April 2, 1963 M. BOBRICK 3,084,247

WALL MOUNTED HOSPITAL BED LIGHT FIXTURE AND SERVICE CONSOLE COMBINATION

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FIG. 1.

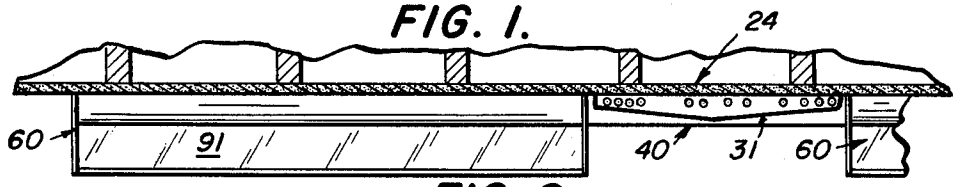

FIG. 2.

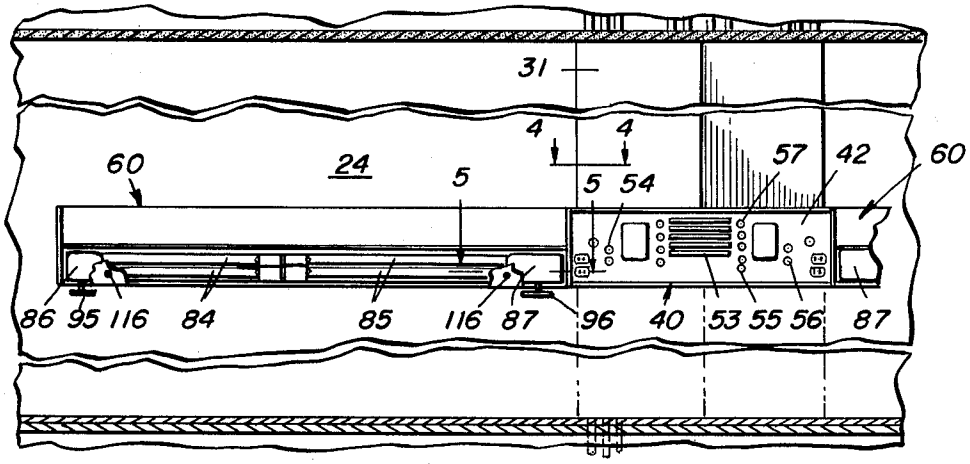

FIG. 3.

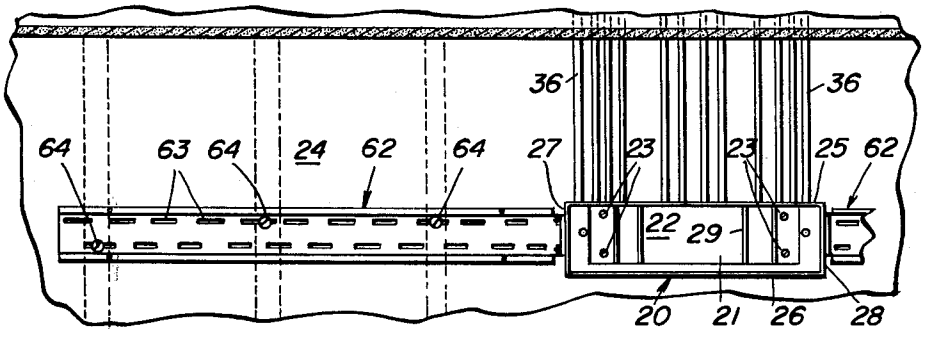

FIG. 4.

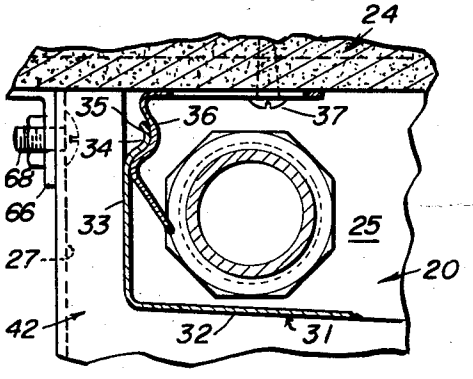

FIG. 5.

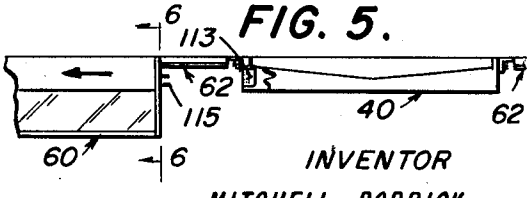

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FIG. 6.

