

Dec. 23, 1941.

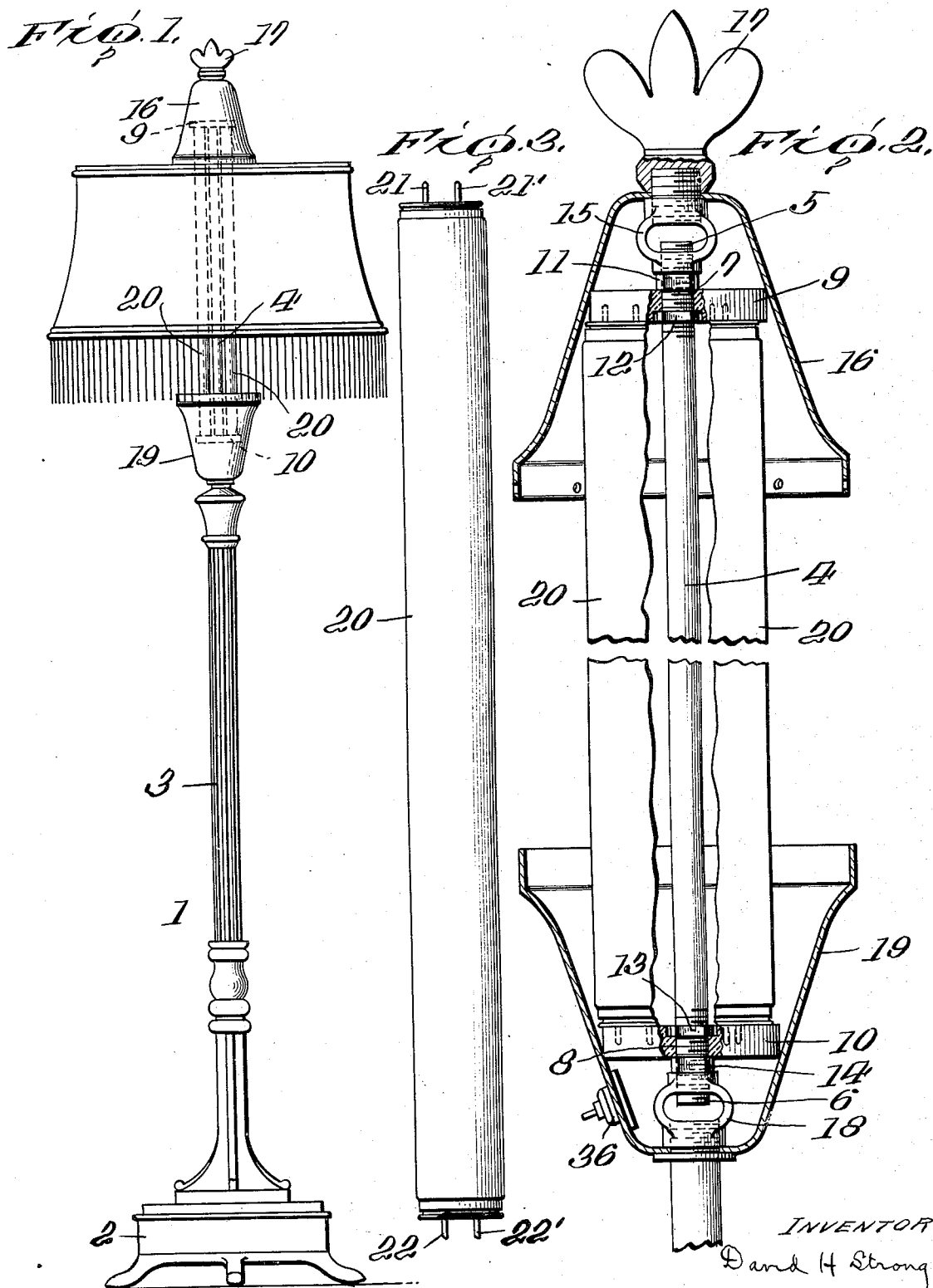
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2,267,145

MULTIPLE SOCKET FOR LIGHT TUBES

Filed July 15, 1940

2 Sheets-Sheet 1



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FIG. 4.

