Jan. 24, 1939. E. M. SORENG 2,144,745

LIGHTING FIXTURE

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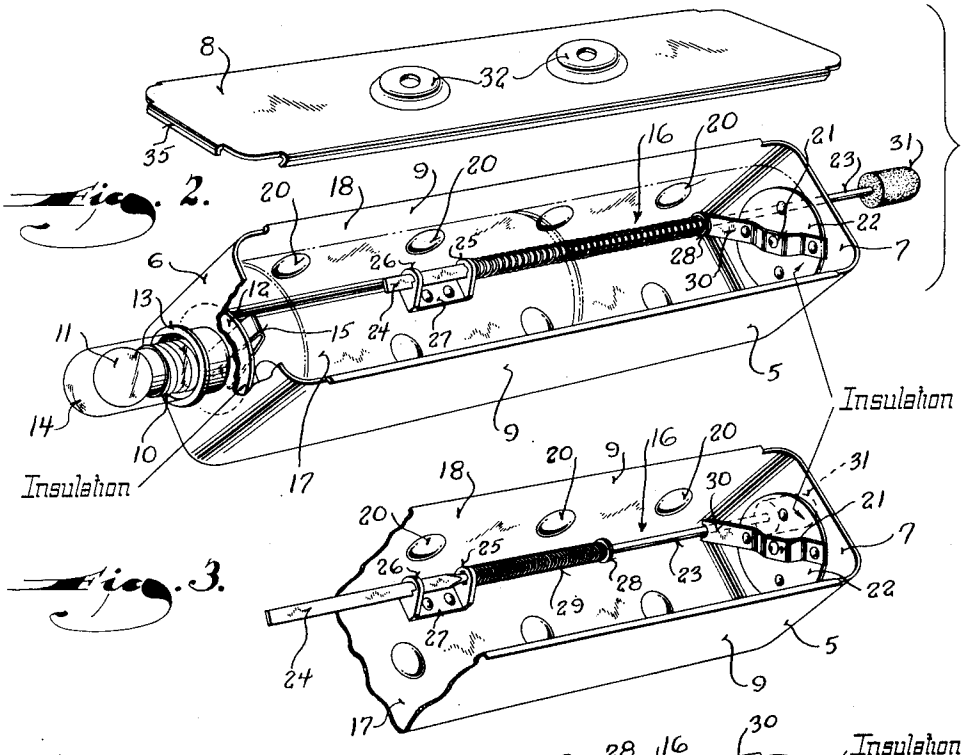



Fig. 2.




Fig. 3.

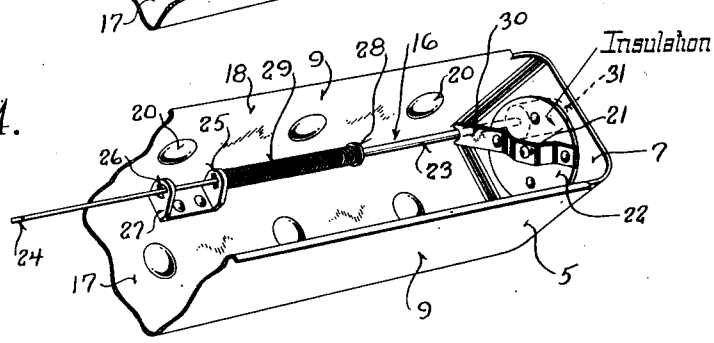



Fig. 4.

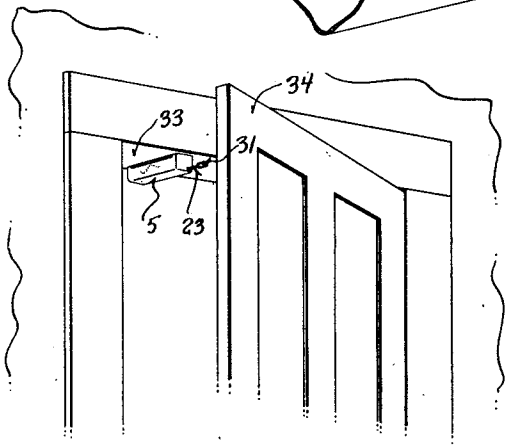



Fig. 1.

