E. GRAH.

LANTERN.

APPLICATION FILED OCT. 22, 1914.

1,162,288.

Patented Nov. 30, 1915.

FIG. 1

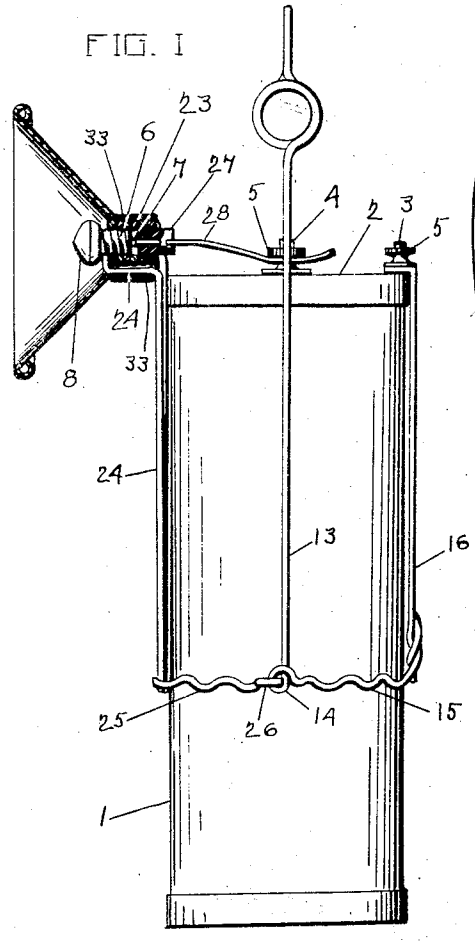
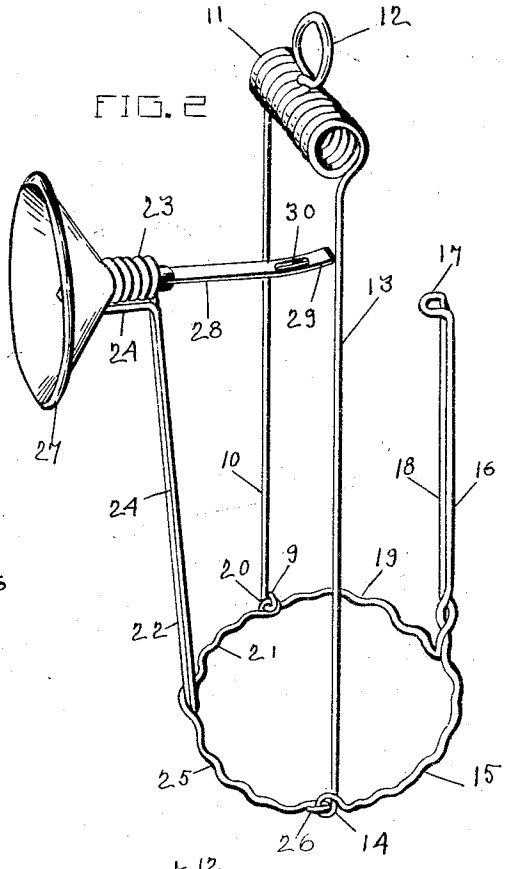


FIG. 2



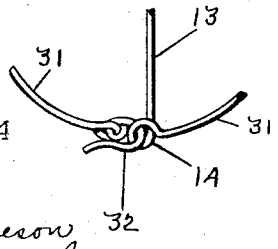


FIG. 4

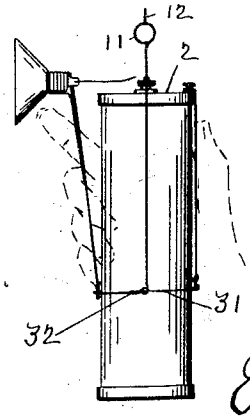


FIG. 3

Witnesses

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UNITED STATES PATENT OFFICE.

EMIL GRAH, OF TOLEDO, OHIO.

LANTERN.

1,162,288. Specification of Letters Patent. Patented Nov. 30, 1915.

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To all whom it may concern:

Be it known that I, EMIL GRAH, a citizen of the United States, residing at Toledo, Lucas county, Ohio, have invented a new and useful Lantern, of which the following is a specification.

This invention relates to circuit conducting and controlling means from a source of electrical supply.

This invention has utility when incorporated in connection with an electrolytic cell or battery, having special value as an illuminating device for lantern or flashlight use.

Referring to the drawings: Figure 1 is a side elevation, with parts broken away, of a dry cell with the device as an illuminating attachment incorporated therewith; Fig. 2 is a perspective view of the illuminating device attachment of Fig. 1; Fig. 3 is a side elevation, on a smaller scale, of the dry cell lantern, the attachment being provided with a cell embracing clasp; and Fig. 4 is a detail perspective view of the clasp of Fig. 3.

The electrolytic cell or dry battery 1 is provided with a waterproof cap 2 through which extend the electric current supply terminals 3, 4, threaded to receive the thumb nuts 5.

