Patented May 5, 1942

2,281,839

UNITED STATES PATENT OFFICE

2,281,839

ELECTRIC LANTERN

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Application October 1, 1938, Serial No. 232,819

12 Claims. (Cl. 240—10.63)

This invention relates to electric lanterns and has for its principal object to reduce the cost of manufacture and to simplify the assembly of the insulated connection between the battery and the lamp.

A preferred embodiment is shown in the accompanying drawing, in which

Fig. 1 is a side elevation of the complete lantern;

Fig. 2 is a plan section on the line 2—2 of Fig. 1;

Figs. 3 and 4 are vertical sections on the lines 3—3 and 4—4, respectively, of Fig. 2, the upper and lower parts of the lantern being broken away;

Fig. 5 is a section through a fragment of the lantern taken on the line 5—5 of Fig. 2;

Fig. 6 is a perspective view of a number of parts slightly displaced from their assembled position in the bottom of the lantern; and

Fig. 7 is a section of a fragment taken on the line 7—7 of Fig. 2.

The specific drawing and the corresponding description are used for the purpose of disclosure only and are not intended to impose unnecessary limitations on the claims.

Generally speaking, the lantern includes a casing 10 equipped with a removable cover 11 and having a hinged bail 12 secured to it by bolts 13. The base of the lantern is formed by a guard ring 14 and four legs 15 having their upper ends secured to the casing.

The casing is made by rolling a sheet of metal into the form of a cylinder and bending over and locking the meeting edges, as shown at 16 in Fig. 2. The cylinder thus formed is trimmed and stiffened by two beads 17 and 18 against the latter of which the cover 11 rests.

The lower edge of the casing is turned in to form a flange 19, as best shown in Fig. 4, upon which rests a corresponding flange 20 of a bottom plate or a head generally indicated by the letter A and comprising two reflectors 21 and 22 equally spaced from the center and surrounded by a cylindrical flange 23 joined to the flange 20.

Each reflector has a central opening to receive a lamp socket 24 insulated from it by rings 25 and 26 and made fast by crimping the edge 27 around the central opening against the ring 25. The upper edge of the lamp socket is counterbored to receive another insulating ring 28 which surrounds the upper end of a lamp bulb 29 screwed into the lamp socket.

Within the casing 10 is a battery 30 having a side contact 31 and a central contact 32. Current is brought to the lamp sockets 24 from the side contact through a head 33, the legs 15 and the side of the casing and a switch 34. Current from the center contact 32 to the center poles 35 of the lamps passes through a rivet 36 and a resilient contact plate 37.

To insure that there will be no short circuit in the last-mentioned connection, the rivet 36 must be and remain insulated from the head 33. To accomplish this the head is provided with a relatively large hole 38 affording clearance around the rivet and the head is flanked at opposite sides by insulating plates 39 and 40, both of which have rivet holes corresponding to the size of the rivet 36. Above the plate 39 is a metal plate 41 and beneath the plate 40 is the contact plate 37, all of which parts are secured together by the rivet 36.

In order to simplify centering all of these parts with respect to the axis of the rivet, the head 33 has three lugs 42 struck upwardly to cooperate with the rim of the circular insulating plate 39 and center it with respect to the head 33 and the central rivet hole.

The head 33 also has a number of lugs 43 struck downwardly, Figs. 4 and 6, to cooperate with the insulating plate 40 and align its opening with the axis of the head 33. The contact plate 37 has two lugs 44, Fig. 4, struck upwardly and fitting into corresponding holes of the insulating material of the plate 40, thus locking the contact member in a fixed position relative to that plate.

With this arrangement of parts and aligning lugs, the circular plate 39 will be automatically aligned on the top and will serve to locate the rivet 36 when it is passed through the metal plate 41. The lugs 43 will then properly align the lower insulating plate 40 and the contact plate 37 may be set and the lugs 44 formed with a punch. Then the rivet's head may be set up and the parts will be properly assembled and maintained in their proper relative positions.

The switch 34 is a matter of choice, and, in this instance, is chosen to correspond with the switch shown in the co-pending application of Larson, Serial No. 231,037, filed September 21, 1938, now Patent No. 2,255,291, dated September 9, 1941. It will be sufficient here to say that the switch consists of a sector-shaped member including the arms 46 to make actual contact with the respective rims of the lamp sockets 24. The switch slides along the curved wall of the casing 10 within the limits permitted by a slot 47, Fig. 1, and is under the control of an external knob 48.

