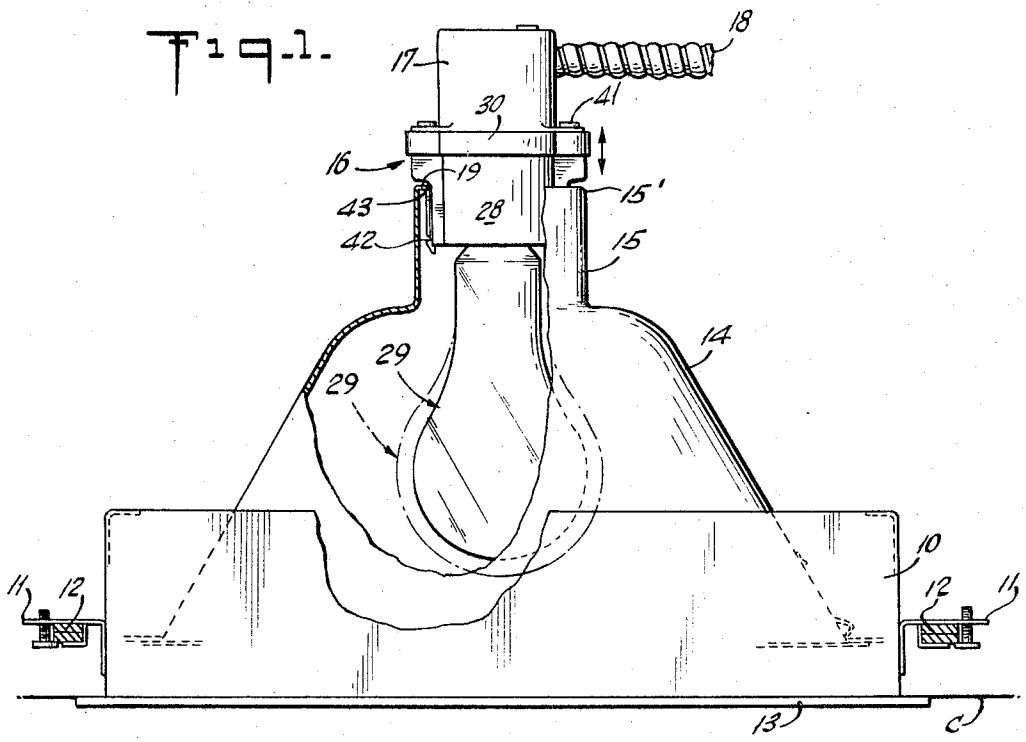
Dec. 27, 1966 J. A. PASCUCCI 3,294,967

REFLECTOR SOCKET MOUNT FOR LIGHTING FIXTURES

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Fig. 1.



