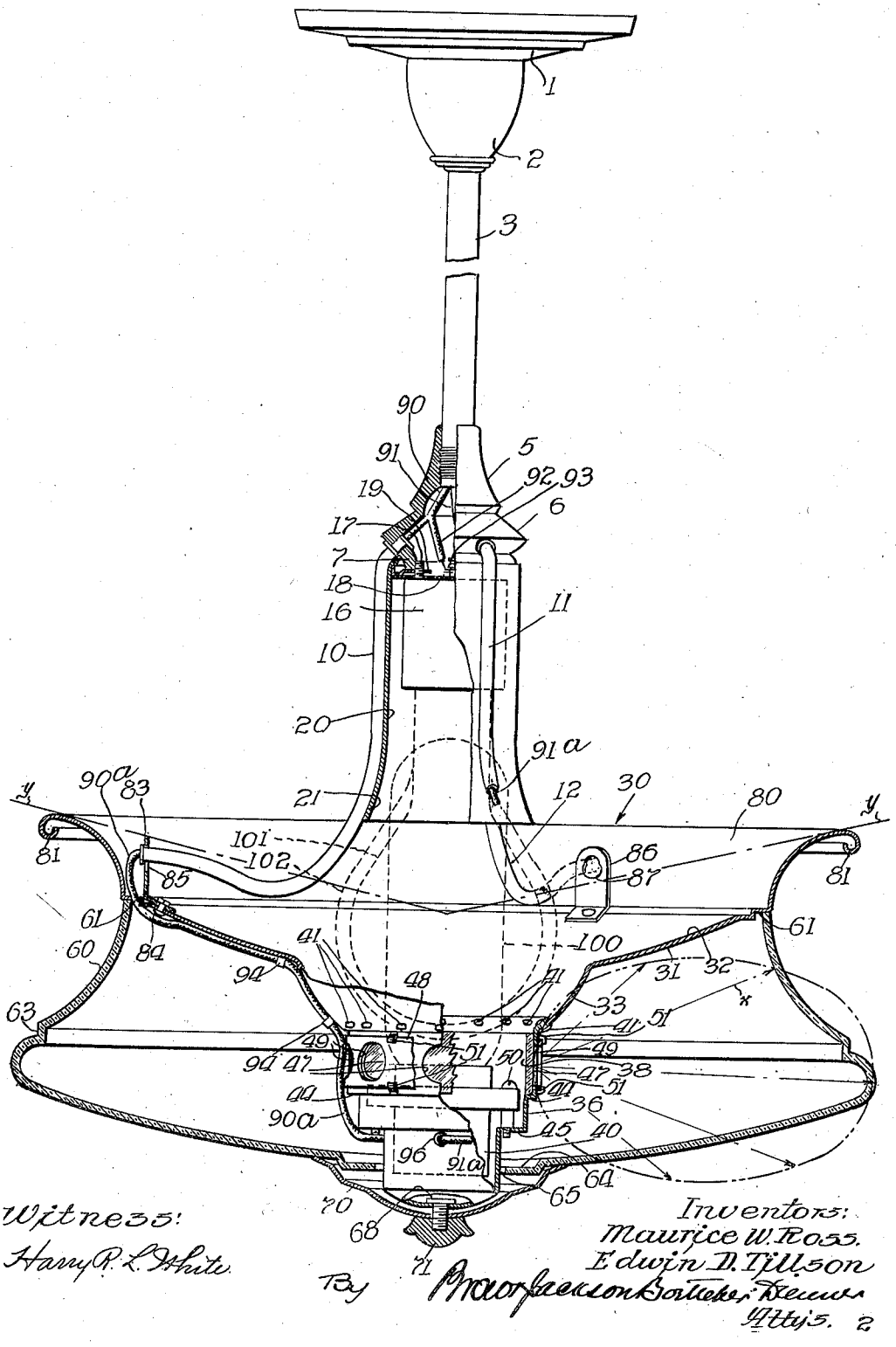
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LIGHTING FIXTURE

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LIGHTING FIXTURE

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The present invention relates generally to lighting fixtures and is more particularly directed to certain new and improved features adapted for use in indirect lighting fixtures, such as those employing luminous bowls.

The principal object of the present invention is the provision of a new and improved lighting fixture of the indirect type embodying a reflector carrying a luminous bowl and a shield ring, so arranged that enough diffused light emanates from the luminous bowl, and in such a manner, that the bowl and the shield ring are illuminated, not only uniformly, but also with approximately the same intensity or brightness as the ceiling upon which most of the light from the lamp and reflector is uniformly directed.

