

Aug. 10, 1965

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3,200,244

HOSPITAL LUMINAIRE

Filed Feb. 19, 1963

5 Sheets-Sheet 1

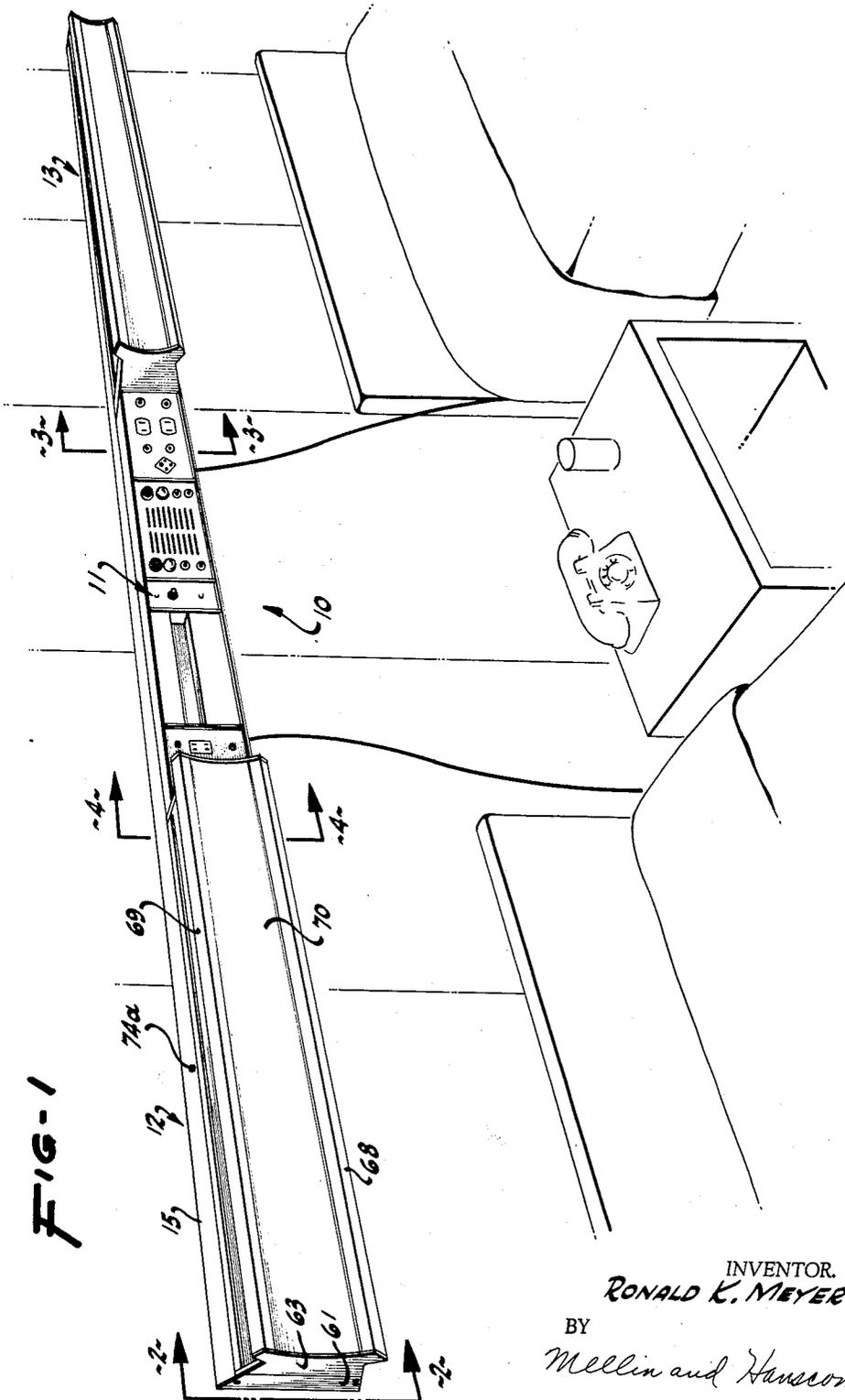


FIG-1

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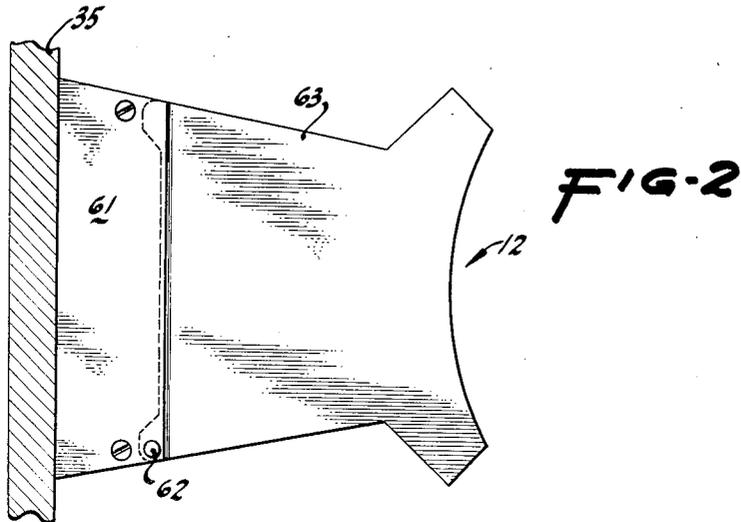