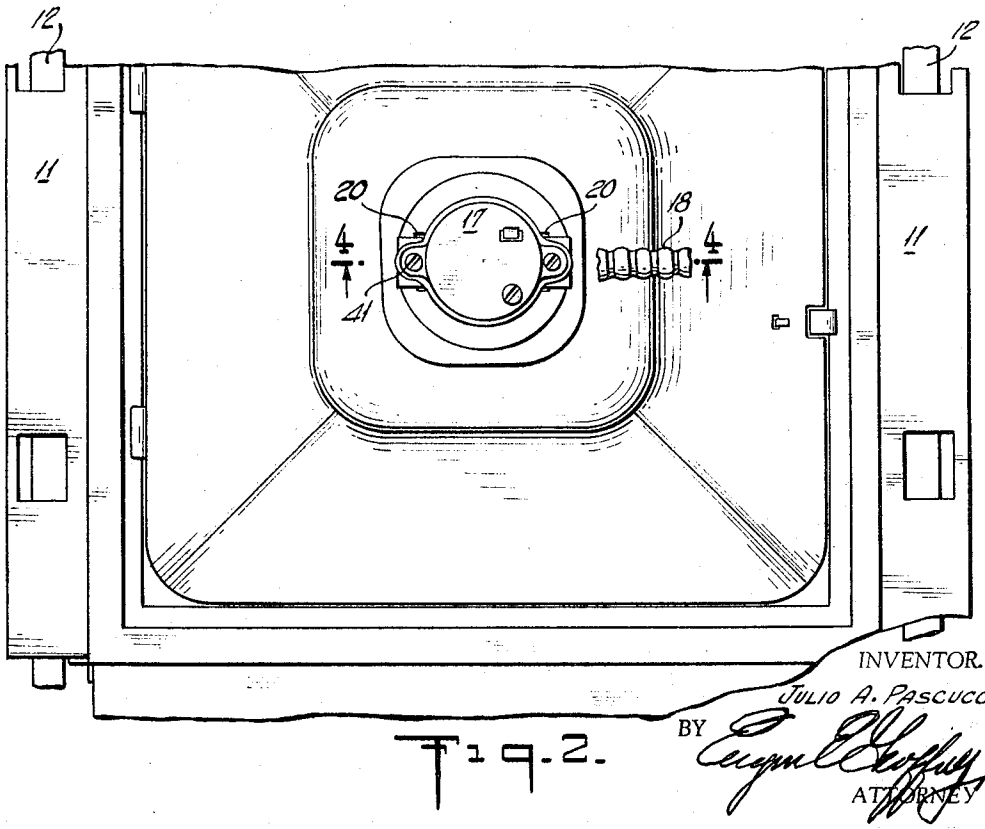


Fig. 2.

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Fig. 3.

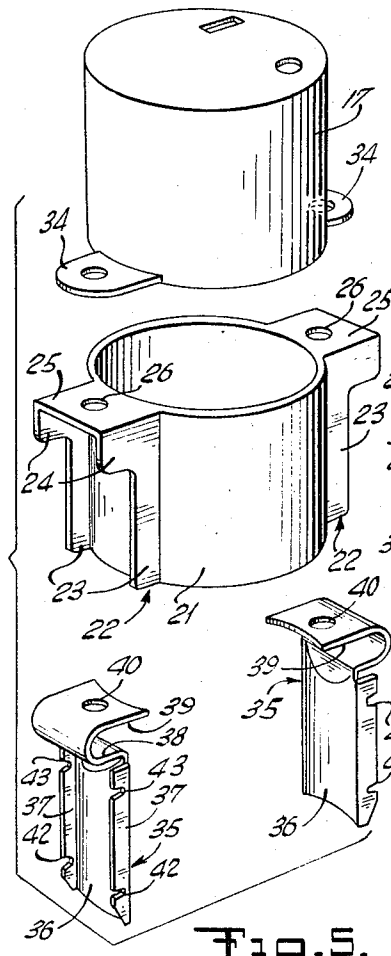


Fig. 4.

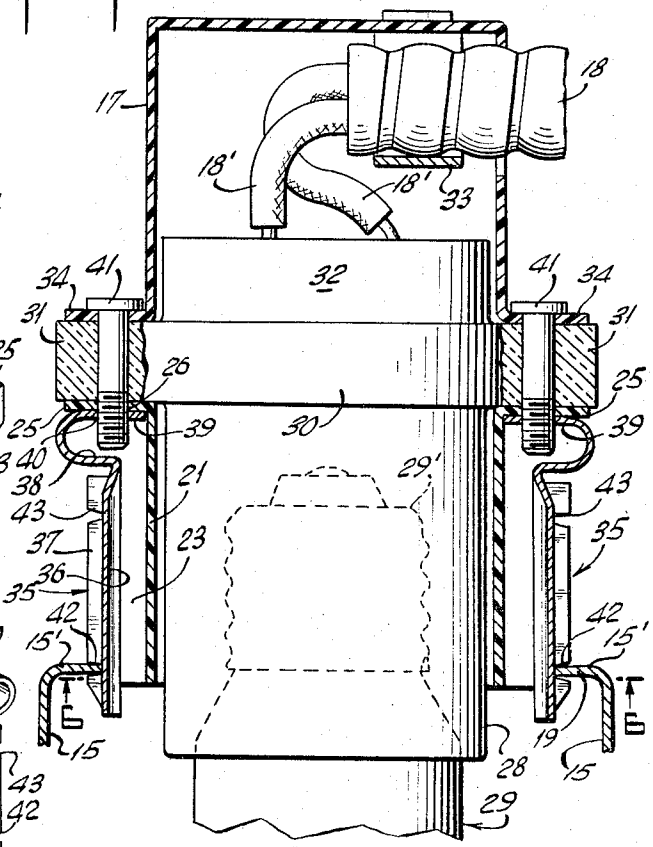


Fig. 5.

