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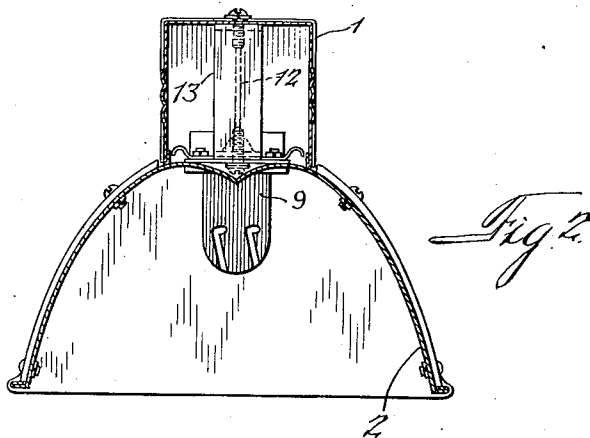
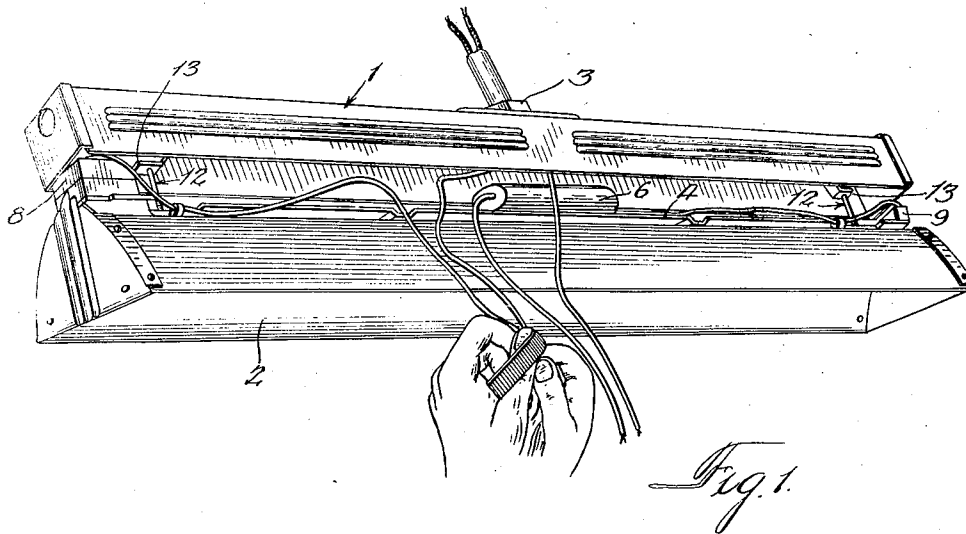
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2,287,565