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Fig. 5.

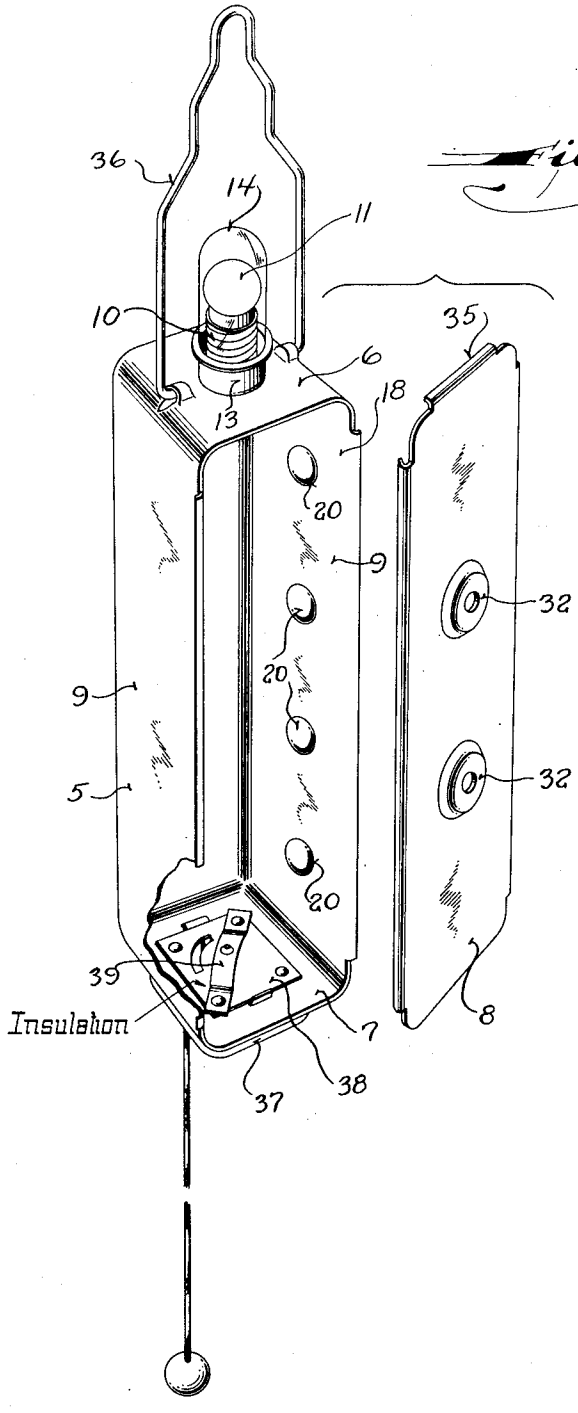
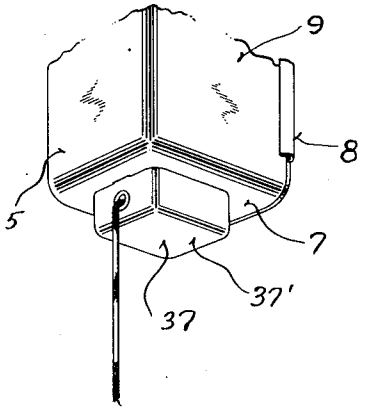



Fig. 6.




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# UNITED STATES PATENT OFFICE

2,144,745

## LIGHTING FIXTURE

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Application June 7, 1937, Serial No. 146,778

2 Claims. (Cl. 240—6.4)

This invention relates to improvements in lighting fixtures and refers particularly to a self-contained battery operated lighting fixture, particularly adapted for use in closets and the like.

It is an object of this invention to provide a lighting device of the character described which incorporates a switch and which may be so mounted that upon opening of the closet door the switch is closed to light the light.

Another object of this invention is to provide a compact lighting device of the character described in which the batteries to provide the electric energy are contained within the housing or casing of the light.

