Feb. 20, 1962 R. L. ROBERTS 3,022,416

OVERHEAD WALL LIGHT

Filed July 2, 1959 2 Sheets-Sheet 1

Fig. 1

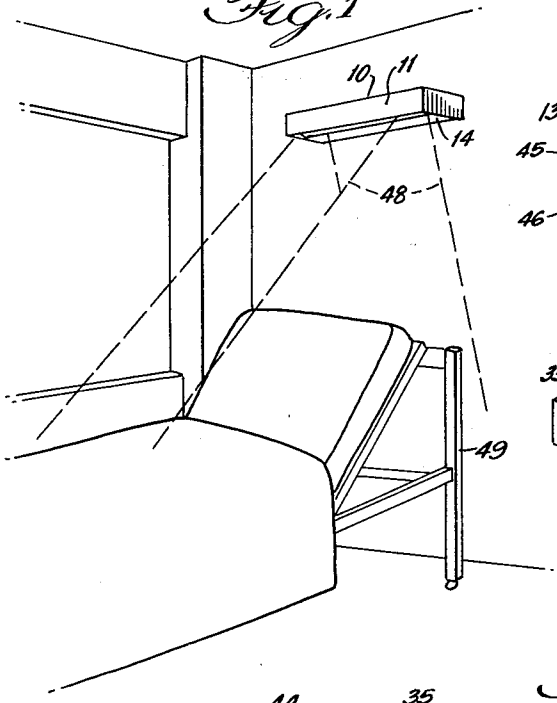


Fig. 2

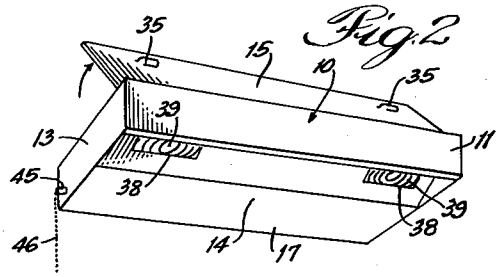


Fig. 3

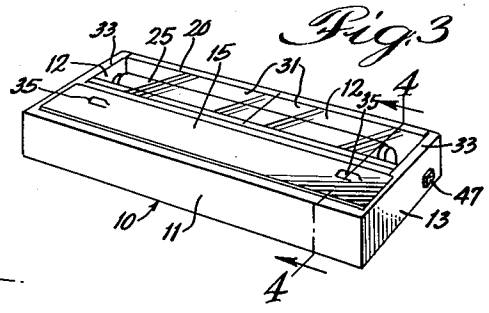
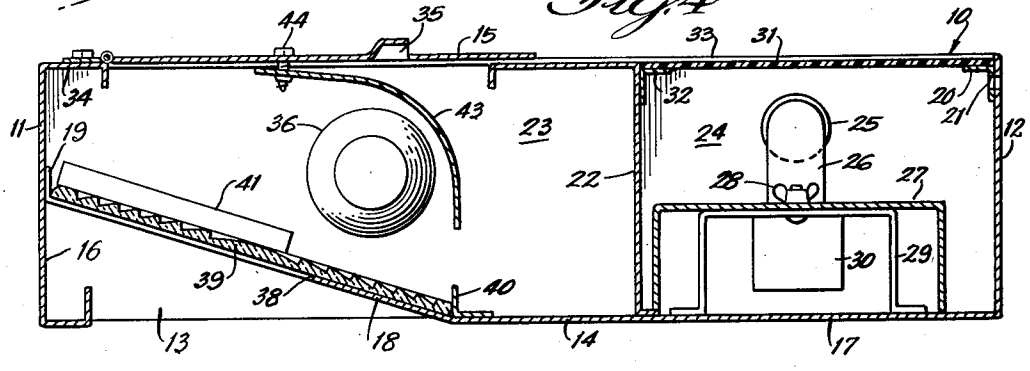


