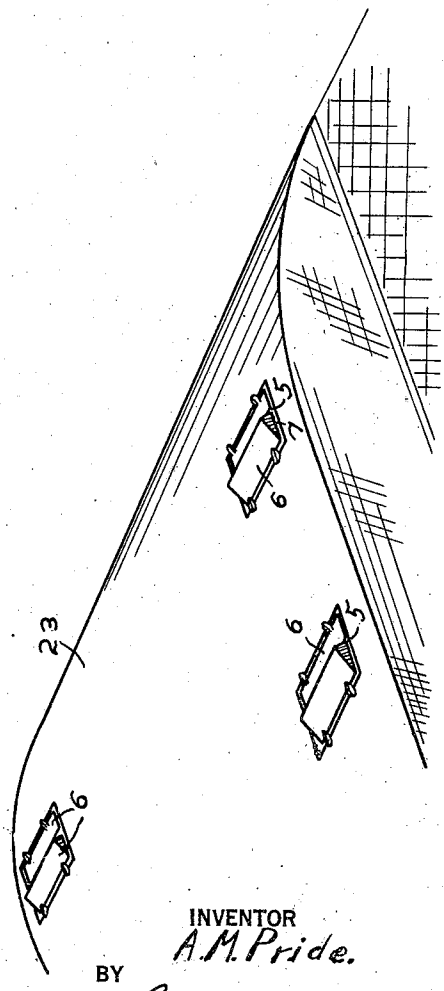
July 9, 1946. A. M. PRIDE 2,403,610

LANDING-DECK LIGHT

Filed March 1, 1932 2 Sheets-Sheet 1



Fig. 1.



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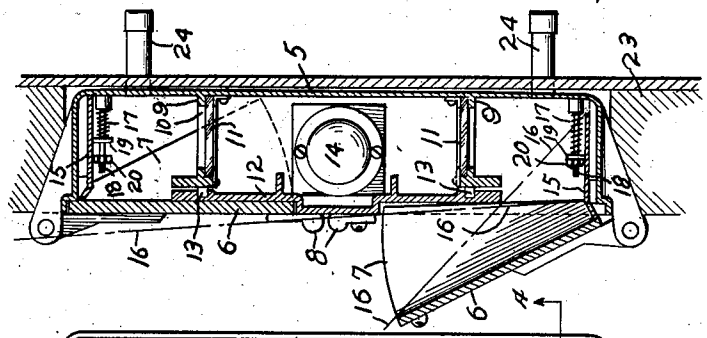


Fig. 3.

