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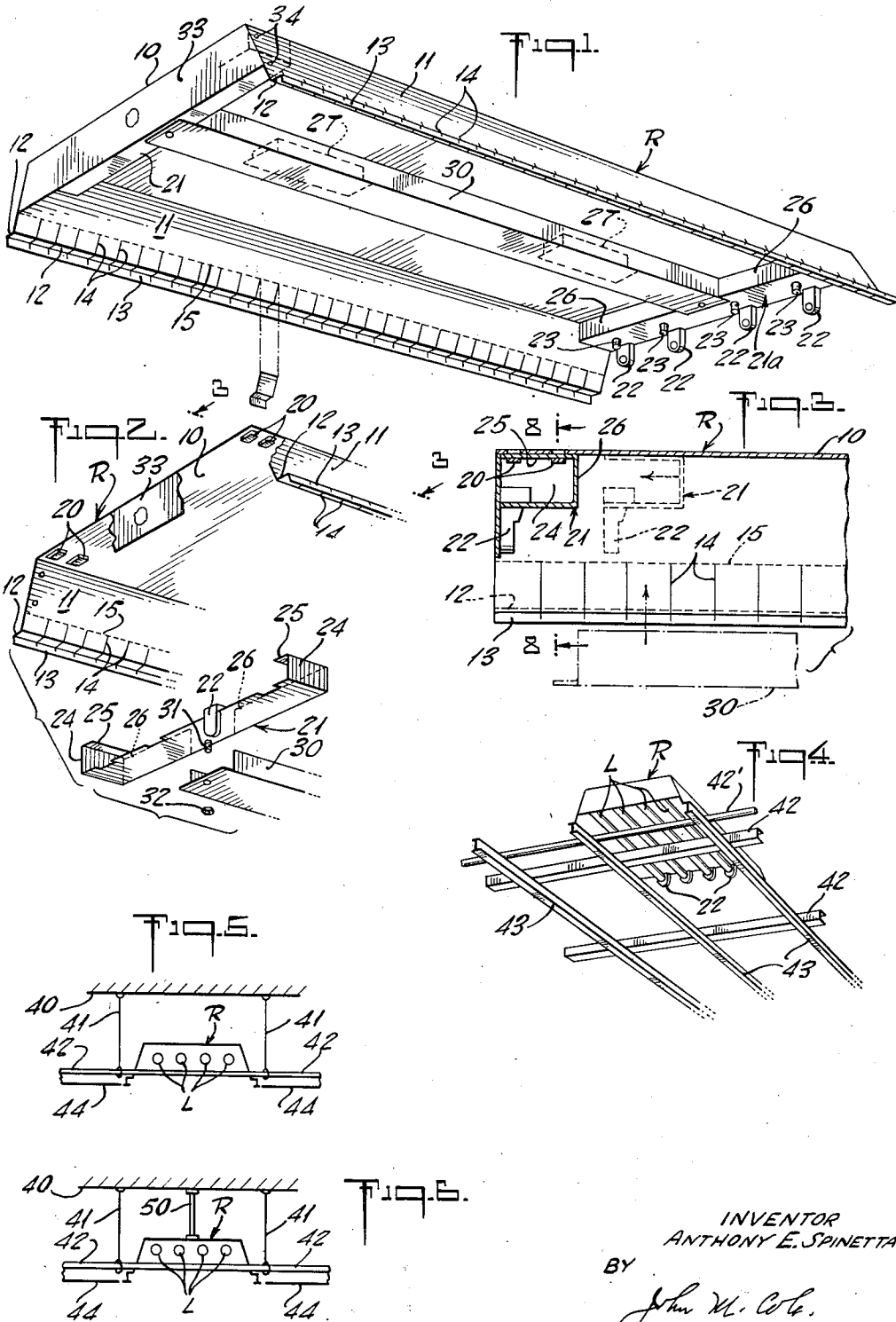
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2,762,911

