Oct. 17, 1939. H. E. BABB 2,176,662

KEYHOLE ILLUMINATOR

Filed May 31, 1938

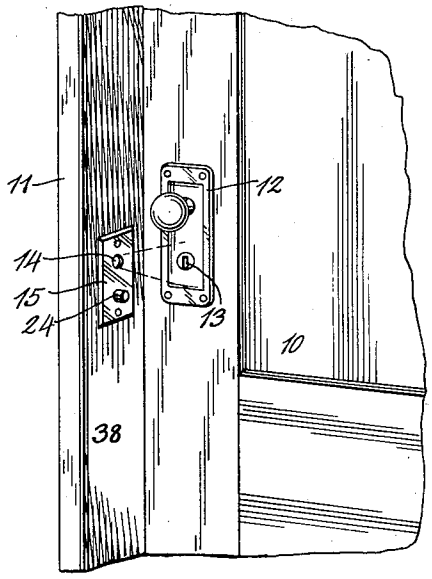


Fig. 1.

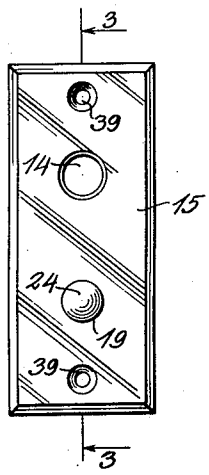


Fig. 2.

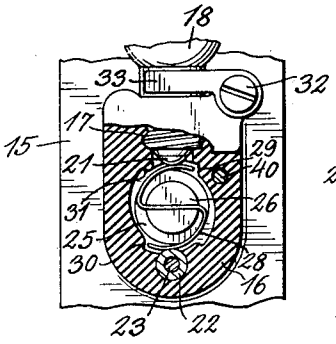


Fig. 4.

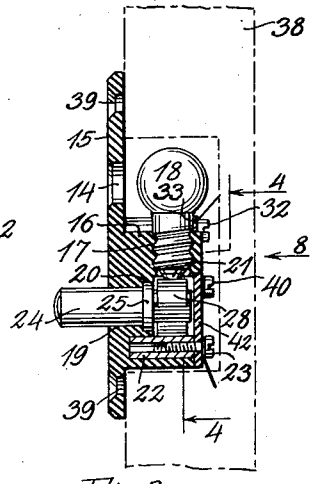


Fig. 3.

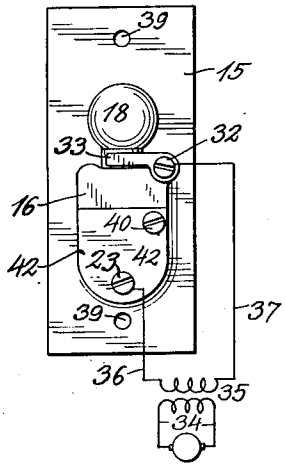


Fig. 8.

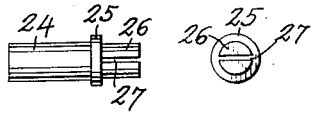


Fig. 5. Fig. 6.



Fig. 7.

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KEYHOLE ILLUMINATOR

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Application May 31, 1938, Serial No. 210,873

1 Claim. (Cl. 173—351)

This invention relates to improvements in keyhole illuminators.

It is well known that many persons have more or less difficulty in opening the doors to their homes when returning on a dark night.

It is the object of this invention to produce a combined switch and socket of such shape that it can be readily attached to the door jamb and which, when the lamp is lighted, will illuminate the lock so as to facilitate the insertion of the key.

I am aware that patents have been granted for devices for this purpose, and therefore do not claim to be the originator of this idea, in its broadest aspect, but only of a specific embodiment thereof.

In order to describe this invention so that its construction and mode of operation can be readily understood, reference will now be had to the accompanying drawing on which the invention has been shown in its preferred form and in which:

Figure 1 is a perspective view of a portion of a door and frame showing the relative positions of the lock and the illuminator;

Figure 2 is a front elevation of the combined socket and switch member which forms the keyhole illuminator;

Figure 3 is a section taken on line 3—3 of Fig. 2;

Figure 4 is a section taken on line 4—4 of Fig. 3;

Figure 5 is a plan view of the switch spindle;

Figure 6 is an end view of the spindle shown in Fig. 1;

Figure 7 is an end view of the switch blade or contact; and

Figure 8 is a rear elevation of the device shown in Fig. 1.