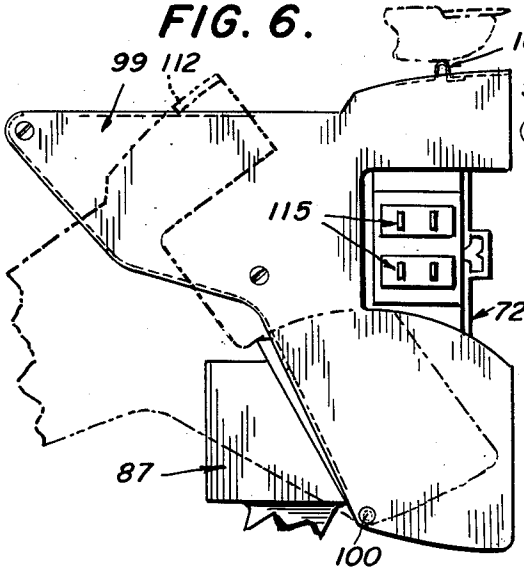


FIG. 7.

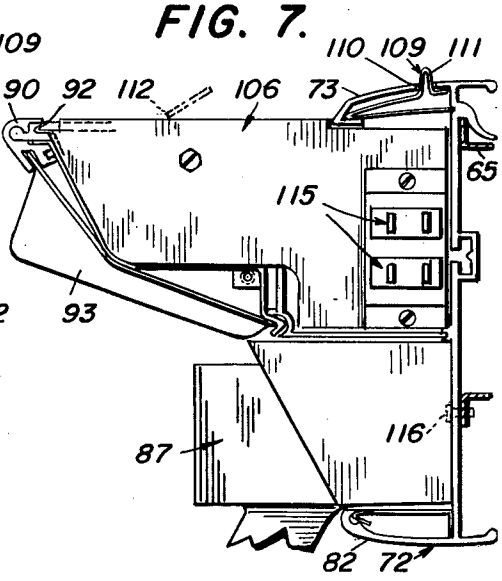


FIG. 8.

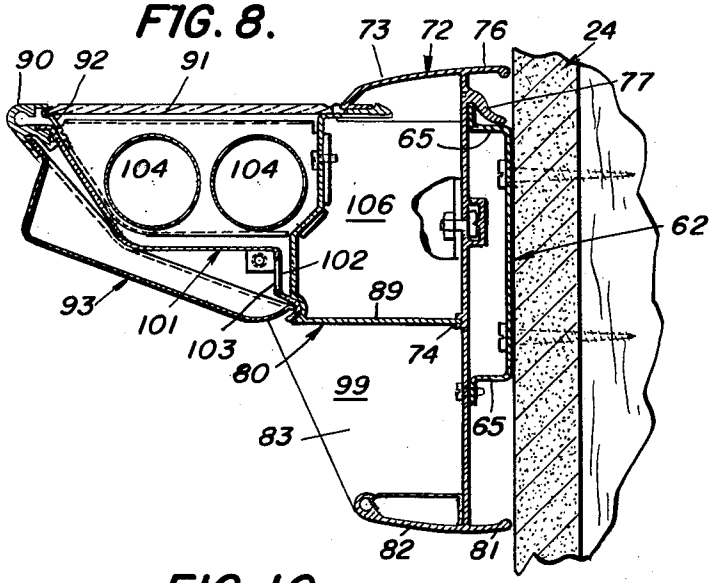


FIG. 9.

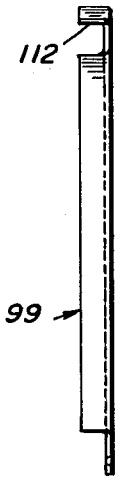
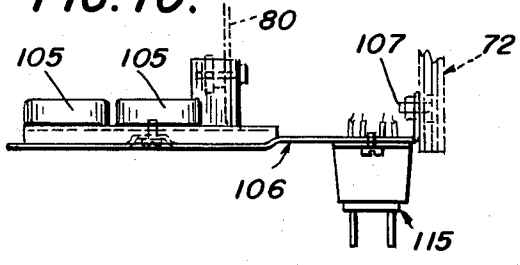


FIG. 10.



