

Jan. 6, 1948.

H. HANDLER

2,434,108

LIGHTING UNIT

Filed Feb. 23, 1946

2 Sheets-Sheet 1

Fig. 1

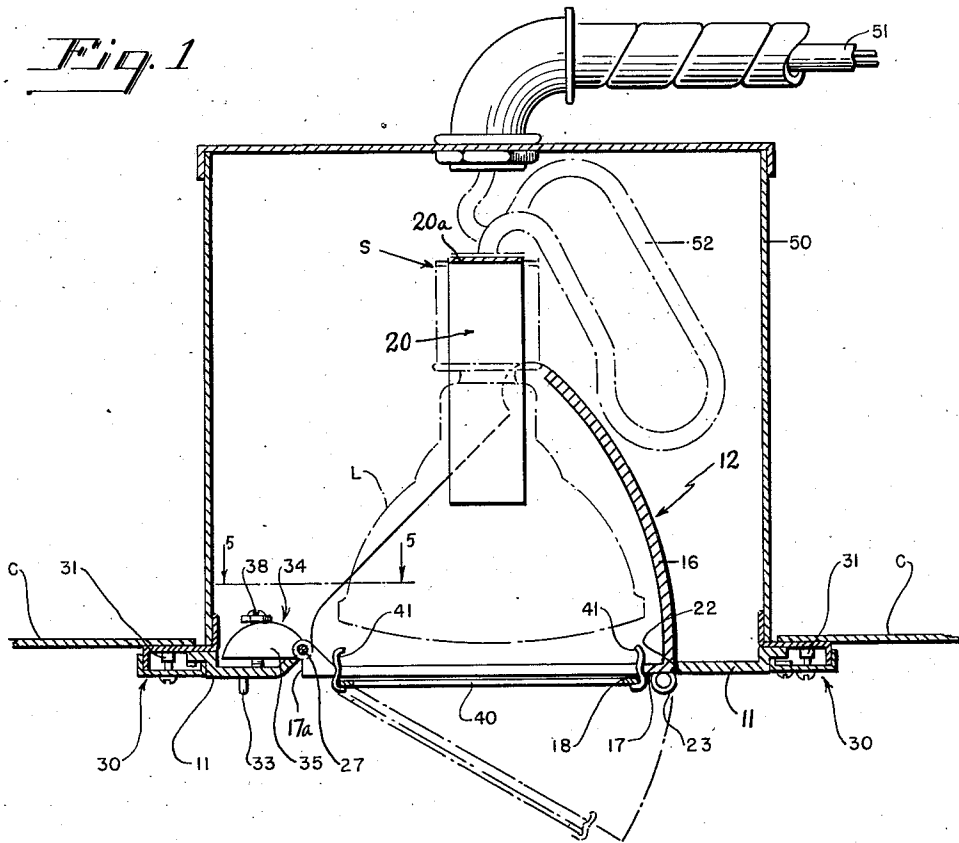


Fig. 4

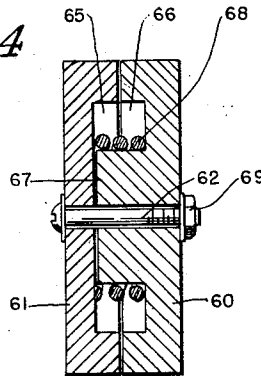
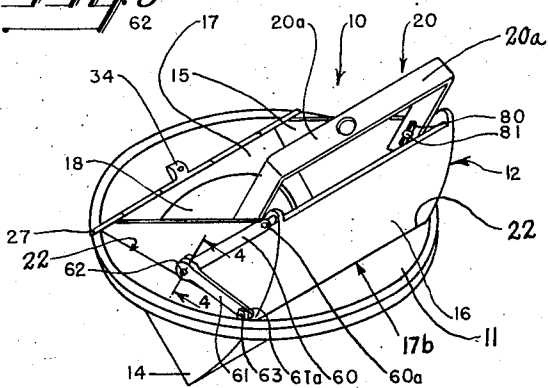


