May 30, 1939. O. T. WOOD 2,160,529

FLASHLIGHT SWITCH

Filed May 8, 1937

Fig. 1.

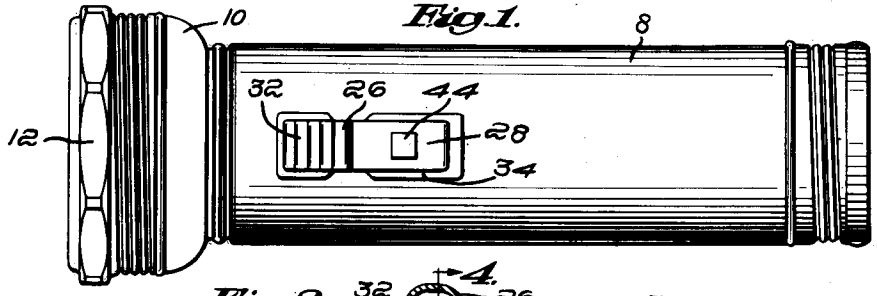


Fig. 2.

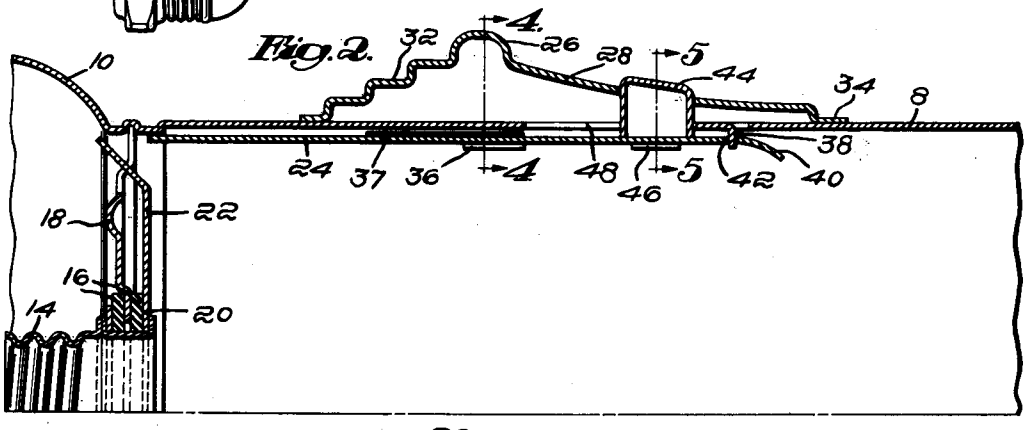


Fig. 3.

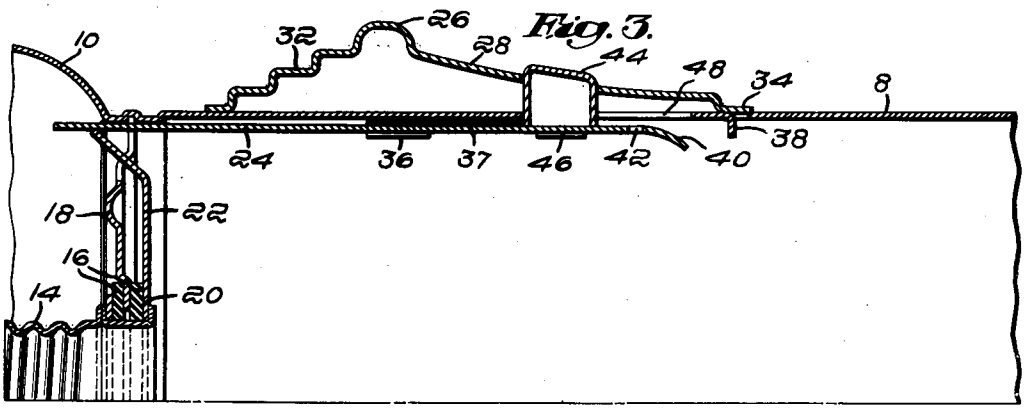


Fig. 4.