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WALL MOUNTED HOSPITAL BED LIGHT FIXTURE AND SERVICE CONSOLE COMBINATION

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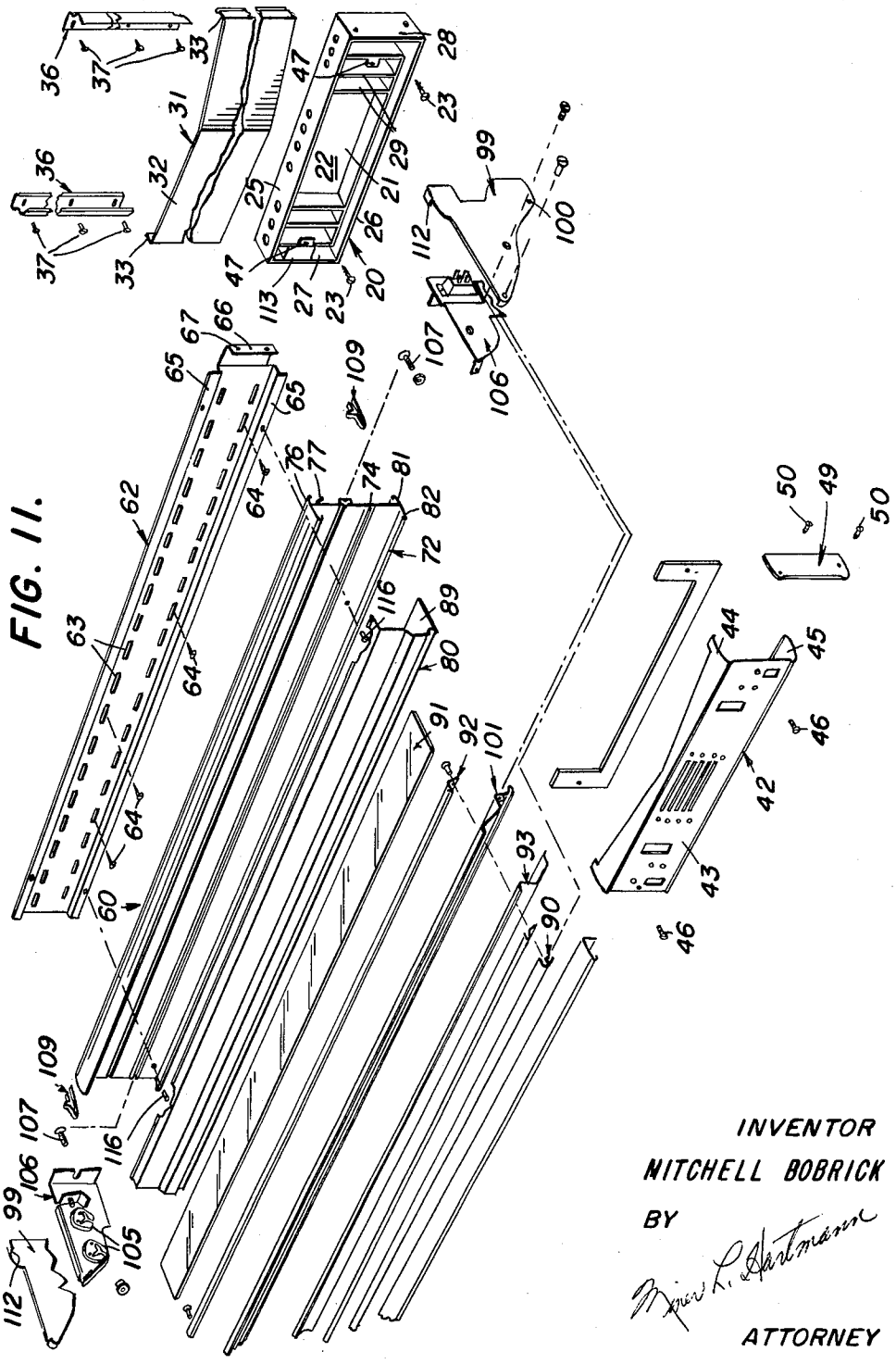

FIG. 11.

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WALL MOUNTED HOSPITAL BED LIGHT FIXTURE AND SERVICE CONSOLE COMBINATION

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FIG. 12.