Fig. 3



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Fig. 2

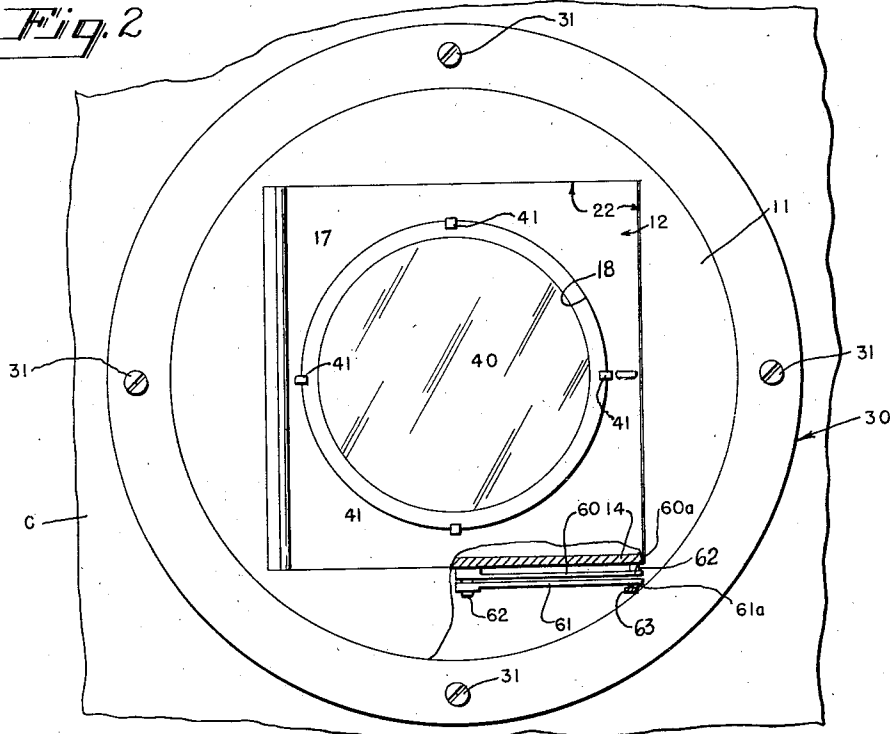


Fig. 5

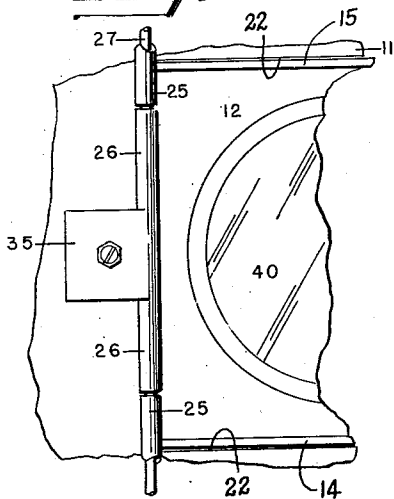


Fig. 6

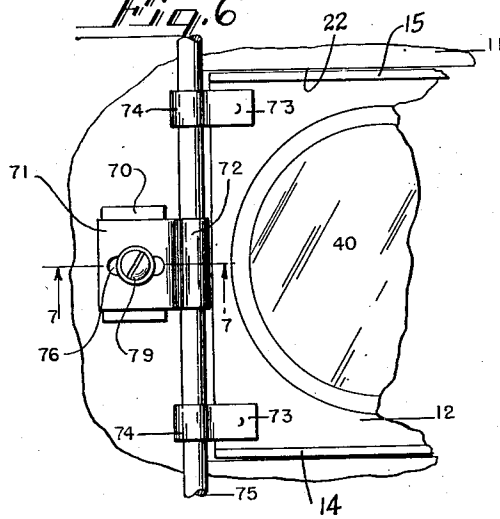
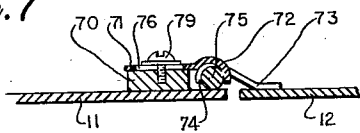


Fig. 7



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2,434,108

LIGHTING UNIT

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1 Claim. (Cl. 240-78)

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This invention relates generally to electric lighting fixtures. More particularly, my invention is directed toward an improved construction for electrical spotlight fixtures.

One of the objects of my invention is to provide a lighting unit of the character described, which shall be adapted for use as a spotlight and which shall be so constructed and arranged that the beam of light from said spotlight may be selectively directed angularly, and at the same time may be turned axially 360 degrees to thereby obtain substantial universal mounting for said spotlight.

Another object of my invention is to provide a lighting unit of the character described capable of being manually angularly adjusted, which shall have improved and novel means for maintaining the lamp structure at any such desired angularly adjusted position.

Still another object of my invention is to provide a lighting unit of the character described which shall comprise relatively few and simple parts, which shall be relatively inexpensive to manufacture and which shall represent a general improvement in the art.