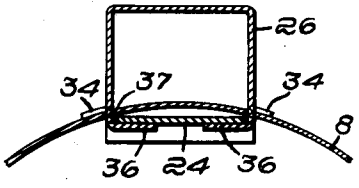
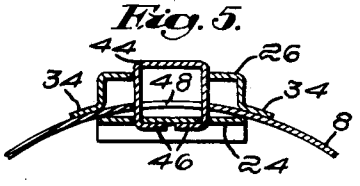


Fig. 5.



Inventor:
Orville T. Wood,
By Emery, Booth, Townsend, Miller & Windsor
Attys

Patented May 30, 1939

2,160,529

UNITED STATES PATENT OFFICE

2,160,529

FLASHLIGHT SWITCH

Orville T. Wood, Clinton, Mass., assignor to Blake Manufacturing Corporation, Clinton, Mass., a corporation of Massachusetts

Application May 8, 1937, Serial No. 141,541

5 Claims. (Cl. 200—60)

This invention relates to portable electric lamps, such, for example, as those powered by dry cells and commonly termed flashlights, and the object is to provide such a lamp having a simple but effective switch mechanism adapted to be locked in open or "off" position.

My invention will be well understood by reference to the following description of the illustrative embodiment thereof shown by way of example in the accompanying drawing, wherein:—

Fig. 1 is a plan view of a battery-powered flashlight illustrative of the invention;

Figs. 2 and 3 are fragmentary longitudinal sections on a larger scale showing the switch means in "on" and "off" positions respectively; and

Figs. 4 and 5 are sections on the lines 4—4 and 5—5 of Fig. 2 respectively.

Referring to the drawing, the lamp which I have there shown as an example of my invention comprises a metallic casing which includes the cylindrical battery compartment 8 and a head or hood 10, within which a reflector may be housed, closed by the bezel or lens ring 12. A bulb-receiving or lamp socket 14 is located centrally of the head on a lamp socket support and is here shown as suspended by the insulating washers 16 from the partition 18 located at the junction of the head and the battery compartment.

The socket 14 is adapted to be placed in electrical communication with the casing to complete the circuit of the bulb in well known manner. Herein a metallic washer 20 embracing the socket 14 has a radial arm 22 projecting to the side of the casing with which cooperates a metallic strip 24 resting against the interior of the battery compartment 8 and reciprocable therealong between the "off" position of Fig. 2 and the "on" position of Fig. 3, in which latter position it engages across the end of the arm 22 and closes the circuit through the battery at this point. It is understood that the central terminal of the lamp (not shown) is in electrical connection with one terminal of the battery while the other terminal of the battery is grounded on the casing 8 or is otherwise electrically connected with the sliding switch contact member 24.

The strip 24 may be moved by means of an exterior knob or finger piece 26 which may be provided with a rearwardly presented sloping surface 28 adapted to be engaged by the thumb of the hand encircling the casing 8 to push the knob forward i. e., toward the hood 10, from the position of Fig. 2 to that of Fig. 3 and a forwardly presented sloping surface 32 to be engaged by the thumb for retracting the knob. The knob or thumb piece 26 is preferably formed from a suitable hollow stamping having flanges 34 resting on the exterior of the casing and tongues 36 (see Fig. 4) which pass through suitably elongated slots 37 in the casing anld engage notches in the sides of the strip 24 to communicate the reciprocating motion thereto. The ends of the tongues 36 may be turned over on the under side of the strip 24 to hold the same in position against the interior of the battery casing 8.