REFLECTOR FOR DIRECT LIGHTING EQUIPMENT

Original Filed June 30, 1954

2 Sheets-Sheet 1



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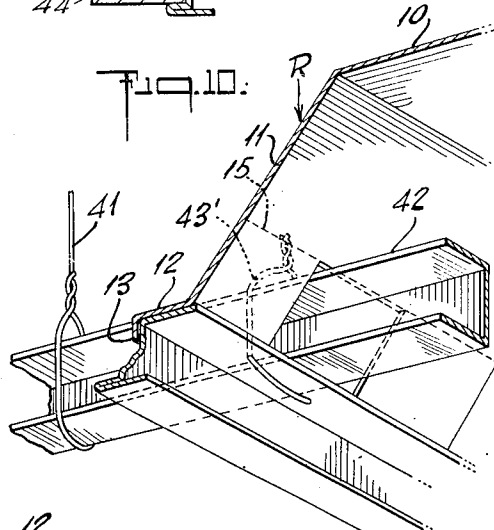
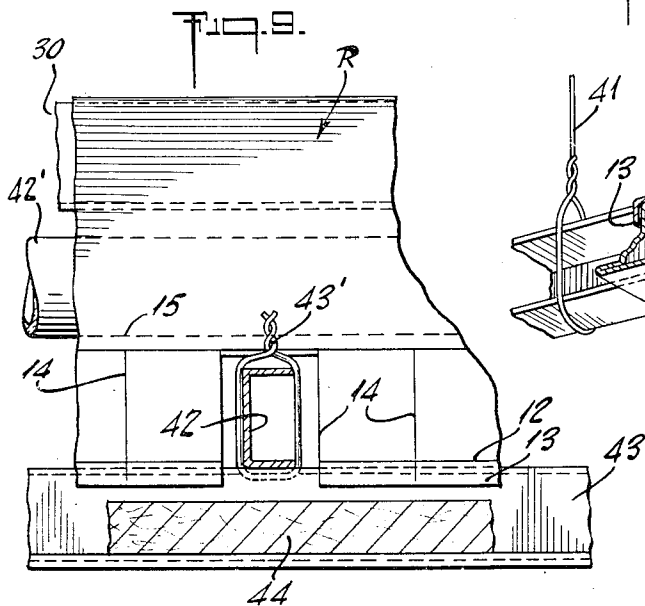
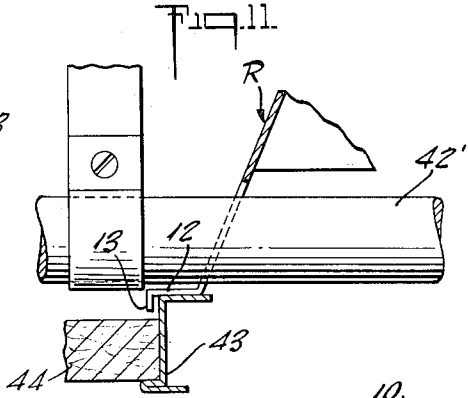
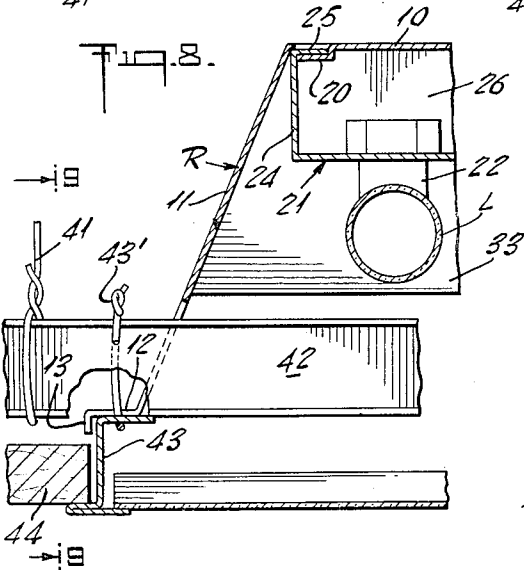
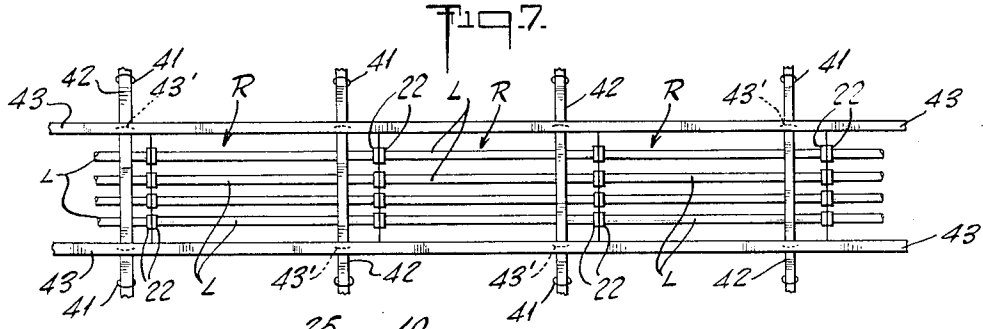
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REFLECTOR FOR DIRECT LIGHTING EQUIPMENT

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2 Sheets-Sheet 2



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1

2,762,911

REFLECTOR FOR DIRECT LIGHTING EQUIPMENT

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Original application June 30, 1954, Serial No. 440,377, now Patent No. 2,713,631, dated July 19, 1955. Divided and this application April 4, 1955, Serial No. 499,026

3 Claims. (Cl. 240-103)

The present invention relates to direct lighting equipment and is more particularly directed toward direct lighting equipment designed to use elongated fluorescent lamps for light sources and for recessed mounting in the ceiling.

