April 22, 1958 K. G. JEFFERSON 2,831,959

KEYHOLE LIGHT

Filed July 10, 1956

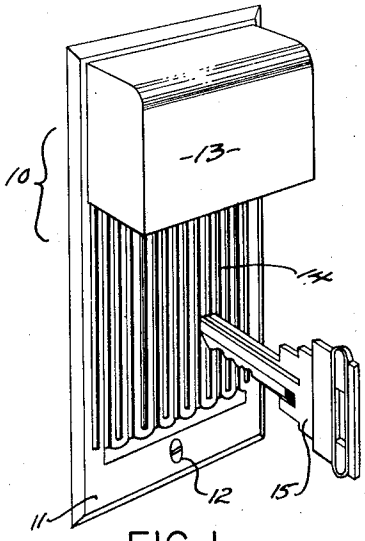


FIG. 1

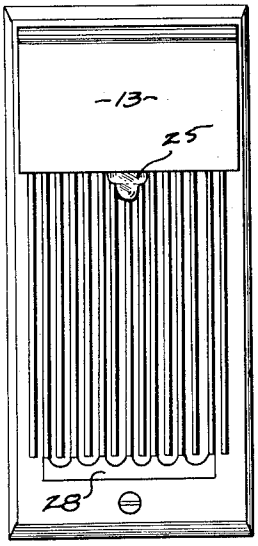
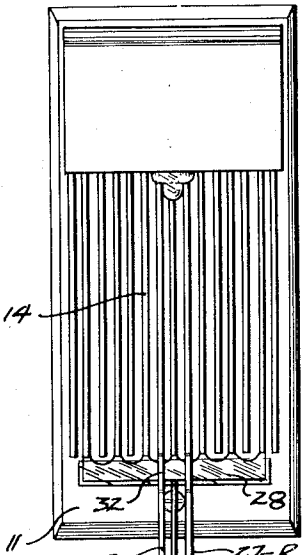


FIG. 2



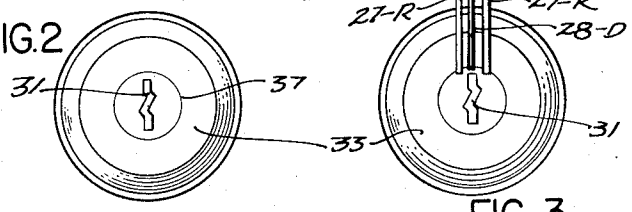
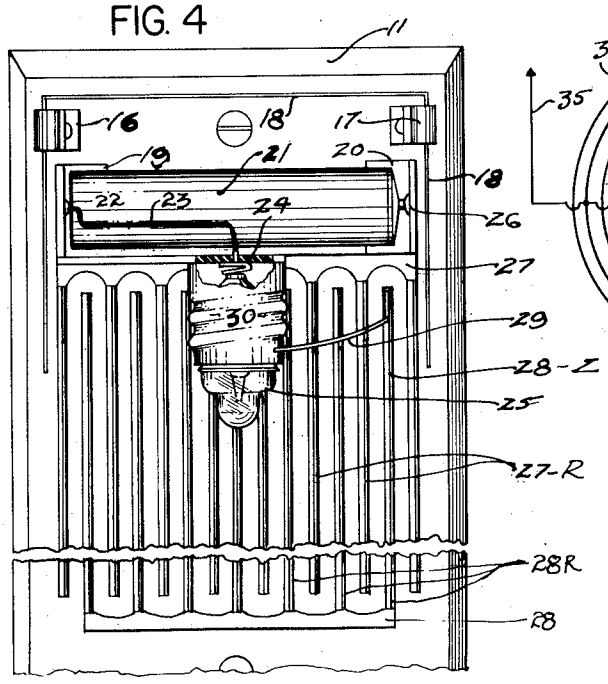


FIG. 3

FIG. 4



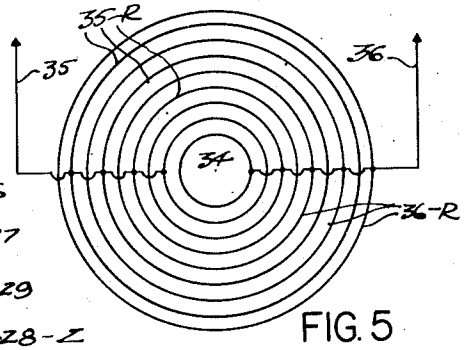


FIG. 5

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United States Patent Office 2,831,959
Patented Apr. 22, 1958

2,831,959

KEYHOLE LIGHT

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Application July 10, 1956, Serial No. 596,894

2 Claims. (Cl. 240—2.13)

This invention relates to lights for illuminating keyholes, and more particularly to a small fixture adapted for attachment to a door above a keyhole therein, having its own power source and bulb and switch menas including two sets of interposed parallel rods connected in series in the battery circuit so that current is directed to the bulb when any two adjacent rods are touched by a metallic object such as a door key.

In the past there have been a number of comparatively ineffective attempts to overcome the problem involved in finding a keyhole in the dark. This problem has been difficult to solve particularly in the case of homes which have no porches, and consequently no porch lights. It is also present in homes having outside lights adjacent the door, but having no outside switches for them.