Fig. 4



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OVERHEAD WALL LIGHT

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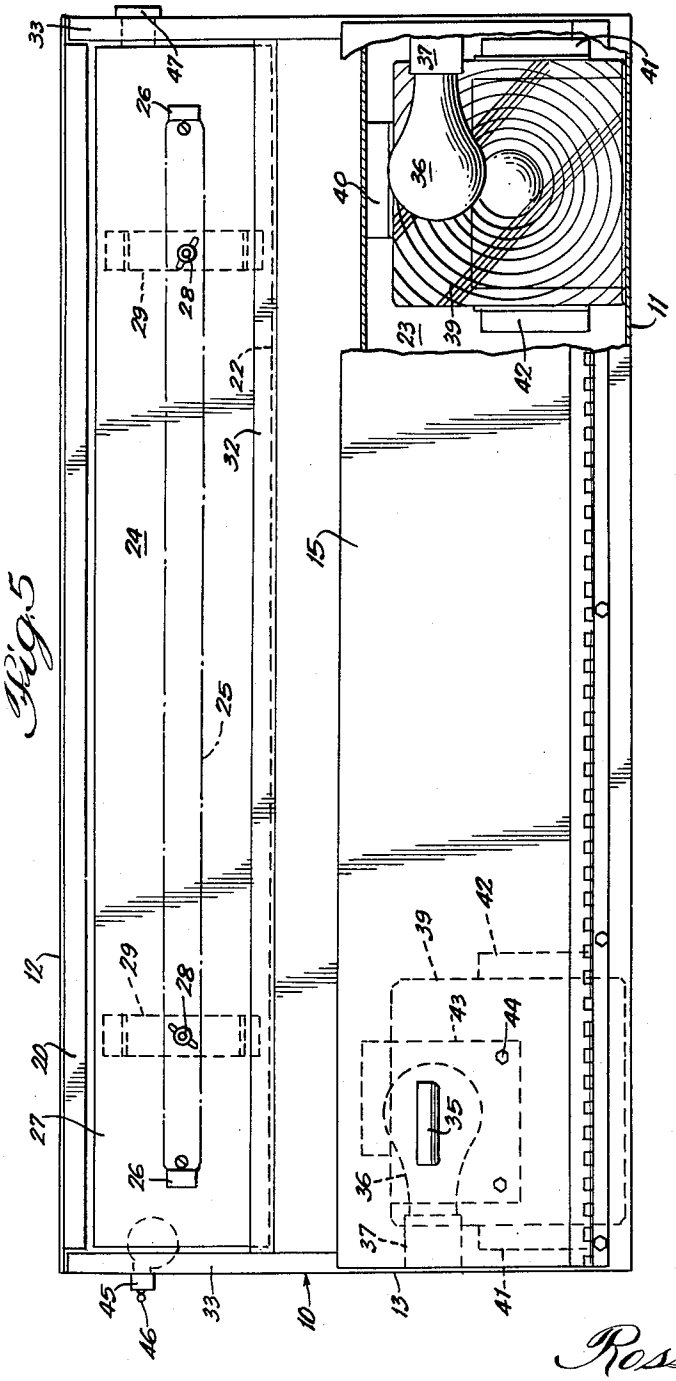

Fig. 5

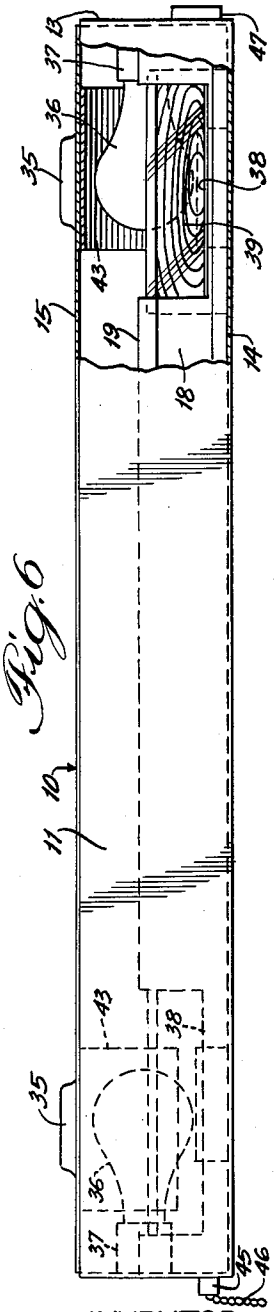

Fig. 6

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OVERHEAD WALL LIGHT

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This invention relates to an overhead wall light, and more specifically, to a light fixture particularly adapted for mounting upon a wall above a patent's bed in a hospital, clinic, etc.

