B. BENEDICT.

ELECTRIC SWITCH.

APPLICATION FILED SEPT. 30, 1913.

1,107,646. Patented Aug. 18, 1914.

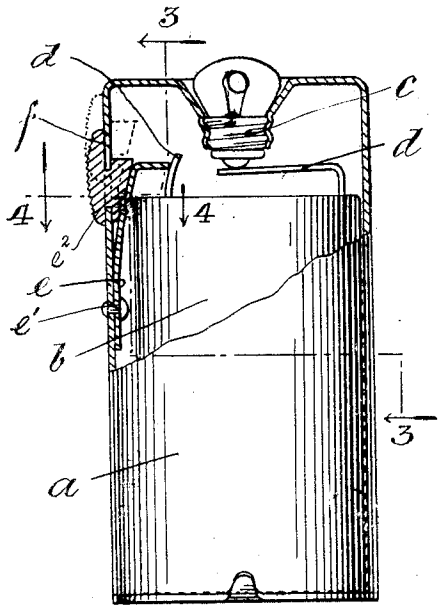


Fig. 2.

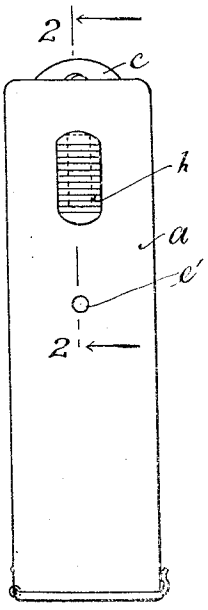


Fig. 1.

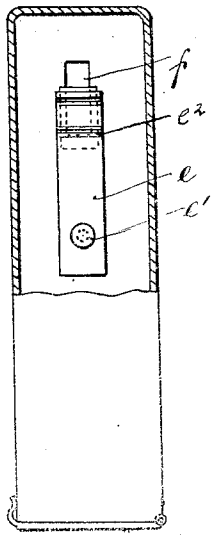


Fig. 3.

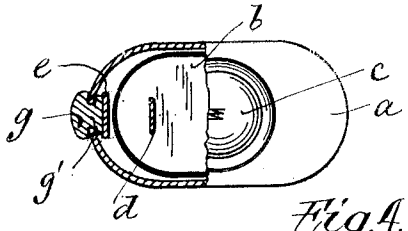
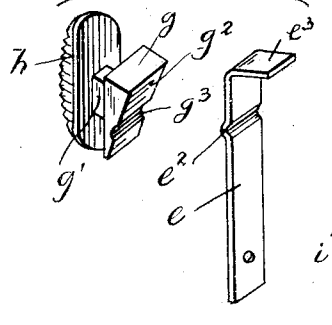


Fig. 4.

Fig. 5.



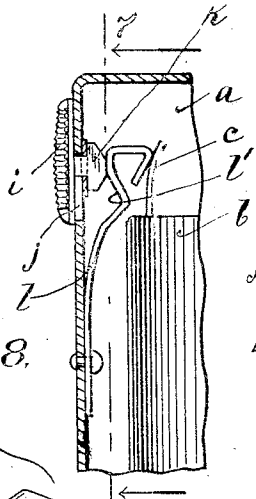


Fig. 6.

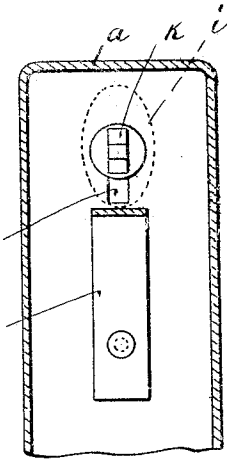
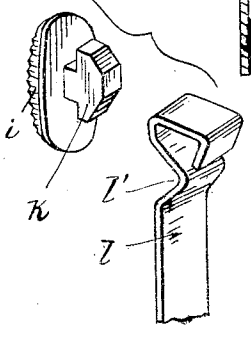


Fig 7.

Fig. 8.



Witnesses:
W. W. Benjamin
Alexander Erdmann

Inventor
Bernhard Benedict
By his Attorney
Mart. Oxenham

UNITED STATES PATENT OFFICE.

BERNHARD BENEDICT, OF NEW YORK, N. Y., ASSIGNOR TO BEACON MINIATURE ELECTRIC COMPANY, OF NEW YORK, N. Y.

ELECTRIC SWITCH.

1,107,646. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed September 30, 1913. Serial No. 792,572.

To all whom it may concern:

Be it known that I, BERNHARD BENEDICT, citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

The present invention relates to electric pocket flash light lamps, and consists in an improved construction of the switch mechanism.