Another object of the present invention is the provision of an indirect lighting fixture wherein is provided a leakage of light to a luminous bowl which is so shaped that it is illuminated uniformly, and wherein the reflector is supported by a hanger in a new and improved manner so as to eliminate ceiling shadows.

Still further, another object of the present invention is the provision of a new and improved supporting means for an indirect lighting fixture in which three or more tubular supporting arms are provided, two of which act as hinges for pivotally supporting the reflector and bowl unit and, in addition, are adapted to receive the conductors leading to the lower lamp socket, while a third arm serves to releasably hold the unit in proper position, the release making it possible to easily and quickly clean the unit or install or replace the lamp without disturbing the connections.

An additional object of the present invention is the provision of a new and improved reflector unit, embodying a one-piece reflector body and outwardly and upwardly flaring shield ring for the purpose of not only receiving the lower diffusing bowl but, in addition, preventing a direct observation of the lamp from any normal viewing position.

A further object of the invention is the provision of a new and improved support for a diffusing ring in the lower central portion of the reflector body, light emanating through the ring and through a plurality of openings formed in the reflector body or the support for the diffusing ring and socket which, in effect, forms a part of the central portion of the reflector unit.

Another object of the present invention is the provision of new and improved supporting arms carried by and forming a part of the hanger unit, and in which all portions spaced from the lamp are below the angle of cut-off of the shield ring and in which all portions of the supporting arms above the angle of cut-off are disposed closely adjacent the lamp so that ceiling shadows are eliminated. A further object of the present invention in this connection is the provision of a tubular enclosing member or husk surrounding the upper light socket.

Still further, another object of the present invention is the provision of a luminous bowl and a shield ring, either or both flaring upwardly and outwardly and particularly adapted for use in an indirect lighting fixture so that the under surface of the shield ring is illuminated by light from the luminous glass bowl to substantially the same intensity as the ceiling and the bowl.

A further object of the present invention is the provision of a new and improved fixture provided with two lamp sockets providing for the optional use of two or more different kinds of lamps in the same fixture. An additional object of the present invention in this connection is the provision of a new and improved diffusing ring and support for the same properly associated with both of said lamp sockets, whereby the proper amount of diffused light emanates from the fixture when any one of the two or more kinds of lamps is used.

These and other objects and advantages of the present invention will be apparent to those skilled in the art after a consideration of the following detailed description, taken in conjunction with the accompanying drawing illustrating the preferred structural embodiment.

In the drawing, the figure shown is a generally vertical transverse section, with certain parts shown in elevation.

Referring now more particularly to the drawing, the principles of the present invention have been embodied in a lighting fixture of the indirect type. The fixture includes a ceiling supported canopy 1 having a depending core 2 which serves as a swivel support for the upper end of a hanger stem 3 in the form of a tubular member carrying a cast head assembly 5 at its lower end. The member 5 flares outwardly and downwardly, as at 6, and then terminates in a reentrant portion 7 in which the upper ends of three tubublar arms 10, 11, and 12 are received, preferably, but not necessarily, being placed when the member 5 is cast. The arms may, of course, be installed after the formation of the member 5 is completed, and secured in place in any desired manner, as by screw threads or the like. The head assembly 5 carries an upper downwardly facing socket 16 of porcelain or the like, fastened, as by bolt or screw

means 17, to the portion 7 of the head 5, and an insulating plate 18 is disposed between the socket 16 and the head 5. Clips 19 are disposed over the socket screws 17 and between the plate 18 and the head 5 so as to engage the upper flange of and support in position a tubular sheath or husk 20 which surrounds the upper lamp socket 16 and which flares downwardly and outwardly, as at 21, following the curvature of the tubular supporting arms 10, 11 and 12, although this is not essential. The sheath or husk member extends downwardly an appreciable distance below the lower edge of the lamp socket 16.

The reflector unit is indicated in its entirety by the reference numeral 30 and includes an outwardly and upwardly flared reflector body 31, preferably formed of aluminum and having an upper reflecting surface 32. The central portion of the reflector body 31 is formed with a recessed central portion 33 terminating downwardly in a central opening over which is disposed a spun metal cup-shaped member 36 serving as a support for a diffusing ring 38 and a lower lamp socket 40. Preferably, the socket and diffusing ring supporting member 36 is riveted, as at 41, to the lower edge of the central portion of the reflector 31. The supporting cup-shaped member 36 is provided with two shouldered sections 44 and 45, the former serving to support the diffusing ring 38, which is preferably formed of opal glass, and a number of openings 47 are punched or otherwise formed in the upper portion of the member 36 so as to provide for the escape of light. The other shoulder 45 of the member 36 serves to support the lower upwardly facing lamp socket 40, the latter being secured in place by any suitable means, such as screws 50. An adjusting ring 48, with openings 49 adapted to register with the openings 47, is disposed around the member 36 and is held in position by clips 51 or the like. By rotating the ring 48, the effective size of the light openings in the member 36 may be adjusted.