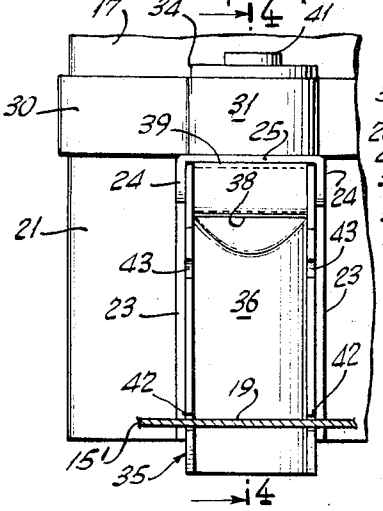
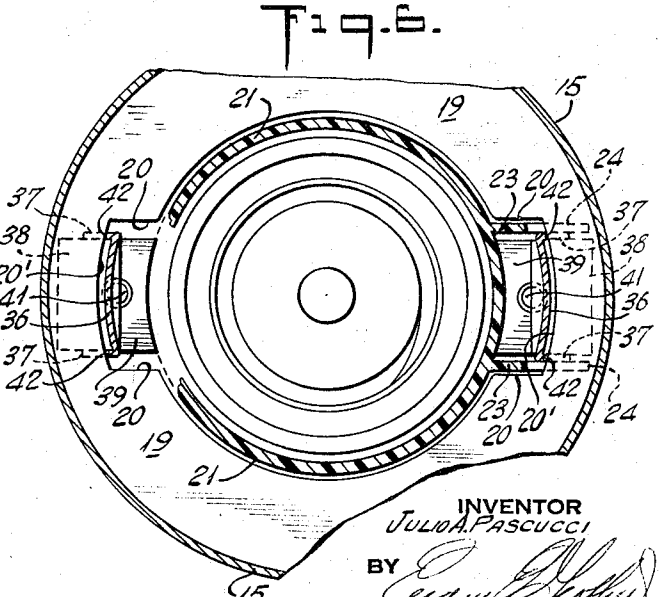


Fig. 6.



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REFLECTOR SOCKET MOUNT FOR LIGHTING FIXTURES

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6 Claims. (Cl. 240—78)

This invention relates to improvements in lighting fixtures and more specifically to a novel and improved structure for mounting a lamp socket in a cooperating reflector to facilitate adjustment of the socket relative to the reflector so that the filament of a lamp of a selected size or rating can be properly coordinated with the reflector.

Incandescent lamps vary in physical size with light output, as it is necessary to increase the area of the glass envelope as the power dissipated in the filament is increased. Therefore, as the envelopes of lamps become progressively larger, the filament of the lamp is normally positioned farther from the base. This has presented difficulties in the design and manufacture of lighting fixtures utilizing incandescent lamps, as it is often necessary to design a single lighting fixture for the accommodation of at least two different size lamps, say 100 watts and 150 watts or 200 watts and 300 watts.

This invention overcomes these difficulties and provides a novel and improved lamp mount which is readily and easily adjustable to shift the lamp socket relative to the reflector so that the filament of a selected lamp can be properly positioned relative to the reflector.

Another object of the invention resides in a novel and improved adjustable socket mount for use with a cooperating reflector.

The above and other objects and advantages of the invention will become more apparent from the following description and accompanying drawings forming part of this application.

In the drawings:

FIGURE 1 is a side view in partial section of a light fixture embodying a reflector and lamp mount in accordance with the invention.

FIGURE 2 is a top view of the structure shown in FIGURE 1.

FIGURE 3 is an exploded perspective view of the lamp mount in accordance with the invention.

FIGURE 4 is a cross-sectional view of FIGURE 2 taken along the line 4—4 thereof.

FIGURE 5 is a fragmentary side elevational view of FIGURE 4.

FIGURE 6 is a cross-sectional view of FIGURE 4 taken along the line 6—6 thereof.

