Jan. 20, 1948. G. B. KURTZON 2,434,781

LAMP FIXTURE

Filed March 15, 1946 2 Sheets-Sheet 1

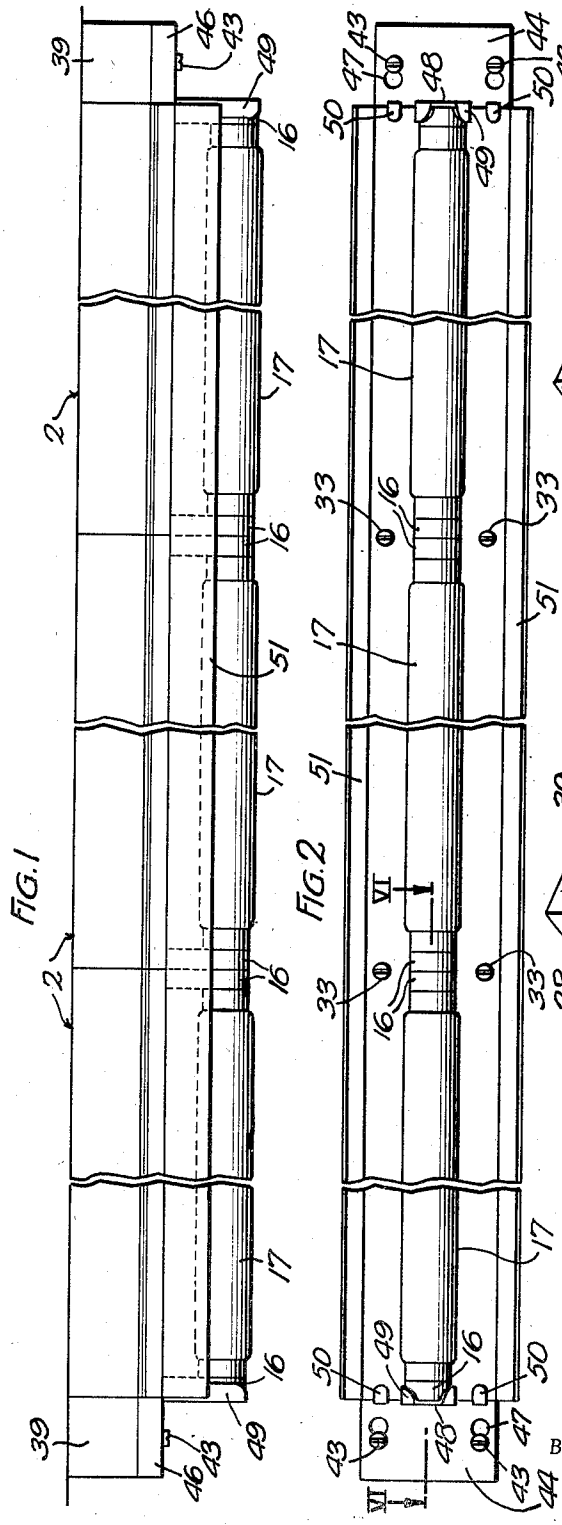


FIG. 1

FIG. 2

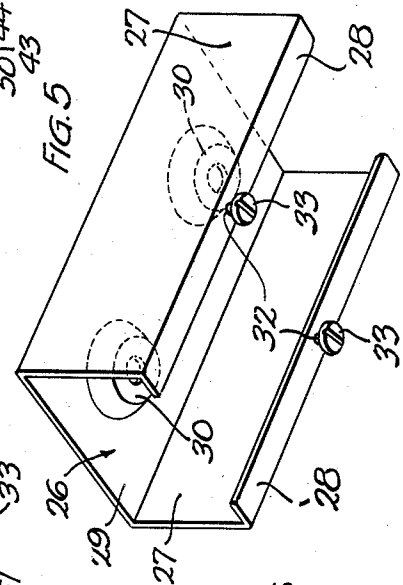


FIG. 5

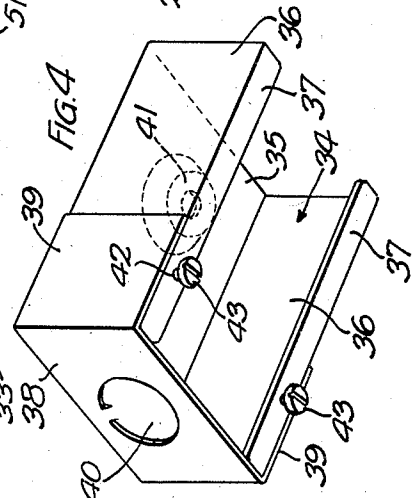