FIG-2

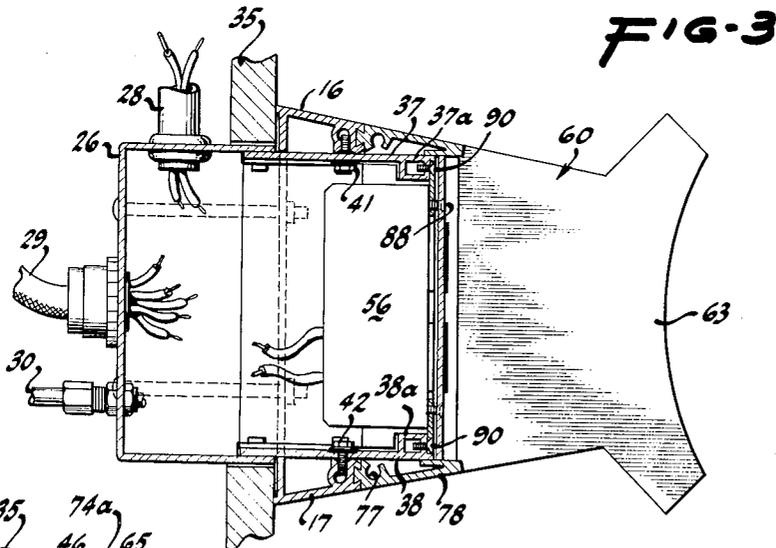


FIG-3

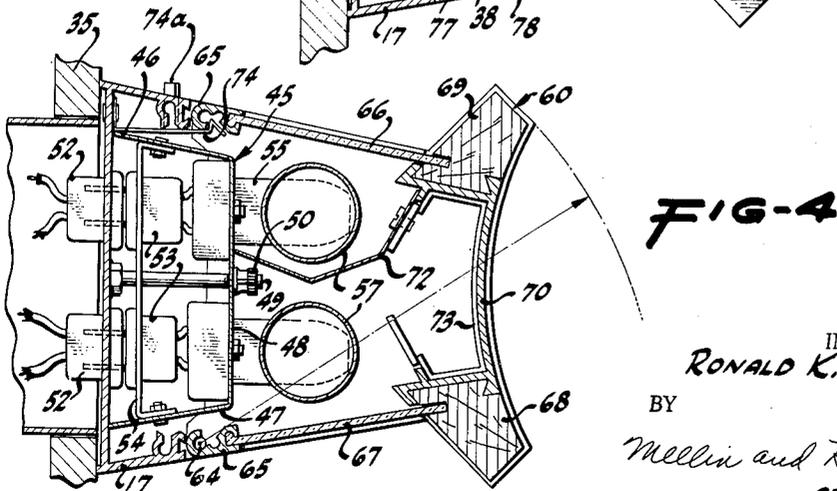


