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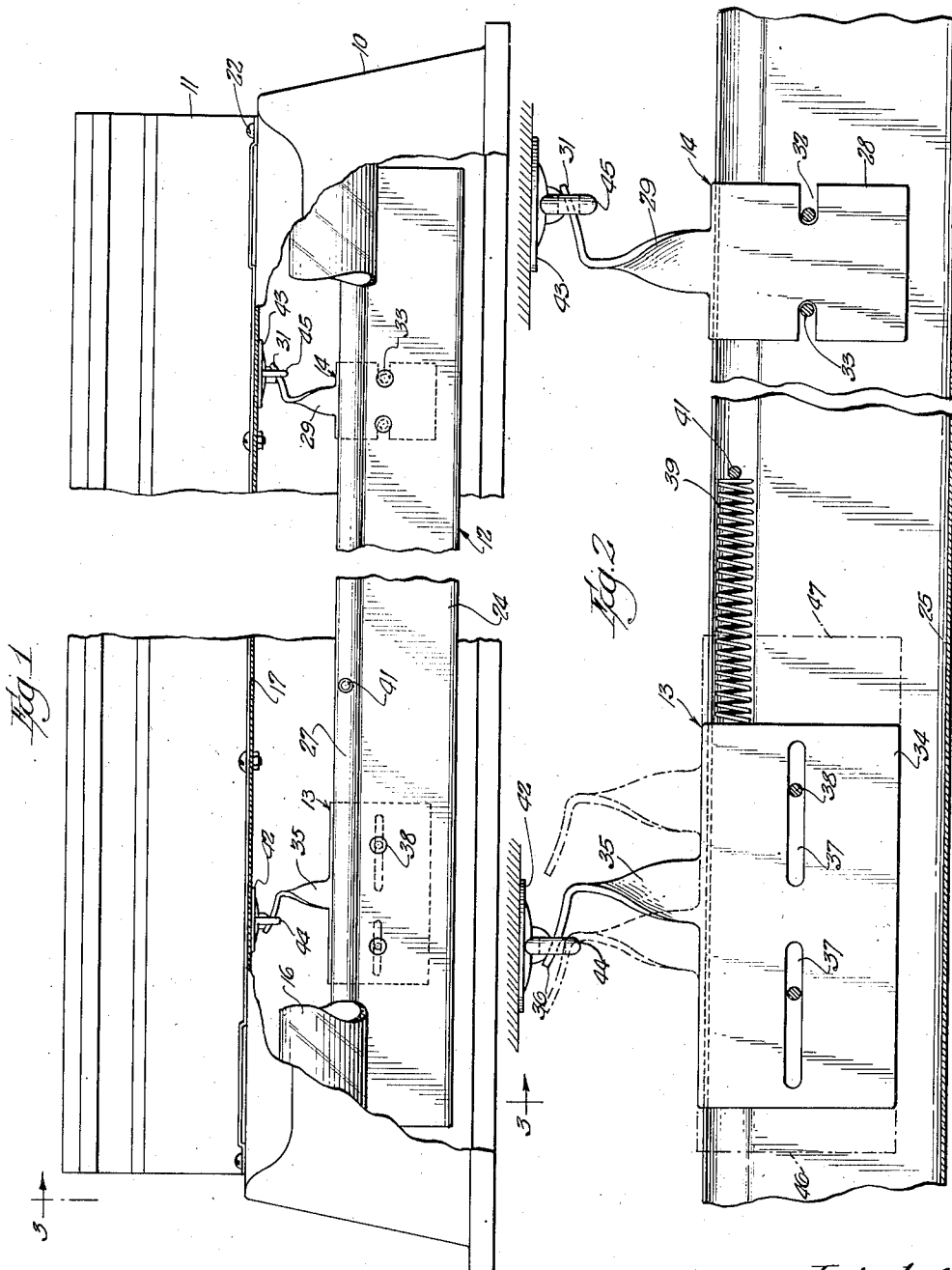
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2,565,435