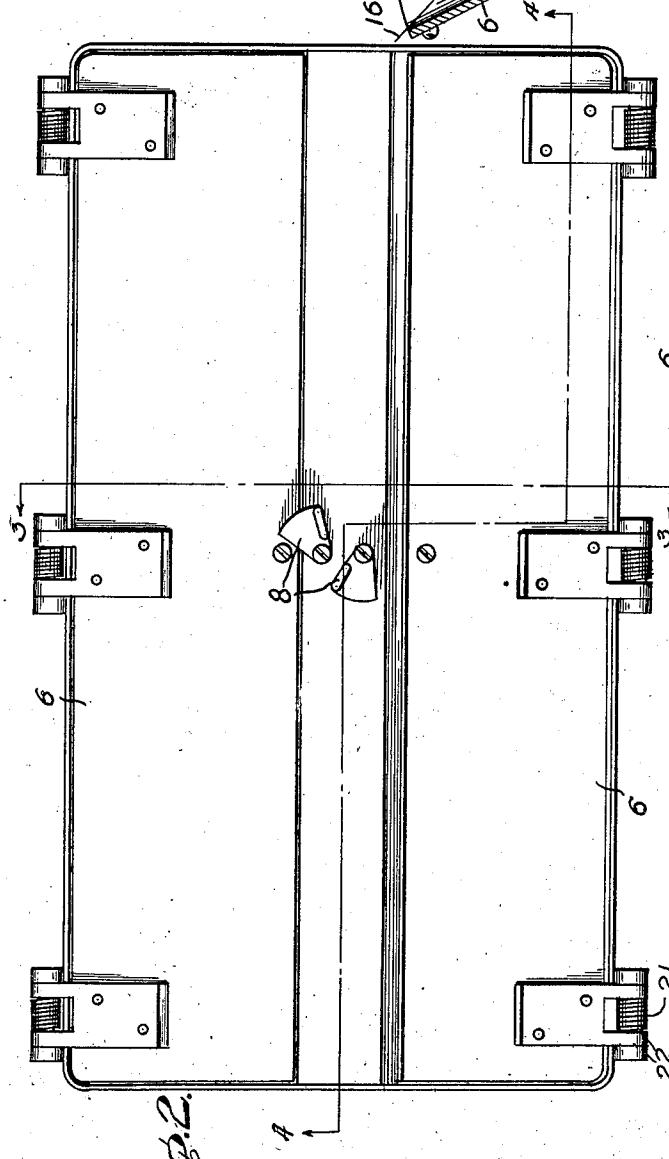


Fig. 2.

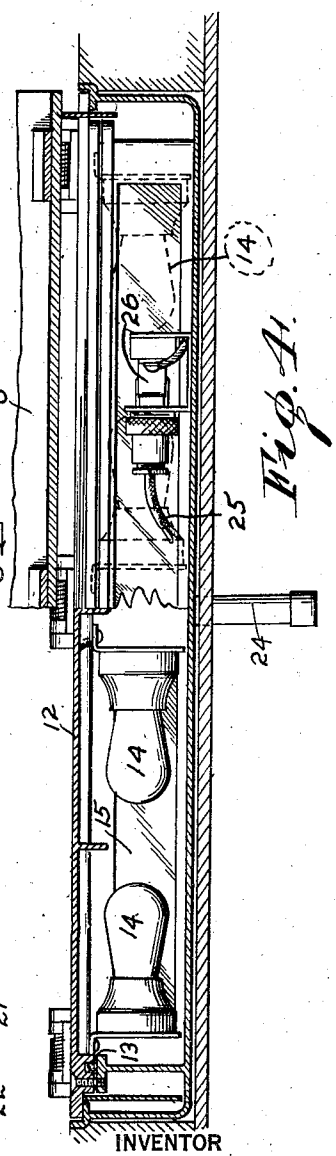


Fig. 4.

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Patented July 9, 1946 2,403,610

UNITED STATES PATENT OFFICE

2,403,610

LANDING-DECK LIGHT

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Application March 1, 1932, Serial No. 596,090

4 Claims. (Cl. 240—1.2)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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This invention relates to means for defining the position and limits of the airplane landing-deck of a ship by lights visible from a very limited zone only and has for its object to provide a device to assist a pilot to land safely at night on a vessel under darkened ship conditions.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts as will be described more fully hereinafter.

In the drawings:

Fig. 1 is a schematic view showing the flight deck of a vessel equipped with the present invention and an airplane in the position from which the lights are visible;

Fig. 2 is a top plan view of the device with one shield closed;

Fig. 3 is a transverse sectional view on the line 3—3, Fig. 2;

Fig. 4 is a longitudinal sectional view on the line 4—4, Fig. 2;

The device comprises a box or housing 5 having hingedly mounted light shields 6 with downwardly extending sides 7. These shields may be retained in the closed position by means of latches 8 or opened to make the light visible over a zone of the extent desired. Within the housing are longitudinally extending partitions 9 having apertures 10 covered with glass 11 so set as to prevent the entry of water into the space inside the partitions. A cover 12 for the space within the partitions is secured to the partitions with water tight sealing strips 13 between the cover and the partitions, the latches 8 being mounted on cover 12.

Sources of illumination 14, either incandescent light globes or glow lamps, are disposed in the water tight space enclosed by partitions 9 and cover 12. Since the extent of cover 12 precludes seeing the light directly, the vertically movable members 15 at the sides of the enclosed space are prepared to reflect the light between the edge of cover 12 and the outer edge of shield 6. Side members 7 prevent any emission of light in a lateral direction, and therefore the light is confined to a pyramid having its apex defined by the sides 7 of the shields and the planes 16 drawn from the upper edge of member 15 over the adjacent edge of cover 12 and from the lower edge of member 15 over the outer edge of member 6. It will be observed that the lower limit of the pyramid of light from each opening lies above the deck and the distance thereof from the deck increases proportionately to the distance from the opening, and hence no light strikes the

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deck. The reflecting surfaces on members 15 may be a suitable white paint or any other material adapted to the purpose while the inner surface of member 6 is rendered light absorptive to avoid reflection therefrom to the deck.