The switch in the hitherto known electric flash light lamps comprises a button protruding outwardly from the casing and which when pressed inwardly closes the electric circuit. Such structure has been found objectionable, because when the lamp is carried in the pocket, some other objects coming in contact with the button depress the latter and close the electric circuit, thereby shortening the life of the battery. To overcome this drawback, the switch has been modified by the provision of a sliding shield which envelops the button and which, on its displacement, depresses the latter. While this shield prevents an accidental depression of the button, it entails another objection, to wit, it protrudes too far from the casing, and renders the carrying of the lamp in the pocket very inconvenient.

My improved structure obviates the above mentioned drawbacks, in that it avoids the use of a button, and comprises a slide formed with a member that projects through a slot into the casing and is adapted to act against a spring member arranged inside of the casing so as to force it into contact with one of the poles of the battery. There being no button, the shield can be made very flat, to protrude only very slightly from the casing.

My invention will be more fully understood by reference to the accompanying drawing in which similar reference characters denote corresponding parts and in which—

Figure 1 is a side elevation of an electric pocket flash light showing my improved slide switch; Fig. 2 is a face view of the lamp of which a part is shown in longitudinal section along line 2—2, of Fig. 1; Fig. 3—3 is a side elevation partly in section along line 3—3 of Fig. 2; Fig. 4 is a top plan view partly in cross section along line 4—4 of Fig. 2; Fig. 5 shows in perspective view details of the switch; Fig. 6 is a partial longitudinal section of the lamp, showing a modified switch; Fig. 7 is a section on line 7—7 of Fig. 6 and Fig. 8 are details of the modified switch.

With reference to Figs. 1–5, a denotes the casing of an electric pocket flash light lamp, b the battery, and c the electric bulb. One of the poles d of the battery is constantly in contact with the lamp, while the other extends into the free space of the casing. Thus far the construction is well known.

The new switch comprises a spring leaf or arm e fixed at its lower end to the inside of the casing. The upper end of said spring has a bend e^3 projecting toward the free pole d of the battery, but is normally separated from the same. Provided in the casing opposite this leaf e and extending to a point above the upper end of the latter is a narrow slot or recess f in which engages a neck or projection g' of a flat slide piece h having a rough surface and arranged on the outer surface of the casing a. Secured to or made integral with the neck g' is a wedge shaped member g which with its outer surface is adapted to bear against the inner surface of the casing and bears with its front biased surface g^2 against the spring arm e.

It will be seen that when the slide is moved downwardly from its dotted position into the full line position, it will force the leaf or arm e inwardly, bringing it into contact with the free pole of the battery, whereby the electric circuit will be closed. To secure the switch in operative position, the arm or leaf e is formed with an outwardly bent rounded portion e^2, which is adapted to engage a transversal groove g^3 in the wedge g. When the slide is moved into operative position the rib e^2 of the spring will snap into the groove g^3.

With the construction illustrated in Figs. 1–5, the closing of the switch is effected by the movement of the wedge carrying slide in downward direction, that is, to say, when holding the lamp in one hand, the thumb resting on the slide, will have to be moved downwardly, which is inconvenient. In order to enable the operation of the switch in a more convenient way, that is, by moving the thumb upwardly, I have somewhat modified the construction, which is illustrated in

Figs. 6–8. In this modification all parts of the lamp are substantially the same as in the first described construction. The flat slide *i*, as before, is slidably engaged in the longitudinal slot *j* of the casing *a*. The slide is provided with a member or a projection *k* in form of a short double wedge which is adapted when moved upwardly to engage the opposite spring arm *l* to force the latter into contact with the free pole of the battery *b*. The recess or slot in the present case is arranged somewhat lower, relative to the spring arm *l*, than in the first construction, so that when the slide *i* occupies its utmost position, the member *k* thereof, bears against the spring arm *l*. The spring arm is provided with an angular or V-shaped bend *l'* at a point which is opposite or nearly opposite the lower edge of the recess *j* so that when the slide *i* is moved downwardly to open the switch, its member *k* will enter the space formed by the angular bend, releasing the spring arm *l* and permitting it to spring back into its initial position.

Since various other modifications may be made by those skilled in the art without departing from the spirit of my invention, I do not wish to limit myself to the particular details of the construction described and shown.

What I claim and desire to secure by Letters Patent is:—

1. An electric circuit closer or switch, comprising a flat slide having a wedge-shaped extension, a spring leaf against which said wedge acts to force the latter into circuit closing position and means between said wedge and leaf to lock the former in circuit closing position.

2. An electric circuit closer or switch, comprising a flat slide having a grooved wedge-shaped extension, and a spring leaf having a projecting rib and against which the said wedge acts to force it into circuit closing position, said rib serving to engage the grooved portion of said wedge to lock the latter in circuit closing position.

In testimony whereof I affix my signature in presence of two witnesses.

BERNHARD BENEDICT.

Witnesses:
E. D. JUNIOR,
MAX D. ORDMANN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."