Other objects of my invention will hereinafter be pointed out or will become apparent from the description to follow.

In the accompanying drawings,

Fig. 1 is a transverse sectional view of a lighting unit constructed and arranged in accordance with my invention and shown mounted in effective position in a ceiling;

Fig. 2 is a bottom plan view thereof with parts broken away to disclose the interior construction;

Fig. 3 is a perspective view of the device illustrated in Figs. 1 and 2, dismounted from its position, and without the lamp and lamp socket;

Fig. 4 is an enlarged cross-sectional view taken substantially along the line 4-4 of Fig. 3;

Fig. 5 is a cross-sectional view taken substantially along the line 5-5 of Fig. 1;

Fig. 6 is a view similar to Fig. 5, but illustrating a modified form of my invention; and

Fig. 7 is a cross-sectional view taken substantially along the line 7-7 of Fig. 6.

Referring now in detail to Figs. 1 to 5 of the drawings, I have shown a lighting unit 10 constructed and arranged in accordance with my invention and mounted in effective position in a ceiling C.

As clearly shown in Figs. 1, 2 and 3, my lighting unit 10 comprising a circular plate member 11 provided with a rectangular opening 22. Piv-

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otally mounted on the plate 11, in a manner soon to be described, is a shield member 12. Said shield member comprises a pair of spaced triangular shaped side walls 14 and 15 and an arcuate front wall 16. The said member 12 is completely open at the top and has a bottom wall 17 which is provided with a circular opening 18. Mounted on the member 12 for movement therewith, is an inverted U-shaped bracket 20. A suitable electric lamp socket S is fixedly mounted to the top wall 20a of the bracket 20, the said socket S being adapted to receive therein a suitable spotlight or any other suitable lamp L of well-known and customary construction and shown by dot and dash lines in the drawing. The size of the opening 18 is such that the enlarged flared end of the lamp L will be substantially coextensive with said opening 18.

The following means are provided for pivotally mounting the member 12 on the plate 11:

Permanently attached to the edge 17a of the apertured bottom wall 17 is a hinge section 26. Permanently attached to the plate 11 along an edge thereof adjacent the edge 17a are cooperating hinge sections 25. A hinge rod 27 is passed through the sections 25 and 26 to maintain the member 12 in pivotal attachment with the plate 11. The above described hinge arrangement is so designed as to permit the free pivotal movement of the member 12 in the rectangular opening 22, the arcuate wall 16 having the proper degree of curvature with respect to the edge 17b of the wall 17 so as to permit of such free movement.

It is thus seen from the above described construction that when the member 12 is pivotally moved about the bar 27 as an axis, the lamp L fixed to the bracket 20 will move with the said member 12, so that when said member 12 is in its uppermost position as shown in full lines in Fig. 1, the beam of light from the lamp L will be directed vertically downwards. If it is desired to throw the said beam of light further to the left such as, for example, to the position in dotted lines, as viewed from Fig. 1, it is merely necessary to pivotally move the said member 12 to the said dotted line position shown in Fig. 1.

In order that the beam of light from the lamp L may be thrown in any desired angular direction, I mount my plate 11 in a suitable circular bracket 30 removably fixed to the ceiling C by the screw members 31, as clearly shown in Fig. 1 of the drawings. The said brackets 30 are so designed as to permit free manual axial rotational movement of the plate 11. By the above

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described construction, it is noted that while the member 12 is in a selected angular position as shown by the dotted lines in Fig. 1, the plate 11 may be manually axially rotated to cause the light L to be thrown in any desired position, and to thus obtain substantial universal mounting. To facilitate the axial rotational movement of the plate 11, there may be provided a lug 33 on the said plate 11, conveniently positioned, as shown in Fig. 1.

To limit the pivotal movement of the member 12 in a counter-clockwise direction, so that the bottom wall 17 thereof will be flush with the plate 11 when the said member 12 is in its uppermost position, I provide a stop member 34 which comprises an abutment flange 35 fixed to the hinge section 26 so that the same will move with the said member 12. The said flange 35 is so designed that when the bottom wall 17 of the member 12 is flush with the plate 11, it will effectively abut the said plate 11. A set screw 38, mounted on the flange 35 is provided so that an adjustment may be made to insure the proper alignment of the wall 17 with the plate 11.

If desired, the opening 18 in the wall 17 of the member 12 may be covered with any translucent covering in order to avoid a direct glare in the lamp L, and also to enable the user to obtain certain desired ornamental effects by making the said translucent member of different colors.

