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LAMP ATTACHMENT FOR DRY CELLS

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Fig. 1.

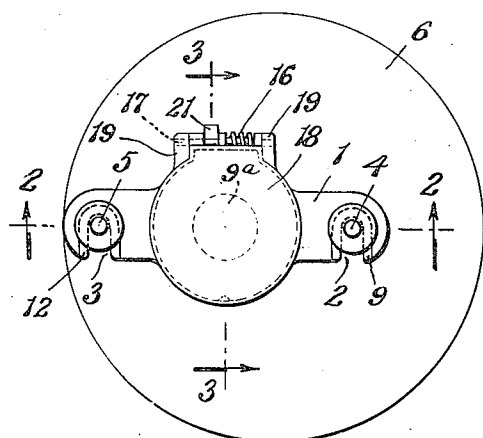


Fig. 3.

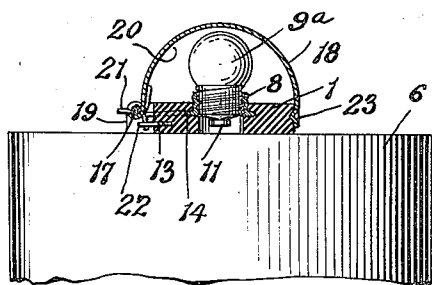


Fig. 2.

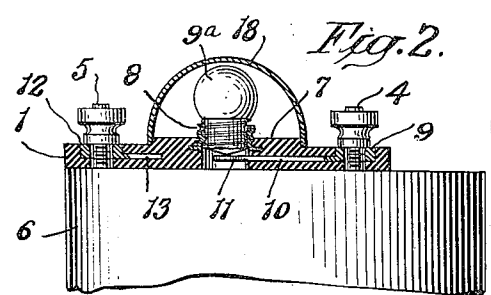


Fig. 4.

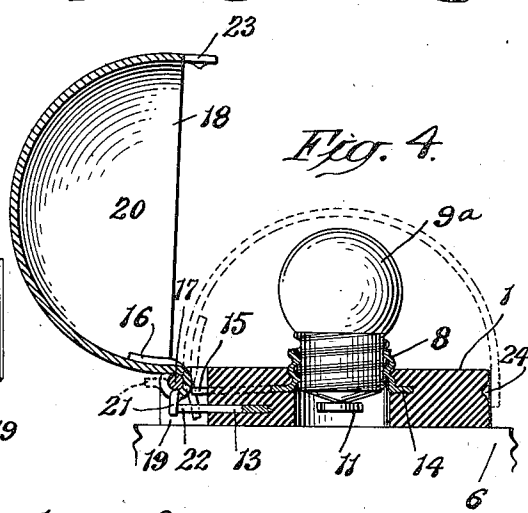
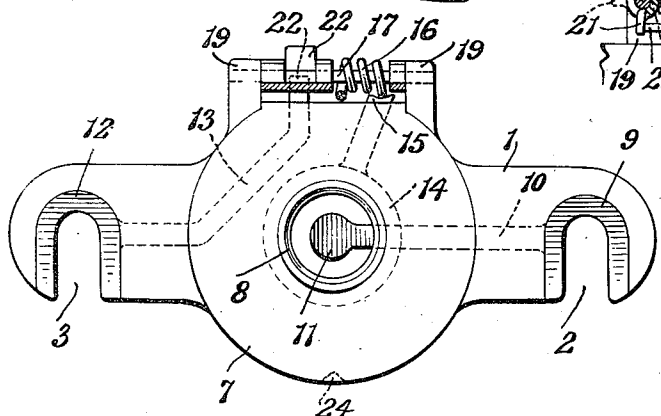


Fig. 5.