FIG. 4

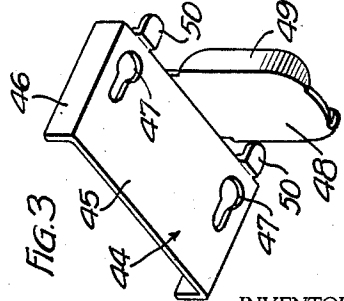


FIG. 3

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LAMP FIXTURE

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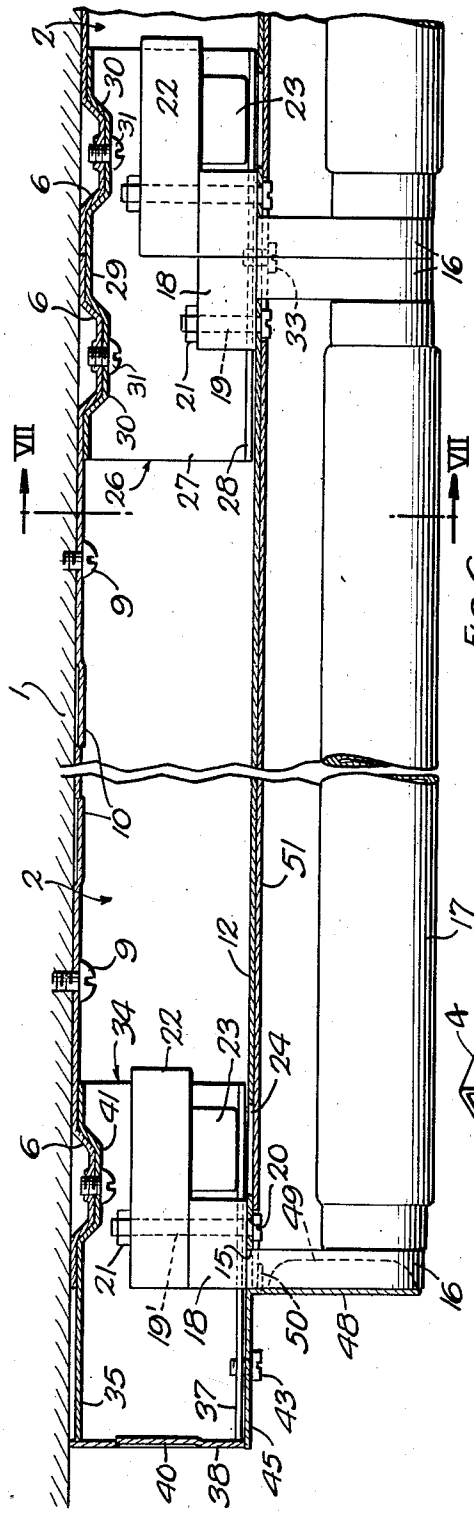