FIG-4

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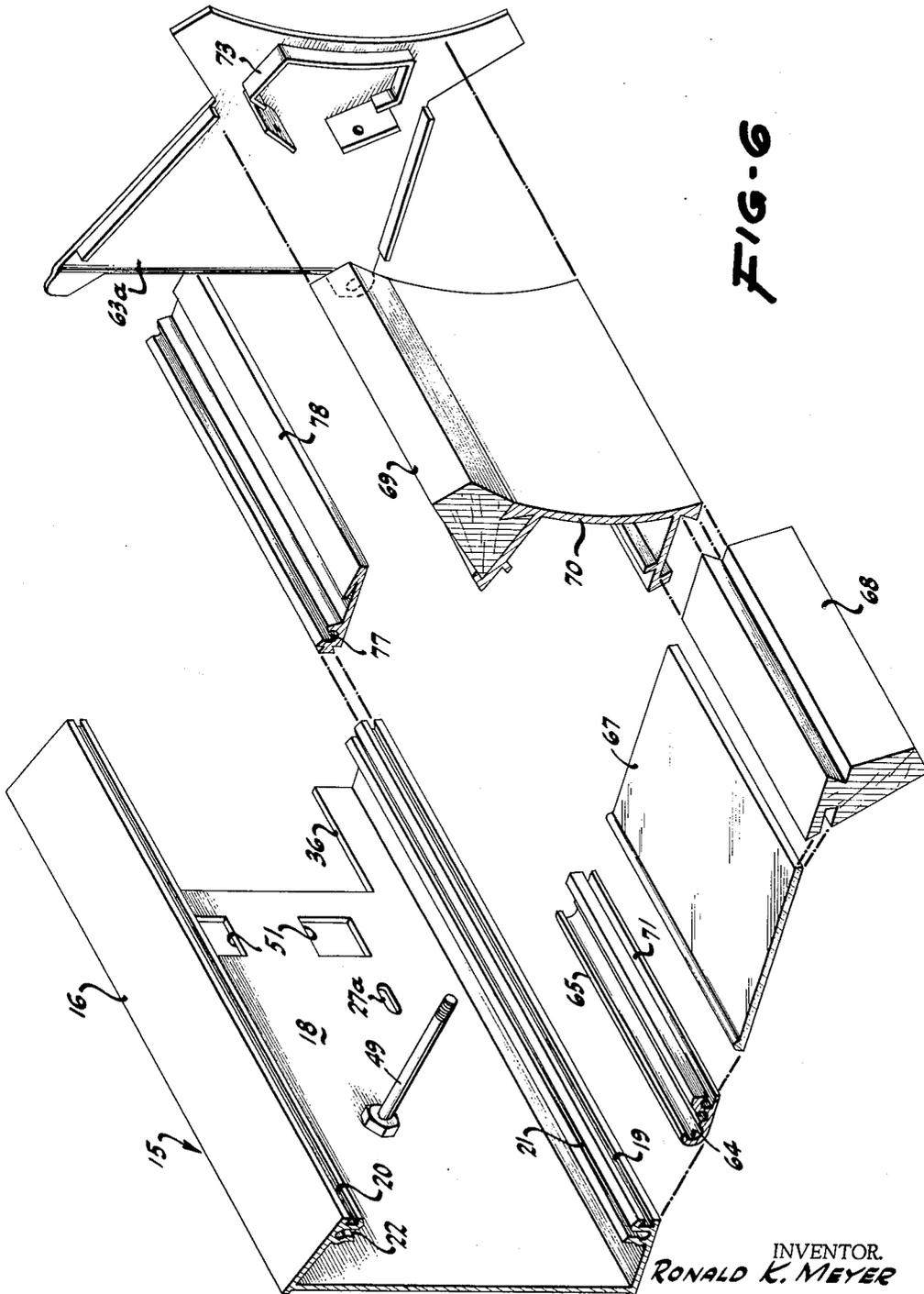