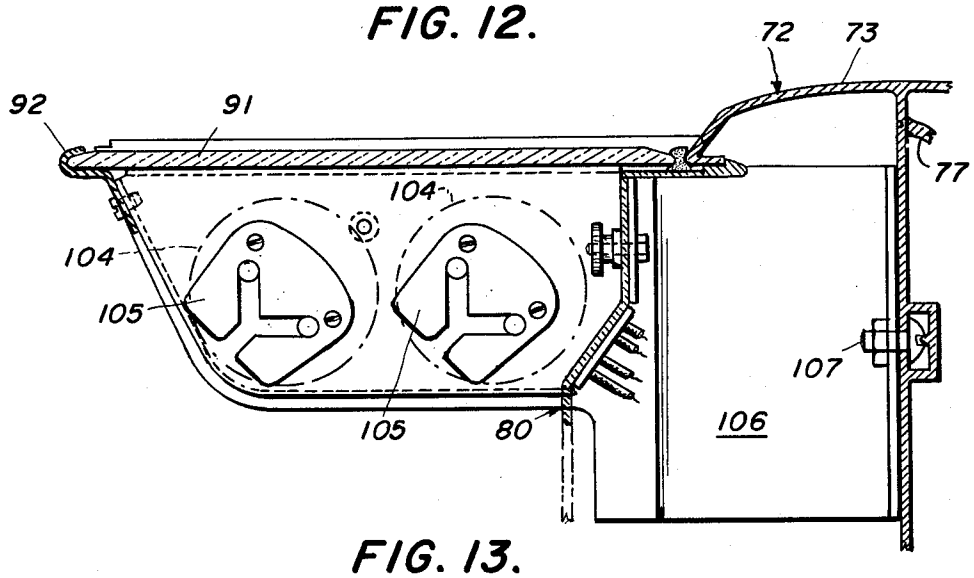
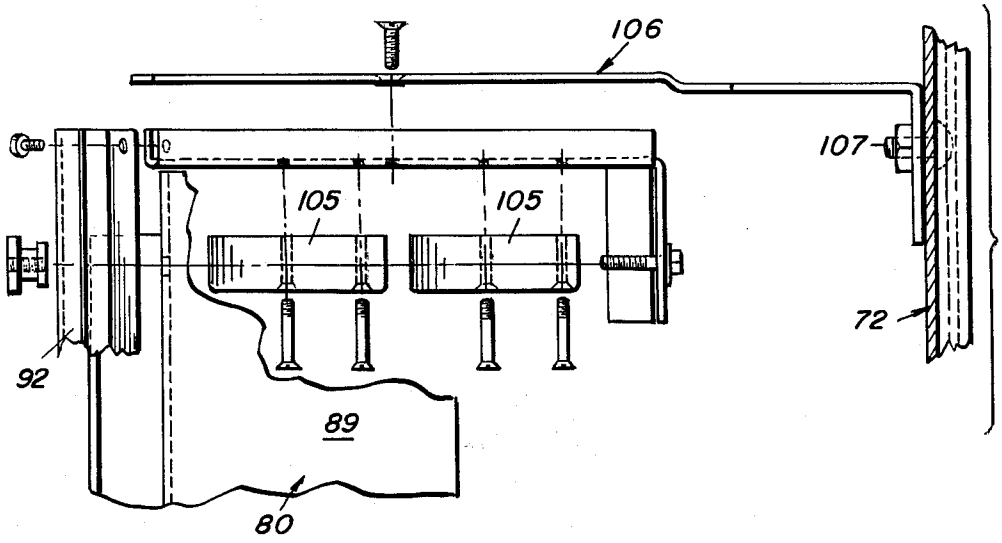


FIG. 13.



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WALL MOUNTED HOSPITAL BED LIGHT FIXTURE AND SERVICE CONSOLE COMBINATION

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Filed July 3, 1961, Ser. No. 121,652

12 Claims. (Cl. 240—2)

This invention relates to a bed light and service fixture combination particularly adapted for mounting on existing room walls adjacent hospital beds, including means for providing various kinds of lighting, means of communication, and gas services associated with the care of patients in bed in a hospital.

One object of the invention is to provide in a centralized unit adjacent individual or pairs of beds, many of the facilities required by the patient or attendant for the care of bed patients in a hospital.

Another object is to provide, in association with room lighting, individual reading and examination spotlights, signaling means, voice communication, and service outlets such as oxygen, suction, etc., in a service console mounted on the existing wall structure, with concealed service lines leading alternatively from floor, ceiling, or intermediate outlets.

Another object is to provide light, communication and gas service to two pairs of adjacent beds in adjoining wall-separated rooms from common service outlets.

A further object is to provide a hospital bed light fixture which requires no behind-the-wall service wiring or piping.

Another object is to provide universally adjustable spotlights extending over a hospital bed, in combination with fixed general illumination means.