FIG. 6

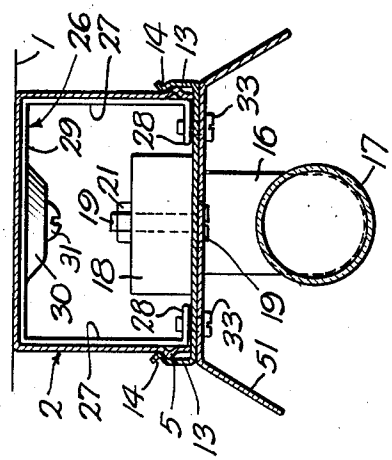


FIG. 7

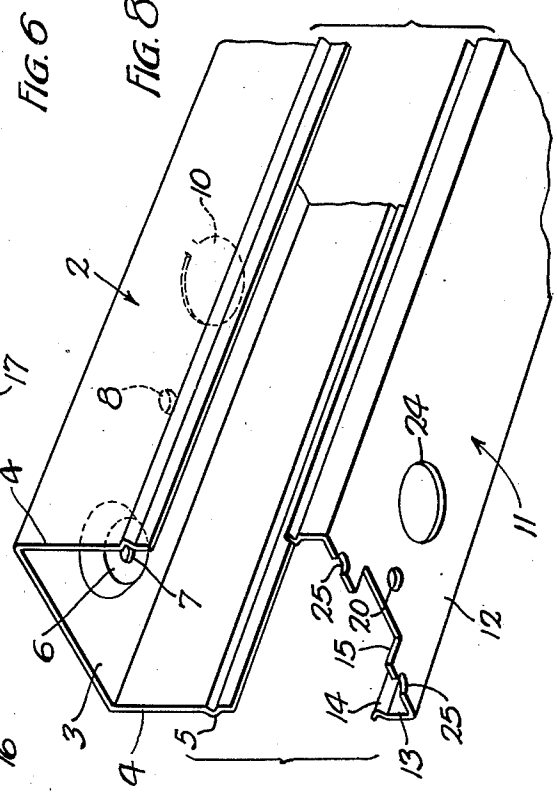


FIG. 8

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Patented Jan. 20, 1948

2,434,781

UNITED STATES PATENT OFFICE

2,434,781

LAMP FIXTURE

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Application March 15, 1946, Serial No. 654,579

5 Claims. (Cl. 240—51.11)

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This invention relates to a lamp fixture and particularly to means for facilitating the installation of a continuous line of elongated lamps such as fluorescent lamps or tubes.

In the installation of a continuous line of elongated lamps, the ultimate aim of the designer is to provide a continuous line of light. This is not possible, however, with the present lamps for each of them requires space at each end for connections, and the resulting gaps between adjacent tubes in such installations cause dark spots which spoil the beauty and impair the efficiency of the lighting installation.

The fixture constituting the present invention permits adjacent tubes to be joined in a continuous line with a minimum of space required between tubes so that the installation may be of any desired length and the gaps between adjacent tubes will be practically negligible. The fixture also includes simple and efficient means whereby it may be joined in accurate alignment with a coupling or with an end member to provide a harmonious balanced appearance at each end of the installation. Means are also provided on the fixture to facilitate the attachment of a reflector of suitable length to the fixture.

The present invention has many other advantages which will be made apparent from the following description, taken in conjunction with the accompanying drawings, which constitute a part of the specification.

In the drawings:

Figure 1 is a side elevation of an installation of fluorescent tubes in a fixture embodying the present invention;

Fig. 2 is a bottom elevation of the installation shown in Fig. 1;

Fig. 3 is a detail perspective view of the splice box cover;

Fig. 4 is a detail perspective view of the splice box;

Fig. 5 is a detail perspective view of the coupling member;

Fig. 6 is a longitudinal sectional view taken substantially along the line VI—VI of Fig. 2 showing the tube and its sockets in elevation;

Fig. 7 is a cross sectional view taken along the line VII—VII of Fig. 6; and

Fig. 8 is a fragmentary perspective view of the channel and cover in disassembled relationship.

In the drawings, the reference numeral 1 indicates a supporting surface such as a ceiling or wall on which the lamp fixtures of the present invention are mounted. Each fixture includes a channel member 2, comprising a base section 3

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and a pair of side walls 4. Each side wall has a longitudinally extending bead 5 adjacent its outer end. The base section 3 is provided with a boss 6 adjacent each end. Each boss is provided with an aperture 7 which, preferably, is threaded. The base section 3 is also provided with a plurality of apertures 8 through which screws or bolts 9 may be passed to secure the channel member to the supporting surface 1. A plurality of heavily scored knock-out panels 10 are formed in the base section to provide an aperture for the wires if the design of the installation requires that the wires pass through the base section of any channel member.

