March 1, 1960 C. M. PHILLIPS ET AL 2,927,197

KEYHOLE ILLUMINATOR

Filed March 13, 1956

Fig. 1.

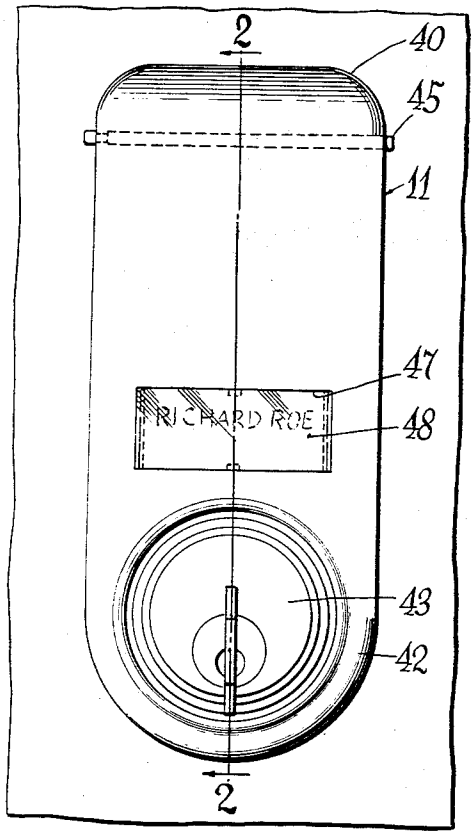


Fig. 2.

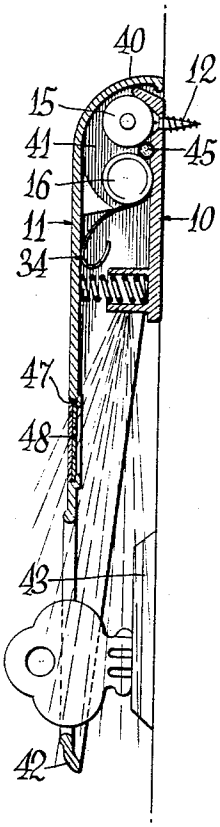


Fig. 5.

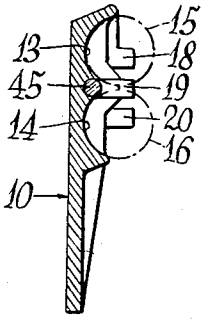


Fig. 6.

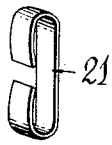


Fig. 7.

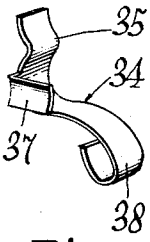


Fig. 3.

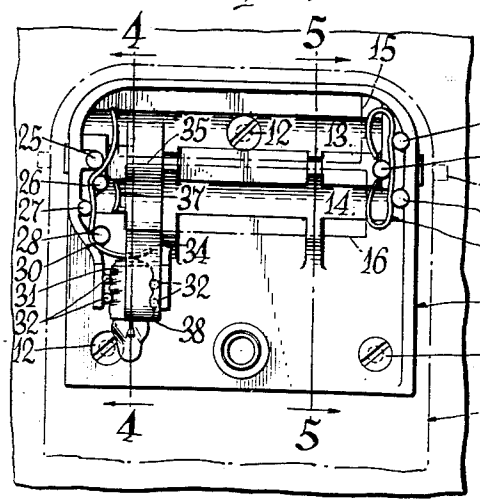


Fig. 4.

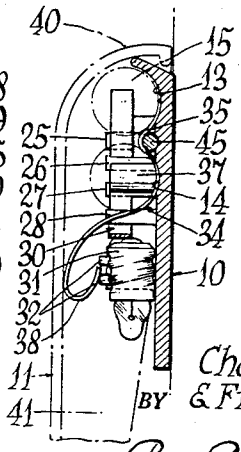
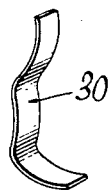


Fig. 8.