These and other objects are attained by my invention, which will be understood from the following description, reference being made to the accompanying drawings which form a part hereof, in which:

FIG. 1 is a plan view of twin bed lights with a single service console unit as it appears mounted on the existing wall of a hospital bedroom, including a service line wall stack;

FIG. 2 is a front elevational view of the same with the auxiliary spotlight arms in fully retracted position;

FIG. 3 is an elevational view partly in section of a typical wall structure showing a preferred manner of mounting the outlet box and fixture mounting plate, and snap-on channels for holding the stack on a plastered partition wall;

FIG. 4 is an enlarged fragmentary plan view partly in section taken on the line 4—4 of FIG. 2;

FIG. 5 is a fragmentary plan view, taken from the position 5—5 of FIG. 2, and with the light fixture displaced laterally as indicated disconnected from the console;

FIG. 6 is an end elevational view taken from the position 6—6 of FIG. 5, showing also the tilted down position for access to the fluorescent light tubes;

FIG. 7 is an end elevational view, similar to FIG. 6 but with the end plate removed;

FIG. 8 is an end elevational view similar to FIG. 7, with the light tube mounting sub-assembly removed, and also showing the wall bracket mountings for the light fixture;

FIG. 9 is a front elevational view of the lighting fitxure end plate;

FIG. 10 is a plan view of the lighting tube mounting sub-assembly;

FIG. 11 is a perspective view in disassembly of the constituent parts of the lighting fixture, service console and service line stack;

FIG. 12 is a vertical sectional view of the tube socket sub-assembly viewed from the inside of the fixture; and

FIG. 13 is a plan view partly in disassembly of the sub-assembly shown in FIG. 12.

In general the service console and bed light combination consists of a service console including an outlet or junction box, serving alternatively either a single light unit for one bed, or a pair of light units for two adjacent beds; a lighting fixture at one side, or at both sides of the console, disposed respectively adjacent and over one bed, or two lights, one over each of two adjacent beds; and a stack covering and concealing the service lines to the outlet box. In a hospital having wall-separated adjoining rooms with pairs of beds disposed on opposite sides of the wall in head-to-head relation, one stack may serve four beds, by carrying the service conduits through communicating wall openings from one side of the partition to the other side.

The basic units of the combination are substantially the same in the various indicated combinations, so that for simplicity a combination of one light fixture with a console will be described in detail as illustrative of the structure.

The service console **40** consists essentially of a junction or outlet box **20** which is an elongated rectangular metal structure with its open face **21** directed outwardly, the opposite rear wall **22** being drilled for lag bolts or otherwise adapted for attachment to the existing room wall **24**, by lag bolts **23**. The top wall **25**, bottom wall **26**, end wall adjacent a lighting fixture **60** and the other end wall **28** (when only one lighting unit is used) form an enclosure which is divided by several interior wall members **29** into compartments as may be required to isolate and contain the electrical conduit outlets, the service pipes and control valves and switches for the several facilities which are brought into the console and which are controlled or made accessible through openings in the facia **42**. The facia is preferably an aluminum extrusion having a plane front mounting surface **43**, a top member **44**, which covers or partly covers the top wall **25** of the outlet box, and bottom member **45** which covers or partly covers the bottom wall **26** of the outlet box **20**. The facia **42** is held to the outlet box **20** by screws **46** engaging holes in screw tabs **47** welded to the interior wall members **29**.

A console end cover plate **49** conforming to the cross-sectional shape of the facia extrusion **42** is attached by screws **50** to the end wall **28** of the outlet box when only a single light unit is used adjoining the console. When two light units are used with one console as indicated in FIGS. 1, 2 and 3, no end cover plate **49** is required since the inner ends of the light fixtures abut the ends of the facia **42**.

Various service outlet elements may be mounted on the front surface **43** of the facia **42**, or they preferably are mounted inside the outlet box **20** in the compartments thereof so that their forward ends enter coinciding holes provided in the facia **42** when the latter is mounted in place as described, these elements being selected to conform to the particular requirements of the installation but including, for specific examples, telephone jacks **54**, switch buttons **55**, control valves **56** for gas services such as oxygen or vacuum, and signal lights **57**. Other services may be provided. A speaker unit may also be provided behind a grill **53** in the facia **42**.

A stack **31** leading from the top wall **25** (or alternatively from the bottom wall **26**) to the ceiling of the room (or alternatively to the floor of the room) conceals the service conduits adjacent the room wall on which the bed light combination is mounted. The stack **31** consists of an outwardly bowed cover plate **32** having narrow side flanges **33** terminating in beads **34** which are adapted because of the resilience of the bowed cover plate to make spring pressed connection with grooves **35** provided in angle brackets or rails **36** which are mounted on the room wall

by screws 37. The cover plate 32 may be shaped or ornamented to simulate a pilaster and it may be painted or otherwise decorated to blend into the room wall to become inconspicuous.

