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3,007,110

FLASHLIGHT ELECTRIC UTILITY TESTERS

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FIG. 1

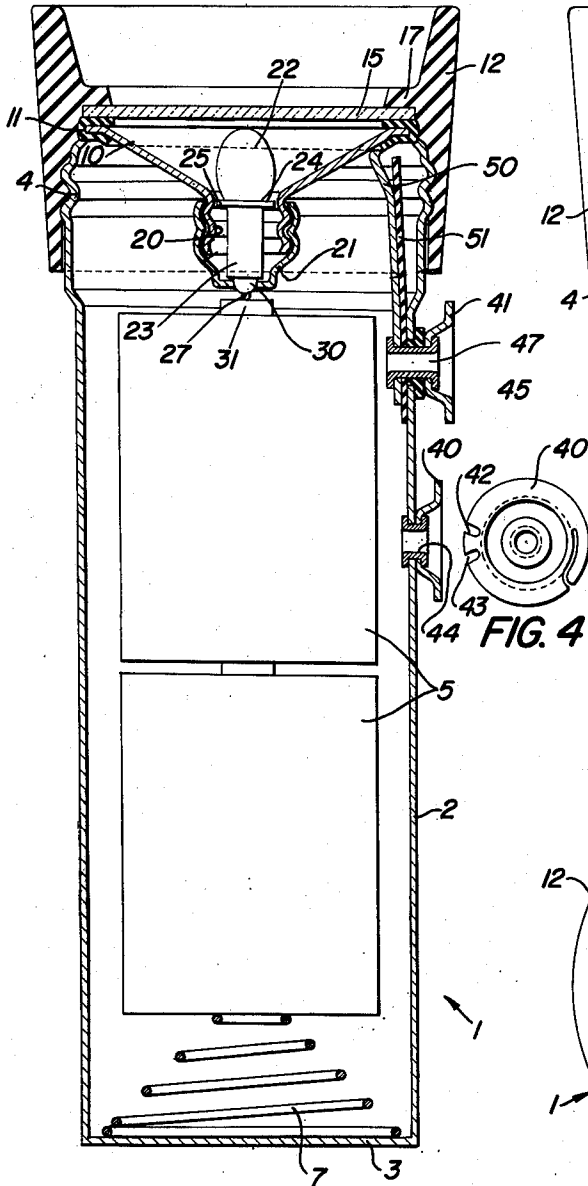


FIG. 2

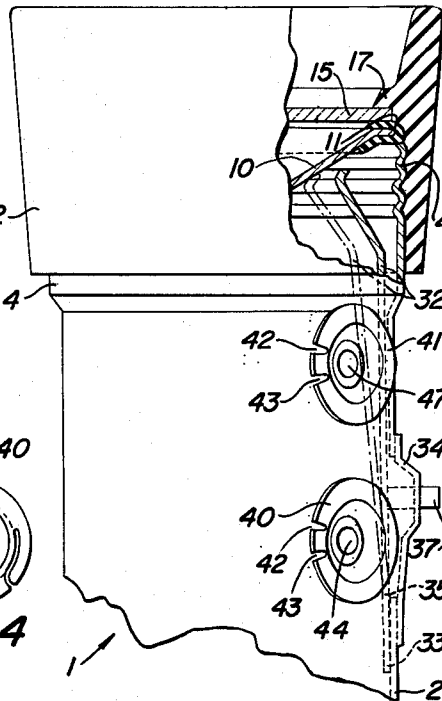


FIG. 4

FIG. 5

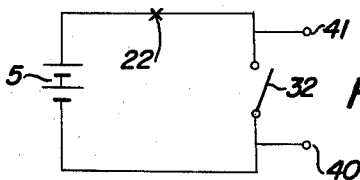
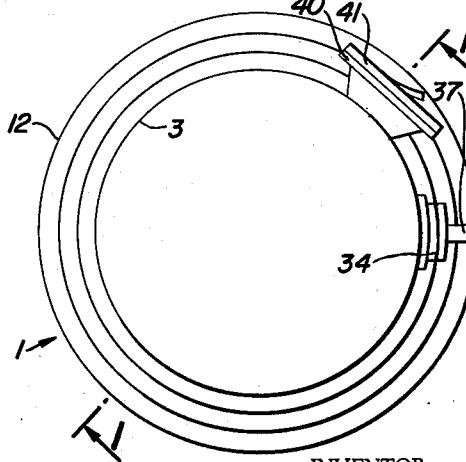


FIG. 3



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FLASHLIGHT ELECTRIC UTILITY TESTERS
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The present invention relates to improvements in electric hand lamps; particularly to a portable lamp having a casing containing a light bulb and a source of electric energy and bearing a switch to enable the bulb to be energized or extinguished by operation of the switch to close or open the circuit.

