

F. BLAU.  
POCKET ELECTRIC INCANDESCENT LAMP.  
APPLICATION FILED APR. 28, 1908.

916,833.

Patented Mar. 30, 1909.

Fig.1.

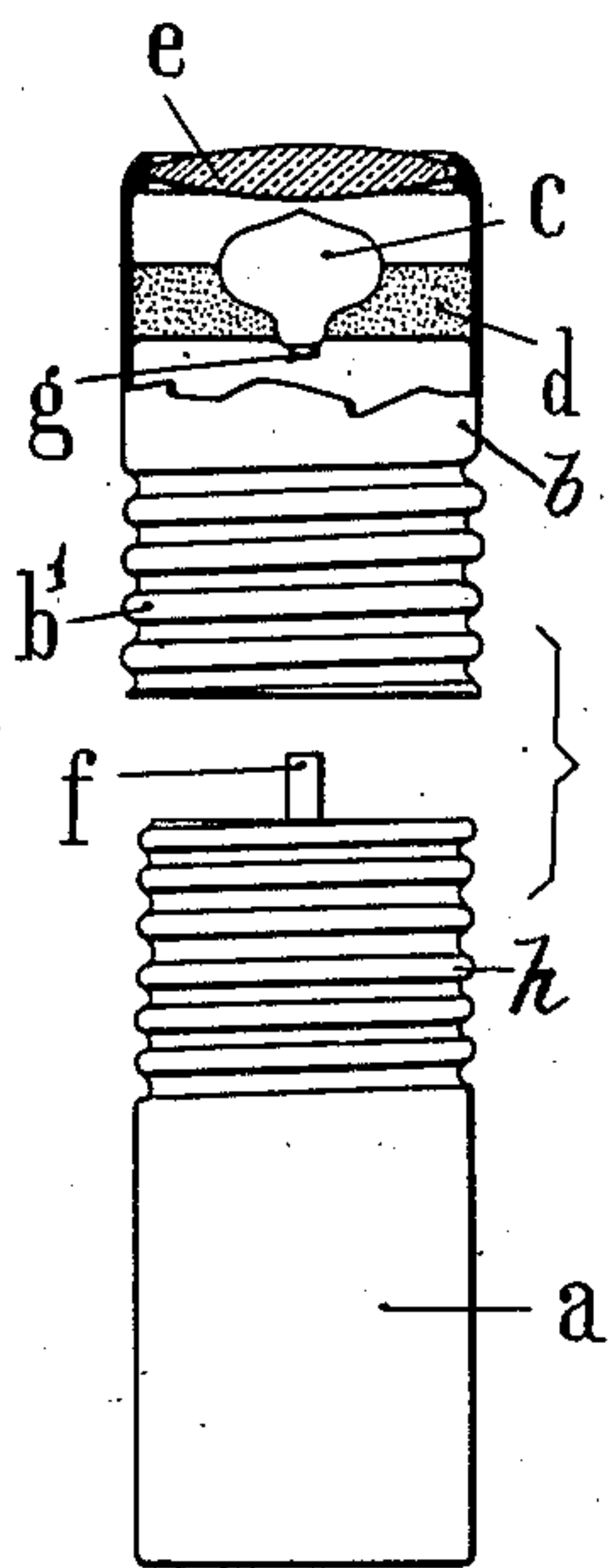


Fig.2.

