstanding supports fixed to said base, said upstanding supports having a rod-like form, a light diffusing bowl fixed to the upper ends of said supports and to the inwardly facing portions thereof, and a shade surrounding said upstanding supports, said shade including spaced upper and lower circularly extending wires and a supporting framework spanning said wires, said shade also including a covering spanning said framework thus defined, and a plurality of inwardly facing channels fixed to said circular wires, said channels having the same general cross section and size as said supports and slidingly embracing the same, the upper ends of said channels being closed and being in abutting engagement with the upper ends of said supports thereby holding said shade against downward movement on said supports while enabling upward removal of said shade from said supports.

8. The structure of claim 7 wherein each of the channels includes outwardly extending flanges fixed to said circular wires.

9. The structure of claim 8 wherein said supporting framework is in the form of a continuous loop of wire extending around the periphery of said first named wires and being outwardly and angularly bent with respect to the axis of said first named wires, said continuous length of wire being fixed to said circularly extending wires, and fabric material positioned over the continuous loop of wire so formed.

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