Sept. 26, 1939. E. WASSEL 2,174,484

FLASHLIGHT TESTER

Filed March 28, 1938

Fig. 1.

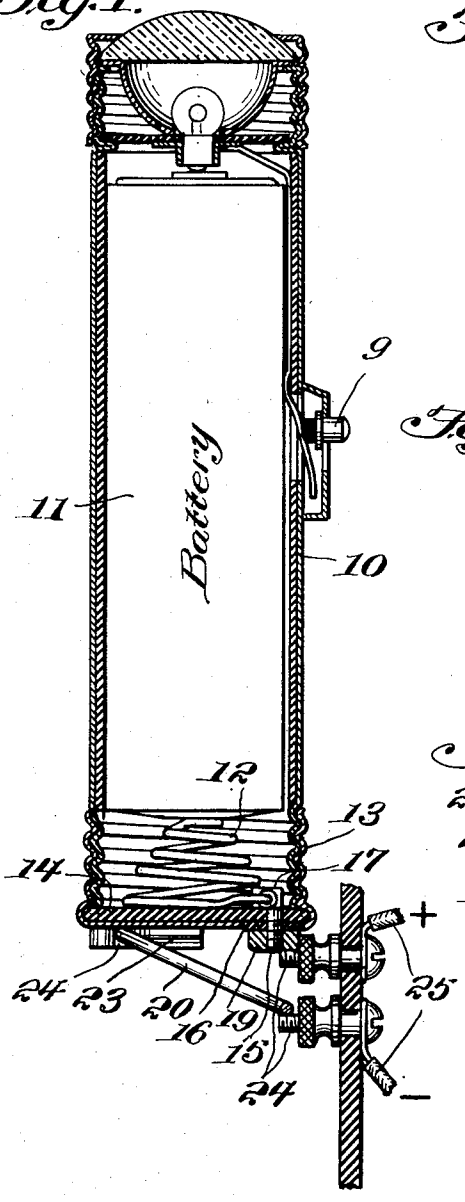


Fig. 2.

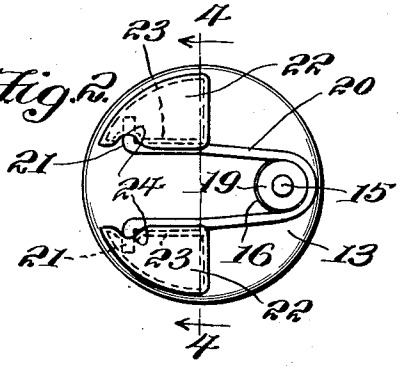


Fig. 3.

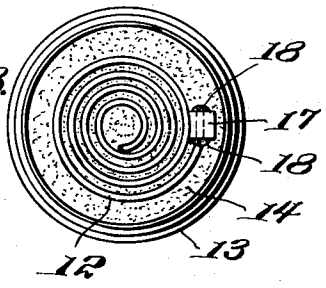
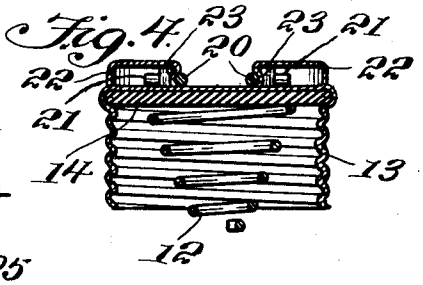


Fig. 4.



Edward Wassel
INVENTOR

BY Victor J. Evans & Co.
ATTORNEYS

J. L. Wright
WITNESS

Patented Sept. 26, 1939 2,174,484

UNITED STATES PATENT OFFICE

2,174,484

FLASHLIGHT TESTER

Edward Wassel, Amsterdam, N. Y.

