

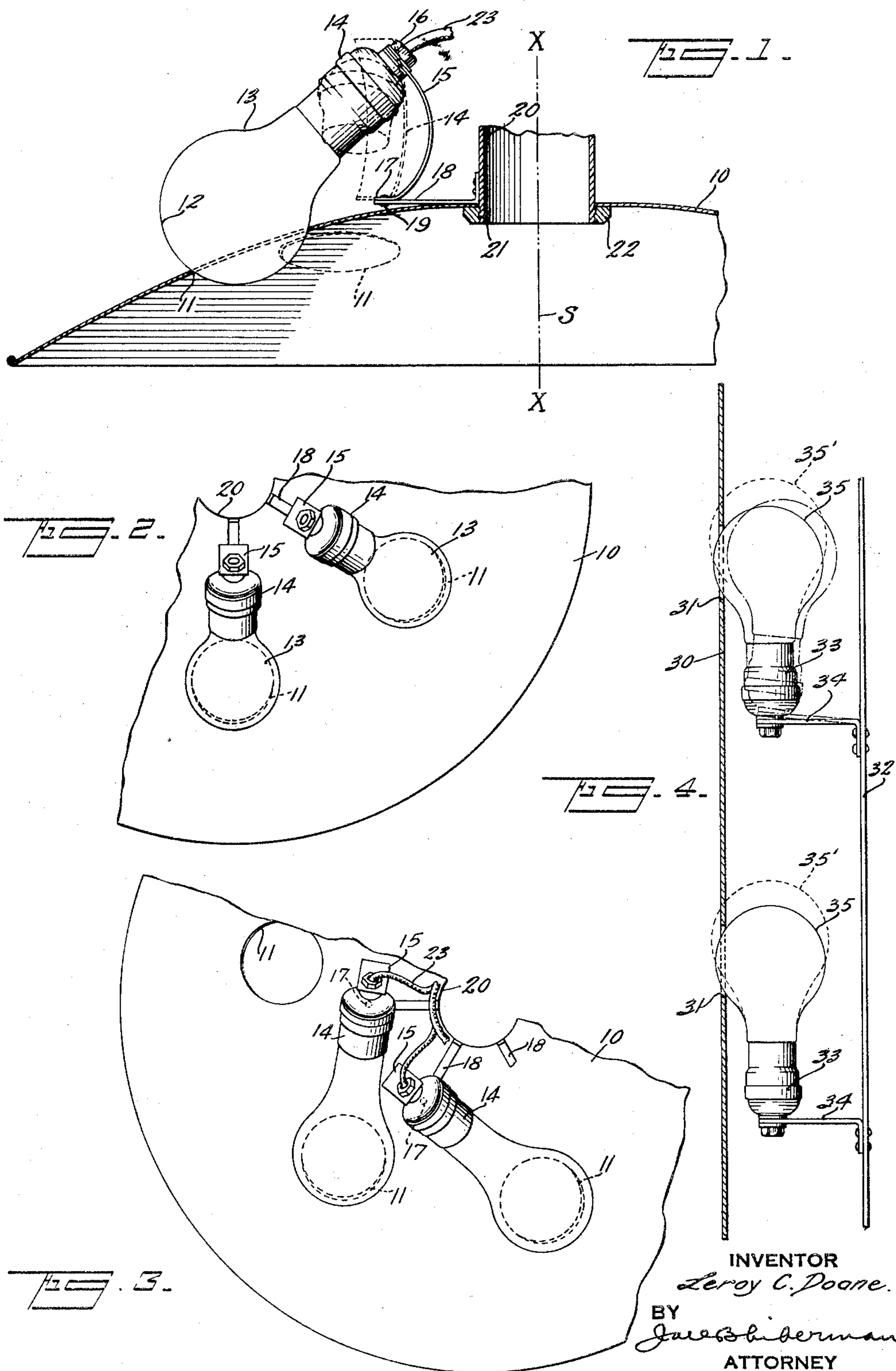
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ADJUSTABLE SOCKET FOR LIGHTING FIXTURES

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## ADJUSTABLE SOCKET FOR LIGHTING FIXTURES

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The present invention relates to adjustable sockets for lighting fixtures. The present invention contemplates a lighting fixture designed to use a plurality of incandescent lamps, each of the same size and so arranged that the fixture can be readily adjusted to accommodate lamp bulbs of various sizes.