FIG. 6

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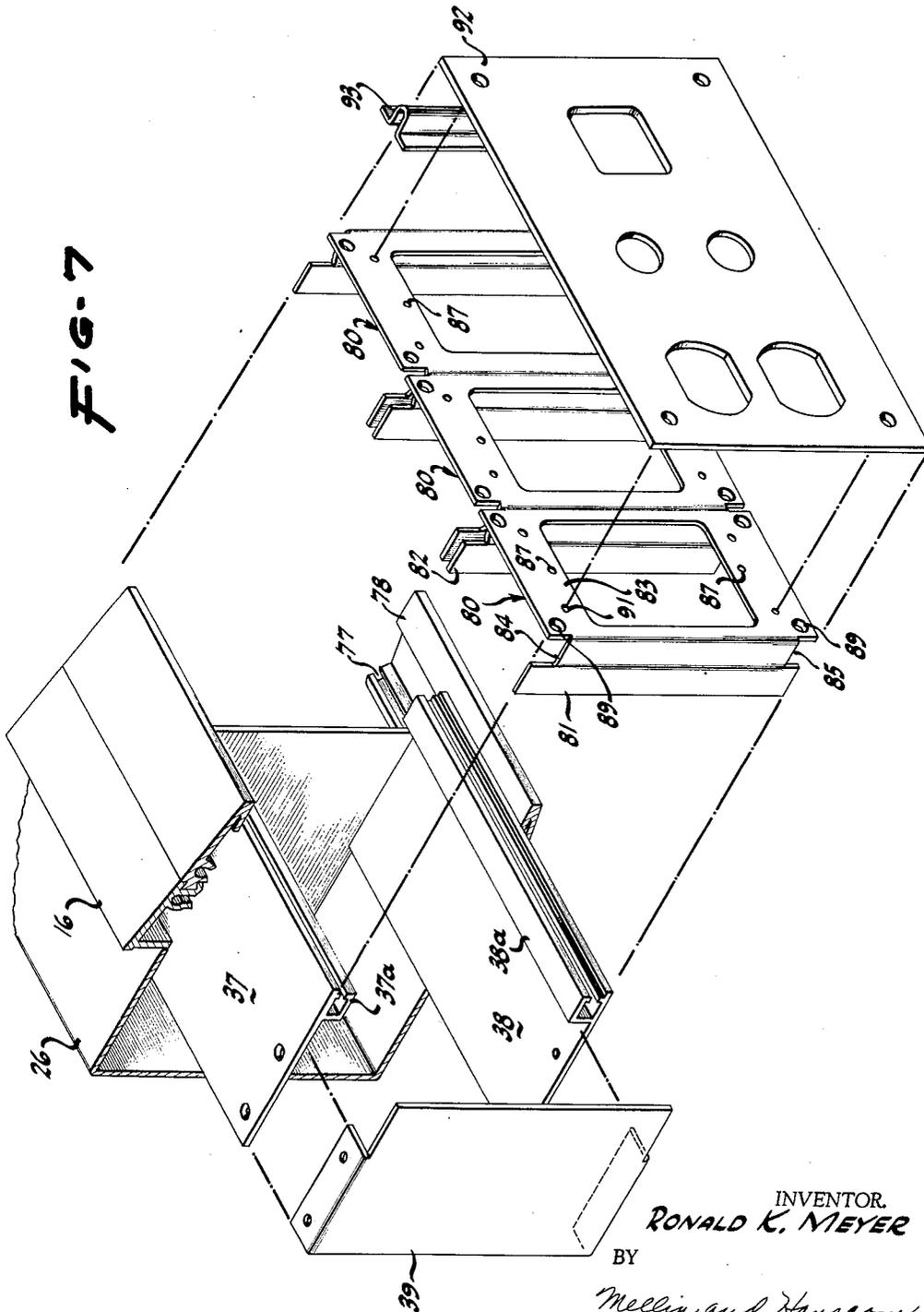
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Filed Feb. 19, 1963

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FIG. 7



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**HOSPITAL LUMINAIRE**

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Filed Feb. 19, 1963, Ser. No. 259,641

8 Claims. (Cl. 240-73)

This invention relates to lighting fixtures, particularly those adapted for use in connection with the illumination of hospital rooms.