Application March 28, 1938, Serial No. 198,609

1 Claim. (Cl. 175—183)

This invention relates to flashlight testers and has for an object to provide a novel screw cap adapted to be substituted for the conventional end closure cap of the battery compartment of a conventional flashlight, the screw cap having an insulating disc which insulates the conventional battery supporting helical spring of the flashlight from the cap, and having two exposed terminals, one of which is stationary and is electrically connected to the spring and insulated from the cap, and the other of which is a wire loop pivoted in bearings on the cap and electrically connected to the cap, the wire loop being engageable with the stationary terminal to form a part of the conventional circuit of the flashlight, and being releasable from the stationary terminal to coact with the stationary terminal in connecting the circuit to be tested in series with the flashlight circuit.

A further object of the invention is to provide a device of this character which will be formed of a few strong simple and durable parts, which will be inexpensive to manufacture and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification:

Figure 1 is a longitudinal sectional view of a conventional flashlight equipped with a screw cap forming a circuit closer in accordance with the invention.

Figure 2 is a bottom plan view of the flashlight cap shown in Figure 1.

Figure 3 is a plan view of the cap showing one of the test terminals connected to the conventional spring which holds the battery in place.

Figure 4 is a cross sectional view of the cap taken on the line 4—4 of Figure 2.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, 10 designates a conventional flashlight, 11 the flashlight battery, 12 the flashlight spring which holds the battery in place.

The invention provides a metal screw cap 13 which is adapted to be substituted for the conventional screw cap which holds the spring 12 in place. The screw cap is provided with an insulating disc 14 which contacts with the bottom wall of the cap, and insulates the spring 12 from the cap.

A screw 15 is passed through the insulating disc and the bottom wall of the cap and is insulated from the bottom wall of the cap by an insulating washer 16. Inside of the cap the screw is provided with a perforated head 17 through which the end of the largest convolution of the spring 12 is passed, as best shown in Figure 3. The spring may be soldered to the head as shown at 18 to form a good electrical connection with the screw. A nut 19, of circular contour, is threaded on to the screw, as best shown in Figure 2. The screw forms an exposed stationary test terminal.

A spring wire loop 20 is provided at the ends of its legs with outturned extremities 21 which are in good electrical contact with the cap and are pivotally mounted in openings formed in opposed hollow bearings 22 on the bottom wall of the cap. The inner sides of the bearings are grooved, as shown at 23 in Figure 4 so that the loop may be sprung into the grooves to contact with the nut 19 and form a part of the flash light circuit which is controlled in the usual manner by the conventional flashlight switch 9. The bearings are provided with notches 24 to receive the wire loop when it is swung out of engagement with the screw to form a carrying ring or to form a test terminal which coacts with the stationary test terminal 15 in connecting the circuit to be tested in series with the flashlight circuit.

When the wire loop 20 is sprung out of the grooves 23 it may be rocked outwardly from the cap to coact with the nut 19 in forming a circuit closer between terminals 24 to which circuit wires 25 are connected for determining whether the circuit wires are in good working order. When the switch 9 is closed if the circuit wires undergoing test are in good working order the flashlight circuit will be closed and the flashlight bulb will glow. If the circuit wires are broken the flashlight circuit will remain open and the flashlight bulb will not glow.

From the above description it is thought that the construction and operation of the invention is fully understood without further explanation.

What is claimed is:

A flashlight tester cap adapted to close the end of a conventional flashlight casing opposite the flashlight bulb, an insulating disc disposed within the cap in contact with the bottom wall of the cap, a helical spring adapted to be interposed between the bottom cell of the flashlight and said insulating disc, a pin connected to the spring and carried by and projecting through the bottom of the cap, means insulating the pin from the cap, bearings

projecting from the bottom wall of the cap and having grooves parallel with the bottom wall of the cap, and a spring wire loop electrically connected to the cap and pivoted at the ends to said bearings, said loop being engageable in said grooves with spring action to engage said pin to close the flashlight circuit, said loop when rocked to open position coacting with said pin in forming circuit closers through the medium of which circuits, bulbs and fuses to be tested may be connected in series with the flashlight circuit.

EDWARD WASSEL.