April 3, 1928. 1,664,447

G. E. ALLEN

LANTERN

Filed Aug. 24, 1926

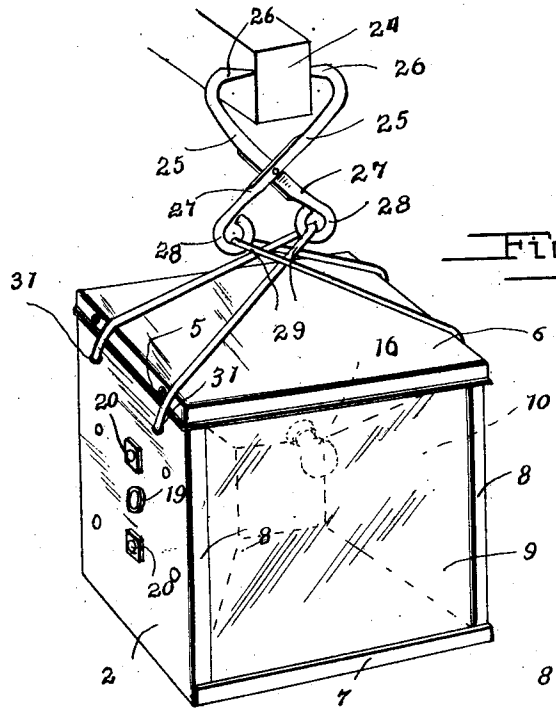


Fig. 1.

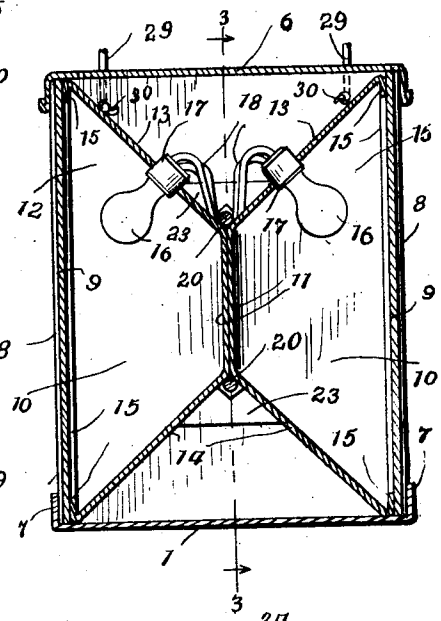


Fig. 2.

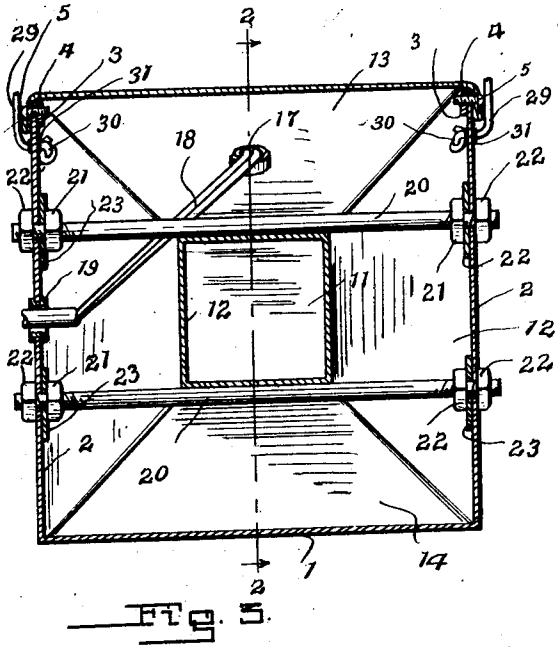


Fig. 5.

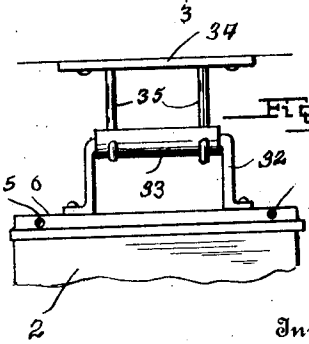


Fig. 4.