ELECTRIC LIGHTING FIXTURE

Filed Jan. 30, 1941

4 Sheets-Sheet 1



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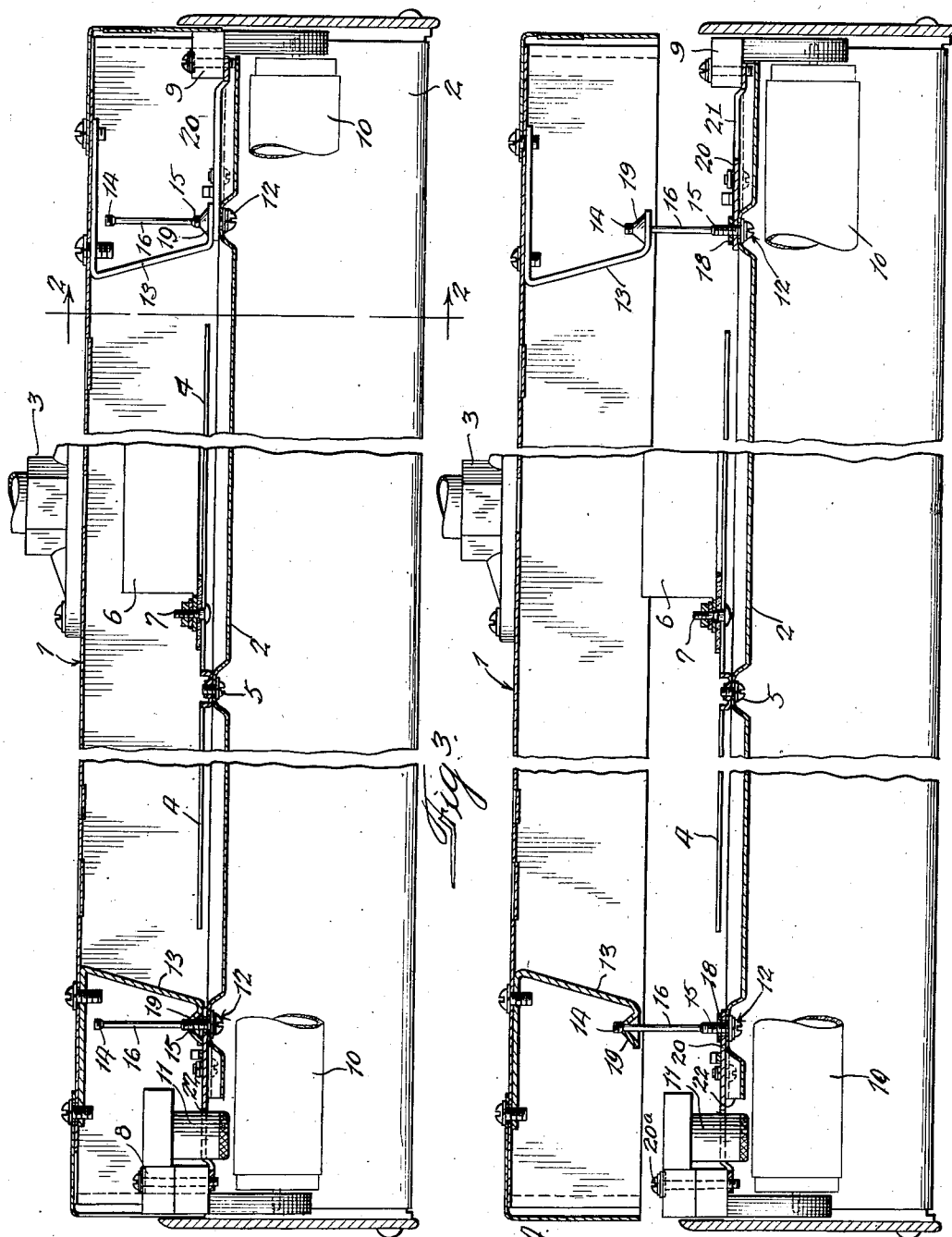
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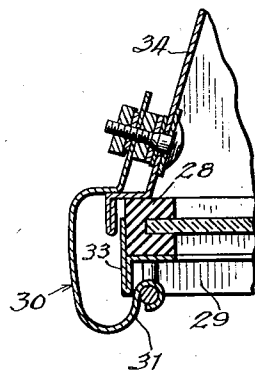
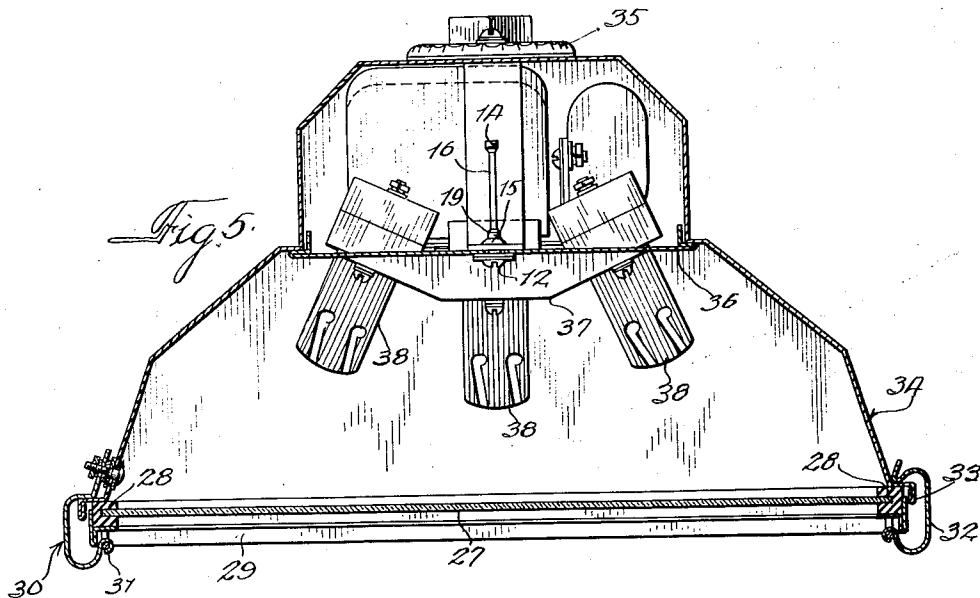