In some forms of lighting equipment it is desirable to utilize an apertured opaque reflector between two light sources for controlling the light. The apertures allow transmission of light from the source at one side of the plate through the plate, and when the sources on the other side of the plate are in the form of incandescent lamps protruding through the apertures, some of their light flux may be passed through the plate. In this type of lighting fixture it is desirable to be able to select the size of incandescent lamp to be employed, and an object of the present invention is to provide means for supporting these various sized incandescent lamps in such a manner that the bulbs are held close to, or seated in, the apertures in the reflector, the lamps or reflector, or both, being adjustably carried.

In application Serial No. 525,362, there is shown a form of lighting fixture which utilizes a reflector symmetrical about a vertical axis apertured to receive a portion of the bulbs of each of the number of incandescent lamps and arranged so that a predetermined portion of the light from the incandescent lamps passes through the apertures in the reflector. The incandescent lamps are accordingly carried in lamp sockets pivotally supported for movement about centers spaced about the axis of the reflector and the reflector is adjustable about this axis so that, by relatively moving the lamp sockets and reflector, one can vary the spacing of the holes in the reflector from the lamp sockets.

A further object of the invention is to provide a mechanism to insure that the lamp bulbs are held in the openings in the reflector and at the same time to permit moving the bulbs away from the reflector so that they can be removed from the sockets.

The accompanying drawing shows, for purposes of illustrating the present inven-

tion, two forms in which it may be embodied, it being understood that the drawing is illustrative of the invention rather than limiting the same.

In the drawing:

Figure 1 is a sectional view through a portion of a lighting fixture showing the reflector, lamp socket and incandescent lamp in one position in full lines and showing, in dotted lines, the adjustment of the parts for an incandescent lamp of different size;

Figure 2 is a top plan view of a fragment of the reflector and two small lamps carried in the correspondingly positioned lamp sockets;

Figure 3 is a view similar to Figure 2 showing the relative position of the parts adjusted for larger incandescent lamps; and Figure 4 illustrates a modified form of construction.

In Figures 1-3 of the drawing the reflector is indicated at 10. In the shape shown it is concave from underneath and adapted for downwardly reflecting light. The lower light sources are preferably placed somewhere on the axis XX of the reflector 10, and this reflector is preferably a sheet metal stamping having a surface of revolution about such axis. The reflector 10 is provided with a number of apertures 11, preferably regularly spaced about the reflector at a point substantially spaced from the axis. These apertures are adapted to upwardly transmit light from underneath, as described in the application above referred to, and to receive the bulb portions 12 of incandescent lamps 13. These lamps are carried in lamp sockets 14 secured to the free end of a supporting member 15 in the form of a flat spring. This spring member acts as a yieldable socket support and is conveniently secured to the rear end of the lamp socket by a nut 16. The lower end 17 of the spring 15 is pivotally secured to a radial arm 18 by means of a rivet indicated at 19. This arm is supported in any convenient manner, as, for example, by a tube 20, concentric with the axis XX. The lower end of this tube may be threaded as indicated at 21, and a

threaded ring 22 clamps the reflector 10 in place.

When one desires to use smaller lamp bulbs, for example, 25 watt bulbs, as indicated in Figures 1 and 2, the lamp sockets may be in somewhat the position indicated in full lines and the reflector 10 adjusted so that the lamp bulbs are seated in the openings 11. The spring 15 acts to hold the lamp bulbs down tightly against the reflector.

When one desires to insert larger lamp bulbs, it is merely necessary to place the larger bulbs, (such as 100 watt bulbs) in the sockets and then turn the reflector 10 on its axis until the holes or apertures 11 are moved far enough to receive the lamp bulbs, the bulbs and sockets being turned about the pivot 19 so that the lamp bulb is directed toward the desired aperture 11. It will, of course, be obvious that the reflector may be the relatively fixed member and that the supports for the lamp brackets which support the lamp sockets may be relatively movable as a unit. The wires 23 for supplying all the lamp sockets can readily be accommodated adjacent the rear of the sockets and sufficient slack provided to permit swinging the lamp sockets the desired amount.