One of the objects of the present invention is to provide a patient's wall light which is compact and attractive in appearance, and which overcomes major defects and disadvantages of light fixtures presently used in hospitals, clinics, and the like. Specifically, it is an object of the present invention to provide a light fixture which, upon proper mounting on a wall above a patient's bed, will provide abundant illumination for reading while at the same time will not throw light directly into the eyes of people in other parts of the room and will not shine directly into the eyes of the patient should he glance upwardly at the fixture. Another object is to provide a wall-mounted bed light which projects light downwardly in such a way as to eliminate or greatly reduce shadows about an article as it is being examined by a person lying in bed. A further object is to provide a wall-mounted bed light which is easily maintained and which may be readily opened for removal and cleaning of parts, replacement of bulbs, etc. A still further object is to provide a wall light adapted to illuminate a large but well defined area about a bed, thereby reducing the possibility of eye strain which might otherwise result from a sharp contrast between a narrow zone of illumination and the surrounding unlighted area.

Other objects will appear from the specification and drawings, in which—

FIGURE 1 is a perspective view illustrating the light fixture of the present invention in mounted condition upon a wall and above a hospital bed;

FIGURE 2 is a perspective view of the fixture partially showing the under surface thereof and illustrating the hinged cover in partly raised condition;

FIGURE 3 is a perspective view showing the top construction of the fixture;

FIGURE 4 is an enlarged transverse vertical sectional view of the wall light fixture;

FIGURE 5 is a top plan view of the fixture partly broken away to illustrate the internal construction thereof;

FIGURE 6 is a front elevation of the fixture partly broken away to illustrate details of the internal construction thereof.

In the embodiment of the invention illustrated in the drawings, the numeral **10** generally designates a wall light fixture comprising an enclosure having a front wall **11**, rear wall **12**, end walls **13**, bottom wall **14** and top wall or cover **15**. The front and rear walls extend along spaced vertical planes and are horizontally elongated. As shown in the drawings, all of the walls are generally rectangular in shape. They may be formed from metal, opaque or translucent plastic, or any other suitable nontransparent material.

As shown most clearly in FIGURE 4, the lower end of front wall **11** projects downwardly and is then turned rearwardly and upwardly to define a free bottom portion **16**. The bottom wall has a rear portion **17** which lies along susbtantially the same horizontal plane as the free bottom portion **16** of the front wall and also has a front portion **18** which merges with rear portion **17** and which slopes forwardly and upwardly, terminating intermediate

the upper and lower ends of front wall **11**. At its forward end, the bottom wall **14** is provided with an upstanding flange **19** which is spot welded or otherwise secured to the rear face of the front wall. Similarly, the ends, front and rear walls may be secured together to form a rigid enclosure by spot welding or by any other suitable means. It will be noted that the upper portion of the rear wall and the vertical leg of the L-shaped strip **20** secured thereto are provided with aligned apertures **21** extending therethrough for attachment of the enclosure to a wall surface by screws, bolts, or any other appropriate connecting means. It will also be noted that the rear wall **12** and the bottom wall **14** are integrally formed from the same piece of sheet material.