Each lighting fixture 60 is of elongated form and supported to extend outwardly from the wall and generally positioned above and over the head of a hospital bed. The lighting fixture 60 is mounted on a mounting plate 62. The mounting plate 62 consists of a flanged metal channel which is provided with a plurality of slots 63 for screws 64 which hold the mounting plate securely on the wall structure. The mounting plate has out-turned edge flanges 65 upon the upper one of which the lighting fixture 60 is supported. End tabs 66 are provided at the inner end of the mounting plate, these tabs being provided with holes 67 which are adapted to engage bolts 68 provided in the end wall 27 of the outlet box 20.

The lighting fixture 60 consists generally of elongated plates supported by a somewhat intricate double-T shaped aluminum body extrusion 72 (as shown particularly in FIG. 11), by a longitudinally grooved V-shaped longeron 90 which is also an aluminum extrusion whose forward angle defines the forward upper corner of the lighting fixture, and by end plates 99 which are generally triangular in shape and are attached at the forward point to the ends of the longeron 90. The body extrusion 72 consists of the top member extending forwardly to form the top 73 for a wiring channel. A hook member 77 is integral with the extrusion 72 and disposed below the rear cap strip 76 extends rearwardly and downwardly at an angle to engage the upper edge flange 65 of the mounting plate 62, the hook member 77 extending the full length of the fixture, and the rounded end of it being adjacent the wall of the room. The body extrusion 72 is provided in its central portion on the front face with a groove 74 which is adapted to receive the horizontal shelf portion 89 of the vertical reflector plate 80. The lower cross member of the body extrusion 72 includes a rearwardly directed positioning edge 81 which is adjacent the room wall to align the fixture therewith; and there is also provided the forwardly extending ledge 82 which constitutes the floor of an open faced compartment 83 into which extensible pivoted arms 84 and 85 for examination lights 86 and 87 are folded when these lights are not in use. A wiring channel in which the ballast and other electrical control units are housed is formed by the reflector plate 80, the upper part of the body extrusion 72, and the top piece 73 thereof.

The end plates 99 of the light fixture are pivotally mounted at low forward positions by the pivot pin 100 which is mounted in the forward edge of the ledge 82 of the body extrusion 72. Extending between the end plates 99 is a diffuser which is an outwardly dished plastic member 93 which is adapted to diffuse a small amount of light directed over the bed which is serviced by the light fixture. The dished shaped plastic 93 is covered by a reflector plate 101 having a downwardly disposed flange 102 at its lower edge which is provided with windows 103 which permit only a small portion of the light from the fluorescent lamps 104 to enter the second or dished diffuser plate 93. The longeron 90 extends between the two end plates 99, this being a specially shaped aluminum extrusion provided with slots properly directed to receive the edges of the reflector plate 101 and the dished diffuser plate 93 holding these as a unit or sub-assembly which may be tilted forwardly on the pivots 100 to give access to the fluorescent lights 104 and the light sockets 105 in which they are mounted.

The light sockets 105 are mounted as a sub-assembly on a socket bracket 106 which extends forwardly from and is mounted on the body extrusion 72, being fastened by screws 107. The main light diffuser plate 89 extends horizontally between the end plates 99, being held on the top edge of the light socket brackets 106 by the elongated angle member 92.

Spring latch members 109 are provided under the top members 73 of the body extrusion 72 at the ends thereof, with openings 110 therethrough for a loop 111 which engages the lug 112.

The space between the shelf member 89 of the vertical reflector 88 and the ledge 82 of the extrusion 72 serves as a container compartment for a pair of movable spotlights 86 and 87, these being pivotally mounted on the body extrusion 72, and having extensible arms 84 and 85. Handles 95 and 96 are provided on the spotlights for adjusting the position of the lights. The spotlight 86 is particularly adapted for use as a reading lamp for the patient and may be readily adjusted to any comfortable position. The spotlight 87 is a high intensity examination light, particularly for use for examinations by the physician.

Prong electrical connectors 115 are mounted on the socket brackets 106 adjacent the outlet box end 27, protruding beyond the ends of the lighting unit, and adapted to engage prong receiving sockets 113 mounted within the outlet box end 27, there being a window opening 114 to receive said prong connectors 115. The electrical wiring within the light fixture is completed during factory assembly, so that the unit is not opened during installation, but is mechanically mounted by the hook member 77 placed over the upper flange 65 of the mounting plate 62. The light fixture is then moved laterally toward the outlet box until the prongs 115 are engaged in the sockets 113, following which attachment screws 116 are inserted to securely hold the body extrusion 72 to the mounting plate.

Variations in the details of construction are contemplated as being part of this invention, when within the scope of the appended claims.

The advantages of my combination service console and bed light fixture, with or without the stack, will be apparent from the above description. The objectives stated in the beginning have been attained.