When the incandescent lamps alone are lighted, a portion of the light is transmitted downwardly below the reflector while most of the light is transmitted upwardly, and when the lamps underneath the reflector alone are lighted, some of the light from this lower lamp will be transmitted upwardly through the lamp bulbs.

Figure 4 shows an arrangement wherein a reflector 30, apertured at 31, 31', is movable relative to a socket carrier or bar 32. This socket carrier supports a number of sockets 33, preferably by means of springs 34. The reflector may be moved to accommodate lamps 35, 35' of varying length, and the sockets tilted sufficiently (as indicated in dotted lines) to permit lamp removal.

It is obvious that the invention may be embodied in many forms and constructions, and I wish it to be understood that the particular form shown is but one of the many forms. Various modifications and changes being possible, I do not limit myself in any way with respect thereto.

I claim:

1. In a lighting fixture, a plate having regularly spaced apertures of uniform size slightly smaller than the bulb portions of incandescent lamps included within a predetermined range of sizes of incandescent lamps of standard shape, a plurality of regularly spaced lamp sockets each adapted to carry such lamps, and means to relatively adjust the plate and sockets so that the spacing of the sockets and apertures may be varied to compensate for the varying lengths of the lamps and the filaments of

the same disposed in the axis of the apertures.

2. In a lighting fixture, a plate having regularly spaced apertures of uniform size slightly smaller than the bulb portions of incandescent lamps included within a predetermined range of sizes of incandescent lamps of standard shape, a plurality of regularly spaced lamp sockets each adapted to carry such lamps, means to relatively adjust the plate and sockets so that the spacing of the sockets and apertures may be varied to compensate for the varying lengths of the lamps and the filaments of the same disposed in the axis of the apertures, and spring means acting on each socket to yieldingly hold the bulb of the lamp against the edge of the aperture.

3. In a lighting fixture, a plate having regularly spaced apertures of uniform size slightly smaller than the bulb portions of incandescent lamps included within a predetermined range of sizes of incandescent lamps of standard shape, a plurality of regularly spaced lamp sockets each adapted to carry such lamps, means to relatively adjust the plate and sockets so that the spacing of the sockets and apertures may be varied to compensate for the varying lengths of the lamps and the filaments of the same disposed in the axis of the apertures, and means for yieldingly holding the lamp bulbs in the apertures so that the bulb may be swung away from the plate to permit removal from the socket.

4. In a lighting fixture, a revolvably mounted plate provided with an off center aperture, a stationary bracket adjacent the plate, and means to support lamp socket and incandescent lamp from said bracket so that the socket and lamp may point toward the aperture at various adjustments thereof whereby the filament of a lamp of the proper size may be disposed substantially in the axis of the aperture.

5. In a lighting fixture, an axially disposed supporting member, a plate having a surface of revolution secured to said supporting member and angularly adjustable about the same, the plate having a plurality of apertures regularly spaced at a uniform radius about this support, a plurality of radially extending arms carried by the support, a pivotally carried socket carrier secured to each arm, a lamp socket fixed to the socket carrier, and incandescent lamps of uniform dimension in the sockets, the bulbs of the lamps being adjacent the apertures in the plate.

6. In a lighting fixture, an axially disposed supporting member, a plate having a surface of revolution secured to said supporting member and angularly adjustable about the same, the plate having a plurality of apertures regularly spaced at a uniform

radius about this support, a plurality of radially extending arms carried by the support, a pivotally carried socket carrier secured to each arm, a lamp socket fixed to the socket carrier, and incandescent lamps of uniform dimension in the sockets, the bulbs of the lamps being adjacent the apertures in the plate, the socket carrier including a spring to yieldably hold the bulbs of the lamps against the apertured plate.

7. In a lighting fixture, an axially disposed supporting member, a plate having a surface of revolution secured to said supporting member and angularly adjustable about the same, the plate having a plurality of apertures regularly spaced at a uniform radius about this support, a plurality of radially extending arms carried by the support, a pivotally carried socket carrier secured to each arm, the pivots being closer to the axis than the apertures, a lamp socket fixed to the socket carrier and extending outwardly, incandescent lamps of uniform dimension in the sockets, the bulbs of the lamps being adjacent the apertures in the plate, and wires connecting the sockets, the wires being sufficiently loose to permit adjustment of the sockets.

