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LIGHTING FIXTURE

Filed June 28, 1966

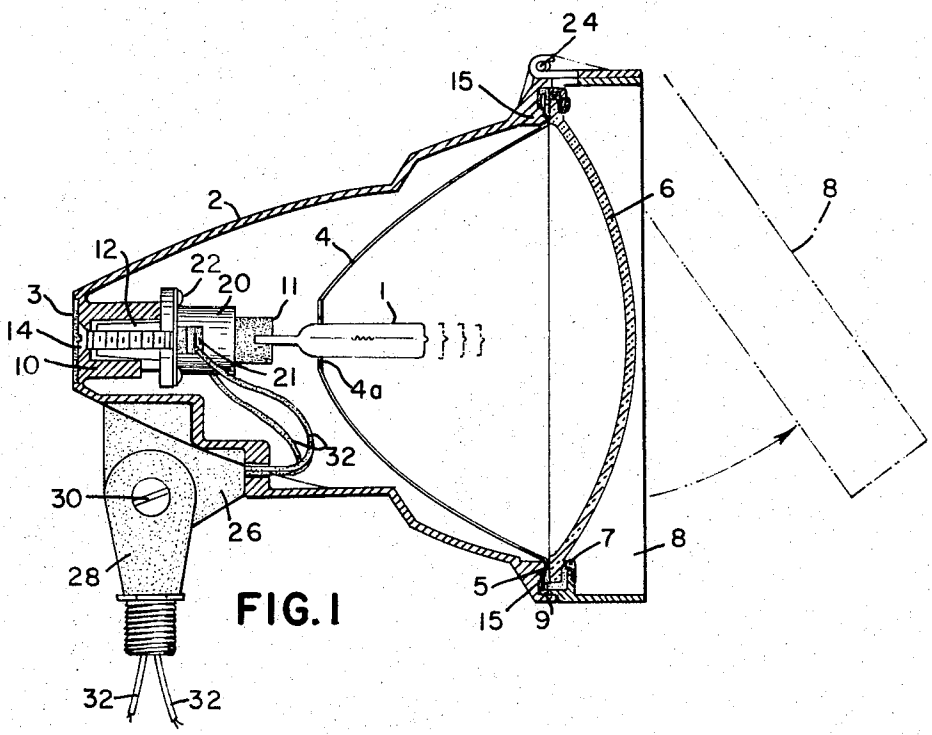


FIG. 1

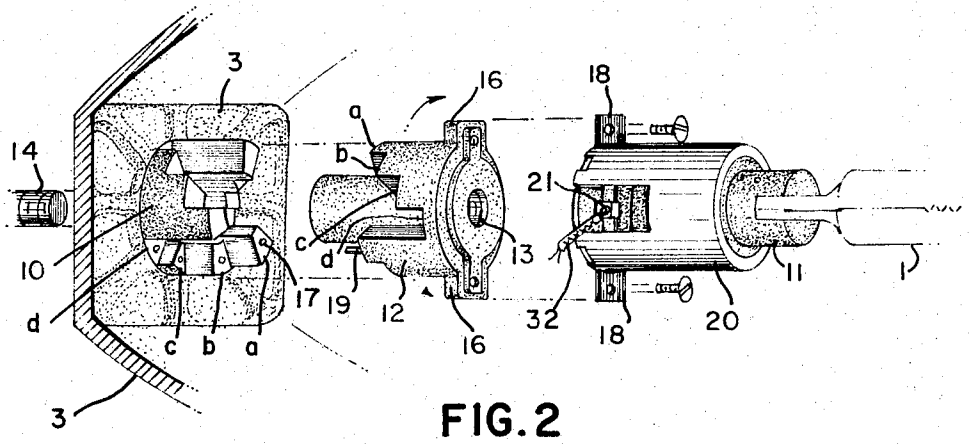


FIG. 2

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LIGHTING FIXTURE

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ABSTRACT OF THE DISCLOSURE

A lighting fixture in which the base member is provided with a series of graduated steps with which a similarly graduated adapter cooperates to provide an arrangement whereby the light source may be relocated in its reflector to thereby obtain different beam spreads.

This invention relates to lighting fixtures and more particularly to lighting fixtures designed primarily for outdoor floodlighting applications, including parking areas, building facades, billboards, signs and sporting areas. The fixture of this invention is designed particularly for use with a 500 watt, single base, iodine quartz lamp.

The ever-increasing number of outdoor floodlighting applications has presented a substantial problem to both the fixture manufacturer and the user. Different applications usually require different beam spreads and heretofore this has usually meant a different fixture for each beam spread. Thus the manufacturer has the problem of running and stocking a large number of fixture types which do not differ significantly from one another from a manufacturing viewpoint. This requirement adds significantly to the cost of the operation and adversely affects the efficiency thereof.

Insofar as the user is concerned, he too has a problem in that he is restricted in moving his fixtures around from one position to another in any given application as well as in moving a fixture from one application to another, because the fixture may give very good results and be very efficient in one position but the particular beam spread may render the fixture somewhat less than desirable and quite inefficient in another position.

In view of the foregoing, one of the principal objects of this invention is to provide a versatile floodlight lighting fixture readily adaptable to a number of different lighting applications.

Another object is to provide a floodlight lighting fixture with means for readily adjusting the locus of the light source within its reflector so that a different beam spread can be obtained.