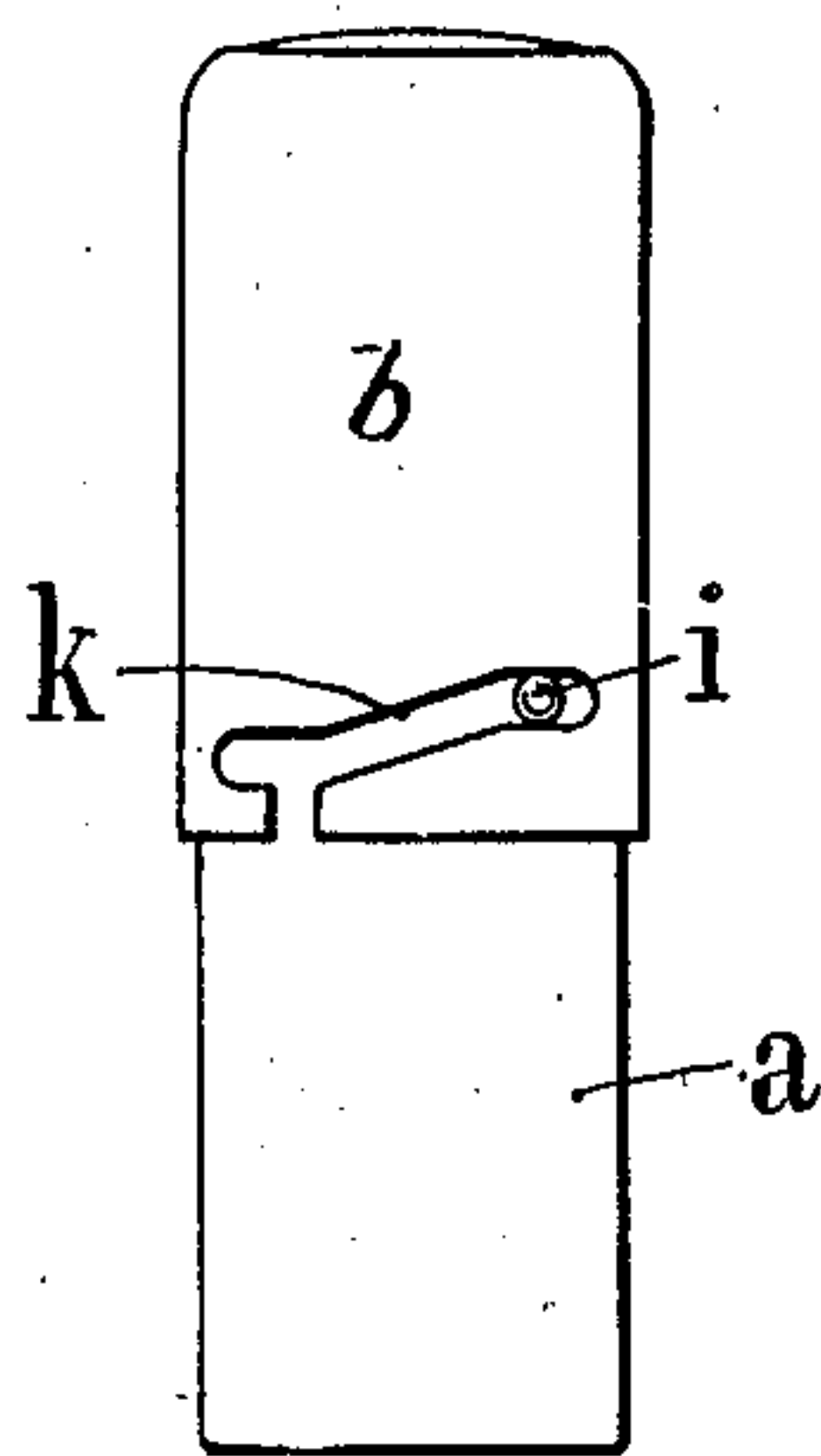
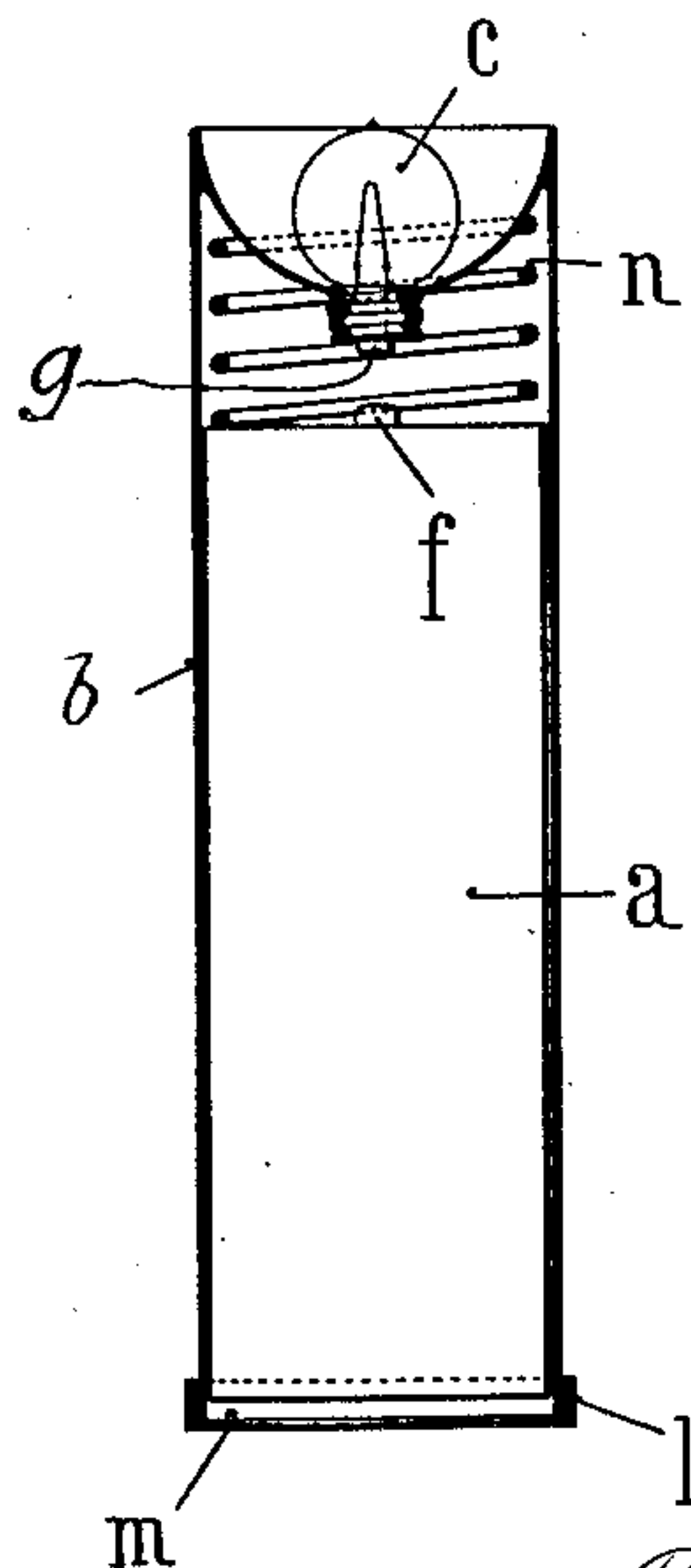


