Oct. 13, 1953 M. O. FREDRICKSON 2,655,593

LAMP CLIP FOR DRY CELLS

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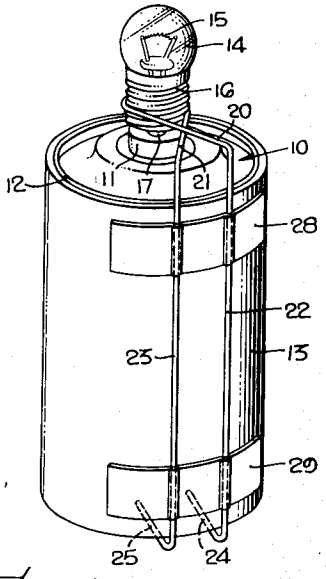
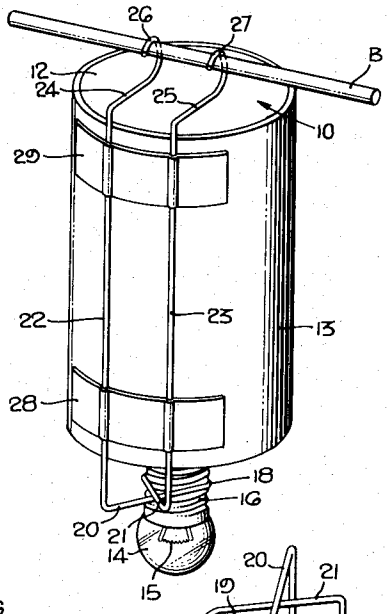


FIG. 1.

FIG. 2.



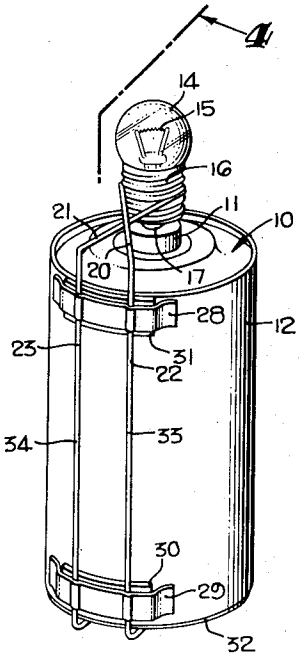


FIG. 3.

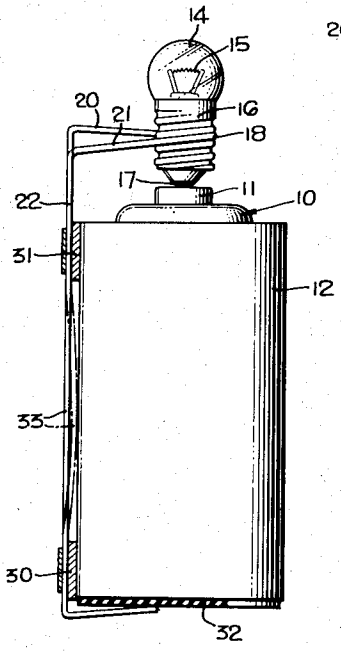


FIG. 4.

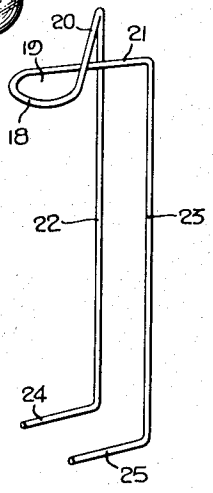


FIG. 5.

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LAMP CLIP FOR DRY CELLS

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4 Claims. (Cl. 240—10.61)

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This invention relates to an inexpensive electric lamp and dry cell combination, and to a clip for mounting the lamp on a dry cell so that the lamp may be energized thereby.

A primary object of the invention is to provide a simple and inexpensive clip that can be readily applied to a dry cell and which will serve to support an electric lamp thereon so that the lamp may be energized thereby. In this manner, a dry cell and lamp may optionally be converted into either a steadily burning lamp or into a flashlight by the application of the clip to the dry cell and positioning of the lamp thereon.

Still another object of the invention is to provide a clip for mounting lamps on dry cells which is very easily and extremely economical to manufacture and which may be readily applied to a dry cell and which, when in applied position, will serve to sturdily hold the lamp in a position so as to be energized by the dry cell. The improved clip is so constructed that it may be readily removed from one dry cell and applied to another when a dry cell becomes exhausted.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawing for an illustrative embodiment of the invention, wherein:

Figure 1 is a perspective view of a dry cell showing an electric lamp mounted thereon by means of one form of clip embodying the present invention;

Fig. 2 is a perspective view illustrating a slightly alternative form of clip that may be employed;

Fig. 3 is a perspective view illustrating another alternative form of construction;

Fig. 4 is a sectional view taken substantially upon the line 4—4 upon Fig. 3; and

Fig. 5 is a perspective view of the clip.

