

Nov. 15, 1932.

E. F. GUTH

1,888,103

LIGHTING UNIT FOR REFLECTED ILLUMINATION

Filed May 16, 1931

3 Sheets-Sheet 1

Fig. 1.

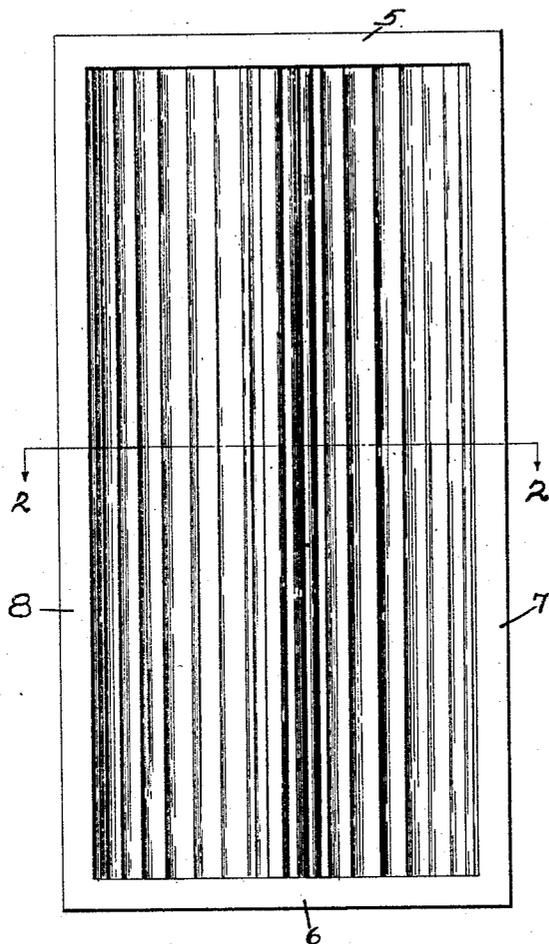
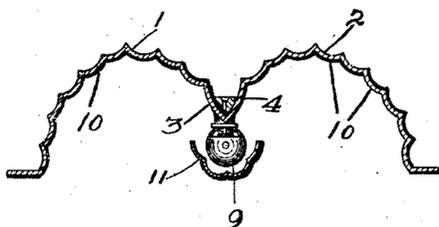


Fig. 2.



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Fig. 3.

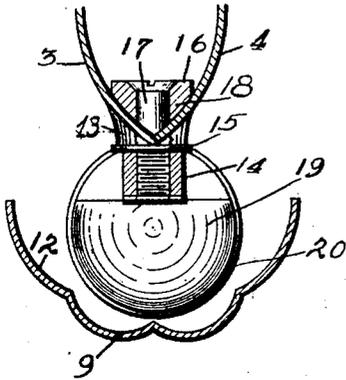


Fig. 4.

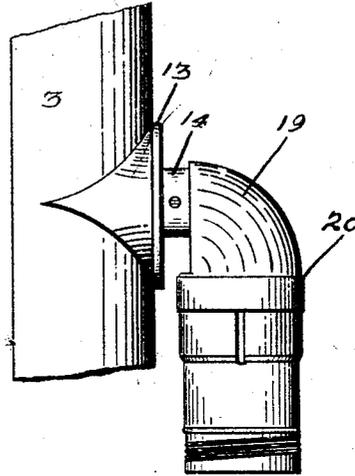


Fig. 5.

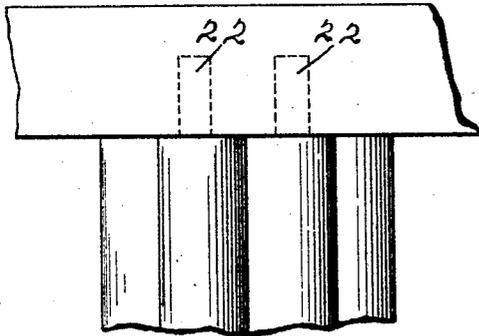


Fig. 7.

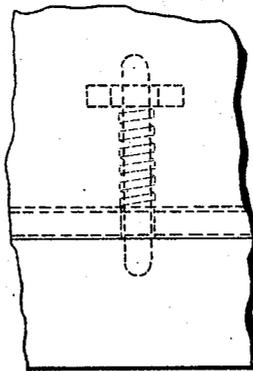


Fig. 8.

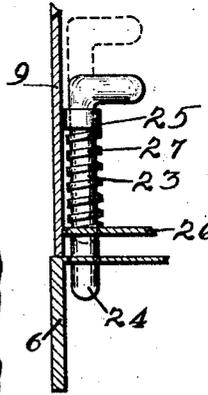
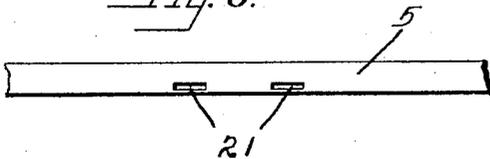


Fig. 6.