The illuminating device or lantern attachment is of simple continuous conductors, the pair of conductors being continuous between the supply terminals 3, 4, and the lamp terminals 6, 7, of the incandescent lamp 8.

A cheap and efficient form for the major conductor of the attachment may be wire. This wire conductor may be continuous from the eye 9, having an upwardly rising bail portion 10 to the coiled handle 11 forming a convenient grip portion in carrying the device as a lantern, while the central loop 12 therein may serve as a support for suspending the lantern for use or hanging away. To complete the handle connection, the bail portion 13, extends downwardly parallel to the bail portion 10, to the eye 14 opposite the end eye 9. From the eye 14, the embracing portion section 15 extends to the upwardly extending portion 16 having the loop 17 to be made fast to the terminal 3 by a nut 5, thereby locking the cap 2 in position at one edge, while the central nut 5 upon the terminal 4 holds the cap 2 in position centrally, and it is so firmly mounted in position that in use of the lantern even out in rain, there may be no accumulation of water on the cell top to short circuit between the terminals and thus allow the cell to run down. From the loop 17, this major conductor wire of the attachment, has the downwardly extending portion 18, to the embracing portion section 19, oppositely extending as to the section 15, but similar thereto. This section 19 extends to the eye 20 interlocked with the eye 9, and then by the embracing portion section 21, proceeds to the upstanding section 22 terminating in the lamp socket forming coil 23. From this coil or socket 23, this major conductor has the downwardly extending portion 24 to the embracing portion section 25 terminating in the eye 26 interlocking with the eye 14.

The battery embracing portion comprises the sections 15, 19, 21, 25, slightly crinkled to provide automatic gripping in extending the attachment over the cell in mounting or assembling. The reflector 27 may be slipped over the outer end of the socket 23, and the attachment tinned or coated to maintain the major conductor element or wire more firmly in its yieldable lamp gripping position as well as mounting the reflector. In the socket 23 after portion may be inserted the insulator 27, to space from the wire conductor element the second conductor element 28 having the opposite end 29 movable by the flexing of the portions 22, 24 toward the cell 1, to contact the nut 5 at the terminal 4, and thereby act as a flash light in completing electric circuit to the lamp terminal 7, while the wire conductor or first element has completed circuit to the lamp terminal 6, through the portions 23, 22, 21, 20, 19, 18, 17, from the terminal 3.

When it is desired to use the device continuously, or as a lantern, the conductor element 28 may have the opening 30 therein engage over the terminal 4 or the nut 5 thereon, and the lamp 8 will burn during the life of the cell. The lantern may be placed upon any flat surface, carried easily, or hung up as desired, and the light readily directed just where needed with absolute safety against fire hazard. The showing in Fig. 1 is of the device connected up for continuous or lantern use, while in Fig. 3 it is shown as adapted for flash handling. Instead of the crinkled embracing section for the major conductor, the major conductor wire embrac-

ing section 31 of Fig. 3 is shown regular and the clasp 32 disposed for detachable engagement with the eye 14, thereby permitting opening up of the embracing section 31 in assembling about the cell 1.

The skeleton structure of the attachment, and its ready application to cells without the use of any tools, produces a device suitable for a wide range of uses at all times. The coil structure of the socket 23 has sufficient yield therein to automatically grip the lamp terminal 6 and effectively hold the lamp in position even against considerable vibration. In instances where moisture conditions are to be met, the insulating sleeve 33 over the socket 23 will preclude water working in to short circuit the device due to any opening up of the coils by the lamp being screwed into the socket 23.

What is claimed and it is desired to secure by Letters Patent is:

1. A portable lantern attachment for an electric battery embodying a continuous conducting wire, bent to form a handle and extending therefrom to embrace the body of a battery and to the battery terminal and thence bent to form a lamp socket, a reflector mounted on the socket, an insulator in the lamp socket, and a second conductor carried by the insulator, said conductor operable by flexing the wire to close a circuit from a second battery terminal.

2. A portable lantern attachment for electric batteries having a pair of terminals, said attachment embodying a continuous conductor mountable upon a battery terminal and extending to a lamp socket to provide the socket terminal for a lamp through said conductor, an intermediate portion of said conductor forming a handle.

3. An incandescent lamp mounting embodying a lamp socket provided with a pair of terminals, an insulator between said terminals, said terminals being continuous therefrom to form conductors, and a battery provided with a pair of terminals to which said conductors extend, one of said conductors being wire and having a battery embracing portion.

4. An incandescent lamp mounting embodying a lamp socket provided with a pair of terminals, an insulator between said terminals, said terminals being continuous therefrom to form conductors, and a battery provided with a pair of terminals to which said conductors extend, said conductors forming a battery embracing holder and a handle.

5. An incandescent lamp mounting embodying a lamp socket provided with a pair of terminals, an insulator between said terminals, said terminals being continuous therefrom to form conductors, and a battery provided with a pair of terminals to which said conductors extend, one of said conductors being flexible to permit moving of the insulator for closing of the circuit by the other conductor from the battery to the lamp socket.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

EMIL GRAH.

Witnesses:
GEO. E. KIRK,
GLADYS JAMESON.