H. M. KORETZKY.

PORTABLE HAND LAMP.

APPLICATION FILED JUNE 18, 1919.

1,353,348. Patented Sept. 21, 1920.

Fig. 1.

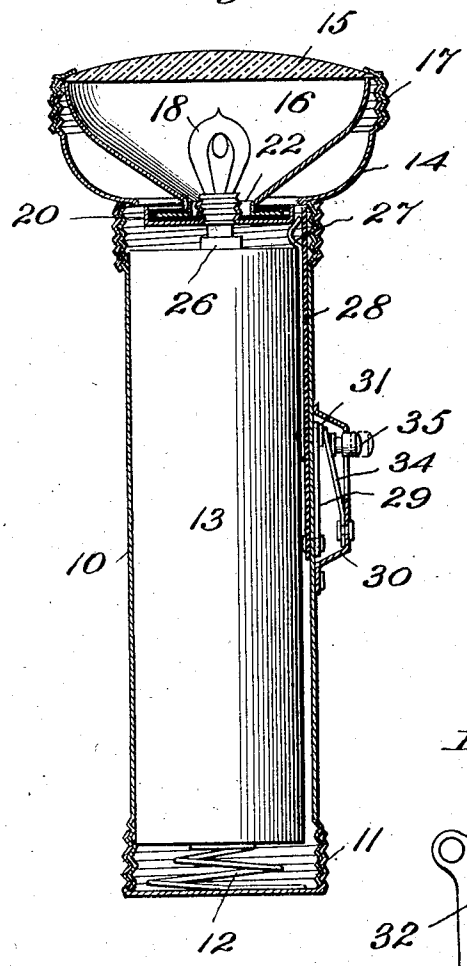


Fig. 2.

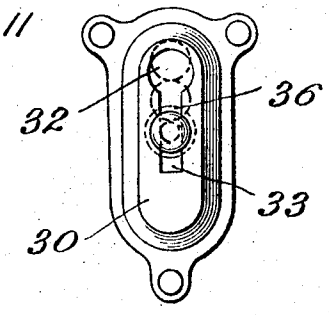
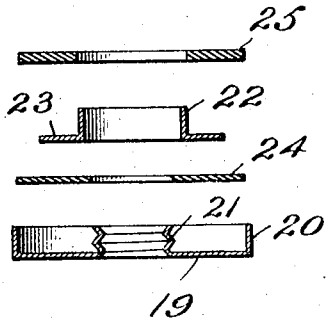


Fig. 3.



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PORTABLE HAND-LAMP.

1,353,348. Specification of Letters Patent. Patented Sept. 21, 1920.

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To all whom it may concern:

Be it known that I, HARRY M. KORETZKY, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Portable Hand-Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to improvements in portable electric lights of the kind in which the current is supplied by a battery of cells within a casing which forms the handle.

One object of the invention is to provide a simple, effective and easily and cheaply constructed combination of reflector and lamp socket, so made as effectually to prevent all possibility of electric connection between the reflector and battery, thus avoiding all danger of external accidental short circuits. Another object of the invention is to provide a simple and inexpensive circuit closer for devices of this character which can be locked on open circuit by a simple slight movement, thus avoiding all danger of accidentally lighting the lamp by means of the switch, either in the pocket, work-box or in shipping.

The invention is illustrated in a preferred embodiment in the accompanying drawings, wherein Figure 1 is a longitudinal section of the device showing the battery in side elevation, Fig. 2 is a plan view of the circuit closing switch, and Fig. 3 is a sectional view of the insulating socket support with the parts separated for clearness.

In the form of my invention herein illustrated, the casing is composed of a metal cylinder 10 open at both ends. Upon the rear end a metallic closing cap 11 is screwed, and this is provided with a spring 12 adapted to press upon the zinc extremity of the battery and at the same time to press the same upward to maintain a firm connection at the upper or carbon terminal of the battery hereinafter described. The battery of the usual well known construction, and covered as usual with a cardboard or other insulating envelop, is shown at 13.

A front cap 14 screws onto the upper end of the cylinder 10, and this carries the lens 15 and the reflector 16, both secured by the threaded ring 17. The lamp 18 is carried by the reflector, and in order to insulate the socket which connects one end of the lamp filament with the battery, I have devised the following construction.