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Fig. 9.

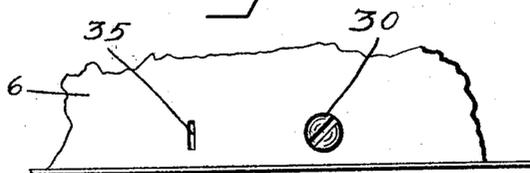


Fig. 10.

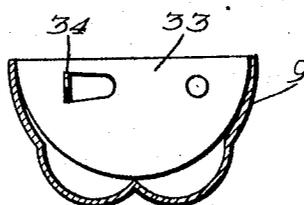
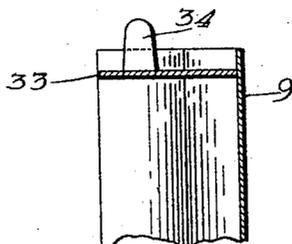


Fig. 11.



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LIGHTING UNIT FOR REFLECTED ILLUMINATION

Application filed May 16, 1931. Serial No. 537,851.

My invention relates to that class of lighting fixtures which are described in my co-pending application, Serial No. 503,128, and has for its object to provide certain improvements in details of construction of the said lighting unit for reflected illumination.

In devices of this character in which the reflector consists of two concave wings each of which is provided with a plurality of longitudinal corrugations, the metal is coated with porcelain and the electric light bulbs are secured to the center of the reflector at the junction of the two wings, the socket support when screwed down on to the reflector frequently cracks the enamel.

One of the objects of my invention is to provide a construction which will avoid this tendency.

Another object of my invention is to provide a construction whereby a reflector will be formed of a single piece of metal and the two wings will be connected by a channel, the sides of which are convex in cross section, forming a convenient means for carrying the wires.

A further object of my invention is to provide convenient detachable means to be located in this channel for readily securing the socket supports in position.

A further object of my invention is to provide a detachable central member which shields the light source from the eye and to provide securing means therefor which will be invisible from the front of the frame.

A further object of my invention is to provide longitudinal corrugations of the central member so that it becomes difficult to tell where the concave corrugations leave off and the central member begins.

My means of accomplishing the foregoing objects may be more readily comprehended by having reference to the accompanying drawings in which—

Fig. 1 is a front elevation of my improved indirect lighting fixture;

Fig. 2 is a section taken on the line 2—2 in Fig. 1 in the direction indicated by the arrows;

Fig. 3 is an enlarged fragmentary detail

view showing the means for mounting the socket support;

Fig. 4 shows a fragmentary detail view showing the manner of forming a neck on the reflector for the socket support;

Fig. 5 is a fragmentary detail view showing the top member of the frame with fastening means for the central member of the frame;

Fig. 6 is a fragmentary detail view of the top frame member showing the orifices for securing the central member;

Figs. 7 and 8 are fragmentary detail views showing the detachable means to hold the lower end of the central member of the frame.

Fig. 9 is a fragmentary detail view from the bottom of the casing showing the opening for a modified form of latch and one of the pivots for mounting the central member.

Figs. 10 and 11 are detailed views showing a modified form of securing the central member in place.

Similar reference numerals refer to similar parts throughout the entire description.

As shown in the drawings, my reflector is formed of a single piece on sheet metal and comprises two wings 1 and 2 which are joined by a channel, the sides 3 and 4 of which are convex in cross section, as clearly seen in Figs. 2 and 3. The reflector is mounted inside of a frame having a top 5, bottom 6, and side members 7 and 8, and a detachable or pivoted central member 9, the wings 1 and 2 are provided with a plurality of longitudinal corrugations 10 and the central member also is provided with a plurality of longitudinal corrugations 11, preferably corresponding in cross section to the corrugations 10 on the wings of the reflector although this is not essential. The inner surface 12 of the central member 9 is provided with suitable coating to form a satisfactory reflecting surface. At spaced intervals on the convex channel at the junction of the two wings I form a plurality of apertures which are provided with necks 13 as clearly seen in Fig. 4. These necks are drawn out of the metal forming the convex channel.

In coating the reflector with porcelain the heat prevents the porcelain from forming on

the edge of the neck 13 with the result that when the socket support 14 is screwed down upon the washer 15 as clearly seen in Fig. 3, there is no enamel to be cracked or chipped thereby and this objectionable feature is obviated.

The socket support 14 is secured in place by means of a rectangular lug 16, the sides 18 of which are formed to coincide with the inner surface of the sides 3 and 4 of the convex channel and the lug 16 is secured in place by means of a screw 17. This screw is preferably tack welded so that it is non-rotatable. The result of this construction is that when the socket support 14 is screwed down upon the stem of the lug 16 that since the lug cannot turn in the channel a very satisfactory mounting is obtained for the socket support 14. This socket support carries a standard socket 19 in which is mounted a lamp 20.