A further object of this invention is to provide a cheap lighting fixture of the character described which may be mounted on a wall or hung up in a closet to provide a semi-permanent lighting fixture.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described, and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

The accompanying drawings illustrate two complete examples of the physical embodiment of the invention constructed in accordance with the best modes so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of the door to a closet or other compartment, and illustrating one manner of using the lighting fixture of this invention;

Figure 2 is a perspective view of the entire fixture with the cover of the casing removed and the batteries shown in construction lines;

Figures 3 and 4 are perspective views showing one end portion of the lighting fixture and illustrating the manner in which the switch may be rendered inoperative;

Figure 5 is a perspective view illustrating a slightly modified embodiment of this invention; and

Figure 6 is a detail perspective view illustrating the lower end of the fixture shown in Figure 5.

Referring now particularly to the accompanying drawings in which like numerals indicate like parts throughout the several views, the numeral 5 designates the housing or casing of a lighting fixture having its opposite ends closed by walls 6 and 7, and having an open side adapted to be closed by a removable cover 8. The housing or casing and the cover 8 are formed of sheet metal, and the cover is preferably attached to the housing by means of a tongue and groove connection along the marginal edges of the side walls 9.

Mounted on the exterior of the end wall 6 is an electric light socket 10 to receive a small light bulb 11. The lamp socket has its outer terminal, which is formed by the outer shell of the socket, grounded to the casing or housing, and has its center terminal insulated therefrom by being attached to a disc of insulating material 12 fixed to the inner surface of the wall 6.

Surrounding the socket 10 and spaced therefrom is a cup 13, preferably secured in position by having its bottom wall confined between the socket and the outer face of the end wall. This cup member 13 frictionally receives the open end of a transparent cap 14 which is fitted over the light bulb to provide a more finished appearance and also protect the bulb.

Secured to the inner face of the insulating disc 12 and in electrical connection with the center terminal of the socket, is a spring clip 15. The outer end of the spring clip is doubled back and engages the center terminal of a conventional flashlight battery, illustrated in construction lines in Figure 2. The housing or casing 5 is of such cross sectional dimensions as to just receive the diameter of the battery and to provide space for a switch contactor, indicated generally by the numeral 16. The bottom wall 17, and one side wall 18 of the casing, have inwardly directed projections 20 which engage the side of the battery and hold the same away from the corner formed at the junction of the walls 17 and 18 in which corner the switch contactor is located.

Two batteries are preferably arranged in tandem, as illustrated in Figure 2, and when so positioned, the batteries are retained in position under spring tension by the spring clip 15 acting in conjunction with a spring contact strip 21 mounted on the end wall 7.

The contact strip 21 is riveted to a disc 22 of insulating material, which in turn is secured to the inner face of the end wall 7 in such a manner that no part of the contact strip 21 or its attachment to the disc 22 is in electrical contact with the end wall 7. One end of the strip 21 projects beyond the circumference of the disc 22 toward the corner of the casing in which the switch contactor 16 is mounted.

The switch contactor 16 consists of a rod 23 having its outer end portion slidable through a hole in the end wall 7 and its inner end portion 24, which is of flattened cross section, slidable through apertures in two ears 25 and 26. These ears are struck up from the opposite ends of a bearing member 27 riveted to the bottom wall of the casing.

At a point intermediate the distance between the bearing 27 and the end wall 7, the rod 23 has

a spring stop 28 fixed to it. An expansion spring 29 coiled about the rod is confined between the stop 28 and the ear 25 and when unrestrained, yieldingly urges the rod outwardly of the casing to engage the spring stop 28 with the end 30 of the contact strip 21 to electrically ground the strip 21. Inasmuch as the end wall of the adjacent battery is an electrical engagement with the strip 21, and as the spring clip 15 engages the center terminal of the other battery, an energizing circuit is thus established for the light whenever the spring 29 engages its stop 28 with the end 30 of the contact strip.

The outermost end of the rod 23 has a rubber button 31 fixed to it to be engaged by a closet door as the door is closed when the light fixture is mounted as illustrated in Figure 1.

To mount the fixture for this manner of use, the cover 8 has two off-set apertured portions 32 through which screws or other fastening means may be passed to securely attach the cover to the door jamb 33 in such a position that the rubber bumper 31 will be engaged by the door 34 when the door is closed.