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LAMP ATTACHMENT FOR DRY CELLS

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4 Claims. (Cl. 240—10.61)

This invention relates to lamp attachments for dry cells and has for its object the provision of a simple, inexpensive device adapted for support by the binding posts of a dry cell to thereby convert the cell into a lamp or flash light. I am aware that prior to this invention, devices have been made for the purpose of performing a similar function, but such devices have been large, bulky, and expensive to manufacture. The device contemplated by the present invention is one of simple and inexpensive construction; one which can be carried in the pocket; which can be easily attached to or removed from a dry cell and which will be decidedly effective in operation.

Another object of the invention is to provide an attachment of the character described having a hinged, protective cover fitting over and enclosing the lamp to thereby protect the same when the device is carried in the pocket or is in an inoperative position on the dry cell, said cover being also arranged to act as a switch and also to act as a reflector for the lamp.

In the accompanying drawing, wherein an embodiment of the invention is shown, Fig. 1 is a plan view of a lamp attachment constructed in accordance with the invention; Fig. 2 is a sectional view on the line 2—2 of Fig. 1, looking in the direction of the arrows; Fig. 3 is a sectional view on the line 3—3 of Fig. 1, looking in the direction of the arrows; Fig. 4 is a sectional view similar to Fig. 3, but showing the combined cover and reflector in raised position, and Fig. 5 is a plan view of the device with the combined cover and reflector in section.

With reference to the structure shown in the drawing, 1 indicates the body portion of the device, the same preferably consisting of an elongated strip of insulating material such as Bakelite or similar plastic substance. Extending inwardly from one of the longitudinal edges of the strip are the recesses 2 and 3, the spacing of these recesses being such that the same fit around the binding posts 4 and 5 of a dry cell or other battery 6. The spacing of the recesses 2 and 3 may be varied according to the location of the binding posts on various types of batteries, as will be clearly understood.

At an intermediate point between the recesses 2 and 3 the member 1 is formed with a widened or enlarged portion 7 in which is located a lamp socket 8 intended for the reception of the conventional lamp or bulb 9a such as is commonly used in a flash-light. The socket 8 is of conventional construction and is held in place in the

enlarged central portion 7 of the member 1 by being embedded therein or by being secured to the member in any other suitable way.

The interior of the recess 2 is provided with a U-shaped metal lining portion 9 serving to establish electrical contact with the binding post 4. Preferably formed integrally with and extending from the metal lining 9 is a metallic conductor 10 which is preferably embedded in the insulating strip 1 and which terminates in a flattened head or end portion 11 located at the bottom of the socket to establish electrical contact with the central contact of the lamp 9a when the lamp is threaded into the socket in the usual way. The recess 3 is provided with a metallic lining member 12, similar to that shown at 9, from which extends the metallic conductor strip 13, said strip 13 being embedded in the insulating member 1, as clearly seen in Fig. 2. The socket 8 has a lower flange 14 embedded in the member 1 from which extends a contact member 15 that establishes a contact with a spring 16 surrounding the pivot pin 17 of a combined cover and reflector 18. The combined cover and reflector 18 is pivotally mounted on the pin 17 which is secured in ears 19 that are moulded or otherwise formed on the edge of the enlarged portion 7 of the insulating strip 1. The combined cover and reflector is of dome-shaped formation and is adapted to be normally held in a substantially vertical or raised position as shown in Fig. 4, by means of the torsional spring 16 that surrounds the pivot pin 17. When the reflector is in its raised position, as shown in Fig. 4, its concave or inner polished surface 20 acts as a reflector for the lamp 9a behind which it is located. In said raised position of the reflector a lug 21 provided on the metal reflector and located adjacent the pivot 17 is in contact with the end 22 of the conducting strip 13. Thus, current is conveyed from the conducting strip 13 through the reflector 18, to the contacting strip 15, and therefrom to the socket 8.

When the combined cover and reflector 18 is in its lowered position, the lug 21 is situated away from the end 22 of the conducting strip 13 and has thus interrupted the continuity of the circuit from the metal member 12 to the socket 8, so that the lamp will be extinguished. The combined cover and reflector 18 is held in its lowered position by any suitable means, such as by the catch member 23 engaging with a recess 24 provided in the edge of the enlarged portion 7 of the insulating member 1.