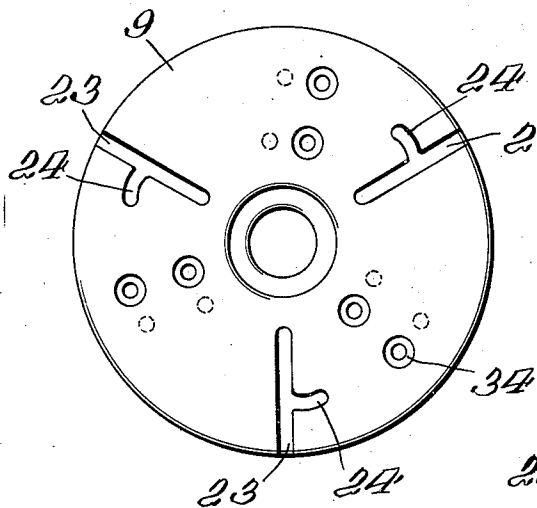


FIG. 6.

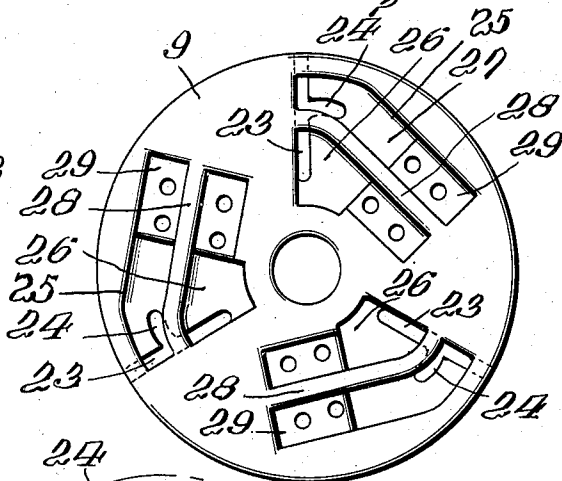


FIG. 5.

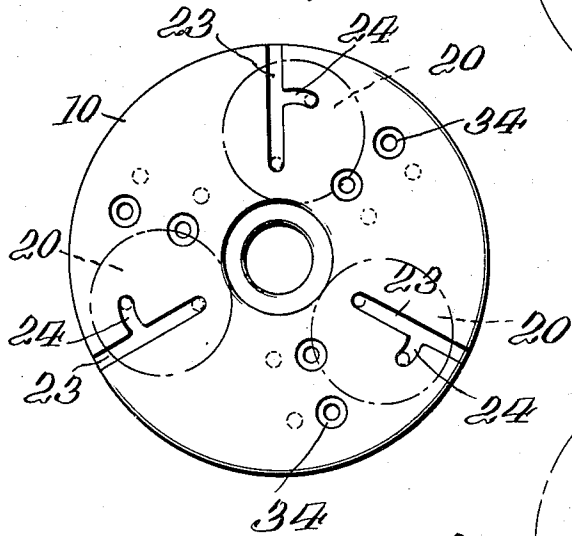


FIG. 7.

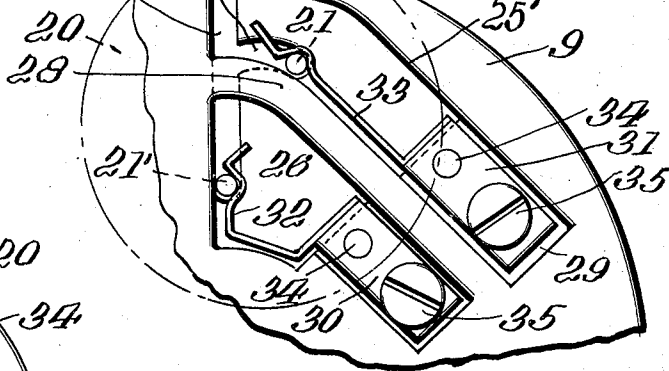
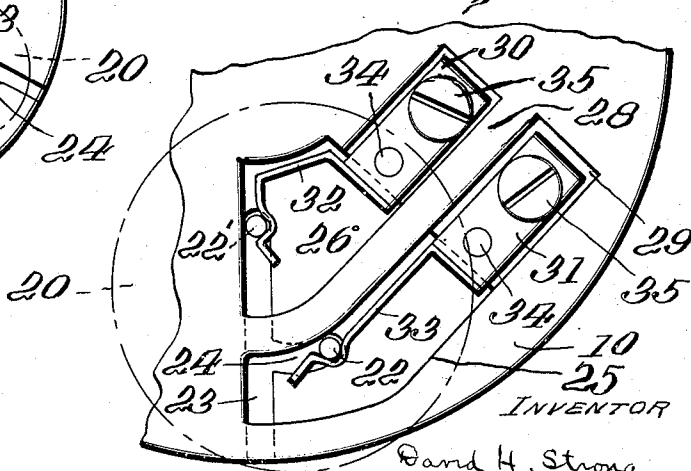


FIG. 8.