An important object of the invention is to provide an electric lamp of the flashlight variety, having the usual design to serve for illuminating purposes; and further equipped with contact terminals to adapt the lamp for testing other circuits and separate electrical appliances of numerous kinds.

In its preferred form the invention comprises a simple and inexpensive attachment or addition to an otherwise conventional flashlight arranged so as to render the lamp useful as a circuit tester or continuity tester, with its battery supplying current, and its incandescent lamp acting as a current indicator, with no loss or impairment of its capacity for illumination.

Another object of the present invention is the provision of a device of the character described which requires practically no changes in the parts of an ordinary flashlight and allows standard flashlight parts to be used without any changes, thus greatly reducing the cost of tooling up and of storing parts for the making of these devices.

Yet still another object is the arrangement and construction of the aforementioned contact terminals in such a manner as to enable a user to test rapidly, conveniently and inexpensively all types of fuses, automobile bulbs, male and female plugs, outlets, switches, sockets, relays, so-called "jacks" and telephone plugs, automobile and television antennas and leads, lamps, wires for open and short circuits, loud speakers and phones by listening for a clicking sound, Morse codes by flashes, and the like; moreover, said contact terminals are adapted for facilitating the attaching thereto of wire leads to be used as test prods.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangements of parts without departing from the spirit of the invention as claimed.

In the accompanying drawing a preferred form of the invention has been shown.

In said drawing:

FIGURE 1 is a longitudinal sectional view, on the line 1—1 of FIG. 3, of a preferred embodiment of my invention;

FIG. 2 is a fractional side view of the same angularly disposed relative to FIG. 1 at an angle of about forty-five degrees;

FIG. 3 is a bottom plan view;

FIG. 4 is a detailed plan view of a contact terminal; and,

FIG. 5 is a wiring diagram.

Similar reference characters refer to similar parts throughout the several views.

In the drawing the numeral 1 denotes a cylindrical casing of conductive material having a tubular main portion 2, a bottom 3, and a threaded, preferably increased mouth portion 4. The main portion 2 is adapted for

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containing one or more batteries 5 and a conductive spring 7 interposed between the conductive bottom of a battery 5 and the bottom 3 of the casing 1. A conductive reflector 10 is provided with an insulating rim cover 11, which is interposed between the reflector 10 and the upper extremity of the mouth portion 4 of the casing 1. An internally threaded cover member 12 is screwed upon the mouth portion 4 of the casing 1, and a transparent member 15 is interposed between the rim cover 11 and a shoulder portion 17 of the member 12. The reflector 10 has a threaded center portion 20 upon which is screwed a cup-shaped member 21. A light bulb 22 has a conductive socket 23 provided with a flange portion 24 (FIG. 1) which rests against a ring portion 25 of the reflector 10. The socket 23 with its flange portion 24 constitutes a first terminal of the light bulb 22, and a second terminal 27 thereof is insulated from the socket 23 by an insulating member 30. The terminal 27 rests against a terminal 31 of one of the batteries 5. Any suitable switching device is provided on the casing 1 for electrically connecting and disconnecting the conductive reflector 10 and the socket 23 to, and from the conductive casing 1, which is connected to the bottom terminal of a battery 5 by the spring 7, as previously referred to. In the instance shown in FIGS. 2 and 3 said switching device consists of a resilient conductive longitudinal blade 32 secured with one end at 33 to the inner side of the casing 1, and of a knob member 34 shiftably attached to the outer side of the casing 1 and connected to the blade 32 by means of traverse guide members 35, which extend through a slot in the main portion 2 of the casing 1. If the blade 32 is in the position shown in full lines in FIG. 2, it does not touch the reflector 10, so that the same is fully insulated from the casing 1 by the insulating rim cover 11. If the blade 32 is in the position shown in dash-and-dotted lines in FIG. 2, its upper end touches the reflector 10, so that an electrical current flows from the batteries 5, over the light bulb terminal 27, the electric light bulb 22, the socket 23, the reflector 10, the blade 32, the casing 1, the spring 7, back to the batteries 5, so that the light bulb 22 will light up. A pin 37 shiftably extended through the member 34, and connected with one end to the blade 32, constitutes a code flicker for facilitating the giving of Morse signals or the like with the light bulb 22, by alternately moving the blade 32 from its position shown in full lines in FIG. 2 to that indicated by dash-and-dotted lines.