Springs 17 are disposed on bolts 18 fixed to the bottom of box 5. Eyes 19 are attached to the members 15 and slide on bolts 18 above springs 17. The upper edges of members 15 bear against the lower faces of shields 6 and tend to raise the shields when the latches 8 are turned off the shields, the extent of upward movement being adjusted by nuts 20 on bolts 18. Springs 21 connected to hinges 22 of the shields under torsional strain assist in raising the shields, but do not exert sufficient force to open them beyond the limit set by nuts 20.

Boxes 5 are set in the flight deck 23 along the sides thereof to define the landing area, the two shields of each making provision for directing light in either direction above the deck. Pipes 24 are provided to drain off any water that may pass through around the edges of shields 6. Connection between the lights 14 and the supply is made through wires 25 and a distributing fixture 26 to which each lamp is connected. As the shields are resiliently supported when open, passage of the wheel of an airplane over an open shield will merely move it into the closed position and will not damage or obstruct the wheel.

It is apparent from the foregoing description that the landing area on a vessel equipped with this invention is well defined when viewed from the proper position, which would be approximately known to the pilots of planes attached to the vessel, but would be invisible from above and from any other position than in the pyramid above defined. Fig. 1 illustrates an airplane 27 about to land upon a ship provided with such illuminating means. The extent of the zone of visibility of the lights is controlled by the degree of opening of the shields.

It will be understood that the above description and accompanying drawings comprehend only the general and preferred embodiment of my invention, and that various changes in construction, proportion and arrangement of parts may be made within the scope of the appended claims without sacrificing any of the advantages of my invention.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

I claim:

1. An illuminated marker, comprising a housing, members adapted to close substantially one side of said housing and hingedly mounted on said housing, said members having inturned end portions and springs connected to the hinges thereof tending to move said members outwardly, means having transparent side walls and forming a water-tight compartment in said housing, illuminating devices in said compartment, a slidably mounted element disposed to contact each of said members, each of said elements having a reflecting surface facing said illuminating devices to reflect light outwardly and upwardly when the first mentioned member is swung outwardly, guide members in said housing adjacent said elements, a spring on each of said guide members, an eye slidable on each of said guide members between the spring thereon and the free end thereof and connected to the adjacent slidable element whereby said slidable element is urged upwardly by said springs to exert a lifting force on the first mentioned member, and adjustable stop means on the free ends of said guide members to limit the movement of the eyes thereon.

2. An illuminated marker, comprising a housing, hingedly mounted members adapted to close substantially one side thereof, said members having inturned end portions, resilient means tending to move said members outwardly, means having transparent side walls and forming a water-tight compartment in said housing, illuminating devices in said compartment, a slidably mounted element disposed to contact each of said members, each of said elements having a reflecting surface facing said illuminating devices to reflect light outwardly and upwardly when the first mentioned member is swung outwardly, means to guide the movement of said elements, means to move said elements outwardly to exert a lifting force on said hingedly mounted members and move the reflected surface into position to project light outwardly and upwardly, and adjustable means to limit the outward movement of said elements.

3. An illuminated marker, comprising a housing, two hingedly mounted members having inturned end portions disposed with their hinged sides adjacent each other, resilient means tending to move said members outwardly, a source of illumination, means including transparent portions forming an enclosure for said source, means to reflect light through the opening in said housing left by the outward movement of either of said members, resilient means to move said reflecting means outwardly to exert a lifting force on said hingedly mounted members, and means to limit the outward movement of said reflecting means by said resilient means.

4. An illuminated marker, comprising a housing, outwardly swingable members mounted on opposite sides of said housing, a source of illumination in said housing, means to direct light from said source out through the opening left by outward movement of either swingable member, said means being mounted for inward and outward movement, means to move the aforesaid means to exert on the respectively adjacent swingable member a force to swing such member outwardly, and means to limit the outward movement of said light directing means.

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