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UNITED STATES PATENT OFFICE.

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LANTERN.

Application filed August 24, 1926. Serial No. 131,250.

This invention relates to lanterns of the type illuminated by an electrically energized bulb, and one object of the invention is to provide a lantern from which light may be projected in opposite directions.

Another object of the invention is to provide reflectors so constructed that they will project light from a bulb over a large area.

Another object of the invention is to so arrange the reflectors in the casing that they may serve to hold transparent closures for open sides of the casing in proper position.

Another object of the invention is to permit each reflector to retain the other in proper engagement with its cooperating transparency and to unite them so that they may be inserted or withdrawn from the casing as a unit.

Another object of the invention is to firmly hold the reflectors in proper position in the casing, but permit them to be easily removed when necessary.

Another object of the invention is to provide the casing with bracing rods serving not only as means to brace opposite side walls thereof, but also as means to retain the reflectors in proper position.

Another object of the invention is to provide improved means for suspending the lantern from an overhead support.

Another object of the invention is to so construct the suspending means that it will be held in firm gripping engagement with an overhead support by the weight of the lantern.

The invention is illustrated in the accompanying drawings, wherein,—

Figure 1 is a perspective view of the improved lantern suspended from a support.

Figure 2 is a vertical sectional view through the lantern, taken along the line 2—2 of Figure 3.

Figure 3 is a vertical sectional view taken through the lantern along the line 3—3 of Figure 2, and

Figure 4 is a fragmentary view in side elevation of a modified form of the lantern.

The lantern constituting the subject matter of this invention includes a casing preferably formed of sheet metal and having a bottom 1 and opposed side walls 2 extending upwardly therefrom. The upper portions of the side walls are folded inwardly, as shown at 3 to provide smooth and reinforced upper edge portions and threaded openings 4 are formed in these reinforced portions to receive securing screws 5 by means of which the cover or top 6 of the casing is removably held in place. At its front and rear the casing is open and portions of the side walls are severed from the bottom to form detached portions which are folded inwardly to provide lower and side flanges 7 and 8. The end portions of the flanges 7 overlap the lower ends of the flanges 8 and are soldered or otherwise firmly secured thereto. These flanges constitute abutments for engaging transparencies 9 which preferably consist of clear glass and constitute transparent closures for the open front and back of the casing.

Reflectors 10 fit into the casing and each includes a central portion 11, side walls 12 and upper and lower walls 13 and 14. The walls and central portions of the reflectors are flat and the walls extend in diverging relation to each other and in flaring relation to the central portion, as clearly shown in Figures 2 and 3. At their outer ends the walls of the reflectors are folded inwardly to provide flanges 15 constituting abutments adapted to engage the inner surfaces of the transparencies 9 and retain them in close contacting engagement with the flanges 7 and 8 of the casing. The central portions 11 contact with each other and are firmly secured by solder, or any other suitable fastening means. The outer surfaces of the reflectors are painted a dead white in order to very efficiently reflect light rays from the bulbs 16 mounted in sockets 17 which are firmly secured in openings formed in the upper walls 13. It should be noted that the bulbs project downwardly from the upper walls at an outwardly incline and are so located with respect to the central portions and walls that the light rays may be projected outwardly by the central portions 11 of the reflectors, upwardly and downwardly by the upper and lower walls 13 and 14 and toward opposite sides by the side walls 12. Therefore, a large area may be illuminated when the lantern is in operation. The usual wires 18 lead from the sockets 17 and are passed outwardly through an eye 19 in one of the side walls 2 for connection with a suitable source of electric energy. In order to retain the reflectors in place and brace the side walls of the lantern there has been provided rods 20 which pass transversely through the casing above and below the attached central portions of the reflectors. These rods are

formed with threaded end portions passed through openings formed in the side walls 2 and carrying securing nuts 21 and 22 which, when properly tightened will firmly grip the walls of the casing. Reinforcing strips 23 are secured against the inner faces of the side walls 2 across the portions through which the rods 20 pass so that these portions of the side walls will not be unduly weakened and to also permit the securing nuts to be tightened without danger of rupturing the walls.