In Fig. 1 a perspective view of a portion of a door 10 and a door frame 11 have been shown for the purpose of showing the relative position of the keyhole and the light or illuminating device. The escutcheon plate 12 has been shown as having a keyhole 13 which is illuminated by rays of light coming from the opening 14 in the plate 15.

In Figs. 2, 3 and 4 the combined switch and socket that comprises this invention has been illustrated and the same will now be described. The plate which has been designated by number 15 has formed integral therewith a base 16, which has a threaded opening 17 for the reception of the screw base of an incandescent lamp that has been indicated by dotted lines and designated by numeral 18. Plate 15 and base 16 are perforated by an opening 19. The outer portion of opening 19 is cylindrical and terminates in a circular rabbet 20 that in turn terminates in a section whose wall is irregularly shaped. Opening 19 intersects the threaded opening 17 and when the lamp is in position the center contact 21 thereof extends into the irregularly shaped, inner end of opening 19. Diametrically across from the center contact is a tubular contact 22, whose axial opening is threaded for the reception of screw 23, which serves as a binding screw.

The movable member of the switch consists of a cylindrical plug 24, of Bakelite or other insulating material, that is provided with a flange 25 that fits in the rabbet 20. The end 26 is of smaller diameter than part 24 and has a diametrical slot 27 in which is positioned the S-shaped switch blade 28, shown in Fig. 7. The switch blade has been indicated in Fig. 4 and shown in position to establish an electrical connection between the center contact of the lamp and contact 22. The shoulder 29 serves to prevent reverse movement of the switch, and is supplemented in its action by shoulder 30. When the switch is to be moved to open position the blade is rotated until the end that is shown in contact with shoulder 29 contacts with shoulder 31. A screw 32 is threaded into the material of base 16 and serves as a terminal and also to hold the spring contact 33 in place. The spring contact is bent inwardly and when the lamp is in place it rests on the screw shell contact of the lamp and forms one contact of the socket.

If a low voltage lamp is employed, for example, a 6 volt lamp, and it is desired to operate it from the ordinary house lighting circuit 34 that is usually 110 volt A. C., a transformer 35 has its primary coil connected with the lighting circuit and its secondary connected with terminal screws 23 and 32 by conductors 36 and 37.

It is now evident that when the switch blade 28 is in the position shown in Fig. 4, with its ends in contact with the center contact of the lamp and with contact 22, the lamp will be illuminated and a beam of light will pass through the opening 14 and illuminate the lock. By turning switch member 24 through a few degrees, the lamp is disconnected.

In Fig. 3 the door jamb 38 has been shown by dotted lines. To install the illuminator an opening is cut in the jamb, large enough to receive the base 16 and the lamp. The device is secured in place by screws passing through openings 39. The inner end of opening 19 is normally closed by a plate of insulating material that is held in

place by screws 40 and 23; this cover plate has been shown in section in Fig. 3 and designated by numeral 42.

It will be seen from the above description that the combined socket and switch is formed from a plate 15 having an integral base 16.

The plate 15 is larger than the base and fits against a supporting surface in such a way that it forms a cover for the opening in the jamb. The switch is exceedingly simple, and comprises the rotatable pin 24 and the switch blade 28. The lamp socket is formed by the threaded opening 17 and the spring contact 33 while the center contact of the lamp and contact 22 form the stationary switch contacts.

The device is extremely simple and can be readily installed in both old and new houses and may be used in connection with the entrance doors of apartments when desired.

Particular attention is called to the unitary construction of the base and plate 15 and to the very few parts used.

Having described the invention what is claimed as new is:

A combined lamp socket and switch comprising in combination a plate-like member having a base of insulating material extending from one side thereof, the base being smaller than the plate-like member, a threaded opening extending into one end of the base, another opening extending through the plate and the base at right angles to the axis of the threaded opening and intersecting the latter, the threaded opening serving to cooperate with the threaded outside contact of an incandescent lamp, a terminal carried by the base, a resilient contact member attached to the terminal in position to engage the outside contact of an incandescent lamp positioned in the threaded opening, a switch member mounted for rotation in the second mentioned opening, an electric terminal positioned in the wall of the base with a portion of its surface exposed in the second named opening, and a resilient switch contact carried by the switch member, said contact when in one position connecting the last mentioned terminal with the center contact of a lamp positioned in the threaded opening.

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