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D. HAYS

1,927,796

LAMP SUPPORTING STRUCTURE AND THE LIKE

Filed March 21, 1933

Fig. 1.

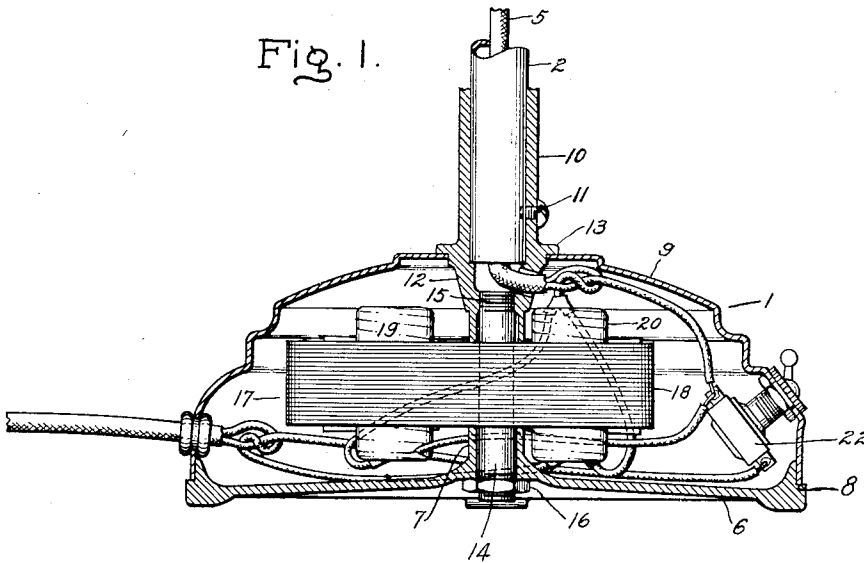


Fig. 2.

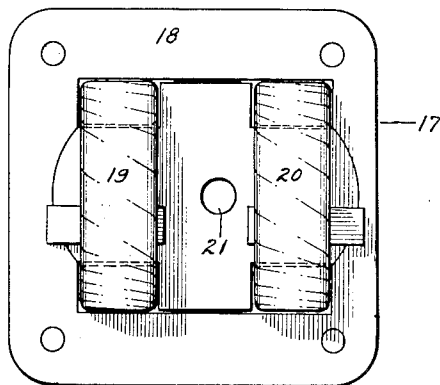
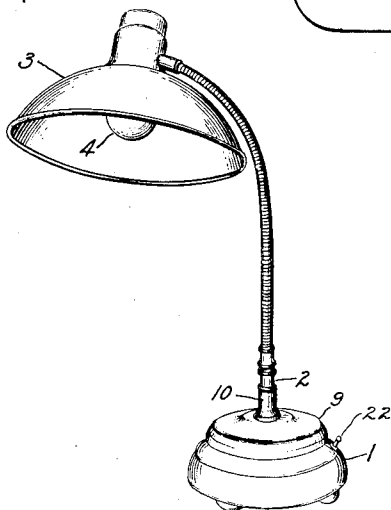


Fig. 3.



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## UNITED STATES PATENT OFFICE

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LAMP SUPPORTING STRUCTURE AND THE  
LIKE

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5 Claims. (Cl. 240—81)

The present invention relates to lamp supporting structures of the type wherein a transformer is provided as a part of the supporting structure for supplying current of the correct voltage to the lamp. A specific application of the invention is in connection with "sun" lamps, a transformer being required for such lamps when used on the ordinary house lighting circuit.

The object of my invention is to provide an improved lamp supporting structure wherein the transformer is built directly into the base of the supporting structure so as to form a unit therewith and wherein the construction and arrangement is such that the transformer can be assembled in the base with a minimum amount of labor.

For a consideration of what I believe to be novel and my invention, attention is directed to the accompanying description and the claims appended thereto.

In the drawing, Fig. 1 is a sectional view through the base of a lamp supporting structure embodying the invention; Fig. 2 is a plan view of the transformer, and Fig. 3 is a side view of a complete lamp supporting structure.

Referring to the drawing, 1 indicates the base of the lamp supporting structure, 2 indicates the standard, 3 indicates the reflector, and 4 indicates the lamp. The lead wires for conveying current to the lamp extend up through standard 2 and are indicated at 5.