I claim:

1. A hospital service console and bed light fixture adapted to be mounted on an existing room wall, comprising in combination a service console comprising a metal outlet box having an open front, said box enclosing the several service electric conductor terminals and pipe terminals, including switches, connectors, and valve control units for said terminals, and a facia member removably attached to said box, said facia member having a panel face with openings giving access to said service control units and connectors; and at least one fluorescent light fixture disposed adjacent said console and electrically and mechanically connected thereto, said fixture consisting essentially of an elongated box-like housing for elongated fluorescent lights, said housing having a back plate with means for attachment to the room wall, and having a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lamps, said housing also having a top diffuser plate for light directed upwardly, and a second diffuser plate disposed angularly from the top edge of said housing to direct light downwardly and outwardly, with a horizontally disposed reflector plate disposed and arranged to transmit only a small part of the light from said fluorescent lamps to said second diffuser plate, and said housing also having end plates supporting the ends of said second diffuser plate and said reflector plate, said end plates being pivoted whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent light tubes.

2. A hospital service console and bed light fixture adapted to be mounted on an existing room wall, comprising in combination a service console comprising a compartmented metal outlet box having ends, top, bottom and back plate, with an open front, said compartments enclosing the several service electric conductor terminals and pipe terminals, including switches, connectors and valve control units for said terminals disposed to be accessible

from said open front, and a channel-sectioned facia member removably attached to said box, said facia member having a panel face with openings giving access to said switches, connectors and control units; and a fluorescent light fixture disposed adjacent said console and electrically and mechanically connected thereto, said fixture consisting essentially of a horizontally disposed channel mounting plate having out-turned edge flanges and an end tab adapted to be removably attached to one end of said outlet box, the said mounting plate benig provided with screw-slots for screws to attach said plate to said room wall in horizontal alignment with said outlet box, an elongated box-like housing for elongated fluorescent lamps, said housing having a back plate with overturned edge adapted to hook over the upper edge flange of said mounting plate, and having a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lamps, said housing also having a top diffuser plate for light directed upwardly, and a second diffuser plate disposed angularly from the top edge of said housing to direct light downwardly and outwardly, with a horizontally disposed reflector plate with windows, disposed between said second diffuser plate and said fluorescent lights, and said housing also having end plates supporting the ends of said second diffuser plate and said reflector plate, said end plates being pivoted at the lower back corner whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent light tubes.

3. The service console and bed light fixture defined in claim 1, in combination with a stack adapted to enclose electric conductors and service pipes adjacent the room wall and aligned with and contacting said outlet box, said stack consisting of a cover plate having end flanges adapted to be removably mounted on the room wall, said cover plate extending between said outlet box and the entrance of said service pipes and electrical conductors.

4. The service console and bed light fixture defined in claim 1, in combination with a stack adapted to enclose electric conductors and service pipes from the room ceiling to the top of said outlet box, said stack comprising an outwardly bowed cover plate having end flanges adapted to make spring pressed connection to vertically disposed angle brackets mounted on the room wall, said cover plate extending between the room ceiling and the top of said outlet box.

5. The service console and bed light fixture defined in claim 1, in combination with a stack adapted to enclose electric conductors and service pipes from the room floor to the bottom of said outlet box, said stack comprising an outwardly bowed cover plate having end flanges adapted to make spring pressed connection to vertically disposed angle brackets mounted on the room wall, said cover plate extending between the room floor and the bottom of said outlet box.

6. The service console and bed light fixture defined in claim 2, in combination with a stack adapted to enclose electric conductors and service pipes adjacent the room wall and aligned with and contacting said service box, said stack comprising vertically disposed grooved angle brackets mounted on the room wall, and an outwardly bowed cover plate having beaded side flanges adapted to make spring pressed connection in the grooves of said angle brackets, said cover plate extending between the room ceiling and the top of said service box.

7. A fluorescent light fixture comprising an elongated box-like housing for elongated fluorescent lamps, said housing having a back plate including means for attachment of said back plate to the room wall, a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lights, a top diffuser plate for light directed upwardly, and a second diffuser plate disposed angularly from the top forward edge of said housing to direct the light downwardly and outwardly, and a horizontally disposed reflector plate disposed between said second diffuser plate and said lamps, said reflector plate reflecting a major portion of the light upwardly to said top diffuser, said reflector plate being provided with windows of relatively small area whereby to transmit only a small part of the light from said fluorescent lamps to said second diffuser plate, and said housing having end plates supporting the ends of said second diffuser plate and said reflector plate, said end plates being pivoted to the lower edge of said partition plate whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent light tubes.

