

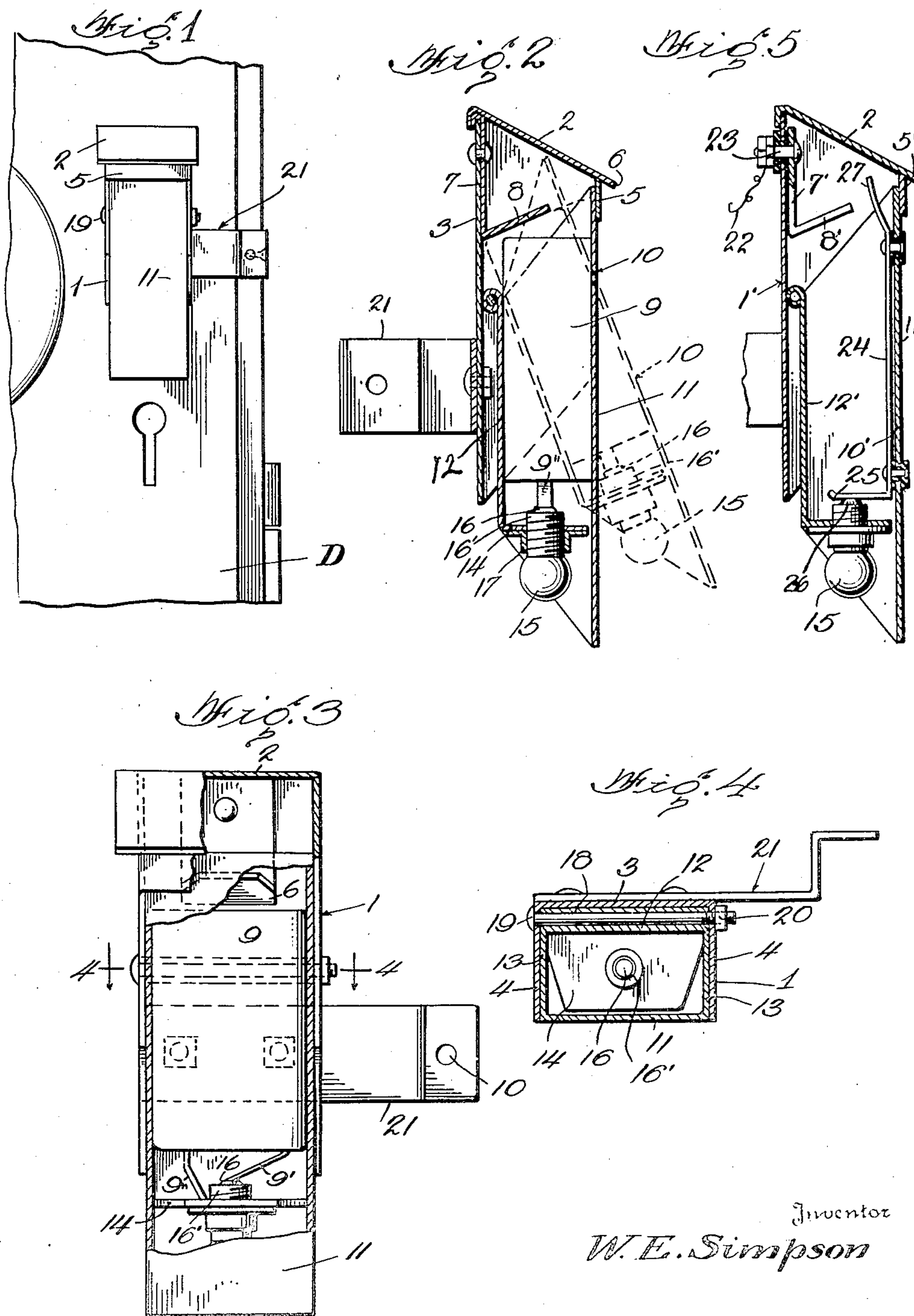
Aug. 20, 1935.