Fig. 6.

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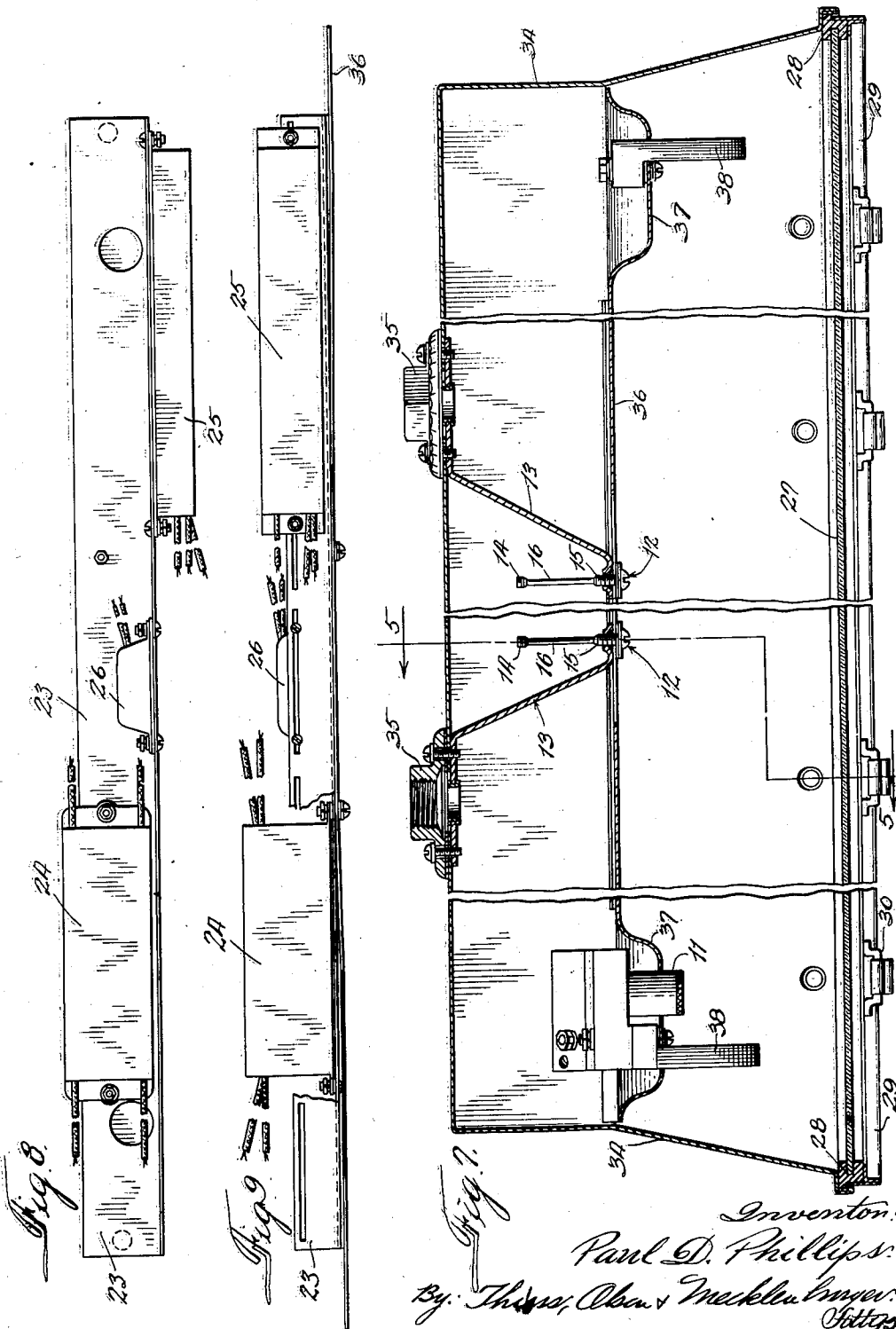
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ELECTRIC LIGHTING FIXTURE