8. A fluorescent light fixture comprising a horizontally disposed channel mounting plate having an upper out-turned edge flange, the said mounting plate being provided with screw-slots for screws to attach said plate to said room wall in a horizontal position, an elongated box-like housing for elongated fluorescent lamps, said housing having a back plate with overturned edge adapted to hook over the upper edge flange of said mounting plate, a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lights, said housing having a top diffuser plate for light directed upwardly, and a second diffuser plate disposed angularly from the top forward edge of said housing to direct the light downwardly and outwardly, a horizontally disposed reflector plate reflecting a major portion of the light upwardly to said top diffuser, said reflector plate being provided with windows, said reflector plate being disposed between said second diffuser plate and said fluorescent lights, and end plates on said housing supporting the ends of said second diffuser plate and said reflector plate, said end plates being pivoted to the lower edge of said partition plate whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent light tubes.

9. In combination, a pair of elongated fluorescent light fixtures and a service console operatively connected between said fixtures in horizontal end-to-end relation, said combination having means for attachment to a room wall adjacent the heads of a pair of hospital beds and at an elevation above said beds; said fluorescent light fixtures each comprising an elongated box-like housing for elongated fluorescent lamps, said housing having a back plate including means for attachment of said back plate to the room wall, a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lights, a top diffuser plate for light directed upwardly, and a second diffuser plate disposed angularly from the top forward edge of said housing to direct the light downwardly and outwardly, and a horizontally disposed reflector plate disposed between said second diffuser plate and said lamps, said reflector plate reflecting a major portion of the light upwardly to said top diffuser, said reflector plate being provided with windows of relatively small area whereby to transmit only a small part of the light from said fluorescent lamps to said second diffuser plate, and said housing having end plates supporting the ends of said second diffuser plate and said reflector plate, said end plates being pivoted to the lower edge of said partition plate whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent light tubes; said service console consisting essentially of an open front metal outlet box attachable to said room wall, said box enclosing the several terminals of electrical conductors and pipes including also control switches, connectors, and valve control units for said terminals independently for each light fixture, and a facia member having upper and lower flanges and a vertical panel with openings giving access

to said service control switches, connectors, and valve control units; said fluorescent light fixtures being mechanically and electrically connected to said service console.

10. In combination, an elongated fluorescent light fixture, attachment means for mounting said fixture on a room wall adjacent the head of a hopsital bed and at an elevation above said bed, and a service console operatively connected to one end of said fixture; said attachment means comprising a horizontally disposed channel mounting plate having an upper out-turned edge flange, said plate being provided with horizontal slots for screws to attach said plate in horizontal position to said room wall; said light fixture comprising an elongated box-like housing having movable end plates, and a back plate with an overturned edge to hook over the upper edge flange of said mounting plate, a vertical elongated partition plate spaced forwardly from said back plate defining a wireway for ballast and electrical conductors for fluorescent lamps, said housing having a top diffuser plate for upwardly directed light, and a second diffuser plate attached to said end plates and disposed angularly from the top forward edge of said housing to direct light downwardly and outwardly a horizontally disposed reflector plate attached to said end plates and disposed between said second diffuser plate and fluorescent lamps mounted within said housing, said reflector plate reflecting a major portion of the light upwardly to said top diffuser, said reflector plate being provided with windows to transmit a minor portion of the light to said second diffuser plate, the end plates on said housing being pivoted to the lower edge of said partition plate whereby the end plates, the reflector plate, and the second diffuser plate as a unit may be tilted downwardly to provide access to the fluorescent lamps; said service console consisting essentially of an open front metal outlet box attachable to said room wall, said box enclosing the several terminals of electrical conductors and pipes including also switches, connectors, and valve control units for said terminals, and a facia member having upper and lower flanges, and a vertical panel with openings adjacent to and providing access to said service control switches, connectors, and valve control units.

11. The combination defined in claim 9, and stack means for enclosing electrical conductors and service pipes whose terminals are enclosed within said outlet box of said service console, said stack means comprising an outwardly bowed cover plate having edge flanges removably engaging vertically disposed angle brackets mounted on the room wall and vertically aligned with said outlet box, the end of said cover plate resting upon the upper side of said outlet box and pressed against the wall by a flange of said facia member.

12. The combination defined in claim 10, and stack means for enclosing electrical conductors and service pipes whose terminals are enclosed within said outlet box of said service console, said stack means comprising an outwardly bowed cover plate having edge flanges removably engaging vertically disposed angle brackets mounted on the room wall and vertically aligned with said outlet box, the end of said cover plate resting upon the upper side of said outlet box and pressed against the wall by a flange of said facia member.

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