BAFFLE AND REFLECTOR FOR LIGHTING FIXTURES

Filed May 3, 1946

2 Sheets-Sheet 1



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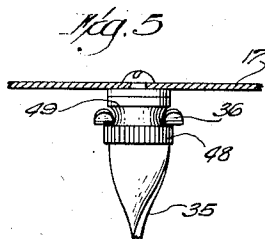
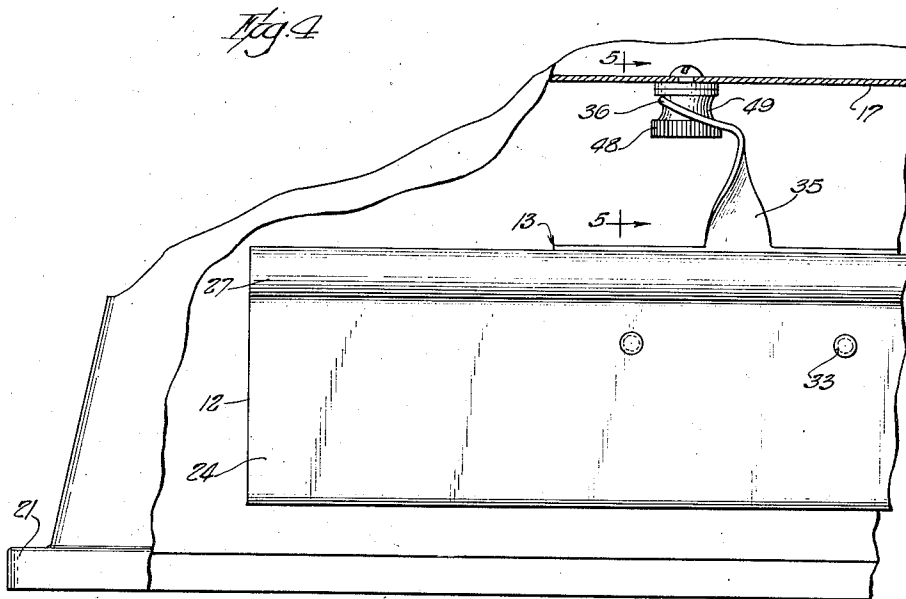
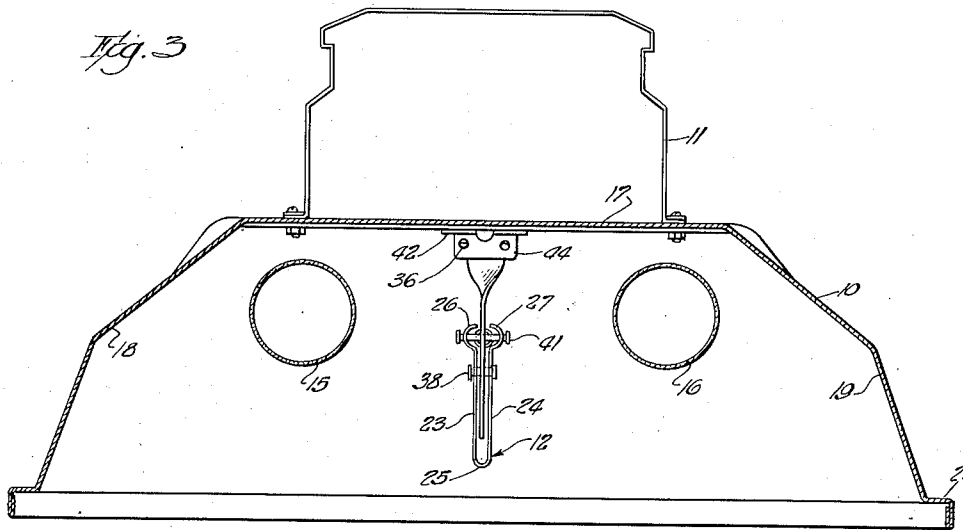
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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BAFFLE AND REFLECTOR FOR LIGHTING
FIXTURES

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5 Claims. (Cl. 240—51.11)

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This invention relates to lighting fixtures, more particularly to fluorescent lighting fixtures for holding a plurality of fluorescent lamps and fittings therefor and it is an object of the invention to provide improved apparatus of this character.

It is a further object of the invention to provide a fluorescent lighting fixture including a baffle and a reflector having an improved arrangement for attaching the baffle to the reflector.