Filed Jan. 30, 1941

4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

2,287,565

ELECTRIC LIGHTING FIXTURE

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Application January 30, 1941, Serial No. 376,645

2 Claims. (Cl. 240—78)

This invention relates to electric lighting fixtures and more particularly to a lighting fixture for use in conjunction with fluorescent or luminescent electric lamps.

In fixtures such as those for fluorescent lamps, where apparatus in addition to the lamp holders is required for adaptation of a particular supply line source to the operation of the lamp, and a series of devices must be enclosed or housed separately from the reflector and lamp and a number of wires for interconnection are involved, it has been found very practical and extremely convenient to the installer, to the inspector, and to the maintenance engineer in mounting, checking and rewiring if means are provided whereby the reflector and lamp-holding assembly or element can be lowered and loosely suspended a short distance below the housing element.

These special auxiliaries are well known in the art and will not be described in detail, though it will be noted that they must be wired together and to the lamp sockets, all of which is preferably done before the fixture is raised into operating position and finally connected to the power supply wires. This wiring must be altered whenever it is required that one of these auxiliaries be replaced or repaired and, unless the fixture is so arranged that a portion of the fixture may readily be removed so that such alterations may be made upon a work bench, it is necessary to do it with the entire fixture in place, which is awkward and difficult.

It is an object of the present invention to provide a sectional lighting fixture construction wherein the special auxiliaries, their wiring and the like may normally be enclosed but wherein a portion of the fixture may readily be removed to bring such auxiliaries and wiring into an exposed position for inspection or repair purposes.

It is also an object of this invention to provide a sectional lighting fixture in which the sections may readily be separated so that one section is lowered and remains loosely suspended from the other for inspection or minor repair purposes and which, by simple movement of the same operating means, may be entirely removed for more extensive servicing. An additional object of my invention is to provide a fluorescent lighting reflector bearing a plurality of lamps and which may readily be removed or replaced as a unit together with the special auxiliaries incident to the use of such lamps.

Further objects and advantages of the invention will be apparent from the description and appended claims.

In the drawings, Figure 1 is a perspective view showing one embodiment of the invention;

Fig. 2 is a transverse vertical section through one embodiment of the device as assembled, and taken on a line substantially corresponding to line 2—2 of Fig. 3;

Fig. 3 is a longitudinal side elevation partially in section, showing the parts secured together in completely assembled relationship;

Fig. 4 is a longitudinal side elevation showing the embodiment of Fig. 3 in a partially assembled or suspended position;

Fig. 5 is a transverse vertical section through another embodiment of my invention, in which multiple lamps are accommodated. This view is taken on a line substantially corresponding to line 5—5 of Fig. 7;

Fig. 6 is an enlarged detail view of a portion of Fig. 5;

Fig. 7 is a longitudinal side elevation, partially in section, of the construction shown in Fig. 5;

Fig. 8 is a top plan view of the auxiliary supporting member employed in the multi-lamp embodiment illustrated in Figs. 5 to 7; and

Fig. 9 is a side elevational view having portions broken away, of the structure illustrated in Fig. 8.

Referring first to the embodiment illustrated in Figs. 1 to 4, inclusive, the construction shown comprises a hood or wiring channel 1 of elongated, channeled section and a trough-like reflector member 2 adapted to be secured to said cover member by special fastening means of particular construction which will later be discussed in detail. This hood is provided with a supporting conduit fixture 3 through which the line wires may pass and by which the hood is supported when in place.