The base 1 comprises a base plate 6 which rests against the supporting wall or floor. It is made of relatively heavy material and of a diameter to provide a suitable supporting area. It is dished inwardly somewhat and at its center it is provided with an opening surrounded by a lower spacing sleeve 7, which may be formed integral with plate 6. The edge of base plate 6 is provided with a ledge 8 on which rests a dome shaped housing 9 having an opening at the center of the dome. Mounted in the opening in the dome is a tubular member having an outer portion 10 in which standard 2 is fixed by a set screw 11, and an inner portion 12 which stands in line with spacing sleeve 7 and forms an upper spacing sleeve. The member is provided with a flange 13 which engages the dome of housing 9 to hold it on ledge 8. The upper and lower spacing sleeves are connected by a rod or tube 14, the upper end of the rod threading into spacing sleeve 12, as is indicated at 15, and the lower end extending through lower spacing sleeve 7 and being provided with a threaded end on which is a nut 16. Rod 14 is

made preferably of a suitable nonmagnetic material.

Mounted on rod or tube 14 and clamped between spacing sleeves 7 and 12 is a transformer 17 of a type suitable for the particular application. The core of the transformer is indicated at 18 and the primary and secondary windings are indicated at 19 and 20 respectively. The transformer is not provided with a transformer casing but comprises only the laminated core structure and the windings. This serves to reduce the transformer to the simplest construction. The core is provided with an opening 21 through which rod or tube 14 extends. With this arrangement, the transformer is firmly supported in the base, being held by rod or tube 14 and firmly clamped in position in spaced relation to the walls of the base by the spacing sleeves 7 and 12. In the present instance, opening 21 is located to one side of the center line of the transformer so that the transformer is positioned somewhat to one side of the base. This serves to provide space for the electric switch which is indicated at 22.

In assembling the construction, the transformer is first mounted on post or tube 14, the post or tube fitting opening 21 with a tight fit. Housing 9 is then positioned against flange 13 after which the upper end of post or tube 14 is threaded into upper spacing sleeve 12. The required wiring is then done in the base, the switch being positioned and the wires connected thereto and to the transformer. Next, the lower end of post 14 is inserted through lower spacing sleeve 7 and nut 16 positioned. By tightening up the nut 16, the transformer is clamped firmly between the two spacing sleeves and the dome shaped housing is clamped between flange 13 and ledge 8. The one nut serves to hold the entire structure assembled.

From a consideration of the foregoing, it will be seen that by the invention there is provided a device which is simple in structure and easy to assemble and dismantle. At the same time, the transformer is supported rigidly in the base in spaced relation to the walls thereof and in a manner such that its weight is distributed to provide a well balanced structure, this resulting from the fact that the transformer is located approximately centrally of the base.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A lamp supporting structure comprising a base plate having an inwardly projecting spacing sleeve at the center thereof, a housing supported by said base plate and having an opening in line

with said sleeve, a second sleeve supported in said opening, a transformer comprising a core and windings thereon, said core being provided with an opening, a post in said opening projecting beyond the core on opposite sides thereof, and means for fastening the ends of the post in said sleeves to support the transformer in spaced relation to the walls of the base plate and housing.

2. A lamp supporting structure comprising a base plate having an inwardly projecting spacing sleeve at the center thereof, a housing supported by said base plate and having an opening in line with said sleeve, a second sleeve supported in said opening, a transformer comprising a core and windings thereon, said core being provided with an opening, a post in said opening projecting beyond the core on opposite sides thereof, and means for fastening the ends of the post in said sleeves to support the transformer in spaced relation to the walls of the base plate and housing, the ends of said sleeves engaging the transformer and clamping it between them.

3. A lamp supporting structure comprising a base plate having an inwardly projecting spacing sleeve at the center thereof, a housing supported by said base plate and having an opening in line with said sleeve, a second sleeve supported in said opening, a transformer comprising a core and windings thereon, said core being provided with an opening, a post in said opening projecting beyond the core on opposite sides thereof to provide upper and lower ends, means connecting said upper end to said upper sleeve, said lower end pro-

jecting through the lower sleeve, and a nut on said lower end for clamping the transformer between said spacing sleeves.

4. A lamp supporting structure comprising a base plate having an inwardly projecting sleeve at the center thereof and a ledge at its periphery, a dome shaped housing supported by the ledge of said base plate having an opening in line with said sleeve, a second sleeve having a flange attached thereto, said flange adapted to engage the periphery of the opening in the housing, a transformer comprising a core and windings thereon, said core being provided with an opening, a post in said opening projecting beyond the core on opposite sides thereof to provide upper and lower ends, means connecting the said upper end to the upper sleeve, said lower end projecting through the lower sleeve, and a nut on said lower end for holding the housing, base plate and transformer in place.

5. A lamp supporting structure comprising a base plate having an inwardly projecting spacing sleeve at the center thereof, a housing supported by said base plate and having an opening in line with said sleeve, a second sleeve supported in said opening, a transformer comprising a core and windings thereon, means providing posts on opposite sides of the transformer core, and means fastening said posts in said sleeves to support the transformer in spaced relation to the walls of the base plate and housing.

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