It is a further object of the invention to provide an improved removable baffle for a lighting fixture.

Fluorescent lighting fixtures usually include a reflector adapted to support any desired number of fluorescent lamps and baffles spaced between adjacent ones of the fluorescent lamps. The inside surfaces of the reflector and the exterior surfaces of the baffle are covered with a smooth coating of reflecting material in order that substantially all of the light emitted from the fluorescent lamps is transmitted into the area being lighted. Ordinarily the baffles are so arranged with respect to the fluorescent lamps that a person viewing the fixture, or being present in the area lighted, is substantially prevented from viewing the fluorescent lamps directly, thereby preventing glare on the eyes. That is to say, the fluorescent lighting fixture is so designed as to present the illumination in as diffuse a manner as possible. In one well known fluorescent lighting fixture, the baffle comprises a pair of spaced reflecting surfaces which receive attaching brackets or hangers between them, the hangers being relatively rigidly attached to the reflector for supporting the baffle in proper relationship to the fluorescent lamps.

It is a further object of the invention to provide a fluorescent lighting fixture including an improved removable baffle therefor.

In carrying out the invention in one form, a lighting fixture is provided comprising a reflector adapted to support at least a pair of lamps therein, a removable baffle lying between the lamps, and a pair of hangers, one of which is resiliently urged toward one position for attaching the baffle to the reflector.

For a more complete understanding of the invention, reference should now be had to the accompanying drawings in which:

Figure 1 is a side elevational view partially broken away of a lighting fixture embodying the invention;

Fig. 2 is an enlarged fragmentary view partially in section of Fig. 1;

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Fig. 3 is a sectional view taken substantially along lines 3—3 of Fig. 1;

Fig. 4 is a fragmentary view of another embodiment of the invention; and

Fig. 5 is a sectional view taken substantially along lines 5—5 of Fig. 4.

Referring to the drawings, the invention is shown embodied in a fluorescent lighting fixture including a reflector 10 surmounted by a housing 11 and a baffle 12 suspended from the reflector by hangers 13 and 14, the baffle being spaced between a pair of fluorescent lamps 15 and 16.

Reflector 10 preferably includes a top surface 17, side surfaces 18 and 19 extending therefrom, and a rim 21 surrounding the reflector at the ends of the side surfaces, the rims lending rigidity to the reflector. The length of reflector 10 may be chosen to accommodate fluorescent lamps of the desired wattage, and while shown in the drawings to be that for accommodating a pair of fluorescent lamps, it will be understood that the width may be chosen to accommodate any number of fluorescent lamps. Advantageously, the reflector may be constructed of a single piece of sheet metal bent into the channel-shaped configuration shown, with sides 18 and 19 extending directly from top surface 17 so as to provide a relatively regular contour. The inside surface of the top and the side members are covered with some light reflecting material, such for example as white vitreous enamel, thereby providing a smooth, light reflecting surface which is relatively free from cracks or other imperfections. At each end of reflector 10, suitable fixtures (not shown) may be provided for supporting fluorescent lamps 15 and 16.

The housing 11 surmounting reflector 10 is adapted to contain the various electrical appurtenances for operating the fluorescent lamps, and may also be constructed of sheet metal bent into the configuration shown, having a length substantially equal to that of the reflector and attached thereto by any suitable means, such for example as the bolts 22. The housing 11 provides additional heat dissipating surface in order to transmit to the atmosphere the heat given off by the lamps.

The baffle 12 is of a length substantially equal to that of reflector 10 so as to extend substantially the full extent of the fluorescent lamps, the baffle including a pair of spaced apart side members 23 and 24. The side members may be formed, for example, by bending a piece of sheet metal into the configuration shown, thereby providing a construction in which these members are in-

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tegrally and regularly connected together along one edge by the portion 25. At the side of the baffle, opposite to edge 25, concave portions 26 and 27, respectively, are provided to rigidify the relatively lengthy baffle and thereby prevent warping when the baffle becomes heated. The concave portions are preferably formed integrally with side members 23 and 24 and bent smoothly therefrom so as to provide a regular contour. In order that the baffle reflect light evenly therefrom, its various surfaces may also be coated with a white vitreous enamel.