As shown in Figs. 1 and 2, a translucent member 40 is resiliently supported by a plurality of spring bracket members 41, circumferentially arranged as shown in Fig. 2. The said brackets 41 may be permanently fixed to the wall 17 by any suitable attaching means, such as, for example, by spot welding, and the colored member 40 resiliently snapped into position.

As shown in Fig. 1, the entire lighting unit 10 may be encased within the wall or ceiling C by a suitable casing 50 of the type generally known and used in the art. An electrical connection 51 from a source of supply (not shown) is provided. In this connection, it is noted that sufficient slack wire 52 is furnished to permit the unhampered pivotal movement of the member 12 as hereinbefore described.

In accordance with my invention, the following means are provided for automatically maintaining the member 12 in any selected angular position along its path of pivotal movement:

Referring particularly to Figs. 2, 3 and 4, there is provided a pair of arms 60 and 61 which are pivotally interconnected at one end by means of the pivot shaft 62. The free end 60a of the arm 60 is pivotally mounted on a wall 14 of the member 12 by means of the pivot 62 carried by said wall 14. The free end 61a of the arm 61 is pivotally attached to the plate 11 by the pivot 63 fixed to said plate 11. As noted in Fig. 4, the arm 61 is provided on its inner surface thereof, in the area of the pivot 62, with a recessed portion 65 and the arm 60 is also provided, in the same area, with a recessed portion 66 in alignment with the recessed portion 65 to form an annular hollow space between the arms 60 and 61. The arm 60 is provided with an inwardly projecting hub portion 67 which projects beyond the recessed portion 66 and into the recessed portion 65. Surrounding the hub 67 and interposed between the arms 60 and 61 is a spring 68 tending normally to urge the said arms apart. By proper adjustment of the nut 69 on the threaded end of the

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shaft 62, the said arms 60 and 61 can be made to be constantly in resilient frictional engagement.

It is now seen from the above described construction that when the member 12 is pivotally moved from its uppermost position as in Fig. 1 downwardly to any desired angular position, means have been provided whereby the said member 12 will be maintained in such last-named selected position.

In Figs. 6 and 7, I have shown a modified form of my invention for pivotally mounting the member 12 on the plate 11. In this form, I provide a block 70 which is fixed to the plate 11 by any suitable means such as welding, and on which there is fastened a flange 71 having a forwardly projecting overhanging arcuate portion 72. Fixedly attached to the bottom wall 17 of the member 12 are a pair of fingers 73, each of which is disposed on opposite sides of the flange 71 and are provided with outwardly projecting arcuate portions 74. A rod member 75 is permanently attached to the fingers 73 by any suitable means such as, for example, welding, as shown in Fig. 7. The fingers 73 are so designed that the rod 75 will normally rest upon the plate 11 and the flange 71 is so designed so that its arcuate portion 72 will partially embrace the rod 75. The flange 71 may be provided with a slotted opening 76 so that the arcuate portion 72 thereof may be suitably adjusted with respect to the rod 75. The advantage of the hinge arrangement of this modified form of my invention resides in the fact that the member 12 may be more readily disassembled from the plate 11 for purposes of repair, etc.

As noted in Fig. 3 of the drawings, each leg of the inverted U-shaped bracket 20 may be provided with a slotted opening 80 designed to freely slidably receive therein a threaded shaft member fixed to the adjacent wall 14 of the member 12 so that the said bracket 20 may be elevated or lowered in accordance with different sizes and shapes of the lamp L used. A butterfly nut 81 or other suitable nut member may be provided to maintain the said bracket in selected position.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved, and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having described my invention, I claim as new and desire to secure by Letters Patent:

A lighting fixture unit of the character described, comprising a circular plate adapted to cover an opening in a wall or ceiling, means for supporting said plate in effective position over said opening and for manually axially rotating said plate, a member, said member comprising a rectangular bottom wall, a pair of substantially triangular side walls and an arcuate front wall, said plate having a rectangular shaped opening formed therein to conform to the shape of said bottom wall of said member so that said member is matingly free to pass through said plate opening, means for pivotally mounting said member on said plate so that it may be manually moved inwardly and outwardly through said plate opening, an electric light socket carried by said member for movement therewith, said member having

a light opening formed in its bottom wall, said side and front walls of said member being imperforate and opaque to prevent loss of light there-through, and means for maintaining said bottom wall of said member in a plurality of selected angular positions with respect to said plate. 5

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