A cover member 11, of the same length as the channel member, is provided for each channel member. The cover member comprises a bottom wall 12 and a pair of lateral, longitudinal flanges 13. Each flange is provided with an internally beaded edge 14 adapted to be snapped over the bead 5 to secure the cover 11 resiliently to the channel 2. This resilient attachment of the cover to the channel affords a substantial saving of time and labor in the original installation and in any subsequent repair work because operative parts of the fixture, including the sockets, are mounted on the cover member and it is not necessary to remove the entire installation to make repairs.

The cover member 11 is provided at each end with a rectangular recess 15 adapted to fit the cross section of a socket 16 which carries the conventional electrical contacts (not shown). The sockets may be made of any suitable material, preferably of plastic. The sockets of a single fixture or the outermost sockets in a line of fixtures in accordance with the present invention are protected by suitable armor in a manner hereinafter described. Each end of a fluorescent tube 17 or similar elongated lamp fits into a socket, as is well understood.

Each socket has a base portion 18 fitting under the cover adjacent the rectangular recess 15 and is secured to the cover by a bolt 19 which passes through the base portion and an aperture 20 in the cover member. A nut 21 is secured on the inner end of the bolt 19. A starter base 22 is secured to the socket 16 at one end of the cover member. At this end of the cover the bolt 19' is longer than the bolt 19 so that it can project through the starter base as well as the base portion 18 of the socket. A starter 23 is inserted into the starter base by passing it through an aperture 24 provided in the cover 11 for that purpose. A transformer or ballast (not shown) may

also be secured to and inside the cover member. A pair of semi-circular recesses 25 is provided in each end of the cover member on opposite sides of the recess 15 for a purpose to be described.

In order to build the installation of lamp fixtures up to any desired length, coupling members 26 are provided to facilitate longitudinal alignment of a pair of channel members 2 and to join them in end to end relationship so that adjacent sockets on aligned cover members are back to back. Each coupling member has a cross sectional configuration similar to the cross sectional configuration of the channel members except that its side walls 27 are provided at their outer edges with inturned flanges 28. The coupling member is slightly smaller than the channel members so that it fits snugly inside the channel.

The base section 29 of the coupling has an apertured boss 30 adjacent each end adapted to fit over a boss 6 in a channel member to insure proper alignment and positioning of the coupling member relative to the channel members which it joins together. When two channel members are positioned in end to end relationship and a coupling member has its bosses positioned over the adjacent bosses of abutting channel members, a screw 31 is threaded through the apertured, mated bosses to hold the channel members and coupling member rigidly in position. It is obvious that any number of channels and couplings may be used to build the composite fixture to the desired length.

The flanges 28 are each provided with a medially positioned aperture 32, threaded to receive screws 33. The semi-circular apertures 25 on adjacent cover members register with the apertures 32 so that when the screws 33 are screwed into the apertures 32 the covers are held against the channel members by the screws as well as by the resilient engagement of the beaded edges 14 and 5. The screws 33 have another function in connection with the reflector which will be hereinafter described.

A splice box 34 is secured to the outer end of each of the two outermost channel members of the series of aligned fixtures. The splice box comprises a base section 35, side walls 36 having longitudinally extending inturned flanges 37 on their outer edges, and an end wall 38 having laterally projecting walls 39 welded to the side walls 36. The end wall 39 has a scored knock out panel 40 similar to the panels 16 so that the wires for the fixture may pass through either end or the base section of the aligned fixtures. Each splice box is provided on its base section with an apertured boss 41, similar to bosses 30, to fit over the outer bosses 6 in the channels at each end of the aligned fixtures.