For suspending baffle 12 between fluorescent lamps 15 and 16, hangers 13 and 14 are received between the reflecting side surfaces 23 and 24 and are attached to the baffle. Hanger 14 may be formed of sheet metal with a relatively rectangular base 28 and a tongue 29 projecting therefrom, the tongue including a pair of spaced prongs or fingers 31 at its outward end. The rectangular base is received between reflecting side members 23 and 24, while tongue 29 extends upwardly therefrom, the base including a pair of cut-out portions 32 through which rivets 33 extend for relatively rigidly attaching the hanger to the baffle. The tongue 29 is twisted, as shown best in Fig. 2, so as to have its upper end directed at right angles to the plane of base 28, the fingers 31 being bent downwardly from tongue 29 to extend generally in the direction of baffle 12 thereby facilitating the attaching of baffle 12 to reflector 10.

At the end of baffle 12, opposite the hanger 14, hanger 13 is arranged to be slidably disposed between reflecting side members 23 and 24. Similar to hanger 14, hanger 13 in its general configuration includes a base 34, a tongue 35 extending from the base substantially midway of its confines, and a pair of prongs or fingers 36 extending from the outward end of the tongue. Base 34, tongue 35, and fingers 36 may conveniently be formed from a blank of sheet metal bent as shown, the base being substantially rectangular and provided with a pair of slots 37 lying substantially parallel to the top and bottom edges of the base and midway therebetween. Rivets 38 are passed through the reflecting side members and through slots 37 for holding hanger 13 between the side members, while permitting the hanger to move slidably relative to rivets 38. This is accomplished by virtue of the rivets being spaced apart approximately a distance equal to the distance between the center lines of slots 37. Tongue 35 projecting upwardly from base 34 is twisted as shown so as to have its upper edge extending at right angles to the plane of base 34, and the fingers 36 are bent downwardly from tongue 35 so as to lie substantially in the longitudinal direction of the baffle to permit relatively easy attachment thereof to reflector 10. Hanger 13 is biased toward a left hand position by the coil spring 39 contacting one edge of base 34 and prevented from moving at its other end by rivet 41 extending through channel portions 26 and 27, the coil spring being confined thereby within the channel members and held in its proper position without additional means.

Projecting downwardly into reflector 10 adjacent each end of top surface 17, and substantially centrally thereof, are the brackets 42 and 43 for cooperating respectively with hangers 13 and 14 to suspend baffle 12 from reflector 10. Bracket 42 may include a base portion attached to top surface 17 by any well known means, such for example as welding, and a ledge or flange 44

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provided with a pair of holes, as may be seen best in Fig. 3 to receive the projecting fingers 36 of hanger 13. Similar to bracket 42, bracket 43 includes a base attached to top surface 17 and a ledge or flange 45 projecting downwardly therefrom and including a pair of holes to receive the projecting fingers 31.

The baffle, including the hangers 13 and 14, may be assembled, after forming the baffle to the configuration shown, by placing hanger 14 in its proper position, followed by placing coil spring 39 within channels 26 and 27, inserting rivet 41, placing hanger 13 in proper position, and inserting rivets 33 and 38. In this position coil spring 39 biases hanger 13 toward its extreme left hand position, as shown by the dot-dash line 46. Thereafter, in assembling the baffle to the reflector, prongs 31 are first inserted in the cooperating openings of ledge 45. Then hanger 13 is pushed to the position shown by the dot-dash line 47, whereupon prongs 36 are aligned with openings in ledge 44 and the hanger 13 is allowed to be pushed toward the left by coil spring 39 until prongs 36 are received within the openings of ledge 44. The baffle is then securely held within the reflector and is relatively free from wobbling or vibration since the two prongs provided on each of the tongues 29 and 35 provide sufficient supporting surface. When it is desired to remove the baffle, it is only necessary to push hanger 13 toward the dot-dash line 47 thereby to remove prongs 36 from the openings of ledge 44, followed by removing prongs 31 from the openings of ledge 45.