Fig.3.



Witnesses.  
*Julius H. Hutz*  
*John A. Kellenbeck*

Inventor  
*Fritz Blau*  
By *Brinson & Tamm*  
Attorneys



# UNITED STATES PATENT OFFICE.

FRITZ BLAU, OF BERLIN, GERMANY, ASSIGNOR TO DEUTSCHE GASGLUHLICHT AKTIEN-GESELLSCHAFT, (AUERGESELLSCHAFT,) OF BERLIN, GERMANY.

## POCKET ELECTRIC INCANDESCENT LAMP.

No. 916,833.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed April 28, 1906. Serial No. 314,116.

*To all whom it may concern:*

Be it known that I, FRITZ BLAU, chemist, a subject of the Emperor of Austria-Hungary, and a resident of Alte Jakobstrasse 139, Berlin, Germany, have invented certain new and useful Improvements in Pocket Electric Incandescent Lamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in pocket electric incandescent lamps, and more particularly to such lamps in which a dry battery is provided to energize the lamp whenever contact is made between the proper poles of the lamp and the battery. In lamps of this class heretofore in use the contact between said poles was made by means of an intermediate movable element, the circuit being closed or opened, by means of a push button or another appropriate element.

Now, the object of my improvement is to provide a lamp of this class, in which the electric circuit is closed or opened by merely displacing one of the movable parts of the device, viz. the lamp or its support, relatively to the other one, viz. the battery or its support.

In the accompanying drawing, forming part of this specification, I have illustrated several examples of lamps embodying my invention.

In said drawing: Figure 1 is a vertical cross-section of an example of my improved lamp, in which the displacement of the parts is effected by turning the lamp-support on the casing for the dry battery, both parts being provided with screw threads. Fig. 2 is a side view of a structure similar to that of Fig. 1, in which, however, the displacement is effected by a lug provided on one of the parts and sliding in an inclined slit of the other part, and Fig. 3 illustrates an example, in which one part is longitudinally slidable within the other, a spring or the like being provided normally to hold the parts in their retracted position.

Similar letters of reference refer to similar parts throughout the different views.

The dry battery, or a suitable casing *a* inclosing the same is provided, at its upper

part, with screw threads *h*. Adapted to be screwed on the casing *a*, a casing or other support *b* for the incandescent lamp is provided with screw threads *b'*. The lamp *c* is supported within the casing *e* by any preferred means. In the present example I have shown, for the purpose of illustration, a layer *d* of plaster of paris. In front of the lamp, the casing is closed by means of a lens *e*.