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MULTIPLE SOCKET FOR LIGHT TUBES

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Application July 15, 1940, Serial No. 345,658

5 Claims. (Cl. 240—81)

This invention relates to multiple sockets for use with lamps of the fluorescent type in which a tube having electrical contact points at each end is employed.

Heretofore, where multiple lamps or tubes have been used, it has been the practice to mount them snugly in separate sockets and to assemble the desired number of units in various ways. However, this has proven objectionable because of the difficulty involved in assembling the separate units in a compact space. Another difficulty arose from the fact that no provision has heretofore been made for the substitution of one length of tube for another.

One of the objects of the present invention is to provide spaced discs or socket members with contact means for accommodating a plurality of lamps or tubes.

Another object of the invention is to provide means for adjusting the spaced socket members to compensate for tubes of different lengths.

A still further object of the invention is to provide improved multiple socket members in which one or more fluorescent tubes may be conveniently assembled and as easily removed therefrom.

Other objects and advantages of the invention will be apparent as the description is considered with the accompanying drawings, in which:

Figure 1 is a side elevation of a floor lamp embodying the invention;

Figure 2 is a side elevation, broken away and partly in section, of the fluorescent tubes and supporting sockets;

Figure 3 is a side elevation of one of the fluorescent tubes;

Figure 4 is a bottom plan of the top tube supporting socket;

Figure 5 is a top plan of the bottom tube supporting socket;

Figure 6 is a top plan of the top tube supporting socket;

Figure 7 is an enlarged top plan of a portion of the top tube supporting socket, showing the spring contact means for removably clamping the fluorescent tube in position; and

Figure 8 is an enlarged bottom plan of a portion of the bottom tube supporting socket, showing the spring contact means for removably clamping the fluorescent tube in position.

Referring more particularly to the drawings, 1 denotes a lamp comprising a base 2 supporting a hollow standard 3 of conventional construction. Mounted upon the upper end of the standard 3 is a metal tube 4, of predetermined length,

formed with threaded portions 5 and 6 at its upper and lower ends respectively. These threaded ends extend snugly but slidably through openings 7 and 8 suitably formed centrally of top and bottom spaced socket members 9 and 10, respectively and adjustably support the socket members for movement toward and away from each other. Thus lock nuts 11 and 12 at the upper end of tube 4 engage opposite faces of the top socket member 9 and lock the same to the tube, while a similar pair of lock nuts 13 and 14 serve to secure the lower socket member 10 to the lower end of tube 4. A coupling member or nut 15, screwed to the upper end of the tube 4, serves the double purpose of supporting a canopy or shade 16 and an ornament 17, and a similar coupling member or nut 18 is employed to connect the lower end of the tube 4 with the upper end of the hollow standard 3. Any suitable means, not shown, is used to mount a bowl or the like 19 in position to enclose and hide coupling nut 18 from view.

The socket members or disks 9 and 10 are adapted to receive and support therebetween a plurality of glass tubes 20, of the fluorescent type which, according to common practice, are provided at opposite ends with spaced electrical contact points 21—21' and 22—22'. These points are slidably received within a plurality of radially disposed slots or grooves 23, one for each fluorescent tube 20, and which are formed in the opposing inner faces of the socket members. Any suitable number of grooves 23 may be employed, only three being shown because the present embodiment of the invention is adapted to receive that number of tubes. The socket members are preferably molded from "Bakelite" but they may be made from any suitable insulating material and in any desired manner. Extending from and communicating with the radial slots 23, intermediate the ends of the latter, are a plurality of short curved or arcuate slots 24, one for each radial slot. The arcuate slots 24 are identical in the two socket members 9 and 10, with the exception that they extend in opposite directions, that is, the slots 24 in the top socket member extend in anticlockwise direction while the corresponding slots 24 in the bottom socket member extend in a clockwise direction relatively to their respective radial slots and the peripheries of the socket members, for a purpose presently described.

