UNITED STATES PATENT OFFICE.

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POCKET FLASH-LIGHT.

1,134,977.


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To all whom it may concern:

Be it known that we, HARRY H. HIPWELL and HARRY T. HIPWELL, citizens of the United States, residing at N. S. Pittsburgh, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Pocket Flash-Light, of which the following is a specification.

The present invention relates to improvements in pocket flash lights, and more particularly to that type of light in which a casing carries a battery, and such battery is so held therewith as to have one terminal disposed in engagement with an incandescent bulb, there being provided a manually controlled switch for closing the circuit to light the bulb, one object of the present invention, being the provision of means whereby the manually controlled switch may be locked against accidental closure and which may be operated to close only when depressed, or may be locked in closed position.

A further object of the present invention, is the provision of a circuit closing means in combination with a pocket flash light, in which a spring portion thereof retains the battery seated within the casing, while the upper free terminal constitutes the contact member in combination with a stationary terminal carried by the battery.

A still further object of the invention, is the provision of an actuating means which will permit the locking of the free terminal in open or closed position or to permit the actuation thereof manually, the release causing the terminals to separate and producing an open circuit.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings Figure 1 is a vertical central sectional view through the complete device, the locking device being in the position it assumes when locking the terminal separated. Fig. 2 is an enlarged detail view showing the switch actuating means in the position for locking the terminals closed. Fig. 3 is a similar view with the parts in the position they assume when the terminals must be manually operated to close. Fig. 4 is an enlarged detail sectional view showing the manner of sealing the casing to lock the battery therewith. Fig. 5 is a detail rear perspective view of the bottom carried by the resilient terminal.

Referring to the drawings, the numeral 1 designates the casing, which is made in a flask shape in the present instance, so as to be readily accommodated in the hand of the operator, and so that the same may be readily inserted within the pocket. The sealed end 2 of the casing is provided with a lamp socket 3 for the reception of the bulb lamp 4, whose terminal 4' is disposed as will presently appear to be engaged by one of the terminals of the battery 9. A hinge 5 is provided at the open end of the casing 1 to hingedly connect thereto the closure 6, said closure being provided with a clip 7 which cooperates with the head 8 of the casing 1 to lock the closure in battery seating position. The battery 9 is insertible through the open end so that its resilient terminal 10 will be disposed to engage the terminal 4' of the bulb 4 and with the closure 8 sealed, to be held seated within the casing 1 so that a good contact may be made between the terminals 10 and 4'.

Secured to one side of the casing 1 within the same, by means of the rivet 11' is a plate 12, which has a long terminal 12' bent to form a resilient member and to cooperate with one side of the battery 9 to hold the same over against the opposite side and snugly within the casing 1. The opposite terminal 13 is provided with the right angled switch terminal 14, which is adapted to be moved into and out of engagement, being normally held out of engagement due to the resiliency of the terminal 13, of the fixed terminal 10' of the battery 9.

In order to provide a means for actuating the terminal 14, so that the same may be moved into engagement with the terminal 10', or be locked out of engagement therewith, or locked in engagement therewith, the guide member 15 carries the button 16, and said guide member 15 is slideable upon the
portion 13 of the terminal 14 and projects through the elongated slot 17 formed in the casing 1 adjacent the switch member 14, a complete circuit for energizing the bulb 4 being thus grounded at this point, or at the rivet 11 where the spring or plate is connected to the casing 1. The button 16 is provided with the oppositely inclined portions 18 19, which are moved against the apertures or slot 17 and thus assist in holding the terminal 14 relatively to the terminal 10. When the button 16 is moved upwardly the full length of the slot 17, the inclined portion 18 engages the edge 20, and thus this portion 18 moves into engagement with the terminal 10 at which place it is locked by the engagement of the button with the casing 1. When the guide portion 15 is disposed adjacent the portion 23 of the battery 9, the same maintains the terminal 14 spaced from the terminal 11, and as the same is rigid at this point, it is impossible by pushing inwardly upon the button 16 to cause the closure of the switch. When the button 16 is in an intermediate position, with the guide portion 15 above the upper edge 22 of the battery 9, the terminal 14 is normally out of engagement with the terminal 10, and the button 16 must be depressed inwardly and there held by the thumb in order to close the circuit. It will thus be seen that with the present structure that the button 16 may be locked and the terminal 14 will be held out of engagement with the terminal 10, thus rendering it impossible for an accidental closure of the circuit when the device is in the pocket. It is also apparent that by the use of the button 16, that the terminals may be closed and held closed manually, and closed and locked in such position as long as desired.

What is claimed is:

1. A pocket flash light, including a casing, an electric bulb carried by one end of the casing, a cell insertible within the casing and having two terminals one for engagement with the bulb, a combined resilient switch and cell holder mounted at one side within the casing for engagement with the cell, the switch being disposed adjacent to the other terminal of the cell, and means operable from the exterior of the casing for operating the switch to engage the respective terminal.

2. A pocket flash light, including a casing, an electric bulb carried by one end of the casing, a cell insertible within the casing and having two terminals, one for engagement with the bulb, a resilient strip of metal secured intermediate of its ends to the inner side of the casing, one portion thereof being bowed to constitute a cell holder and the other portion being free for disposition adjacent the other terminal of the cell, and means for actuating the free portion of the strip to engage the respective terminal of the cell.

3. A pocket flash light, including a casing, a contact strip secured to the inner side of the casing to cooperate with one terminal of the cell inserted within the casing, a slideable double cam member mounted upon the contact strip and operable exteriorly of the casing, the cam member being co-operable with the cell to lock the contact strip separated from the respective terminal and cooperating with the casing to lock the contact strip in contact with the terminal, and when in an intermediate position, allowing the contact strip to be out of contact with the terminal of the cell for depression manually.

4. A pocket flash light, including a casing, a contact member carried thereby for cooperation with one terminal of a cell inserted within the casing, and actuating means for said contact member arranged when in one position to lock the contact member in engagement with said terminal when at another position to allow the contact member to move out of engagement with said terminal and to be pressed into engagement therewith, and when in another position to lock the contact member out of engagement with the said terminal.

5. A pocket flash light, including a casing, a contact strip secured thereto to cooperate with one terminal of a cell inserted within the casing, and an actuating member slideable along the contact strip and the casing, the actuating member and casing having co-operative means whereby when the actuating member is in one position it will hold the contact strip in engagement with said terminal, when the contact member is at another position it will allow the contact strip to move out of engagement with said terminal and permit the actuating member to be pressed for moving the contact strip into engagement with said terminal, and when the actuating member is in another position it will lock the contact strip out of engagement with said terminal.

6. A pocket flash light including a casing having a slot therein, a contact strip secured within the casing, and arranged to cooperate with the terminal of a cell inserted within the casing, and a double cam member slideable within said slot and having means slidably engaging the contact strip.

7. A portable electric lamp, comprising a casing, a spring contact riveted in one side of the casing, a button adapted to operate said spring contact, said spring contact extended below its rivet forming a spring arm adapted to engage with a battery introduced into the casing.

8. A portable electric lamp comprising a casing, a spring contact riveted in one side.
of the casing, a button adapted to operate said spring contact, said spring contact extended below its rivet forming a spring arm which is provided with a transverse bend adapted to bear against a battery introduced into the casing.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

HARRY H. HIPWELL
HARRY T. HIPWELL

Witnesses:
Edward G. Lang,
A. M. Walsh.