The primary object of this invention is to provide a hospital luminaire that permits fast and immediate replacement of a fluorescent light mounting in the event of disrepair or breakdown in the electrical wiring connections or ballast.

Another object of this invention is to provide a hospital luminaire of unique construction including a plug-in fluorescent light mounting frame that supports a pair of fluorescent tubes.

It is another object of this invention to provide a hospital luminaire of the kind described including a light cover for housing a pair of horizontally disposed fluorescent tubes, and more particularly wherein the cover supports a light partition having a rear edge positioned between the fluorescent tubes to compartmentalize the light from each tube so that the light emitted from the luminaire will be directed either through an upper or a lower translucent lens panel.

Another object is to provide a hospital luminaire of the kind described having a unique construction permitting positive alignment between the luminaire and an outlet box set-in and mounted within a wall opening.

A still further object of the invention is to provide a hospital luminaire of the kind described including a rectangular console mounting frame for vertically aligning the luminaire relative to an outlet box, and further stabilizing the luminaire relative to its wall mounting.

A further object is to provide a hospital luminaire of the kind described, and having a rectangular console frame formed with guide channels extending along the front edges of a pair of upper and lower plates, said console frame being adapted for supporting a plurality of service control mounting frames, each slidable along the guide channels and adapted for being secured in various positions of horizontal adjustment.

A still further object of the invention is to provide a hospital luminaire and console mounting construction of unique and compact design which requires no service wiring except through connections made with an outlet box of conventional construction.

Other objects of this invention will become apparent in view of the following detailed description and the accompanying drawings.

In the drawings forming a part of this application and in which like parts are identified by like reference numerals throughout the same,

FIG. 1 is a perspective view of a hospital room and a hospital luminaire constructed and mounted from the wall of the room in a preferred manner contemplated by this invention;

FIG. 2 is an end view of the luminaire as viewed along lines 2-2 of FIG. 1;

FIG. 3 is a vertical section through the console portion of the fixture, and taken on lines 3-3 of FIG. 1;

FIG. 4 is a vertical section taken through the lighting fixture, substantially along lines 4-4 of FIG. 1;

FIG. 5 is a horizontal center section of the luminaire shown in FIG. 1, with portions broken away;

FIG. 6 is a perspective view showing a parts relationship of the luminaire housing; and

FIG. 7 is a perspective view showing a parts relationship of the mounting for a console panel.

Referring to FIG. 1 of the drawings, there is shown a hospital luminaire and console fixture 10, comprising a centrally disposed service console 11, and a pair of lighting fixtures 12 and 13 disposed on either side thereof. Each of the lighting fixtures 12 and 13 is substantially identical in form, and most of their parts are either the same or symmetrical.

Referring to FIGS. 2-6 in particular, the hospital luminaire shown comprises a generally U-shaped base panel 15 that extends the entire length of lighting fixture and console 10. Base panel 15 includes an upper rail section 16, a lower rail section 17 and an integrally formed wall plate 18. The base panel 15 may be formed as an integrally extruded part with dovetail grooves 19 and 20 being provided in the front edges of lower rail 17 and upper rail 16, respectively. Continuous anchor grooves 21 and 22 are also provided on the respective rail sections 17 and 16.

Base panel 15 is held against the wall of the room by means of screws 25. It is also anchored to a rectangular outlet box 26 by means of bolt connections 27, as shown in FIG. 5. Various service connections are made through the outlet box 26, including a telephone line 28, an electrical supply 29, and an oxygen supply 30.