A vertical partition **22** extends within the enclosure between end walls **13** and divides the interior of the enclosure into front and rear compartments **23** and **24**. The rear compartment houses an elongated fluorescent light tube **25** carried by fittings **26** secured to an inverted U-shaped platform **27**. Platform **27** is in turn detachably secured by bolts **28** to a pair of inverted U-shaped straps **29** which have their lower ends permanently secured to the upper face of bottom wall **14**. A ballast **30** for the fluorescent fixture is mounted beneath the tube in the space defined by U-shaped platform **27**. Compartment **24** is closed at the top by a pair of transparent plastic cover plates **31** which have their longitudinal edge portions resting upon the horizontal flanges of strips **20** and **32** and which have their remote end portions extending beneath the inwardly turned top flanges **33** of end walls **13**. The cover plates may be removed for cleaning or for replacement of tube **25** by simply flexing the centrally disposed end of one of the plates upwardly and then sliding both plates inwardly to release their outer edges from beneath end flanges **33**.

Access to the front compartment **23** is achieved by lifting the top wall or cover **15** which has its front edge hingedly connected to a rearwardly projecting flange **34** along the top of front wall **11**. Thus, the cover **15** may be lifted in the manner illustrated in FIGURE 2 and, when in closed position (FIGURES 3–5), rests upon the inwardly turned flanges **33** of the end walls **13**. Vents **35** may be provided in the cover for the circulation of air through front compartment **23**.

Within compartment **23** are a pair of incandescent light elements or bulbs **36** carried by socket fittings **37** which are mounted upon the inner surfaces of end walls **13**. Hence, bulbs **36** are spaced apart at opposite ends of the enclosure and, as shown most clearly in FIGURES 4 and 5, are spaced a substantial distance behind front wall **11**. Since the bulbs are located in the front compartment, they are also spaced well in front of rear wall **12** and the wall surface to which the entire fixture is connected.

At opposite ends of the sloping front portion **18** of the bottom wall are a pair of rectangular openings **38** (FIGURES 2 and 4). Referring particularly to FIGURE 4, it will be seen that each of the openings **38** is disposed in front of, rather than directly below, bulb **36**. That part of front portion **18** disposed directly behind each of the openings provides a light barrier which prevents light rays from passing straight downwardly from the bulbs. A pair of light-concentrating lenses **39** are supported in inclined positions upon front portion **18** and are held against rearward and endwise movement by L-shaped strips **40**, **41** and **42** secured to the inner surface of the bottom wall. It will be noted that the lenses are provided with concentric ridges or ribs which assist in concentrating the rays of light emanating from bulbs **36** and passing through openings **38**.

Arcuate sheet metal reflectors **43** are provided for each of the elements or bulbs **36** and extend above and behind

those bulbs. As shown in FIGURE 4, each of the reflectors has its forward edge portion secured by screws 44 to the hinged cover 15 so that when the cover is lifted the reflectors will be carried upwardly to expose the bulbs. It is believed apparent, therefore, that the direct mounting of the reflectors upon the cover greatly facilitates the removal and replacement of the incandescent bulbs and simplifies the job of cleaning or replacing any of the parts contained within the forward compartment.

Operation of the incandescent and fluorescent lights is controlled by a three-way switch 45 equipped with a pull chain 46. By selective operation of this switch, both the incandescent and fluorescent lights may be turned on for maximum direct and indirect illumination, or the incandescent and fluorescent lights may be operated separately for either direct or indirect lighting. When only the fluorescent tube is lighted, the soft and indirect illumination renders the unit particularly suitable for use as a night light.

If desired, the fixture may be provided with a convenient outlet 47 for the connection of electric shavers and other devices which patients may wish to use, and for the connection of electrically operated devices and implements used by doctors, attendants, etc.

An important aspect of the present invention lies in the fact that elements or bulbs 36 are mounted in such a way that excellent lighting is achieved without causing discomfort for either the patient reclining in bed beneath the fixture or for other persons in different parts of the room. Referring to FIGURE 1, it is believed apparent that the beams of light emanating from opposite ends of fixture 10 and indicated by broken lines 48 fully illuminate an area circumscribing the head portion of bed 49 and that because the beams from the two sources overlap, shadows that would otherwise arise if there was only a single light source are eliminated or greatly reduced.