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KEYHOLE ILLUMINATOR

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2 Claims. (Cl. 240—2.13)

This invention relates to devices for illuminating the keyholes of doors or similar closures and more particularly to such a device wherein a keyhole may be illuminated in a simple and convenient manner as a part of the operation of inserting a key into a lock.

A primary object of the present invention is to provide an improved keyhole illuminator having a self-contained lamp and lamp energizing means in such a form that the device is simple in attachment to a door or the like adjacent to the lock thereof. The device of the present invention is so arranged that it may be operated to illuminate the keyhole by the mere preliminary manual act of inserting a key in a facile one-hand operation. To this end the switch which controls the illumination comprises a manual portion which extends entirely about the keyhole plate of the lock so that bringing the hand in which the key is grasped up to the approximate location of the lock automatically brings the hand into contact with the control member, no matter in which manner the hand approaches the keyhole and no matter on which side of the keyhole the hand is disposed in the act of bringing the key to the keyhole.

A further object is to provide a simple and highly compact arrangement in a device of this general character wherein the device employs few parts and parts which are readily manufactured and easily and quickly assembled.

The device of the present invention is extremely clean and simple in external design, the only visible part being the illumination operator itself which is of novel form and, besides entirely surrounding the key hole opening, comprises a complete casing closure for the entire device. Thus also the few internal working parts of the device are fully housed and protected against the elements.

A single specific embodiment of the principles of the present invention is illustrated in the accompanying drawing and described in the following specification but it is to be understood that such embodiment is by way of example only and that the scope of the present invention is not limited excepting as defined in the appended claims. For instance, the preferred embodiment illustrated herein provides a self-contained lamp energizing source in the form of dry cells housed within the tubes, but it is to be understood that the dry cells may be mounted at another point, such as within the door or at the inside of the door, and in fact the device may be supplied with energy from another source such as the house current supply, which latter may be conveniently accomplished by connecting the device of the present invention to a transformer normally used to power a door bell or the like.

In the drawings,

Fig. 1 is a general elevational view of one form of the device of the present invention shown associated with a door lock of the cylindrical type;

Fig. 2 is a general cross-sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary view taken similarly to Fig. 1 but on a slightly larger scale and with the cover and operating member removed to illustrate the base plate or mounting means of the device;

Fig. 4 is a cross-sectional view on the line 4—4 of Fig. 3;

Fig. 5 is a fragmentary cross-sectional view on the line 5—5 of Fig. 3;

Fig. 6 is a detailed perspective view of a spring clip member for retaining and electrically connecting the pair of dry cells;

Fig. 7 is a detailed perspective view of a spring clip member for connecting the dry cells of a lamp; and

Fig. 8 is a perspective view of a spring clip member which biases the combined housing and operating member to a non-illuminating position when the device is not being used.

Like characters of reference denote like parts in the several figures of the drawing and the numeral **10** designates generally a base plate member which is securable to a door frame or other desired point of attachment. The numeral **11** designates generally a combined housing and operating member which is pivoted to base plate **10** in a manner which will presently appear.

The base plate **10** is attached to a door or the like by means of screws **12** with the cover and operating member **11** removed therefrom, as generally indicated in Fig. 3. Base plate **10** is provided with a pair of concave forms **13** and **14**, see Fig. 5, which receive a pair of dry cells **15** and **16**. In the present instance the base plate **10** is shown as a plastic molding but it may be a sheet metal stamping or otherwise. In the illustrated form base plate **10** includes upstanding integrally molded pins **18**, **19** and **20** and a generally C-shaped spring clip **21**, which is shown in detail in Fig. 6, is assembled and retained between the pins **18**, **19** and **20** as clearly shown in Fig. 3. The looped end portions of spring clip **21** bear against the adjacent ends of the dry cells **15** and **16** to electrically connect such ends and to cooperate in retaining the dry cells in assembled position.