A luminous glass bowl 60 is mounted on the under side of the reflector 31, preferably with its upper edges seating in a shallow groove 61 formed at the margin of the reflector body proper, and the bowl 60 flares outwardly and downwardly and then extends inwardly along an easy curve, being provided with a decorative flange or fillet 63. The central portion of the bowl 60 is recessed, as at 64, and provided with an aperture 65 to receive the lower end of the cup-shaped socket supporting member 36, which carries a fastening screw 68. A finishing cap or decorative button 70 covers the opening 65 and has a central opening through which the lower end of the bolt 68 projects. A cast knob 71 serves as a nut for clamping the cap 70 and the bowl 60 in position. An upwardly and outwardly flaring section in the form of a shield ring 80 is carried at the outer margin or edge of the reflector body 31 and preferably the shield ring 80 and reflector 31 are formed integrally. The outer edge of the shield ring 80 terminates in a beaded or turned edge 81 disposed appreciably radially outwardly of the points where the bowl 60 meets the reflector 31, so that light escaping through the diffusing ring 38 and the openings 47 illuminates the bowl with the same intensity as the ceiling, and by virtue of the flare in both the shield ring and the bowl, light from the latter illuminates the shield ring so that it, too, is as bright as the ceiling. Thus, there are no shadows or dark rings observable, but nevertheless the lamp is itself properly shielded. The shape of the bowl 60 is also important. From the drawing it will be seen that in section the bowl follows the candlepower distribution curve x of an opal glass diffusing ring, so that the illumination of the bowl is uniform, regardless of the size of lamp used.

The combined reflector and bowl assembly is hingedly or pivotally supported, as a unit, on two of the supporting arms and is releasably connected with the other arm, so that when the latter connection is released the unit swings downwardly for cleaning and relamping. A pair of clips 83 are secured, as by bolts or rivets 84, to the outer edge of the reflector body, and are provided with elongated openings 85 to receive the laterally outwardly directed ends of the tubular supporting arms 10 and 11. The releasable connection may take any suitable form, but is preferably a third clip 86 which is made flexible and has an aperture large enough and specially formed to permit disconnection from the end of the third supporting arm 12 associated therewith, whereby when the flexible clip or bracket 86 is sprung out, the reflector unit is disconnected from the supporting arm 12 and may swing downwardly about the lower ends of the other arms 10 and 11. This makes it possible to clean the bowl and install or replace the lamp.

Current is supplied to the two lamp sockets 16 and 40 by means of two conductors 90 and 91 brought down from any suitable outlet box through the hanger stem 3. For the upper socket 16, branches 92 are connected between the conductors 90 and 91 and the terminal posts 93 of the socket 16. For the lower socket, the conductors 90 and 91 are extended downwardly through the two tubular supporting arms 10 and 11 that act as hinges in supporting the reflector and globe unit. Thus, the downward swinging of the unit in cleaning and relamping does not affect, and, in turn, is not affected by the presence of the conductors 90 and 91. Preferably, the lower sections 90a and 91a of the conductors 90 and 91 are brought downwardly through suitable openings in the outer edge of the reflector body 31 adjacent the clips 83 and are secured as at 94 closely to the underside of the reflector body so as to cast no shadows on the bowl 60, the conductors being led into connection with the lower socket 40 through openings 96 formed in the socket supporting member 36.

If desired, all of the supporting clips 83 and 86 may be made flexible so that any one of them may be sprung out to be disengaged from the associated supporting arms and to permit lowering of the reflector unit about the other two arms acting as pivotal supports. Also, all three of the clips may be released from the arms to detach the reflector unit.

An important feature of the present invention lies in the fact that the supporting arms 10, 11 and 12 lie closely adjacent the lamp at all points below the cut-off line y of the shield ring 80, and that the points where the arms extend outwardly are all below the cut-off line y. Thus, the arms 10, 11 and 12 will not cast any shadows on the ceiling. Also, the portions of the arms that are below the cut-off line y lie relatively close to the reflector 31 so that practically all ceiling shadows are eliminated.