The lower portion of the front wall 11 which extends downwardly below the front edges of the lenses 39, as well as the end walls 13 and the areas of bottom wall portions 18 to the rear of openings 38, constitute opaque or non-transparent light barriers which prevent light from shining directly in the eyes of persons in other parts of the room. This is particularly important in a hospital ward where some patients, lying in bed in other parts of the room, may wish to sleep and would obviously be disturbed by light shining directly upon them. In addition, the front portion 18 directly below the bulbs 36 obstructs rays of light which would otherwise shine directly into the eyes of a patient reclining in bed 49 should he glance upwardly, or towards the face of a patient lying in another bed in side-by-side relation with bed 49.

While in the foregoing, an embodiment of the present invention has been disclosed in considerable detail for purposes of illustration, it will be understood by those skilled in the art that many of these details may be varied widely without departing from the spirit and scope of the invention.

I claim:

1. A light fixture adapted to be mounted upon a wall behind a bed comprising an enclosure having a non-transparent and substantially vertical front wall and having a bottom wall providing a horizontal rear portion at substantially the same elevation as the lower edge of said front wall and providing an upwardly sloping front portion terminating intermediate the top and bottom of said front wall, a light element within said enclosure spaced above the sloping front portion of said bottom wall and spaced behind said front wall, said sloping front portion having a lens opening disposed forwardly of said light element and having a non-transparent light barrier portion directly below said light element, and a reflector mounted within said enclosure and extending behind and above said element for reflecting light through said opening, the lower portion of said front wall extending downwardly below said opening to provide a second light barrier in front of said element, whereby, said element is concealed by said barriers from an observer directly beneath or directly in front of said light element of said fixture.

2. The structure of claim 1 in which said enclosure is provided with a hinged top wall, said reflector being mounted upon said top wall and being swingable upwardly with said top wall for exposing said light element from above when the top wall is raised.

3. A light fixture adapted to be mounted upon a wall above the head of a bed comprising an enclosure having opaque front and bottom walls, said bottom wall having a horizontal rear portion at substantially the same elevation as the lower edge of said front wall and having an upwardly and forwardly sloping front portion terminating intermediate the top and bottom of said front wall, a pair of spaced light elements mounted within said enclosure above said sloping front portion and spaced behind said front wall, said sloping front portion having a pair of light-passage openings disposed forwardly of said light elements and having a light barrier portion disposed between said openings, a pair of light-concentrating lenses mounted over said openings and extending along the sloping plane of said front wall, and reflector means mounted within said enclosure for reflecting light downwardly and forwardly through said lenses and openings, said front wall having a lower portion extending downwardly beneath said openings and lenses to provide a frontal light barrier and said front portion of said bottom wall providing a lower light barrier directly beneath said elements.

4. The structure of claim 3 in which said enclosure is provided with a hinged cover, said reflector means being mounted upon said cover and being swingable upwardly with said cover for exposing light elements from above when the hinged cover is raised.

5. A light fixture adapted to be mounted upon a wall behind a bed comprising an enclosure having a non-transparent and substantially vertical front wall and having a bottom wall providing a horizontal rear portion at substantially the same elevation as the lower edge of said front wall, said bottom wall also providing an upwardly sloping front portion terminating intermediate the top and bottom of said front wall, a light element within said enclosure spaced above the sloping front portion of said bottom wall and spaced behind said front wall, said sloping front portion having a lens opening disposed forwardly of said light element and having a non-transparent light barrier portion directly below said light element, an upwardly and forwardly sloping light-concentrating lens extending over said lens opening within said enclosure and having its lower rear edge disposed at an elevation above the lower edge of said front wall, and a reflector mounted within said enclosure and extending behind and above said element for reflecting light through said opening and said lens, the lower porton of said front wall extending downwardly below said opening to provide a second light barrier in front of said light element and said lens, whereby, said element is concealed by said barriers from an observer directly beneath or directly in front of said fixture.

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