One pole of the lamp may be connected with the corresponding pole of the battery in any preferred way. In the present instance, the outer poles of the battery and lamp are connected to the metallic casings *a* and *b*, respectively, whereby a reliable contact is secured. The inner and central pole *g* of the lamp is designed to close the circuit. For this purpose, the corresponding pole *f* of the battery is so arranged, as to be in the path of the pole *g*, when the parts *a* and *e* are screwed one to the other, both poles being located centrally within their respective casing. The pole *f* is preferably, made of carbon.

Normally the parts *a* and *e* are screwed one to the other, but to such an extent only, that the poles *f* and *g* are out of contact. When it is desired to energize the lamp, it is but necessary slightly to turn the casing *e* on the casing *a*, until the poles *f* and *g* are brought together, whereby the circuit will be closed through the pole *f* of the battery, the pole *g* of the lamp, the filament, the casing *b*, the casing *a* and the second pole of the battery.

The example, shown in Fig. 2, is substantially the same as that shown in Fig. 1, the difference being, that the screw-threads *b'* and *h* are replaced by a lug *i* provided on the casing *a*, and an inclined slit *k* provided in the wall of the casing *b*. The operation of the device is the same as that of Fig. 1.

In the example shown in Fig. 3, the battery *a* is longitudinally slidable within the lower part of the casing *b*. The open bottom of the latter is provided with a ring *l* screwed thereto and having an inner flange *m* forming an abutment for the battery *a*, to prevent the same from falling out of the casing *b*. The upper part of the latter, the lamp and the contact *f* are identical with that of Fig. 1. However, I provide a coiled spring *n* or the like, within the upper part of the casing *b*, to hold the battery *a* normally downward and away from the lamp.



When it is desired to energize the lamp, it is but necessary to raise the battery *a* by pushing the finger through the opening of the ring *l*, whereby the poles *f* and *g* will be made to contact.

I claim:

1. The combination of the battery and the lamp carrier one movable relatively to the other in the direction of the battery's axis, said carrier remaining in conductive relation to one of the battery poles during such movement, and the other pole of the battery being arranged centrally, and a lamp secured to said carrier and having one of its terminals connected with said carrier while the other lamp terminal is arranged centrally and adapted to be moved into and out of contact with the central pole of the battery by the said relative movement of battery and carrier.

2. The combination of the battery and the lamp carrier one rotatable relatively to the other and each formed with cooperating elements to cause the battery and carrier to move lengthwise one relatively to the other upon their relative rotation, said carrier remaining in conductive relation to one of the battery poles during such movement, and the other pole of the battery being arranged centrally, and a lamp secured to said carrier and having one of its terminals connected with said carrier, while the other lamp terminal is arranged centrally and adapted to be moved into and out of contact with the central pole of the battery by the said relative movement of battery and carrier.

3. The combination of the battery and the lamp carrier having a screw connection so that rotation of the one relatively to the other will move them toward or from each other, said carrier remaining in conductive relation to one of the battery poles during such movement, and the other pole of the battery being arranged centrally, and a

lamp secured to said carrier and having one of its terminals connected with said carrier while the other lamp terminal is arranged centrally and adapted to be moved into and out of contact with the central pole of the battery by the said relative movement of battery and carrier.

4. A flash-light comprising a casing open at one end and carrying at its other end an incandescent bulb having a central terminal projected toward said open end and another terminal connected with said casing, and a battery fitted into the open end of said casing and movable lengthwise thereof toward and from the bulb, one pole of said battery being in electrical connection with the casing, and the other battery pole being located centrally so as to come into and out of contact with the central terminal of the bulb, whereby the said terminal and pole form a switch located within said casing and protected thereby.

5. A flash-light comprising a casing, an incandescent bulb carried by said casing and having a central terminal, and a battery movable in said casing toward and from the bulb and provided with a central pole concealed and protected by the casing and adapted for engagement with the central terminal of the bulb, the other terminal of the bulb being in permanent electrical connection with the other pole of the battery, whereby the lighting and extinguishing of the bulb is controlled by the mere movement of the battery actuating a protected internal switch formed by said central pole and terminal.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

FRITZ BLAU.

Witnesses:

WOLDEMAR HAUPT,  
HENRY HASPER.