The socket proper comprises a flat plate 19, having an external upturned annular flange 20, and a central screw-threaded portion 21 adapted to receive the usual screw-threaded end of the lamp 18.

The neck of the reflector, which surrounds the lamp 18, but is separated slightly therefrom, fits tightly over a thin metal cylindrical support 22 having a diameter somewhat greater than the threaded socket neck 21, and provided with a surrounding plane annular flange 23, whose outer diameter is materially less than the inner diameter of the upturned annular flange 20 (see Fig. 3).

A thin insulating lower washer 24 is placed upon the upper surface of the plate 19, just filling the space between the socket neck 21 and the flange 20. The support for the reflector is then laid with its flat portion 23 against the upper surface of the washer 24, and over this is pressed the upper insulating washer 25. This washer has the same outer diameter as the lower washer 24, but the central hole therein just fits around the cylinder 22 of the reflector support. This upper washer therefore acts to center the reflector support, so that it is kept permanently out of contact with every part of the lamp socket 19, 20, 21.

The parts having been thus assembled, the neck of the reflector is fitted over the cylinder 22 and against the upper washer 25, when a single blow from a suitable die is sufficient to spin the edge of the cylinder 22 outward and against the reflector in a manner to form a permanent connection between the reflector and the lamp socket.

As shown in Fig. 1, when the lamp is screwed into the socket thus secured, its central terminal makes the usual connection with the carbon terminal 26 of the battery; and this connection is made firm by the pressure of the spring 12, as already stated. The external lamp terminal, being screwed into the socket-neck 21, is electrically connected with the outer flange 20 which comes into appropriate electrical relation to the circuit closing switch when the cap 14 is screwed into place in the following manner.

Inside of the casing 10 is a metallic strip 27, insulated from the casing by the strip 28, and connected physically and electri-

cally with the metal strip 29 within the switch casing 30, by metal rivets 31, also insulated from the casing 10. The upper end of the strip 27 is curved to form a spring terminal against which the flange 20 of the lamp socket normally bears when the cap 14 is in place.

Various forms of switch might be used with the device thus far described. My preferred switch is shown in Figs. 1 and 2.

In this switch the casing 30 has a round opening 32 near one end with which communicates a straight and somewhat narrower slot 33. A contact spring 34 is riveted inside the casing, and may be pressed down into contact with the rivet 31 for temporary lighting by means of a button 35, whose head fits loosely within and is admitted by the hole 32. This button has an inner flange 36 (see Fig. 2) of such a diameter as to prevent the button passing out of the opening 32 as a whole.

It is clear that when this contact occurs between the spring 34 and the rivet 31, the lamp will be lighted by current passing as follows—from the zinc end of the battery by spring 12, cap 11, casing 10, switch casing 30, spring 34, rivet 31, strip 27, socket 20, 19, 21, outer lamp terminal, through the lamp to its central terminal and thus to the carbon end of the battery.

The button 35 is normally kept in its outer position, shown in dotted lines in Fig. 1, by pressure of the spring 34. As shown in Fig. 1 the button 35 has a narrow neck which is adapted to enter the slot 33, permitting the button to be slipped back to the full line position in Fig. 2. When so treated, the button will exert a wedging action upon the spring 34, causing it to be pressed inward until contact is made and the lamp is lighted. This position is employed when it is desired to prolong the lighting without keeping the finger on the button.

On the other hand, if the button is slipped back into the slot 33 only a very short distance, the spring 34 will not be wedged into contact, but the button will be locked in open circuit position, since the head is too large to pass into the slot. Accidental external pressure will therefore not cause the lamp to be lighted. The same result is secured by sliding the button forward until the upper edge of the opening 32 enters the neck of the button. These two safety or locked positions are shown in dotted lines in Fig. 2.

Various changes may be made in the device as shown without departing from the scope of my invention, and I do not limit myself to the exact details herein shown and described.

What I claim is—

In apparatus of the class described, a lamp socket having a central screw-threaded socket neck and an external upturned flange, a reflector-support comprising a flat portion and a cylindrical portion surrounding but out of contact with the socket neck, a flat washer under said reflector-support, a second washer over the flat portion of the reflector-support and adapted to center the neck thereof within the flange around the lamp socket, and a reflector attached to the neck of the reflector-support.

In testimony whereof, I affix my signature.

HARRY M. KORETZKY.

In presence of—
CHAS. T. LUTHER.