The flanges 37 are each provided with a threaded aperture 42 into which screws 43 are threaded. An end cover 44 has a bottom wall 45 and a pair of longitudinal flanges 46 adapted to fit snugly over the side walls 39 of the splice box. The bottom wall 45 is provided with a pair of keyhole-shaped apertures 47 adapted to have the large portion positioned over the screws 43 and then moved laterally to have the narrow portion engage the shanks of the screws 43 to hold the end cover on the splice box. Each of the end covers has a projecting portion 48 which is normal to wall 45. Projecting portion 48 is provided with peripheral flanges 49 and is adapted to be positioned adjacent the end sockets 16 to encompass the same thereby armoring them and protecting them against bending or breaking. The end covers are also provided with a pair of longitudinally extending ears 50 which project over the ends of the covers 11 at each end of the line of fixtures.

A reflector 51 of any desirable shape has its ends positioned under the ears 50 and is held in place thereby. The reflector is one continuous member substantially equal in length to the total overall length of all the channel members in the aligned fixtures. It is provided with cut outs (not shown) to fit around the sockets 16 and the bolts 19, 19'. The reflector is also provided with a plurality of apertures (not shown) in registration with the semi-circular recesses 25 so that the screws 33 may pass therethrough to hold the reflector against sagging in its mid-section. If a reflector is not required, the fixture may be used without one.

From the foregoing it will be seen that I have devised simple, easily assembled lamp fixtures that permit installation of any desired number of elongated lamps such as fluorescent tubes in longitudinal alignment with the gaps between adjacent lamps equal in length to the thickness of the two sockets at the ends of adjacent cover members.

Although I have described a preferred embodiment of my invention in considerable detail, it will be understood that the description thereof is illustrative, rather than restrictive, as many details may be modified or changed without departing from the spirit or scope of my invention. Accordingly, I do not desire to be restricted to the exact structure described, except as limited by the appended claims.

I claim:

1. A lamp fixture comprising a channel member, a cover member, cooperating flanges on said channel and cover engageable to secure said members together, a socket secured to each end of said cover member, a pair of splice boxes adapted to be secured to opposite ends of said channel, and a cover for each of said splice boxes, said splice box covers each having a projecting portion positioned adjacent one of said sockets to protect said sockets against bending or breaking.

2. A lamp fixture comprising a channel member, a cover member resiliently secured to said channel member, a pair of splice boxes secured at opposite ends of said channel member, a cover for each of said splice boxes and means on said splice box covers for securing a reflector to said fixture.

3. A composite fixture for mounting a series of elongated lamps in longitudinal alignment comprising a series of individual channel members, each of approximately the same length as one of the lamps, an apertured boss adjacent each end of each channel member, a coupling member adapted to join two adjacent channel members, said coupling member having two apertured bosses to cooperate with the bosses on adjacent channel members to facilitate alignment, two splice boxes, each having an apertured boss to facilitate alignment with and attachment to the outer ends of the channel members, a cover on each of said splice boxes, a reflector substantially equal in length to the total overall length of the longitudinally aligned channel members, and means on said splice box covers for securing said reflector to said composite fixture.

4. A composite fixture for mounting a series of fluorescent tubes in closely spaced longitudinal alignment comprising a series of individual channel members arranged end to end in sub-

stantially abutting relationship, a series of coupling members joining adjacent channel members and facilitating alignment thereof, an individual cover resilient'y secured to each of said channel members, a pair of electrical sockets carried by each of said cover members, a reflector positioned adjacent said cover members, said reflector being substantially equal in length to the total overall length of said fixture, and a splice box secured to each of the outer ends of the outermost channel members, a cover for each of said splice boxes, each of said splice box covers having a portion projecting over one end of said reflector to secure said reflector against said first mentioned cover members.

5. A composite fixture for mounting a series of elongated lamps in longitudinal alignment comprising a series of individual channel members, each of approximately the same length as one of the lamps, an apertured boss adjacent each end of each channel member, a coupling member adapted to join two adjacent channel members, said coupling member having two apertured

bosses to cooperate with the bosses on adjacent channel members to facilitate alignment, two splice boxes, each having an apertured boss to facilitate alignment with and attachment to the outer ends of the channel members, a cover on each of said splice boxes, said splice box covers each having a projecting portion positioned adjacent one of said sockets to protect said sockets against bending or breaking.

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