It is to be observed that the end of the cover, which is remote from the door 34 in this instance, has its edge turned down as at 35 to engage the end wall 6 of the casing and limit relative endwise motion of the cover and casing so that the engagement of the door with the switch contactor rod does not shift the casing, with respect to the cover.

If it is desired to secure the contactor against movement to its switch closing position, it is only necessary to press the rod 23 to its innermost limit of movement and turn it slightly. To this end the hole in the ear 25 of the bearing 27 is of an oblong or rectangular shape substantially corresponding to the cross sectional shape of the flattened end portion 24 so that when the rod is pushed in sufficiently to dispose the junction of its flattened end portion and its round cross section inwardly of the ear 25, the rod may be turned and thereafter held against spring propelled endwise motion. To limit the rotation of the rod and facilitate its disposition in the position at which it is held against spring propelled endwise motion, the hole in the other ear 26 is of irregular shape to provide stop abutments cooperating with the flat sides of the flattened portion 24, as will be readily apparent.

A modified embodiment of the invention is illustrated in Figures 5 and 6. In this instance, the casing is provided with a bail 36 attached to the end wall 6 to permit the entire fixture to be suspended from a suitable support, and instead of the switch described, a small pull chain switch, indicated generally by the numeral 37, is mounted on the end wall 7.

Inasmuch as the details of this switch form no part of the invention, they have not been illustrated; suffice it to say that the switch mechanism, which is enclosed within a sheet metal cover 37' fixed to the end wall 7, is mounted on a square of insulated sheet material 38 fixed to the inner surface of the end wall 7. One terminal of the switch is electrically connected to a contact strip 39 similar to the strip 21 and arranged to engage the adjacent end wall of a battery so that whenever the switch 37 is closed, this terminal of the battery will be grounded to the casing to complete the lighting circuit.

In other respects the embodiment of the invention illustrated in Figures 5 and 6 is the same as that previously described.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art, that this invention provides a compact self-contained lighting fixture admirably adapted for use in closets and the like, and that its novel construction permits the manufacture thereof at an exceptionally low cost.

What I claim as my invention is:

1. A lighting fixture of the character described comprising: a casing having spaced end walls and being of a size to receive conventional flashlight batteries arranged endwise between its end walls; an electric light bulb mounted on the outside of one end wall with one terminal thereof grounded to the casing and its other terminal insulated therefrom; a contact member on the inner face of said end wall electrically connected with said other terminal of the light bulb and adapted to engage one terminal of a flashlight battery in position; a contact strip mounted on the inner face of the opposite end wall but electrically insulated therefrom, said strip having a part adapted to engage the other terminal of a flashlight battery in position; and means for electrically grounding said contact strip to the casing comprising, a longitudinally movable rod projecting through a hole in said opposite end wall adjacent to one end of said contact strip but with the rod spaced from the strip; a coil spring coiled about the rod; and a spring stop carried by the rod and engaged by the spring so that the spring yieldingly urges the rod outwardly of the casing to a position at which the spring stop engages said contact strip to electrically ground the same whereby the lighting circuit is closed whenever the rod is released for spring propelled outward motion.

2. A lighting fixture of the character described comprising: a casing having spaced end walls and being of a size to receive conventional flashlight batteries arranged endwise between its end walls; an electric light bulb mounted on the outside of one end wall with one terminal thereof grounded to the casing and its other terminal insulated therefrom; a contact member on the inner face of said end wall electrically connected with said other terminal of the light bulb and adapted to engage one terminal of a flashlight battery in position; a contact strip mounted on the inner face of the other end wall but electrically insulated therefrom, said strip having a part adapted to engage the other terminal of a flashlight battery in position; and means for electrically grounding said contact strip to the casing comprising a longitudinally movable rod projecting through a hole in the casing wall adjacent to one end of said contact strip but with the rod spaced from the strip; a coil spring coiled about the rod; a spring stop carried by the rod and engaged by the spring so that the spring yieldingly urges the rod outwardly of the casing to a position at which the spring stop engages said contact strip to electrically ground the same whereby the lighting circuit is closed whenever the rod is released for spring propelled outward motion; and means for releasably securing the rod against spring propelled motion upon the application of a predetermined degree of rotation to the rod while in its retracted position.

EDGAR M. SORENG.