The reflector member 2 may be provided with a shelf or rack 4 extending along the upper side thereof, and secured in place by screws 5. This shelf 4 provides a suitable support to which the usual special auxiliaries, such as the ballast, starter, capacitor, wiring, and the like, may be attached as desired. Thus a ballast 6 may be secured thereto by means of screws 7. A suitable capacitor may also be mounted on the supporting rack, if desired, and at each end of the lighting fixture suitable lamp supporting sockets 8 and 9 may be provided and connected by suitable wiring to the necessary accessories.

The lamps 10 may be of the fluorescent type, tubular in shape, having the usual fluorescent material lining the inside of the bulb and which is activated by the current flow through the gas-filled bulb. The starter may comprise a remov-

able unit 11 provided with a bayonet connection in one of the lamp socket structures.

The respective parts may be wired together as at a bench as required in the particular installation, before the fixture is installed in place.

The reflector is attached to the hood or cover member by special bolts 12, each of which engages a suitably threaded bracket 13 secured to the inside of the hood 1. When installing lighting fixtures of this character, it is desirable, in order to facilitate final assembly, to provide means whereby the reflector portion, with its appendant auxiliary devices, may be suspended immediately adjacent the hood so that the final connections may then be made between the line wires and the auxiliary circuit. This is accomplished in the present invention by making the screws 12 of particular shape, as indicated in the drawings, wherein upper and lower threaded portions 14 and 15 respectively are separated or interrupted by a central unthreaded shank 16 of reduced diameter which is preferably less than the root diameter of the threaded portions.

With the hood or wiring channel mounted at the desired location by means of the supply conduit and conduit-engaging nut 3, and with the line supply leads extending down inside of the housing, the reflector element may then be loosely attached thereto by inserting the threaded portions 14 of the screws 12 into the threaded openings in the brackets 13 not farther than the limit of the upper threaded section 14.

This indicates a stopping point with enough threads through the bracket to support the reflector assembly and still leave it suspended a short distance below the wiring channel. This is the position shown in Figs. 1 and 4. With the reflector element suspended as above described, there is ample room between the mounted housing or hood and the depending reflector element to pull the ends of the extended supply leads and the prepared leads from the unconnected parts out into the open to complete the splice connection to the supply source. It will be noted that with this arrangement both hands of the operator are left free to make the final wiring connections after which the wires may be tucked back into the channel and the reflector raised and the lower threaded portions 15 of the screws 12 raised to engage the channel bracket and the entire assembly tightened into place.

It will be noted that by interrupting the thread on the screw so that only a small threaded portion is left at each end of the screw, the final securing of the reflector to the hood is facilitated by permitting the screw to be pushed up rapidly the length of the unthreaded portion. The fastening screws may be retained in place in the reflector by means of a washer 18 which may be made of resilient material and the central opening of which is just the right size to permit it to be threaded in place and keep the fastener from becoming lost.

With the reflector portion suspended a short distance below the channel housing for inspection or work on the apparatus inside of the housing, it is only necessary, should complete removal of the reflector be desired, to back off the screw until the upper threaded portion passes completely through the threaded part of the bracket 13 and permits complete separation of the unit. The unit may then be taken to any convenient place for completion of the interwiring connections between lamp holders, ballasts, etc.

By forming the lower end of the bracket 13

with a conical indentation 19 surrounding the threaded aperture in said bracket, the initial threading of the screw into the bracket is facilitated. It will be noted that the formation and spacing of the shelf 4, so that it is mounted upon, yet spaced from the reflector 2, is a material aid in rapidly and conveniently mounting the special auxiliaries required for fluorescent lighting fixtures. In this embodiment the lamp sockets 8 and 9 may be secured in place by means of plates 20 which are mounted at each end of the reflector and may be secured to the reflector by screws 20a. These plates may each be provided with openings 21 so that they may be used interchangeably to accommodate readily removable starter switches. Only one of these switches need be employed for each lamp and therefore the reflector 2 need be cut away as indicated at 22 at only one end. With this arrangement the sockets and lamp are removable with the reflector assembly and need not be disturbed during the installation operations.