As seen in Fig. 5 to 8 inclusive, a pair of orifices 21 are formed in the top frame member 5 and are adapted to receive two pins 22 which are secured to the top of the central member 9. On the bottom of this member 9 is mounted a trigger 23, the end 24 of which is adapted to enter an orifice formed in the bottom frame member 6, the trigger is carried by supports 25 and 26 which are secured to the central member adjacent this lower end, a coil spring 27 is mounted on the trigger 23 and serves to hold it normally in the position shown in full lines in Fig. 8. The spring however permits it to be retracted to the position indicated by the dotted lines in Fig. 8. To place the central member 9 in position, the pins 22 are inserted in the orifices 21 in the top frame member 5, the workman's fingers are then passed around in the rear of the central member and the trigger 23 is moved upwardly as clearly seen in Fig. 8 until the central member 9 can be pushed into the proper position for the trigger to register with the opening in the bottom frame member 6, when it is released and the coil spring 27 projects it outwardly and into the said opening thus holding the central member securely in position but all of the securing means are invisible from the front of the frame.

In Figs. 9 to 11 I show the central member 9 secured upon pivots 30 which project inwardly from the wall of the casing. These pivots, the end of one which is shown in Fig. 9, may be suitably located at the top and bottom of said member. These pivots pass through plates 32 and 33 which are preferably spot welded to the central member 9. From the lower plate 33 I punch a tongue 34 which projects downwardly therefrom and is adapted to engage an aperture 35 formed in the bottom frame member 6. This serves to hold the central member 9 in place. I provide sufficient movement of the central member so that it can be lifted upwardly enough for the

tongue 34 to be clear of the aperture 35 when the central member can be swung upon its pivots 30 and free and unobstructed access to the lamps 20.

It will be apparent from the foregoing description that I have described a concrete means for accomplishing the objects of my invention, but it will be understood that I do not desire to be limited to the specific details of construction illustrated in the drawings as they are only for the purpose of disclosing a preferred embodiment of my invention and I do not wish to be understood as limiting myself except as such limitations may appear in the hereinafter appended claims.

Having described my invention what I regard as new and desire to secure by Letters Patent of the United States is:

1. In a device of the character described a frame having top, bottom and side members, and a central member pivoted to the top and bottom of said frame, said member provided with longitudinal corrugations, its inner surface forming a reflector.

2. In a device of the character described, a frame having top, bottom and side members, a central member pivoted to the top and bottom of said frame, said member provided with longitudinal corrugations, its inner surface forming a reflector, and means invisible from the front to detachably secure said central member in position.

3. In a device of the character described, a frame having top, bottom and side members, a central member provided with longitudinal corrugations, its inner surface forming a reflector, pins on one end of said central member fitted to registering orifices formed in one end of said frame and retractable means on the inside adjacent the other end to hold said member in position.

4. In a device of the character described, a reflector comprising two concave wings joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector.

5. In a device of the character described, a reflector comprising two concave wings joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector, a lamp mounting for said reflector comprising a socket support, a lug fitted to the inner surface of said channel and a screw in said lug which passes through said channel openings into said socket support.

6. In a device of the character described, a reflector comprising two concave wings joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said

openings having necks drawn from the metal forming said reflector, a lamp mounting for said reflector comprising a socket support and non-rotatable means to detachably secure said socket support to said convex channel.

5 7. In a device of the character described, a reflector comprising two concave wings joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector, a lamp mounting for said reflector comprising socket supports mounted in said openings which contact the edge of said necks.

8. In a device of the character described, a metal reflector comprising two concave wings having a plurality of longitudinal corrugations thereon, said wings being joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having flat annular surfaces at their edges from the metal forming said reflector.

9. In a device of the character described, a metal reflector comprising two concave wings joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector, a lamp mounting for said reflector comprising a socket support, a lug fitted to the inner surface of said channel and hollow threaded neck which passes through said lug into said socket support.

10. In a device of the character described, a metal reflector comprising two concave wings having a plurality of longitudinal corrugations thereon, said wings being joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector, a lamp mounting for said reflector comprising a socket support and non-rotatable means to detachably secure said socket support to said convex channel.

11. In a device of the character described, a metal reflector comprising two concave wings, a plurality of longitudinal corrugations thereon, said wings being joined by a channel having sides convex in cross section, there being a plurality of spaced openings in said channel at its apex, said openings having necks drawn from the metal forming said reflector, lamp mountings for said reflector comprising socket supports mounted in said openings which contact into the edge of said necks.

12. In a device of the character described a rectangular frame having top, bottom and side members, and a central member which extends from the top to the bottom, said member being provided with longitudinal corrugations, its inner surface forming a reflector,

said central member being pivoted to said frame and means to hold said central member in position.

13. In a device of the character described, a frame having top, bottom and side members and a pivoted central member provided with longitudinal corrugations, its inner surface forming a reflector, a reflector in said frame comprising two concave wings having longitudinal corrugations, lighting means mounted behind said central member, and invisible means to secure said central member in position.

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