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2,011,692

ELECTRIC LIGHT

Filed July 24, 1933



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## UNITED STATES PATENT OFFICE

2,011,692

## ELECTRIC LIGHT

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Application July 24, 1933, Serial No. 681,975

2 Claims. (Cl. 240—2.13)

This invention relates to electric lights and more particularly to such lights as are used for short intervals of time in the manner of a flash-light.

A primary object of the invention is to so construct such a light that it may be easily set up in the position in which it is to remain and the light quickly turned on and off by swinging the bulb carrier outward and inward and which carrier when the light is not in use protects the bulb against the weather, if located outside, and against accidental breakage no matter where located.

Another object of the invention is to provide a light of this character which is simple and compact and which may be easily set up at any desired place ready for use and which may be supplied with current from either a self-contained battery or from any other suitable source.

In carrying out these objects the invention is susceptible of modifications without departing from the spirit or sacrificing any of the advantages of the claimed invention.

In the accompanying drawing

Figure 1 represents a front elevation of a portion of a door with this light in place for illuminating the keyhole;

Fig. 2 is a longitudinal section of the light;

Fig. 3 is a front elevation of the light with parts broken away and in section; and with the contacts in circuit closing position;

Fig. 4 is a transverse section taken on the line 4—4 of Fig. 3; and

Fig. 5 is a view similar to Fig. 2 showing a slightly different form of the invention.

In the embodiment illustrated this device is shown placed on a house door D in such position that when operated it illuminates the key-hole of the lock. It is particularly useful on automobiles; on motor boats; as a bed reading light; in closets; on stairways; cellars; and in any other place where a light may be useful, and it may be mounted in any suitable or desired manner.

As illustrated in Figs. 1 to 4 an open-front casing 1 is shown having a top 2, back 3, sides 4 and an upper front ledge 5, the latter being preferably equipped with an overhanging lip 6 to shed water and prevent its entrance into the casing. All of these parts may be of metal or other suitable material and they may be formed integrally as a single unit or of pieces mechanically united.

Secured to the inner face of the back 3 near its upper end is a plate 7 having at its lower end an inwardly and upwardly extending foot 8 to

be located in the path of a swingably mounted bulb carrier 10. This foot 8 cooperates with a small dry cell battery 9 carried by the bulb carrier 10 and by means of which the battery terminals 9' and 9'' are forced into contact with and respectively engage the bulb terminal 16 and the metal bulb support 14 in which the bulb shank or neck is screwed. This occurs when the carrier 10 is swung outward as shown in dotted lines in Fig. 2 thereby closing the circuit and lighting the bulb 15. When the carrier 10 is swung inward into the full line position of Fig. 2 the battery is moved away from foot 8 and its terminal 9'' disengaged from the bulb support 14 thereby breaking the circuit and extinguishing the light.

The bulb carrier 10 is shown in the form of a pocket-like casing pivotally mounted in the open-front casing 1 to swing into and out of said casing 1 thru its open front and when in normal closed position forms a closure for said front opening. This carrier pocket 10 includes a front 11 and back 12 the front extending at both ends beyond the ends of the back as shown clearly in Fig. 2. Sides 13 connect the front and back and are of a width slightly narrower than the sides of casing 1 so that when the carrier 10 is swung inward into closed position the front 11 lies flush with or slightly below the front edges of the sides 4 of casing 1 with the upper end of said front 11 underlying and abutting the inner face of casing 1. The sides 13 which connect the front 11 with back 12 of the pocket-like carrier 10 have their ends bevelled as shown in Fig. 2 and the lower end of back 12 carries an inwardly extending shelf 14 which is provided with a bulb socket 17 so that when a bulb is screwed therein the depending lower end of front 11 projects beyond the bulb and forms a protective hood therefor. The upper end of back 12 carries a transversely extending tubular barrel or bearing 18 to receive a pintle 19 which is shown in the form of a bolt extending thru the sides 4 of casing 1 and thru said barrel forming a pintle for pivotally mounting carrier casing 10 in casing 1. A nut 20 on said bolt when sufficiently tightened frictionally holds carrier 10 in any of its positions. When so mounted casing 10 has its upper end located in casing 1 and extends far enough thereinto to abut the inner face of ledge 5 when casing 10 is closed as shown in full lines in Fig. 2.