The embodiment illustrated in Figs. 5 to 9, inclusive, discloses a modified form of the present invention whereby a plurality of fluorescent lamps may be secured together in a single reflector and the auxiliary parts thereof housed in a suitable hood. This embodiment also shows a sealed reflector cover which may be secured in place by a hinge at one side thereof, and clamping means at the other side, so that immediate access to the lamps for replacement or for removal of the screws to gain access to the interior of the auxiliary housing hood may readily be had without the use of tools or complicated methods of disassembly. In this embodiment, as in the previously described embodiment, the necessary auxiliary circuits may be completed when the lamp-bearing portion of the fixture has been removed and is conveniently accessible on a work bench or the like. The elongated screws 12 having interrupted threads, as hereinbefore described, are also used in this embodiment and the installation of the lamp-bearing portion of the fixture may be accomplished by first suspending that portion beneath the fixture and completing the power supply connections before the lamp-bearing portion is finally secured in place. As shown in the drawings, the auxiliary members may be secured to a platform 23 of angle iron construction, as shown in Figs. 8 and 9, and parts, such as separate ballasts 24 and 25, the capacitor 26, and the like, for separate fluorescent lamp circuits may be mounted thereon.

In this embodiment the reflector opening is shown closed by a covering assembly comprising a glass panel 27 having a peripheral gasket 28 nested in a door frame 29 which is secured in place by means of hinges 30, shown in detail in Fig. 6, and pivoted at 31 to support the cover assembly as it swings to and from sealing position. When the cover is closed, it may be retained in place by latch members 32 which may be snapped over the peripherally extending bead 33 of the combined reflector and hood 34.

It will be noted that in this construction the hood and a portion of the reflector comprise a single unit which has a pair of conduit engaging fixtures 35 by means of which it may be secured in place. The lamp-bearing portion of the fixture includes a light reflecting plate 36 having end bosses 37 formed to accommodate the light supporting sockets 38 and bearing the auxiliary supporting shelf 23.

It is intended, of course, that the invention

should not be limited to the specific embodiment or embodiments disclosed herein, since modifications may be made, and it is contemplated, therefore, by the appended claims to cover any such modifications as fall within the true spirit and scope of this invention.

Having thus described this invention, what is claimed and desired to be secured by Letters Patent is:

1. A lighting fixture for use with an elongated fluorescent lamp comprising an elongated hood of channel section, a mounting member extending longitudinally of the hood and covered thereby, lamp holders mounted on said mounting member for supporting a lamp underneath said member, circuit-controlling apparatus electrically connected with said lamp holders mounted on said mounting member, and means for suspending said mounting member from said hood comprising a plurality of spaced internally threaded members carried by said hood, and a plurality of spaced vertically-extending screws, each screw having a swivel connection with respect to said mounting member, and two spaced threaded portions connected by a reduced shank, said two threaded portions being alternatively engageable with an internally threaded member for supporting said mounting member in two different positions with respect to said hood, said internally threaded members being located below the top of the hood a distance at least equal to the length of said reduced shank, said mounting member being clamped to the hood when the lower threaded portions of the screws engage the respective internally threaded members and the length of the reduced shank of each screw being at least equal to the distance which the mounting member must be dropped to enable wiring and inspection of the mounting member and the

parts carried when the upper threaded portions of the screws engage their respective internally threaded members.

2. A lighting fixture for use with an elongated fluorescent lamp comprising an elongated hood of channel section, a mounting member having a reflecting surface extending longitudinally of the hood, lamp sockets mounted on said mounting member for supporting a lamp adjacent the reflecting surface thereof, circuit-controlling apparatus mounted on said mounting member and electrically connected with said sockets, and means for suspending said mounting member from said hood comprising a plurality of spaced internally threaded members carried by said hood and a plurality of spaced vertically-extending screws, each screw having a swivel connection with respect to said mounting member, and two spaced threaded portions connected by a reduced shank, said spaced threaded portions being selectively engageable with an internally threaded member for supporting said mounting member in either of two different positions with respect to said hood, said internally threaded members being located below the top of the hood a distance at least equal to the length of said reduced shank, said mounting member being clamped to the hood when the lower threaded portions of the screws engage the respective internally threaded members and the length of the reduced shank of each screw being at least equal to the distance which the mounting member must be dropped to enable wiring and inspection of the mounting member and the parts carried when the upper threaded portions of the screws engage their respective internally threaded members.

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