The lighting fixture embodying a reflector and socket mount in accordance with the invention may of course take any desirable form. For convenience, the lighting fixture illustrated in the drawings is intended to be recessed in ceiling C and comprises a rectangular frame **10** supported by brackets **11** to suitable supports **12** and having a front escutcheon or light controlling element **13**. A reflector **14** of generally conical configuration is supported by the frame **10** in any suitable manner, and it includes an upwardly extending neck **15** carrying the improved socket assembly generally denoted by the numeral **16**. The socket assembly also includes means for reception and attachment of the electric cable **18** as will be described.

Referring to FIGURES 3 through 6 inclusive, it will be observed that the upper edge **15'** of the reflector neck **15** is provided with an inwardly extending flange **19** having diagonally opposed cut out portions or recesses **20**. The inside diameter of the flange **19** is slightly larger than the

outside diameter of the socket housing **21** and the cutouts **20** are adapted to receive the channel-like structures **22** on the housing **21**. It will be observed as the description proceeds that these channel-like structures **22** serve, among other things, to prevent rotation of the socket relative to the reflector and therefore facilitate insertion and removal of the lamp.

More specifically, the socket housing **21** is essentially cylindrical and the channel members **22** each comprise a pair of spaced outwardly extending ribs **23**. The upper end of each rib **23** has a portion **24** of increased depth and these portions are bridged by a top plate **25** having an opening **26** extending therethrough. The socket generally denoted by the numeral **27** may be of any suitable form, though, in the instant embodiment of the invention, it has an elongated cylindrical section **28** disposed within the socket housing **21** and carrying a receptacle for threadably receiving the base **29'** of a lamp **29**. The upper end of the socket portion **28** is provided with an enlarged cylindrical portion **30** having a pair of outwardly extending ears **31** each having an opening extending therethrough. The top portion **32** of the socket **27** includes means for attachment of the leads **18'** of the cable **18**, the latter being secured within the socket cover **17** by a suitable clamp **33**. The socket cover **17** has outwardly extending ears **34**, each of which includes an opening aligned with the cooperating openings in the ears **31** and the openings **26** in the plates **25**.

The channel-like structures **22** on the socket cover **21** are adapted to receive spring fasteners **35** each of which includes an elongated convex body **36** with outwardly extending flanges **37** along each edge thereof. The upper edge of the body **36** is bent outwardly at **38** and then curved upwardly and inwardly to form an essentially U-shaped section **39**. The U-shaped section **39** has a threaded opening **40** extending therethrough.

The socket **27**, the socket housing **21**, the socket cover **17** and the spring fasteners **35** are assembled as shown in FIGURE 4, and held together by a pair of bolts **41** extending through the openings in the several members and threaded into the openings **40** of the spring fasteners **35**. This provides a sub-assembly with the electric cable **18** firmly secured thereto.

The spring fasteners **35** are for the purpose of fixing the socket assembly, as generally shown in FIGURE 4, in the reflector, and, for this purpose, the side flanges **37** of the spring fasteners **35** each include pairs of spaced notches **42** and **43**. These pairs of notches are spaced apart a distance corresponding to the difference in the physical sizes of two lamps having different light outputs, as, for instance, a 100-watt lamp and a 150-watt lamp. In the case of the 150-watt lamp, which is somewhat longer than the 100-watt lamp, the socket assembly is inserted in the reflector until the notches **42** engage the bases **20'** of the recessed portions **20** in the reflector and as shown more clearly in FIGURE 6. With this arrangement, the filament of the 150-watt lamp will be properly positioned in the reflector to obtain the desired light distribution. In the event it is desired to use a 100-watt lamp, which is physically smaller than the 150-watt lamp, the spring fasteners **35** would be depressed and the socket assembly moved inwardly of the neck **15** of the reflector until the notches **43** in the spring fasteners engage the edges **20'** of the recesses **20**. In this way, the filament of the 100-watt lamp will be properly positioned relative to the reflector to produce substantially the same light distribution pattern obtained with the 150-watt lamp.

While the spring fasteners **35** have been shown with only two notches to accommodate lamps of two different sizes, it is possible to provide more than two sets of notches. Furthermore, the socket assembly and spring

fasteners may be arranged to accommodate larger type lamps such as lamps of 200, 300 and 500 watts.