Outlet box 26 is rigidly supported between a pair of wall studs 31 and 32 as in a conventional manner with a pair of angle plate mountings 33 and 34. Angle plates 33 and 34 are attached to outlet box 26 so as to position its forward rectangular opening 26a approximately in the plane of the wall surface provided by plaster board 35.

Wall plate 18 of base panel 15 is formed with an opening 36 which is identical in shape and size to the opening 26a of the outlet box. Base panel 15 is aligned relative to the outlet box by means of a rectangular console frame comprising an upper plate 37, a lower plate 38 and a pair of flanged end plates 39 and 40 which are symmetrical. A rear portion of the console frame, it will be noted, is received within the opening 26a of the outlet box, being projected through opening 36 of wall plate 18. Upper plate 37 is secured to upper rail section 16 by means of self-tapping screws 41, which are threadedly received in groove 22. Similarly, lower plate 38 of the console frame is attached to lower rail section 17 by other self-tapping screws 42.

Lighting fixtures 12 and 13 more especially comprise a plug-in fluorescent light mounting frame 45, said frame including upper and lower sides 46 and 47, both of which extend rearwardly from a front plate 48. Frame 45 is adapted to be held against wall plate 18 by means of a pair of binder posts 49 fastened at one end to plate 18 and having a free end threaded for receiving a wing nut 50.

Referring to FIGS. 4 and 6, wall plate 18 is formed with a pair of openings 51, each of which is fitted with an electrical receptacle 52. A pair of electrical plugs 53 are mounted upon light frame 45 by means of a bracket 54, spanning between upper and lower sides 46 and 47. Each plug 53 is electrically connected to one pair of complementary fluorescent tube holders 55 and 56, said tube holders being mounted to the front side of plate 48. Each pair of tube holders mounts a fluorescent tube 57.

Referring to FIG. 5, lighting fixture 13 is shown with its connector plugs 53 plugged into their mating receptacles 52. Lighting fixture 12, however, has been illustrated to show the manner by which the entire light mounting frame 45 can be removed after first unthreading the wing nuts 50 from the binder posts 49.

Lighting fixtures 12 and 13 include pivotally mounted light covers, indicated generally by the reference number 60. The light covers are pivotally supported at one end from an end plate 61 by means of a mounting pin 62,

which is secured in the lower front corner of plate 61 and received in a lateral offset of one of two cover end plates 63 or 63a. Pins 62 are also supported in a groove 64 formed in an extruded mounting strip 65.

Referring to FIG. 5, light covers 60 are pivotally supported from that end proximate to console 11 by a second pin 62a mounted in the groove 64 of mounting strip 65, and projecting through an opening formed in an offset on either end plate 63 or 63a, opposite to the end plate mounted by pin 62. Pin 62a is received in a continuous circular groove 77 formed in a mounting strip 78 which is dovetail fitted with groove 19 of rail 17.

Light cover 60 further comprises an upper translucent lens 66 and a lower lens 67. Both lenses are symmetrically mounted to wooden blocks 68 and 69 secured to an arcuate mounting plate 70. Both lens plates are formed with cleat edges which are mounted dovetail fashion with a continuous groove 71 formed in mounting strip 65.

Referring to FIG. 4, a light partition 72 extends longitudinally through each lighting fixtures 12 and 13 being supported near each end by a mounting bracket 73. Light cover 60 is held in the position shown in FIG. 4 by means of a spring catch 74, which engages the edge of the upper mounting strip 65 until sprung downwardly by a button release 74a.