Where direct lighting equipment is suspended below a structural ceiling, difficulties frequently arise in the mounting of the fixtures because of interference between suspended pipes, ducts, wireways and the like, as well as the supports for a false ceiling, and the lighting fixture structure, particularly when the fixtures are located where they should be for proper illumination of the work area and with suitable ceiling pattern.

The present invention relates to lighting equipment which, while suitable for general use and installation as recessed lighting equipment, has provisions whereby it can be mounted in the optimum location, notwithstanding the necessity of having pipes, ceiling supporting members and the like, extend across the fixtures between the ceiling line and the lamp level.

To make it possible to accommodate such extraneous parts, the lower side portions of the reflecting trough are formed in such a manner that wherever an obstruction is to be accommodated, a portion of the material of the trough is provided along its lower edge with strips which can easily be broken away from the remainder of the reflector.

A further object of the invention is to provide improved direct lighting fixtures in which the socket carrying members and wireway members are secured to the body of the reflector in an inexpensive and expeditious manner.

Other and further objects will appear as the description proceeds.

This application is a division of my co-pending application Serial No. 440,377, filed June 30, 1954, now Patent No. 2,713,631.

The accompanying drawings show, for purposes of illustrating the present invention, one embodiment in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In the drawings:

Figure 1 is a perspective view showing the assembled reflector with lamp sockets, the lamps being omitted;

Figure 2 is an exploded perspective view showing a fragment of the reflector together with a socket carrier and a fragment of the wiring channel;

Figure 3 is a longitudinal vertical section on the line 3-3 of Figure 2, showing the parts in assembled position;

Figure 4 is a perspective view taken from underneath and diagrammatically illustrating the reflector assembled with the supports for a hung ceiling;

Figure 5 is a diagrammatic view illustrating the support of the reflector and lighting fixture parts from the members which support the hung ceiling;

2

Figure 6 is a view similar to Figure 5, illustrating the reflector supported directly from the superstructure;

Figure 7 is a diagrammatic inverted plan view illustrating the relation of the continuous row of fixtures and the ceiling supporting structure;

Figure 8 is a vertical section taken on the line 8-8 of Figure 3, illustrating the assembly of the socket holder and reflector and also illustrating the ceiling supports and reflector;

Figure 9 is a sectional view taken on the line 9-9 of Figure 8;

Figure 10 is a perspective view illustrating the construction shown in Figures 8 and 9; and

Figure 11 is a fragmentary view similar to a portion of Figure 8 illustrating the accommodation of a pipe or other obstruction extending across the reflector.

In the drawings an elongated sheet metal reflector is indicated generally by the letter R. This reflector has an overall length equal to normal lamp length, for example, 24 inches or 48 inches. As shown in the drawings, the reflector R has a wide, flat top wall 10, downwardly and outwardly flaring side walls 11, 11. Near the lower edge of the side walls the metal is bent outwardly as shown at 12 to form flat, downwardly facing seating areas, and beyond these flat areas are downwardly extending narrow flanges 13. While the metal from which the reflector is made is still in the flat condition, it has been punched through to provide a number of slits or cuts 14 which do not extend all the way to the outer edge of the blank (or lower edge of the reflector side walls). The outer surface of each reflector side wall is preferably weakened by a score line 15 cut into the material at the level of the upper end of the cuts or slits 14.

The reflector profile is uniform and continuous from end to end and the vertical slits or cuts are so narrow as not to permit of an appreciable light loss through leakage of light through the same. The optical characteristics of the reflector are therefore unimpaired by the provision of the cuts or slits referred to, and as there is material along the lower margin of the reflector below the cuts 14, as shown in the drawings, the rigidity of the reflector is not substantially affected by the cuts.

To facilitate the securement of the sockets, ballasts and the installation of wiring, the top of the reflector near its ends and its outermost side edges is provided with prongs 20, 20 which are spaced below the lower face of the top wall of the reflector, as more clearly indicated in Figure 8. Socket carriers 21, 21a support a plurality of sockets 22 and starters 23 (where starters are employed). The socket carriers 21 and 21a have upwardly bent ends 24, 24 which carry inwardly extending flanges 25, 25. These flanges are spaced the right amount to pass between the prongs 20, 20 and the lower surface of the top wall 10 of the reflector.