Referring to the accompanying drawing wherein similar reference characters designate similar parts throughout, 10 indicates a conventional dry cell having a central electric terminal 11 electrically insulated from the outside case or outside terminal 12. In the usual dry cell construction the outside terminal 12 is frequently surrounded by a cylindrical cardboard jacket 13, but the presence or absence of such a jacket is not essential insofar as the present invention is concerned. 14 indicates an electric lamp, the filament of which indicated at 15 is electrically connected to a threaded base 16 within which there is a central terminal 17. The base 16 and the

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central terminal 17 are electrically connected to the opposite sides of the filament 15 in accordance with conventional construction.

The clip embodying the present invention consists of a single length of wire centrally bent at 18 to form a loop 19 capable of receiving the threads on the base 16. This loop is shown as having crossed ends 20 and 21 which are slightly spaced from each other in a vertical direction so that the plane of the loop corresponds to the pitch of the threads on the base. It is not essential that the ends of the loop cross each other but the loop should be at least larger than a semi-circle so as to retain the base of the lamp therein. If desired, the loop may be formed of a plurality of superposed turns or windings, although in the usual situation a single turn or loop is sufficient. When the loop is formed of a single turn and has crossed ends the loop may be opened or closed slightly so as to assure a snug fit with the threads of the base 16.

The loop 19 which constitutes a socket to receive the base of the lamp has its ends 20 and 21 bent downwardly as depicted in Figs. 1 and 2 to form two spaced arms or lengthwise extending members 22 and 23 which have their lengths arranged approximately parallel to the axis of the socket formed by the loop 19. These lengthwise extending members extend the complete length of the dry cell and as depicted in Figs. 1 and 5, the bottoms of these members are then bent inwardly as at 24 and 25 in a direction extending generally toward the axis of the socket. The terminal portions 24 and 25 are adapted to be positioned beneath the bottom of the dry cell and cooperate with the loop in forming a type of clamp holding the central terminal 17 of the lamp in firm engagement with the central terminal 11.

In the form illustrated in Figs. 1 and 2, the bottom of the case of the dry cell is exposed and the terminal portions 24 and 25 engage this exposed portion of the case so that the electric circuit through the filament of the lamp is completed. In the form shown in Fig. 1 and in Fig. 2, the lamp is continuously burning or continuously energized by the dry cell when the clip and lamp are in position thereon. As a means for retaining the clip on the dry cell, sections 28 and 29 of pressure sensitive tape may be employed to adhesively fasten the arms or lengthwise extending members 22 and 23 to the cardboard jacket 13.

In the construction shown in Fig. 2, the terminal portions 24 and 25 are somewhat extended

and terminate in hooks 26 and 27. These hooks may be positioned over a bar or transverse wire B to suspend the dry cell and lamp thereon. For example, in a lantern, such as a Japanese lantern or in a Halloween pumpkin, the lantern or pumpkin, as the case may be, may be equipped with a transverse wire or bar B and the combination suspended therefrom so as to illuminate the lantern.

Whenever the dry cell becomes exhausted the pressure sensitive tapes 28 and 29 may be peeled from the jacket and the clip and lamp removed. As the adhesive on the tapes remains tacky these same tapes may be employed to apply the clip and lamp to a fresh dry cell.

In Figs. 3 and 4, an alternative form of construction is disclosed wherein the jacket 13 is removed from the outside case or terminal of the dry cell. The clip and lamp are applied thereto but sections 30 and 31 of insulating material are interposed between the lengthwise extending members 22 and 23 to electrically insulate these members from the sides of the case. The tape sections 28 and 29 may be employed which are of such length as to extend beyond the ends of the insulating material and thus fasten the clip and the sections of insulating material to the case. In a similar manner, a disc of insulating material indicated at 32 is interposed between the bottom of the case and the inwardly extending portions 24 and 25. When the clip is applied in this manner portions 33 and 34 of the lengthwise extending members 22 and 23 are disposed closely adjacent but in spaced relation to the outside terminal 12. These portions can be flexed by the application of pressure into engagement with the case 12, thus closing the circuit through the filament of the lamp. When these portions are released their inherent resiliency returns them to a position spaced from the case, thus automatically opening the circuit. The flexed position is shown in dotted lines on Fig. 4 and the full-line position shown on Fig. 4 illustrates the normal position occupied by the portions 33 and 34. In this manner, the clip enables a lamp and dry cell to be easily and quickly converted into a flashlight.