Referring to FIG. 4, it will be noted that light partition 72 extends from the opaque mounting plates 70 into an area between the pair of fluorescent tubes 57. The rearmost edge of partition 72 is positioned in proximate abutting relation to the front side of front plate 48 at those times when light cover 60 is positioned so as to enclose lighting tubes 57. Accordingly, all light coming from either one of the tubes 57 is transmitted only through the translucent lens forming a part of its enclosure; and suitable controls may be installed to selectively light either the upper or lower tube independently of the other. The upper light will provide only indirect lighting as reflected from the ceiling of the room. Such a lighting is easy on the eyes and would be used for general room lighting purposes. The lower fluorescent tube would, of course, have its light emitted only through lens 67, and this light would be directed downward over a patient's bed, thereby providing an ideal reading light. The luminaire construction shown is particularly useful, since both lighting tubes 57 are mounted upon the same plug-in mounting frame and yet provide distinctive and very different forms of lighting. In addition, both lighting tubes are openly accessible when the light cover 60 is pivoted downwardly upon its hinged support, thereby permitting a simultaneous replacement of both tubes.

Referring to FIG. 7 in particular, the upper and lower plates 37 and 38 of the console frame are formed with integral channels 37a and 38a, respectively. Channels 37a and 38a serve as guides for a plurality of service control mounting frames 80, each having a pair of lateral supports 81 and 82 and a front frame mounting plate 83. Slots 84 and 85 are formed on the top and bottom edges, respectively, of lateral support plates 81 and 82. Each slot 84 receives channel 37a and each slot 85 receives the channel 38a, best shown in FIG. 3. Mounting frames 80 are thus slidably adjustable along channels 37a and 38a, so that they may be positioned to accommodate service units of various sizes and kinds.

Units 86 are intended to be of standard construction and having front mounting surfaces which may be placed against the rear surface of plate 83. Each mounting plate 83 is for this reason provided with a number of openings 87 through which screws 88 may be projected and secured to complementary threaded openings in the units 86. Other openings 89 in plate 83 are provided for receiving self-tapping screws 90 which may be secured into grooves of channels 37a and 38a. Addi-

tional openings 91 are provided for attaching console base plates such as plate 92, shown in FIG. 7.

The various sizes of console plates are separated by flanged, U-shaped spacer members 93, which are mounted as shown in FIG. 5. Barrier plates 94 may also be used to separate each service control panel and its outlet box connection. The barrier plates extend between the offset edges of adjacent support plates 81 and 82 and are secured to the rear surface of outlet box 26 by means of screws 95.

Although a preferred embodiment of this invention has been illustrated and described, it is to be understood that various changes may be made without departing from the spirit of the invention or the scope of the dependent claims, and each of such changes is contemplated.

What I claim and desire to secure by Letters Patent is:

1. A hospital luminaire comprising: a generally U-shaped base panel including upper and lower rail sections interconnected by a wall plate; a first pair of vertically aligned electrical plugs mounted to said wall plate; a plug-in fluorescent light mounting frame having upper and lower sides extending rearwardly from a front plate, said sides being received within the upper and lower rail sections of the base panel; a second pair of vertically aligned electrical plugs mounted to the rear side of said front plate and respectively complementary to said first pair of plugs; two pairs of complementary fluorescent tube holders mounted to the front side of said front plate, respective holders of one pair disposed vertically above the other pair of holders; electrical wiring connections between each pair of tube holders and one of said second pair of plugs; a light cover having edges complementary to edges of said base panel for enclosing said plug-in light mounting frame; and a light partition disposed between the two pairs of fluorescent tube holders, said partition extending from the front side of the front plate to the rear side of said light cover.

2. The hospital luminaire of claim 1 wherein said base panel is formed with an opening in its wall plate, and further comprising an outlet box adapted for being set in and mounted within a wall opening, said outlet box having a rectangular forward opening vertically alignable with the opening in the wall plate of said base panel; a rectangular console mounting frame including upper, lower and side end plates, a rear portion of said console frame being received within the opening of said wall plate and the forward opening of said outlet box to center said base panel relative to said outlet box; and means for receiving the upper and lower plates of said console frame to the upper and lower rail sections of said base panel.