As mentioned above, one of the advantages of the present invention lies in the ability to use any one of two or three different kinds of lamps. For example, a high power lamp, for instance one of

the commercially available tubular 1000 watt lamps, may be placed in the lower lamp socket **40** in the position indicated by the reference numeral **100**, and it is to be noted that the upper end of such a lamp is shielded by the sheath or husk member **20**, the lower end of the latter being spaced laterally from the upper portion of the lamp **100** so that the sheath or husk member **20**, acting in conjunction with the shield ring **80**, makes it practically impossible to view the lamp **100** directly from any normal viewing position. Instead of a tubular lamp, a 300 or 500 watt lamp may be disposed in the upper socket **16**, in the position indicated at **101** and **102** in Figure 1. In this case, it is to be noted that the same sheath or husk member **20** now serves to surround the stem or neck portion of the lamp **101** or **102**, so as to prevent this lamp from being viewed directly from any normal viewing position. By virtue of the central recessed portion **33** of the reflector **31**, the bulb or globe part of the lamp **101** or **102** is accommodated and, at the same time, whether lamp **100**, **101** or **102** is used, sufficient light passes through the diffusing ring **39** and the openings **47** to illuminate the bowl **60** with approximately the same intensity as the ceiling from which the fixture is suspended. Also, screw base or prong base sockets may be used, if desired.

While we have thus shown and described above the preferred structural embodiment in which the principles of the present invention have been embodied, it is to be understood that our invention is not to be limited to the specific details shown and described above, but that, in fact, different means may be employed in the practice of our invention, as defined in the appended claims.

What we claim, therefore, and desire to secure by Letters Patent is:—

1. A lighting fixture comprising a ceiling supported hanger carrying a plurality of downwardly and outwardly flaring arms and a downwardly facing lamp socket, an upwardly facing reflector and a shield ring supported on said arms, a tubular member supported from said hanger and surrounding said lamp socket, said member extending downwardly to substantially the level of the upper edge of said shield, and a lower lamp socket carried by said reflector, said sockets providing for the optional installation of two different kinds of lamps and said tubular member cooperating with said shield in both cases to prevent viewing the lamp from any normal viewing position, said tubular member flaring outwardly at its lower portion so as to shield the adjacent portions of a lamp mounted in either of said sockets, the neck portion of the lamp being shielded in one case and the portion opposite the base of the lamp in the other case.

2. A lighting fixture comprising a hanger stem, a head at the lower end thereof, a plurality of downwardly and outwardly flaring arms supported at their upper ends in said head, a reflector carried by the lower ends of said arms and having a central opening therein, a socket supporting member having openings therein and fixed to the reflector over the opening therein, a socket supported in said member, a diffuser carried by the latter over said openings, a glass bowl enclosing said member and engaging the edge of said reflector, and means for adjusting the effective size of the openings in said socket supporting member.

3. A lighting fixture comprising a ceiling canopy, a tubular hanger stem supported for swiveling movement in said canopy and carrying a head member at its lower end, tubular arms fastened at their upper ends to said head member and flaring outwardly downwardly and terminating in laterally directed lower ends, a reflector hung on said lower ends and having a lamp-receiving central opening, a lower socket assembly supported from said reflector and including light openings and a diffusing ring associated therewith, a shield ring flaring upwardly and laterally from the edge of the reflector, and a luminous glass bowl also flaring outwardly and enclosing the lower part of the reflector and socket assembly and secured to the latter.

4. A lighting fixture comprising a hanger stem, a head at the lower end thereof, a plurality of downwardly and outwardly flaring arms supported at their upper ends in said head, a reflector carried by the lower ends of said arms and having a central opening therein, a socket supporting member having openings therein and fixed to the reflector over the opening therein, a socket supported in said member, a diffuser carried by the latter over said openings, and a glass bowl enclosing said member and disposed in a position to be illuminated substantially uniformly by light passing through said diffuser and said openings.

5. A lighting fixture comprising a hanger, tubular arms supported at the lower end thereof, a reflector having light openings in the central portion and an upper reflecting surface, means pivoting the reflector on the lower end of two of said arms, releasable means connecting the reflector to a third arm and operable when released to permit said reflector to swing downwardly about its pivotal connection with said two arms, a lamp socket carried by said reflector, conductors carried within the two tubular arms to which the reflector is pivoted and extending downwardly on the lower side of said reflector to said socket, and a diffusing bowl secured to and illuminated by the openings in said reflector and masking the portions of said conductors on the lower side of the reflector.

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