In lieu of removing the jacket 13 and the application of the sections 30 and 31 of insulating material an opening may be cut in the jacket 13 to expose a portion of the case 12 therethrough. The portions 33 and 34 are then arranged to overlie the opening or window in the jacket and are held in place by the tapes 28 and 29 applied near the top and bottom of the opening. The portions 33 nad 34 may be flexed through the opening to engage the case 12 in the same manner as above-described.

It will be appreciated from the above-described construction that a very simple and inexpensive clip is provided which will enable the lamp to be firmly mounted on a dry cell and held in position so that its central terminal 17 is pressed against the central terminal 11. As the two lengthwise extending portions 22 and 23 are spaced from each other and are fastened to the side of the dry cell, these portions cooperate to hold the socket, and consequently the lamp, against lateral displacement relative to the dry cell. Optionally, the clip may be used to cause the lamp to be continuously energized as depicted in Fig. 1, or to be intermittently energized as depicted in Figs. 3 and 4. If desired, the clip may also be employed to suspend

the combination from a suspending structure B as depicted in Fig. 2.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

I claim:

1. A device of the class described comprising a single length of wire bent to provide a pair of spaced parallel lengthwise extending members, the space between the members being less than the diameter of a dry cell, one end of each member being connected to the other by a loop, the plane of which is substantially at right angles to the length of the members forming a socket adapted to receive the base of an electric lamp, the axis of the loop being equidistant from the members so that when the members are both held in position against the cylindrical surface of a dry cell, the axis of the loop will coincide substantially with the axis of the dry cell thus maintaining the central contact of the lamp in line with the central terminal of the dry cell, the free ends of the members extending inwardly generally toward the axis of the loop and being adapted to be positioned beneath the bottom of a dry cell, the distance between the free ends and the loop being such that the central contact of the lamp will be pressed against the central terminal of the dry cell.

2. A device of the class described comprising a single length of wire bent to provide a pair of spaced parallel lengthwise extending members, the space between the members being less than the diameter of a dry cell, one end of each member being connected to the other by a loop, the plane of which is substantially at right angles to the length of the members forming a socket adapted to receive the base of an electric lamp, the axis of the loop being equidistant from the members so that when the members are both held in position against the cylindrical surface of a dry cell, the axis of the loop will coincide substantially with the axis of the dry cell thus maintaining the central contact of the lamp in line with the central terminal of the dry cell, the free ends of the members extending inwardly generally toward the axis of the loop and being adapted to be positioned beneath the bottom of a dry cell, the distance between the free ends and the loop being such that the central contact of the lamp will be pressed against the central terminal of the dry cell, the extreme ends of the members terminating in hooks by which the device may be suspended.

3. A device of the class described comprising a single length of wire bent to provide a pair of spaced parallel lengthwise extending members, the space between the members being less than the diameter of a dry cell, one end of each member being connected to the other by a loop, the plane of which is substantially at right angles to the length of the members forming a socket adapted to receive the base of an electric lamp, the axis of the loop being equidistant from the members so that when the members are both held in position against the cylindrical surface of a dry cell, the axis of the loop will coincide substantially with the axis of the dry cell thus maintaining the central contact of the lamp in line with the central terminal of the dry cell, the extreme ends of the members terminating in hooks by which the device may be suspended.

4. A device of the class described comprising a single length of wire bent to provide a pair

of spaced parallel lengthwise extending members, the space between the members being less than the diameter of a dry cell, one end of each member being connected to the other by a loop, the plane of which is substantially at right angles to the length of the members forming a socket adapted to receive the base of an electric lamp, the axis of the loop being equidistant from the members so that when the members are both held in position against the cylindrical surface of a dry cell, the axis of the loop will coincide substantially with the axis of the dry cell thus maintaining the central contact of the lamp in line with the central terminal of the dry cell, the free ends of the members extending inwardly generally toward the axis of the loop and being adapted to be positioned beneath the bottom of a dry cell, the distance between the free ends and the loop being such that the central contact of the lamp will be pressed against the central terminal of the dry cell, the extreme ends of the members terminating in hooks by which the device may be suspended, the hooks

being substantially diametrically opposed to said loop and curved in a direction away from said loop.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,162,288	Grah	Nov. 30, 1915
2,104,888	Spahr	Jan. 11, 1938
2,373,306	Gits	Apr. 10, 1945

FOREIGN PATENTS

Number	Country	Date
60,817	Denmark	Apr. 19, 1943
108,234	England	Aug. 2, 1917
418,471	England	Oct. 25, 1934

OTHER REFERENCES

Publication: Popular Mechanics, September 1945, page 126.