3. A hospital luminaire comprising: a generally U-shaped base panel including upper and lower rail sections interconnected by a wall plate; a first pair of vertically aligned electrical plugs mounted to said wall plate; a plug-in fluorescent light mounting frame having upper and lower sides extending rearwardly from a front plate, said sides being received within the upper and lower rail sections of the base panel; a second pair of vertically aligned electrical plugs mounted to the rear side of said front plate and respectively complementary to said first pair of plugs; two pairs of complementary fluorescent tube holders mounted to the front side of said front plate, respective holders of one pair disposed vertically above the other pair of holders; electrical wiring connections between each pair of tube holders and one of said second pair of plugs; a light cover having edges complementary to edges of said base panel for enclosing said plug-in light mounting frame; and a light partition disposed between the two pairs of fluorescent tube holders, said partition extending from the front side of the front plate to the rear side of said light cover; said base panel being formed with an opening in its wall plate, and further comprising an outlet box adapted for being set in and mounted within a wall opening, said outlet box having

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a rectangular forward opening vertically alignable with the opening in the wall plate of said base panel; a rectangular console mounting frame including upper, lower and side end plates, a rear portion of said console frame being received within the opening of said wall plate and the forward opening of said outlet box to center said base panel relative to said outlet box; means for receiving the upper and lower plates of said console frame to the upper and lower rail sections of said base panel; said upper and lower plates of said console frame being each formed with a guide channel extending along their respective front edges; a plurality of service control mounting frames, each slidably supported along the guide channels of said upper and lower plates; and means for securing each mounting frame at any position of adjustment along said channels.

4. The hospital luminaire of claim 3 and further comprising a plurality of face plates mounted to said service control mounting frames, said face plates being separated by flanged U-shaped spacer members.

5. A hospital luminaire comprising: a generally U-shaped base panel including upper and lower rail sections interconnected by a wall plate; a first pair of vertically aligned electrical plugs mounted to said wall plate; a plug-in fluorescent light mounting frame having upper and lower sides extending rearwardly from a front plate, said sides being received within the upper and lower rail sections of the base panel; a second pair of vertically aligned electrical plugs mounted to the rear side of said front plate and respectively complementary to said first pair of plugs; two pairs of complementary fluorescent tube holders mounted to the front side of said front plate, respective holders of one pair disposed vertically above the other pair of holders; electrical wiring connections between each pair of tube holders and one of said second pair of plugs; a light cover having upper and lower translucent lens panels extending rearwardly from an opaque mounting plate, said cover being pivotally hinged from a rail section of said base panel; and a light partition mounted from said opaque mounting plate and having a rearward edge positioned in proximate abutting relation to the front side of the front plate of said plug-in mounting frame.

6. A hospital luminaire comprising: an outlet box adapted for being set-in and mounted within a wall opening, said outlet box having a rectangular forward opening; a generally U-shaped base panel including upper and

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lower rail sections interconnected by a wall plate, said base panel having an opening in its wall plate vertically alignable with the forward opening of said outlet box; a lighting fixture mounted to said base panel; a rectangular console mounting frame including upper, lower and side end plates, a rear portion of said console frame being received within the opening of said wall plate and the forward opening of said outlet box to center said base panel relative to said outlet box; and means for securing the upper and lower plates of said console frame to the upper and lower rail sections of said base panel.

7. In a hospital luminaire: a generally U-shaped base panel including upper and lower rail sections interconnected by a wall plate, said base panel being formed with an opening in its wall plate, and further comprising an outlet box adapted for being set in and mounted within a wall opening, said outlet box having a rectangular forward opening vertically alignable with the opening in the wall plate of said base panel; a rectangular console mounting frame including upper, lower and side end plates, a rear portion of said console frame being received within the opening of said wall plate and the forward opening of said outlet box to center said base panel relative to said outlet box; and means for receiving the upper and lower plates of said console frame to the upper and lower rail sections of said base panel; said upper and lower plates of said console frame being each formed with a guide channel extending along their respective front edges; a plurality of service control mounting frames, each slidably supported along the guide channels of said upper and lower plates; and means for securing each mounting frame at any position of adjustment along said channels.

8. The hospital luminaire of claim 7 and further comprising a plurality of face plates mounted to said service control mounting frames, said face plates being separated by flanged U-shaped spacer members.

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