It will thus be seen that when a dry cell 9 is placed in the pocket of casing 10 one of the terminals 9' of said cell will lightly rest on the terminal or contact 16 of bulb 15 and the other end



of the battery will be so located as to engage foot 8 when the casing 10 is swung outward into the dotted line position of Fig. 2. When such engagement occurs the battery will be forced into the pocket by the pressure exerted by said foot and cause the other terminal 9'' of battery 9 to also engage the bulb support or shelf 14 with which the shank of the bulb is in electrical contact thereby closing the circuit and lighting the bulb. The light will remain on as long as the casing 10 is swung outward and when manually pushed inward to closed position the contacts will assume the full line position shown in Fig. 2 thereby breaking the circuit and extinguishing the light.

A mounting or attaching element in the form of a bracket 21 is carried by the casing 1 being fastened in any suitable manner preferably to the casing back 3 for mounting the light on a suitable support in any desired locality. This bracket may be of any desired shape according to the place where the light is to be used and it may be equipped with any suitable means for securing it in place, screw holes being here shown for this purpose.

In Fig. 5 the light is shown connected with a current supply wire 22 designed to be connected with any suitable source of electricity, the dry cell 9 of the other figures being omitted in this form.

The current supply wire 22 is connected with the plate 7' by an insulated bolt 23, said plate forming one pole of the circuit and the foot 8' thereof projects in the path of a cooperating contact 24 carried by the bulb carrier or shield 10' which is similar to that shown in the other figures. This contact 24 is shown in the form of a metal plate or strip secured to casing 10' and having at its lower end a laterally extending finger 25 engaged with the bulb contact or terminal 26, said bulb casing or base shell being grounded on casing 10'. The upper end of strip 24 is bent inward to form a finger 27 to be engaged by foot 8' when casing 10' is swung outward a predetermined distance and thereby close the circuit and light bulb 15.

It is obvious that in the form shown in Figs. 1 to 4 when the bulb carrier or shield 10 is swung outward a certain distance the foot 8 will engage the battery cell 9 and check its movement so that the further swinging out of the shield will cause the battery to be moved longitudinally rela-

tively to the shield and thus cause the spring contact 9'', which is shorter than contact 9', to engage the bulb casing or base shell 16' and thus complete the circuit and illumine the bulb.

When the shield is swung inwardly the battery is moved away from foot 8 releasing the battery from pressure, and the force of spring contact 9' will move the battery rearward relatively to the shield and separate contacts 9'' and 16', break the circuit and extinguish the light.

In the form shown in Fig. 5 when shield 10' is swung outward contact finger 27 engages foot 8' located in its path and closes the bulb circuit and illumines the bulb.

When shield 10' is swung into closed position the contact 27 is moved away from contact 8 thereby breaking the circuit and extinguishing the light.

The inward swinging or closing movements of shields 10 and 10' are controlled by the engagement of the upper ends of the shields with the ledges 5, 5' of the casings or fixed members 1 and 1'.

The outward movement of the shield 10 is limited by engagement of the toe of foot 8 with the front wall of shield 10 or by the battery 9 engaging member 1.

I claim as my invention:

1. In an electric light, the combination of a base member, a bulb shield movably connected to the base member and having an electric light bulb and a storage battery cell, said bulb and cell having cooperating contacts, an element on the base member in the path of the cell when the shield is moved in one direction whereby the movement of the cell is checked and the electric circuit is completed by further movement of the bulb into engagement with the contacts of the battery cell.

2. A lighting device comprising a fixed part, a second part movable upon the fixed part, an electric light bulb carried by the movable part, a storage battery cell carried by the movable part, a projection on the fixed part to check the movement of the battery cell when the movable part is moved relatively to the fixed part, contacts on the battery cell against which the light bulb contacts engage upon the further movement of the movable part after the movement of the cell is checked to complete the electric circuit and illumine the bulb.

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