In Figs. 4 and 5 a modification of the invention is shown, providing another manner of attaching the baffle to the reflector. Corresponding parts shown in Figs. 4 and 5 and the other figures are designated by the same reference characters. In the modification, instead of brackets 42 and 43, studs 48 project downwardly from top surface 17. Stud 48 may comprise, for example, a bolt and nut in which the nut is provided with a cut-out portion or circular groove 49, the groove being of a diameter so as to be easily receivable between the prongs of the two hangers, for example, prongs 36 of the hanger 13. Thus, to attach baffle 12 to the reflector, the tongues 29 and 35 are manipulated as previously described, but the prongs thereof are placed into the grooves formed in the projecting studs (Fig. 5). Moving tongue 35 backwardly and forwardly, of course, permits attachment as well as removal of the baffle.

While I have shown particular embodiments of my invention, it will be understood, of course, that I do not wish to be limited thereto since many modifications may be made, and I, therefore, contemplate by the appended claims to cover any such modifications as fall within the true spirit and scope of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A lighting fixture comprising a reflector having supporting means for at least a pair of lamps therein, a baffle including a pair of spaced reflecting surfaces integral along one edge lying between said lamp supporting means, channel means extending along the other edges of each of said reflecting surfaces, hangers received between said reflecting surfaces at said other edges, one of said hangers being fixedly attached to said reflecting surfaces, means on said reflector receiving said one hanger for holding one end of said baffle to said reflector, the other of said hangers being slidably attached to said baffle be-

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tween the reflecting surfaces thereof, means on said reflector receiving said other hanger for holding the other end of said baffle to said reflector, and spring means lying in said channel means urging said other hanger into engagement with its receiving means.

2. A lighting fixture comprising a reflector having supporting means for at least a pair of lamps therein, a removable baffle including a pair of spaced reflecting surfaces integral along one edge lying between said lamp supporting means, channel means extending along the other edges of each of said reflecting surfaces, hangers received between said reflecting surfaces at said other edges each of which includes a pair of spaced prongs, one of said hangers being fixedly attached to said baffle at one end thereof, a two opening bracket depending from said reflector receiving the two prongs of said one hanger for holding said one end of said baffle to said reflector, the other of said hangers being slidably attached to said baffle at the other end thereof, another two opening bracket depending from said reflector receiving the two prongs of said other hanger for holding the other end of said baffle to said reflector, and spring means lying in said channel means urging the prongs of said other hanger into engagement with the two openings of the receiving bracket.

3. A lighting fixture comprising a reflector having supporting means for at least a pair of lamps therein, a removable baffle including a pair of spaced reflecting surfaces integral along one edge lying between said lamp supporting means, channel means extending along other edges of each of said reflecting surfaces, hangers received between said reflecting surfaces at said other edges each of which includes a pair of spaced prongs, one of said hangers being fixedly attached to said baffle at one end, a grooved stud projecting from said reflector at one end thereof received between the two prongs of said one hanger for holding said one end of said baffle to said reflector, the other of said hangers being slidably attached to said baffle at the other end thereof, another grooved stud depending from said reflector at its other end received between the two prongs of said other hanger for holding the other end of said baffle to said reflector, and

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spring means lying in said channel means urging said other hanger into engagement with the corresponding stud.

4. A baffle for a lighting fixture comprising a pair of spaced reflecting side members integrally joined along one of their edges, channel members extending along the other edges of said members, one hanger extending between said side members and fixedly attached thereto at one end thereof, a second hanger extending between said side members and slidably attached thereto at the other end thereof, and spring means lying in said channel members for urging said slidable hanger toward its limit of movement.

5. A lighting fixture comprising a reflector having supporting means for at least a pair of lamps therein, a baffle including a pair of spaced reflecting surfaces integral along one edge lying between said lamp supporting means, stiffening means extending along the other edges of each of said reflecting surfaces, hangers received between said reflecting surfaces at said other edges, one of said hangers being fixedly attached to said reflecting surfaces, means on said reflector receiving said one hanger for holding one end of said baffle to said reflector, the other of said hangers being slidably attached to said baffle between the reflecting surfaces thereof, means on said reflector receiving said other hanger for holding the other end of said baffle to said reflector, and spring means urging said other hanger into engagement with its receiving means.

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