The lantern may be set or mounted upon a stationary support if so desired but it is preferred to have it suspended from an overhead support, such as a wooden beam shown in Figure 1 and indicated by the numeral 24. In order to suspend the lantern from the overhead support, there has been provided a grapple consisting of pivotally connected jaws 25. These jaws at their upper ends, are formed with inwardly extending prongs 26 and have their lower end portions constituting handles 27 which terminate in eyes 28. Flexible elements 29 which may consist of strong cord, flexible wire, or light chain are passed through the eyes 28 and have their end portions extending downwardly therefrom. The flexible suspending elements are disposed in crossed relation to each other, as clearly shown in Figure 1 and have their depending end portions diverging and passed inwardly through openings formed in the upper portions of the side walls 2 of the casing. Knots 30 are formed upon the free ends of the cords to prevent them from being drawn outwardly through the openings and eyes 31 are preferably mounted in the openings through which the cords pass, so that the cords will not be liable to be severed by sharp edges about the openings. From an inspection of Figure 1, it will be readily seen that when the lantern is to be suspended the jaws of the grapple are opened and engaged with opposite sides of the support 24. The weight of the lantern causes the grapple to be firmly held in engagement with the support. When it is desired to remove the lantern it is merely necessary to lift the lantern and swing the handle portions of the grapple away from each other, to move its jaws out of gripping engagement with the support.

In Figure 4, there has been shown a slightly modified form of the invention. In this form the grapple and flexible elements 29 are omitted and the cover 6 carries a handle 32 provided with a hand grip 33. A bracket 34 provided with hooks 35 is secured to the beam 24 or other suitable support and the lantern is suspended from the bracket by engaging the hand grip with the hooks. The handle is grasped about its grip 33 when carried from one place to another.

Having thus described the invention, I claim:

1. A lantern comprising a casing open at opposite sides and having opposed side walls, transparencies closing the open sides of the casing, reflectors in said casing having contacting intermediate portions and portions diverging therefrom and engaging said transparencies, bracing means for the side walls of the casing extending between diverging portions of the reflectors above and below their contacting intermediate portions and engaging the adjacent inner ends of their diverging portions to retain the reflectors in place, and means for supporting illuminating means in the casing between the reflectors and transparencies.

2. A lantern comprising a casing open at opposite sides and having opposed side walls, transparencies closing the open sides of the casing, reflectors in said casing engaging said transparencies to support the transparencies upright, rods passed through the casing above and below portions of the reflectors to brace the side walls of the casing and retain the reflectors in place, a removable cover for the open upper end of the casing retaining the transparencies in place, and means for supporting illuminating elements in the casing between the reflectors and transparencies.

3. A lantern comprising a casing open at its top and at one side, a transparency closing the open side of said casing and removable through its top, a removable cover for the open top of said casing retaining the transparency in place, a reflector in said casing facing its open side and having walls engaging said transparency, and means to support illuminating means in the casing between the reflector and transparency.

4. A lantern comprising a casing open at its top and at its front and back and having a bottom and opposed side walls, flanges extending from the bottom and side walls in overlying relation to the open front and back of the casing, transparencies in said casing fitted against said flanges and closing the open front and back of the casing, reflectors in said casing having contacting central portions and flaring wall portions engaging said transparencies to hold the same against said flanges, fastener rods extending through said casing above and below the central portions of said reflectors and engaged with the side walls of said casing, a removable cover for the open upper end of said casing retaining said transparencies in place, and illuminating elements in the casing between the reflectors and transparencies.

In testimony whereof I affix my signature.

GEORGE E. ALLEN. [L. S.]