From the foregoing, the manner in which the

device is used will be readily understood. When the device is not in use, it can easily be carried in the pocket, since it is small and compact, and since the combined cover and reflector 18 extends over and covers and protects the only portion of the device which is liable to breakage, namely, the lamp 9a. To convert the ordinary dry cell into a flash-lamp merely necessitates the loosening of the nuts on the two binding posts 4 and 5 to enable the recesses 2 and 3 to be fitted around the posts, after which the nuts on the binding posts are tightened down to hold the attachment in position on the battery. To cause the lamp to be illuminated, requires the raising of the combined cover and reflector which is done automatically by the spring 16 as soon as the catch 23 is manually disengaged from the recess 24. When this is done, the combined cover and reflector 18 will spring open to the raised or vertical position shown in Fig. 4, at which time it will close the circuit from the metal lining 12 through the conductors 13 and 15, to the shell 8 and cause the lamp to be illuminated. The lamp will stay illuminated as long as the combined cover and reflector is in its raised or elevated position, during which time the combined cover and reflector is acting as an effective reflector for the lamp 9a. To shut off the current to the lamp merely requires the lowering of the combined cover and reflector.

The device is simple and compact and can be carried in a pocket or a tool bag and due to the fact that the lamp is fully protected, it can stand a great deal of hard use and abuse without becoming damaged. It may be made of a size to be attached to the conventional dry cell or to batteries of various shapes and sizes according to requirements, and can be simply and economically used to immediately convert a dry cell into a simple and effective flash lamp.

What I claim is:

1. A device of the character described comprising, a base member of insulating material adapted to extend between and be directly supported by the two terminals of a dry cell, said member having a lamp socket mounted on it, said socket having a metal shell and a contact, a conductor mounted in the member and extending from the socket contact to one of the terminals of the dry cell, and a second conductor mounted in the member and extending from the socket shell to the second dry cell terminal, a movable reflector mounted upon the member and movable to extend either behind the lamp socket or to enclose the same, and means operated by the movement of the reflector for breaking electrical connection between one of the terminals and the socket element to which it extends.

2. A device of the character described comprising, a base member of insulating material having spaced recesses extending from one of its edges, said recesses being adapted to respectively engage around the terminals of a dry cell, said member being provided with a lamp socket having a metal shell and a contact, a conductor having a portion located in one of the recesses to establish electrical contact with the cell terminal located therein, said conductor extending to the socket contact, a second conductor having a portion disposed in the second recess to establish electrical contact with the second cell terminal, said second conductor being adapted to establish contact with the socket shell, a hinged reflector secured to the strip and movable to cover the socket and a lamp held thereby, said reflector being also movable to a vertically disposed position behind the socket and lamp, and a circuit-closing element operated by the reflector to close the circuit between one of the conductors and one of the socket elements when the reflector is in a vertical position.

3. A device of the character described comprising, a strip of insulating material provided with spaced recesses to embrace the binding posts of a dry cell, a lamp socket supported by the strip at a point between the recesses, a reflector hinged at one edge of the strip and adapted to extend over and cover the lamp socket and lamp therein or be positioned behind the lamp to act as a reflector, means on the strip for electrically connecting the lamp and the binding posts of the dry cell when the strip is supported thereon, and means on the hinged reflector for interrupting the continuity of one of said connections when the reflector is in the position of covering the lamp socket.

4. A device of the character described comprising, a flat, elongated member of insulating material having a widened central portion, a lamp socket secured in and rising from said central portion, a reflector hinged at one edge of said central portion and adapted to overlie and cover the socket and lamp held therein or else be disposed behind the lamp to form a reflector therefor, spring means for holding the reflector in either of its two positions, means for supporting the member on the binding posts of a dry cell and to establish electrical contact between said binding posts and the lamp socket, and means actuated by the reflector for interrupting the continuity of one of the connections between the lamp socket and a binding post when the reflector is in the position of covering the socket.

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