It is apparent from the foregoing description that the novel and improved socket assembly and mount affords a highly economical, dependable and rugged means for adjustably mounting lamps in a reflector and greatly simplifies the problems of assembly and maintenance. Furthermore, while the mount as described above was intended to accommodate lamps of different sizes within a given reflector, it is also readily adaptable for use in shifting the position of a lamp within a reflector to modify the light distribution characteristics of the fixture. For instance, by properly designing an appropriate reflector, it is possible by shifting the lamp relative to the reflector to either concentrate the light in a relatively narrow beam or distribute the light in a relatively wide cone for floodlighting.

While only certain embodiments of the invention have been illustrated and described, it is apparent that alterations, modifications and changes may be made without departing from the true scope and spirit thereof as defined by the appended claims.

What is claimed is:

1. The combination with a reflector having a socket receiving opening, of an adjustable lamp mount to permit a given lamp to be positioned with its filaments in a predetermined location relative to said reflector comprising a tubular socket housing slidably engaging said reflector opening and movable axially thereof, a lamp socket carried by said housing, axially disposed means carried by said socket housing in angularly spaced relationship, the socket receiving opening in said reflector having recesses in the edge thereof slidably receiving said axially disposed means to prevent relative rotation of said socket housing and said reflector and means associated with said axially disposed means adjustably fixing the axial position of said housing relative to said reflector to position the filament of a lamp in a predetermined position relative to said reflector.

2. The combination according to claim 1 wherein the last said means comprises at least two elongated resilient elements carried by said tubular housing and axially spaced means on each resilient element for selective engagement with said reflector opening.

3. The combination of claim 1 wherein the last said means includes a pair of channel-like members secured to the outer surface of said housing and extending generally parallel to the longitudinal axis of said housing, the last said channel-like members engaging said reflector to fix said housing against rotation while permitting axial movement thereof relative to said opening and a pair of resilient elements within said channel-like members, said resilient elements including axially spaced notches for selective engagement with the edge of said reflector opening.

4. The combination with a reflector having an opening therein and wherein said opening has diagonally opposed recesses formed in the edge thereof, of a lamp socket mount adjustably positioned in said opening, said mount

comprising a tubular housing, channel-like elements carried in diagonally opposite positions on said housing and fixedly secured thereto, a lamp socket carried at least partially within said housing and channel-like resilient means disposed within each of said channel-like means and secured relative to said housing, said resilient means having axially spaced notches therein for engagement with the edges of said recesses.

5. The combination with a reflector having an opening therein and wherein said opening has diagonally opposed recesses formed in the edge thereof, of a lamp socket mount adjustably positioned in said opening, said mount comprising a cylindrical tubular housing adapted to slidably engage said reflector opening, a first pair of outwardly extending ribs in spaced parallel relationship carried by the wall of said housing and extending along the length thereof, a transverse plate bridging one end of said pair of ribs, a second similarly positioned pair of ribs carried by said housing in a position diagonally opposed to the first said pair of ribs and a plate bridging one end of said second pair of ribs, said plates being substantially coplanar and each having an opening extending therethrough, a socket at least partially disposed within said housing and having a pair of diagonally opposed ears each of which includes an opening extending therethrough, a resilient clip carried between each pair of said ribs, each resilient member having an elongated portion including outwardly extending flanges and terminating at its upper end in a horizontally disposed U-shaped configuration with the outer leg of said U-shaped configuration having an opening therein, means extending through the openings in said socket ears, said plates and said resilient members to form a socket assembly, said resilient members having spaced pairs of notches in said flanges, said spaced ribs engaging the recesses in the edge of said reflector opening to restrict rotation of the housing relative to said reflector, and said notches in said resilient members engaging the inner edges of said recesses to fix the socket assembly in a selected position relative to said reflector.

6. The combination according to claim 5 wherein said socket assembly further includes a cover having outwardly extending ears, and means in said cover adapted to receive and secure an electric cable thereto for connection to said socket, said cover being affixed to said socket assembly to enclose the back portion of said socket and electrical connections.

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