These and other objects, advantages and features are obtained, in accordance with the principles of this invention, by providing a base member of the fixture with a series of graduated steps and by providing a similarly graduated adapter designed to mate with the base member on the one hand and to receive the light source on the other hand. Means are provided for readily and easily relocating the adapter on the base member to a number of different graduated steps and thus relocate the light source in its reflector to thereby obtain different beam spreads. Even greater versatility of beam spread possibilities are obtained by mounting the lens in a readily detachable manner. In the specific embodiment of the invention, the lens is set in a gasket in the fixture cover; no screws, bolts or the like are used to retain it in position in an assembled fixture. Thus flexing and manipulation of the gasket permits removal of one lens having a certain beam spread characteristic and replacement thereof with another lens having a different beam spread characteristic.

In the specific embodiment of the invention illustrated in the accompanying drawing:

FIGURE 1 is a side elevational view in section of a floodlight lighting fixture embodying the principles of this invention.

FIGURE 2 is an exploded detail on an enlarged scale of the housing base-adapter-lamp socket arrangement.

The floodlight lighting fixture illustrated in FIGURE 1 comprises a housing **2**, a reflector **4**, a lens **6** and a cover **8**. The housing **2** is truncated at the rear end **3** thereof. A base or base member **10** is disposed within the truncated end of the housing and is preferably formed integral therewith. The base **10** is provided with four series of steps *a*, *b*, *c* and *d* (FIG. 2). An adapter **12**, having a central bore **13** extending longitudinally thereof, is secured to the base **10** by a screw **14**. The adapter **12** is also provided with four series of steps *a*, *b*, *c* and *d*, which mesh with the steps of the base **10**. The adapter **12** has a pair of ears **16** projecting laterally from the top surface thereof. These ears **16** are normally in register with a pair of ears **18** projecting laterally from the bottom surface of a socket **20**. Screws **22** connect these mating ears to one another and thus secure the socket **20** to the adapter **12**. A 500 watt iodine quartz lamp **1** having a single base **11** is seated in its socket **20**.

As noted above, the floodlight lighting fixture illustrated in the acompanying drawing comprises a housing **2**, a reflector **4**, a lens **6** and a cover **8**. The cover **8** is pivotally mounted along the front upper peripheral edge of the housing **2** on a spring pin **24**. The cover **8** is shown in a partly open position in phantom in FIG. 1. When closed with respect to the housing **2**, as shown in solid in FIG. 1, the cover is drawn tightly against the housing by a pair of spring clips (not shown) or some other suitable latching mechanism. The lens **6** has a gasket **7** fitted around the periphery thereof and the gasketed lens is fitted into the cover **8**. The reflector **4** is provided with a peripheral lip **5** on which a gasket **9** is fitted. The reflector **4** is disposed within the housing **2** with the gasketed peripheral lip **5** of the reflector abutting an internal ledge **15** of the housing **2**. With the reflector so positioned, when the cover is closed a seal is formed between the gasket **7** on the lens **6** and the gasket **9** on the peripheral lip **5** of reflector **4**.

The particular mounting arrangement for the specific embodiment of the invention illustrated in the acompanying drawing comprises a bracket **26** attached to the housing **1** and a threaded swivel **28** pivotally attached to the bracket **26** at **30**. Mating faces of the bracket and swivel are preferably serrated to aid in establishing and maintaining the desired angular positioning of the fixture with respect to its mounting surface.

Connection of the lamp **1** to an external power source may be made by means of wires **32** running up through the swivel **28** and bracket **26** into the chamber defined by the housing **2**. The wires **32** are connected to terminals **21** with which socket **20** is provided. These terminals are in turn connected to lamp base terminals inside the socket **20**.

As shown in FIG. 1, the lamp **1** as shown in solid lines projects a certain distance into the reflector **4** through the aperture **4***a* in the truncated apex thereof. When so positioned, and with a certain lens **6**, a certain beam spread is obtained. When a different beam spread is desired, the lamp **1** may be relocated to one of the phantom positions as shown in FIG. 1 so that its relative position within the reflector **4** has been changed. This is accomplished by relocating the adapter **12** on the base **10**. First the cover **8** is opened and the reflector **4** removed to permit access to the interior of the housing **2**. Then the screw **14** is backed off enough to separate the adapter **12** from the

base **10**. With the adapter-socket-lamp assembly so freed it is rotated about its longitudinal axis to realign the four series of steps *a, b, c* and *d* on the base **10** and the adapter **12**. It will be noted, as shown in FIG. 2, that each step in one series of steps in the base **10** is provided with a bore **17** in the top face thereof and the nearest step in the cooperating series in the adapter is provided with a projecting pin **19**. This pin-bore arrangement provides a means for positive and accurate relocation of the adapter on the base. As soon as the adapter-socket-lamp assembly has been relocated on a different series of steps on the base **10**, the screw **14** is replaced and turned down to secure the adapter to the base, the reflector **4** is put back in place and the cover **8** is closed. The relocated lamp now occupies one of the phantom positions as shown in FIG. 1 and a different beam spread has been obtained.

While there has been shown and described what is at present considered the preferred embodiment of the invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention as defined by the appended claims.

What we claim is:

1. A lighting fixture comprising:

a housing;

a lamp socket supported in said housing;

a reflector disposed in said housing, said reflector having a central aperture therein in axial alignment with said lamp socket;

a lamp mounted in said lamp socket and extending into said reflector through the aperture therein;

and means for adjusting the relative position of said lamp socket in said housing whereby the relative position of said lamp with respect to said reflector through which it extends can be varied, said adjusting means including a base member having a series of steps formed therein to define different levels of elevation and an adapter having a series of steps formed therein to define different levels of elevation, said first mentioned and said second mentioned series of steps being located in cooperative relationship with respect to one another.

2. The combination of claim **1** in which each step of one of said series of steps has a bore formed in the top face thereof and one of the steps in the other of said series has a pin projecting therefrom, thereby defining a positioning means for mating said base member and said adapter.

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