Similar integral upstanding pins **25**, **26**, **27** and **28** are provided for receiving therebetween a spring clip member **30** which is shown in detail in Fig. 8. Spring clip **30** bears against the opposite end of dry cell **15** and against the base contact portion of an incandescent lamp **31**.

Incandescent lamp **31** in the present instance is of the screw base type and is pressed downwardly between two pairs of upstanding pins **32** which engage the grooves in the threaded portions of the base of the lamp **31** to retain the same against axial displacement. A further spring clip member **34** includes a somewhat flat V-shaped base portion **35** which fits into the depressions **13** and **14** beneath the dry cells **15** and **16** and is thus retained by the dry cells. Spring clip **34** includes an angularly extending flange formation **37** which bears against the opposite end of dry cell **16** and an outer loop portion **38** which serves as a resilient biasing member for the cover and operating member **11** and also as a contact member, in a manner which will presently appear.

Housing and operating member **11** comprises generally a flat body portion having a curved enclosing flange **40** at one end, the upper end as illustrated herein, and enclosing side wall or flange portions **41**. The lower end of housing and operating member **11** as illustrated herein includes a flat ring formation **42** which is arranged to be concentric with a lock keyhole plate **43** so as to entirely surround the same.

The base member **10** is provided with a transverse opening extending therethrough parallel to the base surface thereof for receiving a hinge pin **45**. The side wall formations **41** of housing and operating member **11** are provided with aligned openings which register with the hinge pin opening in base member **10** and the final assembly

operation, after base member 10 has been screwed to a door or the like, comprises insertion of the hinge pin 45 through the aligned openings of the side walls of housing 11 and the opening in base member 10. Hinge pin 45 is preferably provided with a reduced or necked-out diametral portion adjacent one end thereof in engagement with one of the side walls 41 to retain the hinge pin against axial displacement.

When housing member 11 is thus assembled its interior surface engages against the looped end 38 of spring clip 34 and the lower portion of the housing member is thus urged to an outward position with the terminal edge of upper flange 40 engaging against the surface point upon which the device is mounted, as clearly shown in Fig. 2.

When the lower portion of housing 11, and more specifically the ring formation 42, is pressed toward the door loop 38 engages against the threaded base of lamp 31, thus establishing an electrical circuit including the dry cells 15 and 16 and the lamp 31, all in series.

If desired the outer face of housing member 11 may be provided with a name tab receiving opening as at 47 and a transparent or translucent name tab 48 will thus be illuminated when the circuit of lamp 31 is closed by depressing action against the lower portion of hinge member 11.

What we claim is:

1. In a keyhole illuminating device, a relatively flat base member adapted to be attached to a door or the like at a point above a keyhole therein, a vertically elongated housing and operating member having an upper portion overlying said base member and pivoted thereto on a generally horizontal axis parallel to said flat base member, the lower portion of said housing and operating member projecting downwardly from said base member to said keyhole in cantilever fashion and terminating in a ring shaped portion surrounding said keyhole and normally

spaced outwardly therefrom, illuminating means mounted on said base member and directed downwardly toward the ring shaped portion of said housing and operating member, and switch means for said illuminating means carried by said base member and operable by movement of said ring shaped portion toward said keyhole to activate said illuminating means.

2. In a keyhole illuminating device, a relatively flat base member adapted to be attached to a door or the like at a point above a keyhole therein, a vertically elongated housing and operating member having an upper portion overlying said base member and pivoted thereto on a generally horizontal axis parallel to said flat base member, the lower portion of said housing and operating member projecting downwardly from said base member to said keyhole in cantilever fashion and terminating in a ring shaped portion surrounding said keyhole, and normally spaced outwardly therefrom illuminating means mounted on said base member and directed downwardly toward the ring shaped portion of said housing and operating member, a resilient member carried by said base member and acting against said housing member to urge the same pivotally outwardly, said resilient member comprising a switch for said illuminating means closable by movement of said ring shaped portion toward said keyhole.

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