The socket carriers are normally left open along the edge which is to be toward the end of the reflector and have upwardly extending flanges 26, 26 along the opposite edge. The socket carriers 21, 21a, together with the sockets 22, starters 23 and wiring harness (not shown) can be preassembled on the bench. The ballasts, such as indicated at 27 may be secured to the under face of the reflector. With a four foot reflector these ballasts may be in tandem, as indicated, whereas with a two foot unit with four lamps, the ballasts can be placed side by side.

In installing the wired parts the two socket carriers with associated wiring are placed in the upside down reflector and each is moved from position as indicated by dot-dash lines, Figure 3, toward the end of the reflector so the flanges 25 pass under the prongs 20. The wiring is then secured in place by bolts 31 and nuts 32, shown in Figure 2. This trough covers the ballasts, conceals the

3

wiring and ensures proper spacing of the socket carriers and sockets.

Where the end of the fixture is to be closed, as indicated at the left of Figures 1, 2, 3 and 4, an end or cross plate 33 is secured in place by rivets or screws 34, as indicated. At the right of Figure 1, no such end plate is indicated, for where the fixtures are continuous, such end plates are not necessary.

The lighting fixture unit including the reflector, lamp socket, socket carriers, ballasts, wiring cover member and end plates (where used) may be completed, wired and boxed for shipment at the fixture factory and the fixtures are suitable for use either as open fixtures or as recessed fixtures. The installation of such fixtures to form a continuous row recessed above a false ceiling is illustrated in Figures 4 to 10.

In Figure 5 the structural ceiling is indicated at 40. Suspension devices 41, such as wires, straps and the like, commonly used for the purpose, are employed to support transverse members indicated at 42, and these transverse members in turn support, by means of ties, hooks or the like, indicated at 43', longitudinally extending runners 43. The runners and cross members form a grid below the structural ceiling which is adapted to support the ceiling surfacing material 44 and provide long open spaces for the lighting equipment.

Where the fixtures are to be supported from the runners 43 as indicated in Figures 5 and 8 to 10, inclusive, the installer, with shears or snips can make cuts which continue the cuts 14 in the reflector walls down to the lower edge of the reflector, thereby freeing the requisite strip or strips so that they can be bent outwardly and upwardly to clear the obstruction. The strips may be readily broken off, if desired, because of the score line 15. In this manner holes or openings are provided to accommodate the obstructions such as the transverse members 42 or the pipes 42', Figure 11. These obstructions may occur at various places lengthwise of the run of fixtures, depending upon the particular conditions arising at the site of installation. The reflectors may rest on the runners without being fastened to them, or the reflectors may be fastened to the runners, as desired. The lamps L may be passed up between the cross members and shifted into position.

As shown in Figure 6 the fixtures may be secured to the structural ceiling 40 by pendant hangers 50 and the

4

cross members 42 and longitudinal members 43 supported from the structural ceiling, as before. The arrangement shown in Figure 6 is suitable for use where the lighting fixtures are installed first, and the false ceiling installed later.

Since it is obvious that the invention may be embodied in other forms and constructions within the scope of the claims, I wish it to be understood that the particular form shown is but one of these forms, and, various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. A sheet metal reflector having lengthwise thereof a side wall of uniform profile and continuous lower edge, there being vertically extending cuts in the side walls which divide the side walls into relatively narrow strips whose upper ends are connected to the portions thereof above the cuts and whose lower portions are connected together at the extreme lower edges by narrow uncut portions of the reflector, each such strip, when completely severed at its lower end from the adjacent portions of the reflector by continuing the vertical cuts downwardly across the uncut portion of the reflector, being bendable to form an opening in the reflector wall for the admission of an extraneous part which would otherwise interfere with the mounting of the reflector.

2. A sheet metal reflector as in claim 1, wherein the reflector is in the form of an inverted trough with like parallel side walls whereby when opposite strips are bent upwardly the extraneous part may extend completely across the reflecting trough.

3. A sheet metal reflector as in claim 1 wherein the reflector wall has a scoring extending past the upper ends of the strip forming cuts which weakens the material and facilitates breaking an upwardly bent strip away from the remainder of the reflector.

References Cited in the file of this patent

UNITED STATES PATENTS

1,412,470	Kaufman	Apr. 11, 1922
2,032,622	Le Guillon	Mar. 3, 1936
2,101,289	Victoreen	Dec. 7, 1937
2,261,733	Pahl	Nov. 4, 1941
2,291,494	Lorenz	July 28, 1942
2,398,507	Rolph	Apr. 16, 1946