8. In a lighting fixture, a sheet metal plate having a surface of revolution and mounted for angular adjustment about its axis, the plate having apertures regularly spaced about this axis, a stationary support, a plurality of pivotally carried socket supports regularly spaced about the axis, the socket supports each carrying a lamp socket and being movable to orient said socket about the pivot so that the sockets may be pointed toward the apertures in the plate when the plate is placed in positions to vary the angular relation of the pivots and apertures.

9. In a lighting fixture, a sheet metal plate having a surface of revolution and mounted for angular adjustment about its axis the plate having apertures regularly spaced about this axis, a stationary support, a plurality of pivotally carried socket supports regularly spaced about the axis, the socket supports each being in the form of a spring and carrying a lamp socket and being movable to orient said socket about the pivot so that the sockets may be pointed toward the apertures in the plate when the plate is placed in positions to vary the angular relation of the pivots and apertures, the spring acting to hold the lamp bulb against the plate.

10. In a lighting fixture, a plate having a plurality of apertures regularly spaced about a center, a socket carrier supporting a plurality of members pivotally secured thereto at regularly spaced points about the same center and each carrying a lamp socket adapted to support an incandescent lamp, the plate and socket carrier being angularly

adjustable to vary the spacing of the lamp sockets and apertures, and the socket carrying members being adjustable about their pivotal supports so that the incandescent lamps of various sizes may be carried in the sockets with the bulb portion of each lamp adjacent an aperture.

11. In a lighting fixture, a plate having a plurality of apertures regularly spaced about a center, a socket carrier supporting a plurality of members in the form of U-shaped sheet metal springs pivotally secured at one end thereto at regularly spaced points about the same center and each carrying at the other end a lamp socket adapted to support an incandescent lamp, the plate and socket carrier being angularly adjustable to vary the spacing of the lamp sockets and apertures, the socket carrying members being adjustable about their pivotal supports and flexible so that the incandescent lamps of various sizes may be carried in the sockets with the bulb portion of each lamp adjacent an aperture.

12. In a lighting fixture, a plate having a plurality of apertures regularly spaced about a center, a socket carrier supporting a plurality of members pivotally secured thereto at regularly spaced points about the same center and each carrying a lamp socket adapted to support an incandescent lamp, the plate and socket carrier being angularly adjustable to vary the spacing of the lamp sockets and apertures, and the socket carrying members being adjustable about their pivotal supports so that the incandescent lamps of various sizes may be carried in the sockets with the bulb portion of each lamp adjacent an aperture, the socket carriers being yieldable so that the lamp sockets and bulbs may be moved away from the plate.

13. In a lighting fixture the combination with a plate having a plurality of apertures regularly spaced about an axis, of lamp sockets corresponding in number with the number of apertures in the plate and regularly spaced about the same axis, and means for effecting an angular adjustment of the lamp sockets relative to the apertures in the plate to vary the spacing of the sockets from the apertures whereby a plurality of groups of various sized incandescent lamps may be carried in the sockets with the bulb portions thereof in the apertures, each of the lamps of any group being the same dimension as the other.

14. In a lighting fixture the combination with a plate having a plurality of apertures regularly spaced about an axis, of lamp sockets corresponding in number with the number of apertures in the plate and regularly spaced about the same axis, means for effecting an angular adjustment of the lamp sockets relative to the apertures in the plate to vary the spacing of the sockets from

the apertures whereby a plurality of groups of various sized incandescent lamps may be carried in the sockets with the bulb portions thereof in the apertures, each of the lamps of any group being the same dimension as the other, and means for yieldably holding the lamp bulbs in the apertures of the plate and for permitting movement of the lamp bulbs and sockets to permit lamp bulb removal.

15. In a lighting fixture the combination with a plate having a regularly spaced plurality of apertures, of lamp sockets corresponding in number with the number of apertures in the plate and regularly spaced, and means for effecting an adjustment of the lamp sockets relative to the apertures in the plate to vary the spacing of the sockets from the apertures whereby a plurality of groups of various sized incandescent lamps may be carried in the sockets with the bulb portions thereof in the apertures, each of the lamps of any group being the same dimension as the other.

Signed at Meriden, in the county of New Haven and State of Connecticut, this 7th day of May 1931.

LEROY C. DOANE.