The structural parts described so far relate to the flashlight and do not necessarily form a part of my present invention. They have been described in detail, however, for facilitating the understanding of the now following portion of this description, which relates directly to my invention.

Mounted externally to the main portion 2 of the casing 1, about forty-five degrees to the left of the switch operating knob member 34, and independent thereof, are two contact terminals 40 and 41. The same preferably are cup-shaped and have angularly to each other disposed open slots 42 and 43 in the rim portions (FIGS. 2 and 4). The terminal 40 is conductively connected to the casing 1 by means of a tubular rivet 44 or the like, whereas the terminal 41 is insulated from the casing 1 by means of an insulating washer 45 (FIG. 1) interposed between a conductive hollow rivet 47 and a wall section of the main portion 2 of the casing 1, through which the same is extended. The rivet 47 also extends through one end of a conductive blade 50, the other end of which touches the conductive reflector 10, and it also extends through a longitudinal insulating member 51 interposed between the inner side of the casing 1 and the blade 50. Thus,

if any conductive object is brought into engagement with, or is electrically connected to, the terminals 40 and 41, an electrical current passing from the terminal 40 through said conductive object, to the terminal 41, the rivet 47, the blade 50, the reflector 10, the light bulb 22 with its socket 23 and its terminal 27, the batteries 5, the spring 7, the casing 1 back to the terminal 40, will cause the bulb 22 to light up. Thus said object can be tested easily and quickly. The slots 42 and 43 in the terminals 40 and 41 facilitate the attaching of wire leads (not shown) to the same, so that said wire leads can be used conveniently as test prods.

Since certain changes may be made in the above article and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination with a flashlight having a control switch, a casing, a flashlight light bulb and flashlight batteries within said casing, of contact terminals being insulated from and independent of said switch and being in spaced relation to, and insulated from each other and having cup-shaped main portions as well as rim portions provided with open slots and being mounted with their main portions on the outer side of said flash light casing and adapted for being connected to terminals of an electrical circuit, so that an electrical current may pass from a first one of said contact terminals, over a conductive object to be tested and conductively connected to said contact terminals to a second one of said contact terminals, through said casing, said batteries, said light bulb to said first contact terminal.

2. A combination flashlight and circuit tester comprising a conductive casing, a light bulb mounted on said casing, having two terminals and being insulated therefrom, a control switch for said bulb mounted on said casing, a source of current contained in said casing, a first contact terminal having a cup-shaped main portion and a rim portion provided with open slots and being mounted with its main portion to the outer side of said casing in spaced relation to said switch and being conductively connected to the casing, a second contact terminal having

a cup-shaped main portion and a rim portion provided with slots and being mounted with its main portion to the outer side of said casing and insulated therefrom as well as from said first contact terminal and from said switch, and a conductive member conductively connecting said second contact terminal to a first terminal of said light bulb and being insulated from said casing, the second terminal of said light bulb being conductively connected to a first one of the terminals of said source of current, while the second terminal of said source of current is conductively connected to said casing.

3. A combination flashlight and circuit tester comprising a conductive casing having an open end portion, a conductive reflector having an outer rim portion, insulating means encompassing the outer rim portion of said reflector and being interposed between the reflector and the open end portion of said casing, an insulating cover member fastening said insulation means and said reflector to said casing, a light bulb mounted on said reflector having two terminals one of which is conductively connected to the reflector, a control switch for said bulb mounted on said casing, a source of current contained in said casing, a first contact terminal of cup-shaped formation having a ring-shaped rim portion provided with angularly to each other disposed open slot and being mounted to the outer side of said casing in spaced relation to said switch and being conductively connected to the casing with its rim portion spaced from the casing, a second contact terminal having a cup-shaped main portion and a ring-shaped rim portion provided with angularly to each other disposed slots and being mounted to the outer side of said casing and insulated therefrom as well as from said switch and said first contact terminal with its rim portion spaced from the casing, and a stationary conductive blade conductively connecting said second contact terminal to said reflector, the second terminal of said light bulb being conductively connected to a first one of the terminals of said source of current, while the second terminal of said source of current is conductively connected to said casing, and said switch is adapted for temporarily connecting conductively said reflector to said casing.

References Cited in the file of this patent

UNITED STATES PATENTS

1,653,669	Rydz	Dec. 27, 1927
2,231,660	Carlotti et al.	Feb. 11, 1941
2,540,471	Borsody	Feb. 6, 1951