The outer faces of the socket members are formed with a plurality of pairs of substantially arcuate recesses 25, each pair comprising an

inner recess 26 and an outer recess 27 separated by a dividing wall 28. These recesses terminate at one end beneath and register with the slots 23 and 24 and are formed with base portions or seats 29 upon which are mounted positive and negative binding posts 30 and 31 respectively. Extending from these posts toward and terminating beneath the slots 23 and 24 are bent spring contact and latching fingers 32 and 33. The binding posts are held in place by small counter sunk screws 34 and the positive and negative feed wires, not shown, are connected to the posts by contact screws 35. Except for the fact that the recesses 26 and 27, the seat portions 29, and the binding posts 30 and 31, of the top socket member 9, are oppositely arranged with respect to corresponding parts of the lower socket member, the parts of each are identical.

Current is fed to and through the lamps through suitable wiring, not shown, which is adapted to be connected by means of a conventional plug, with a wall socket or the like, in turn connected with a source of electricity. A hand switch 36 provides convenient means for selectively turning the individual lamps 20 "on" and "off."

To assemble the parts, the lock nuts are manipulated and the socket members are spaced apart the correct distance for the reception therebetween of a plurality of lamps 20 of a standard length. The lock nuts are then tightened and the lamps mounted, the latter operation being accomplished by first sliding the contact points 21, 21' and 22, 22' inwardly in their respective radial slots 23, until the outermost contact points 21 and 22 register with their respective arcuate slots 24. The lamp is then given a slight turn in a clockwise direction thus causing the outer contact points to move out of the radial slots 23 into the short arcuate slots 24. In this position the inner and outer contact points 21 and 22 of the lamps engage and are latched in place by the resilient inner and outer spring contact fingers 32 and 33 respectively. The lamps are securely held in this position against accidental displacement, but can be readily removed for replacement or other purposes.

Of course it will be understood that while the socket members may be formed to receive, say four or five lamps, but two or three lamps could be symmetrically arranged and efficiently used therein.

The two socket members mounted on the tube 4, together with the lock nuts and socket members previously described constitute a unit which may be manufactured as such for and sold to lamp manufacturers.

What I claim is:

1. A floor lamp fluorescent tube unit comprising a tubular member, a pair of spaced electric

socket members mounted on said tubular member for slidable adjustment toward and away from each other, means for locking said socket members in adjusted position, substantially arcuate and radial grooves in said socket members for releasably mounting the ends of a plurality of fluorescent tubes therebetween and means for mounting said unit on the standard of a floor lamp.

2. A fluorescent floor lamp comprising a base and a standard thereon, an elongated member mounted on said standard, a pair of spaced socket members adjustably mounted on opposite ends of said first named member, said socket members having a plurality of radial and substantially arcuate contact point receiving grooves in their opposing faces for receiving the contact points of a plurality of fluorescent tubes.

3. A fluorescent floor lamp comprising a base and a standard thereon, an elongated member mounted on said standard, a pair of spaced socket members mounted on opposite ends of said first named member, said socket members having a plurality of radial and substantially arcuate contact point receiving grooves in their opposing faces for receiving the contact points of a plurality of fluorescent tubes and means for adjusting the spacing of said socket members relatively to each other.

4. A fluorescent floor lamp comprising a base and a standard thereon, an elongated member mounted on said standard, a pair of spaced socket members mounted on opposite ends of said first named member, said socket members having a plurality of radial and substantially arcuate contact point receiving grooves in their opposing faces for receiving the contact points of a plurality of fluorescent tubes, means for slidably adjusting said socket members on said elongated member, and means for latching the contact points of said plurality of fluorescent tubes in said grooves.

5. A fluorescent floor lamp comprising a base and a standard thereon, an elongated member mounted on said standard, a pair of spaced socket members mounted on opposite ends of said first named member, said socket members having a plurality of radial contact point receiving grooves and a plurality of substantially arcuate contact point receiving slots associated with said grooves, said grooves and slots being arranged in the opposing faces of the socket members for receiving the contact points of a plurality of fluorescent tubes, means for slidably adjusting said socket members on said elongated member, and spring means for latching the contact points of said plurality of fluorescent tubes in said slots.

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