The base is secured to the casing 10 by pro-

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Fig. 2

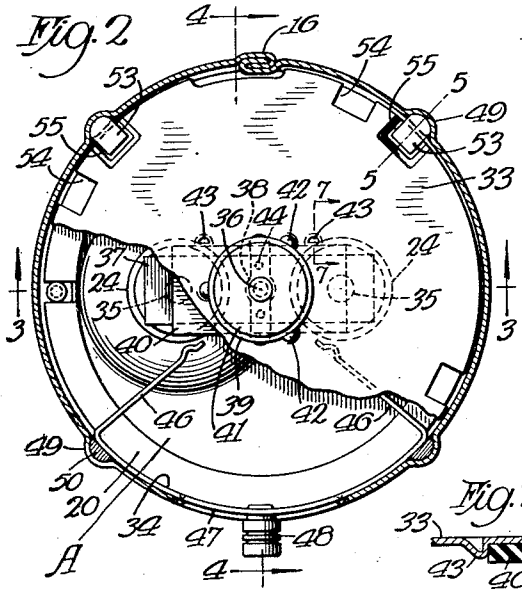


Fig. 1

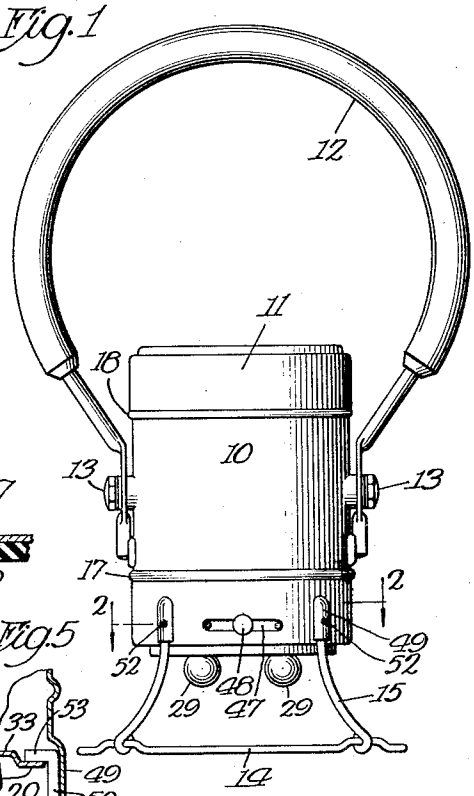


Fig. 7

Fig. 3

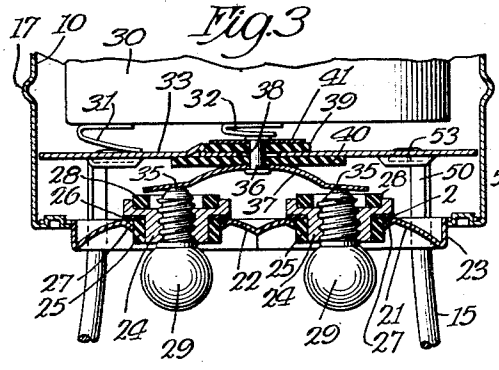


Fig. 5

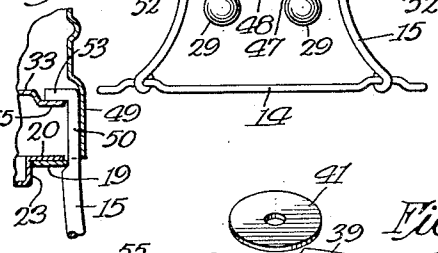


Fig. 4

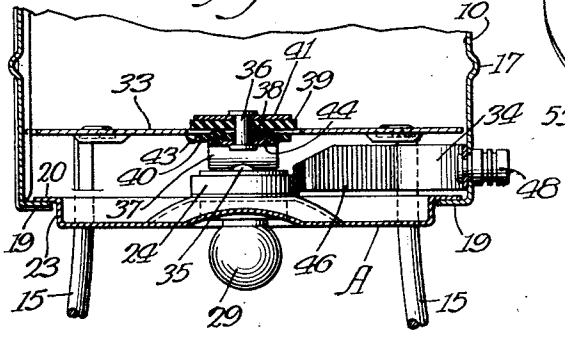
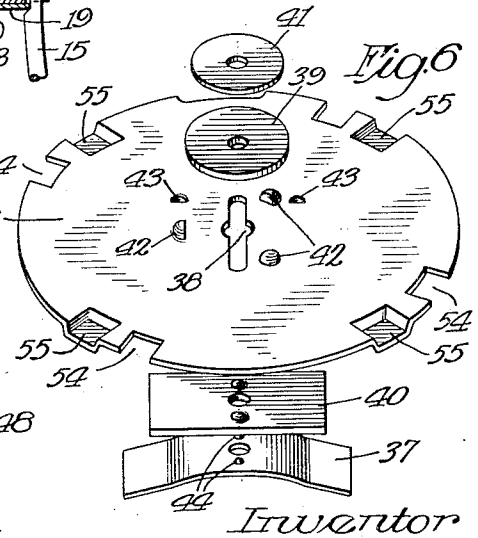


Fig. 6



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head upwardly against the lugs and the reflector downwardly against said flange.

10. In an electric lantern, a casing having an open end, an inwardly facing peripheral seat formed adjacent to said end, a plurality of radially inwardly directed lugs providing an outwardly facing peripheral seat formed within the casing inwardly of said end, a reflector plate mounted on the first named seat, a battery supporting head having spaced marginal openings and adjacent seating portions detachably mounted on the second named seat, and resilient means reacting between said seats yieldably urging the plate and head each to its seat and constituting the sole means for holding the plate and head against their respective seats, whereby said head may be inserted through the casing past the lugs and rotated so that the seating portions of said head will be engaged by the lugs.

11. In an electric lantern, a casing having an open end provided with an inturned marginal flange, a reflector plate seated on said flange and mounting a lamp socket, a lamp guard including legs having inturned lugs positioned within the casing spaced above said flange, a battery supporting head removably seated against said lugs, and a resilient connector reacting between said head and plate yieldably urging the head upwardly against the lugs and yieldably urging the plate downwardly against the flange.

12. In an electric lantern, a casing having an open end provided with an inturned marginal flange, a reflector plate seated on said flange and mounting a lamp socket, a lamp guard including legs having inturned lugs positioned within the casing spaced above said flange, a battery supporting head seated against said lugs, and a resilient connector reacting between said head and the base of a lamp mounted in said socket yieldably urging the head upwardly against the lugs and yieldably urging the plate downwardly against the flange.

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