Means are provided for latching the strip 24 in the "off" or open circuit position of Fig. 2, and herein the strip is extended rearwardly to form a resiliently flexible latch cooperating with a keeper which herein takes the form of a lug 38 struck inwardly, say, from the wall of the casing 8 or its equivalent, preferably in such a position that it is covered and concealed by the thumb piece 26. The end of the strip 24 may be curved inwardly to provide a rearwardly facing, sloping shoulder 40 adapted to engage the lug as the strip moves from the position of Fig. 3 to that of Fig. 2 to cam the end of the strip downwardly to permit it to ride over the lug and with a hole 42, the rear wall of which provides a forwardly facing abrupt shoulder adapted, when the hole passes the end of lug 38 and the strip is released to spring up over the same, to engage behind the lug, as indicated in Fig. 2, to hold the strip 24 latched in the retracted or "off" position of that figure.

I provide means for disengaging the latch such that it may be released, if desired as part of the manual action incident to shifting the actuator or finger piece 26 to the "on" or closed circuit position of Fig. 3, and I herein show a button 44 mounted by means of the tongues 46 (Fig. 5) to the flexible extension of the strip 24, and passing through a slot 48 conveniently formed in the casing or its equivalent and projecting through an aperture 45 in the rearwardly presented sloping surface 28 of the operating knob 44. Thus, the parts being in the position of Fig. 2, when the thumb is applied to the rearwardly presented sloping surface 28 to push the same forwardly, it may as part of the same movement depress the button 44 to bend downwardly the end of the strip and release it from lug 38 permitting the parts to be shifted to the "on" position of Fig. 3. On retracting movement of the switch by rearward pressure on the surface 32 the latch is automatically re-engaged by the action of the sloping camming shoulder 40 guiding the apertured strip past the latch member 82 until the aper-

ture reaches a point where the latch 38 may enter.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive; reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A circuit closer for a flashlight or the like comprising a movable switch element having a flexible extension, a fixed catch so disposed as to engage the flexible extension in the "off" position of the element and from which the element is releasable by flexing of the same, a finger piece to shift the element having a rearwardly presented sloping surface and a button disposed in the sloping surface and depressible as a part of the manual action incident to moving the finger piece to "on" position for flexing the extension to release the element from the catch.

2. A circuit closer for a flashlight or the like comprising a movable switch element having a flexible extension, a fixed catch so disposed as to engage the flexible extension in the "off" position of the element and from which the element is releasable by flexing of the same, a finger piece to shift the element having a rearwardly presented sloping surface and a button disposed in the sloping surface and having a rearwardly presented sloping surface manually depressible as a part of the manual action incident to moving the finger piece to "on" position for flexing the extension to release the element from the catch.

3. A circuit closer for a flashlight or the like comprising a movable switch element having a flexible extension, a fixed catch so disposed as to engage the flexible extension in the "off" position of the element and from which the element is releasable by flexing of the same, a finger piece to shift the element having a rearwardly presented sloping surface and a button disposed in the sloping surface and depressible as a part of the manual action incident to moving the finger piece to "on" position for flexing the extension to release the element from the catch, the element and catch having cooperating surfaces to cause flexure of the former by cam action to effect automatic engagement of the two on return of the element to "off" position.

4. A circuit closer for a flashlight or the like comprising the combination with a casing, a movable switch element having a flexible extension, a lug struck inwardly from the casing, said extension being formed with a cut away portion receiving the lug in the "off" position of the element and from which the element is releasable by flexing of the same, a finger piece to shift the element having a rearwardly presented sloping surface and a button disposed in the sloping surface and depressible as a part of the manual action incident to moving the finger piece to "on" position for flexing the extension to release the element from the catch.

5. A circuit closer for a flashlight or the like comprising the combination with a casing, a movable switch element having a flexible extension, a lug struck inwardly from the casing, said extension being formed with a cut away portion receiving the lug in the "off" position of the element and from which the element is releasable by flexing of the same, a finger piece to shift the element having a rearwardly presented sloping surface and a button disposed in the sloping surface and having a rearwardly presented sloping surface manually depressible as a part of the manual action incident to moving the finger piece to "on" position for flexing the extension to release the element from the catch.

ORVILLE T. WOOD.