Furthermore, the idea of illuminating the keyhole from the inside by the method used in automobiles is impractical because the keyholes do not extend completely through the door, in fact, most keyholes in cylinder locks are completely enclosed and could not be illuminated from the inside even if some method of positioning a light and power source interiorly of the door could be devised.

Certain devices which have been intended to be operated by the low voltage supply serving the door bell circuit proved impractical since they were of necessity installed on the structure of the house rather than on the door, and consequently were too distantly spaced from the keyhole of the lock.

My invention has been made with the foregoing considerations in mind and will be seen to have a plurality of important objectives.

One important object of my invention is the provision of a device adapted to illuminate the keyhole of a conventional door lock and which is attachable to the door directly above the keyhole.

Another important object of my invention is the provision of a device of the character described which is provided with its own power source.

A further important object of my invention is the provision of a device of the character described being adapted with easily accessible switch means conveniently operable in the normal course of unlocking the door by first positioning the key thereon.

An additional important object of this invention is the provision of a keyhole lighting device of the character described which is substantially tamper-proof and cannot be operated manually or by pressure of the fingers on the switch means.

In brief, my invention consists of a small electric fixture including a low voltage bulb and a single cell battery disposed on a mounting plate and protected by a hood below which is a grid assembly including two fork-like assemblies of parallel rods oppositely positioned with the bars of one interposed between the bars of the other. One terminal of the battery is connected to the basal terminal of the bulb, the other battery terminal is connected to one of the fork assemblies, and the other fork assembly is connected to the lamp socket shell.

Touching the point of a key to any two adjacent bars serves to complete the circuit and light the bulb.

Other important objects of my invention will become apparent in the following detailed specification of one preferred embodiment thereof when read with reference to the accompanying drawings, of which:

Fig. 1 is a diagrammatic perspective view showing the keyhole illuminating device and a door key in position to make contact thereon;

Fig. 2 is a frontal elevational view of the device shown in normal positioning relative to the escutcheon plate of a cylinder lock shown therebelow;

Fig. 3 is a view similar to Fig. 2 showing a variation of the grid assembly in which rods from both fork assemblies are extended downwardly to a point immediately above the keyhole;

Fig. 4 is a diagrammatic frontal view, somewhat enlarged, of the device with the hood removed to reveal the interior details, and

Fig. 5 is a purely schematic diagram showing an alternate arrangement of the switch grid elements.

Reference is again made to Fig. 1 in which a keyhole lighting fixture constructed according to my invention is designated collectively by the numeral **10** and is seen to include a base **11** provided with fastening means as at **12** for fastening the device to a door, a hood **13** disposed over the bulb and battery assembly to direct the light downwardly upon the interspaced parallel bars of the grid assembly **14**. Also shown in this figure is a typical door key **15** positioned to make a connection between two of the adjacent rods of the grid.

For a better understanding of the various elements attention is directed to the enlarged diagram of Fig. 4 in which the cover **13** is seen to be removed from the base **11** to which it is removably attachable by means of two spring clips **16** and **17** which engage detents disposed interiorly of the sides of the hood **13**, and are effective to hold the inner edge of the hood **13** interiorly of the groove **18** which is seen to traverse the top of the base **11** and extend downwardly along both sides.

A second pair of spring clips shown at **19** and **20** are right angular members fixedly attached to the base **11** and tensioned inwardly to engage the battery **21** in removable attachment therebetween. Current is directed from one battery contact point indicated at **22** by means of the conductor **23** through the spring contactor **24** to the basal terminal of the bulb **25**, and current from the second battery terminal **26** is carried through the body of the spring clip **20** to a transverse yoke member **27** which connects and supports a plurality of downwardly extended parallel rods designated as **27–R**. A second transverse yoke member **28** is seen positioned adjacent the bottom of the base **11** and has a second plurality of parallel rod members **28–R** upwardly extended therefrom which are seen to be evenly interspaced between the rods **27–R**. A connector member **29** serves to connect one of the rods **28–R** to the exterior of the lamp socket **30** and therethrough to the sidewall of the bulb **25**.

As will readily be understood, touching the point of a key to any two of the adjacent rods is effective to direct current from the battery terminal **26** through the yoke member **27** into the rods **27–R** thence through the key to the rods **28–R** and therefrom through the connector **29** to the socket **30**, thus igniting the bulb **25**.

Although it might normally be expected that the base **11** be conformed of some non-conductive material such as a ceramic or plastic, it can be seen that the base **11** might be brass or any other conductive material as long

as the grid assembly 14 is properly insulated therefrom.

In the variation shown in Fig. 3, two of the rods 27–R are shown to be extended below the base 11 to the top of the keyhole 31 with a downward extension 28–D from the yoke 28 positioned therebetween. The rods 27–R are bent outwardly at 32 to avoid contact with the transverse yoke 28.

A further variation of the grid 14 shown in previous figures is seen in Fig. 5 in which the grid assembly is comprised of a plurality of concentric rings of progressively increased diameter which are connected alternately to opposite lead wires 35 and 36. The inner ring 34 is seen to be of suitable diameter to fit around the central cylinder 37 in which the keyhole 31 is disposed with the circular grid completely covering the escutcheon plate 33 of a conventional cylinder lock.

A circular grid of this type could be utilized as an accessory to or an extension of a grid assembly such as 14, or it could completely replace a grid having a plurality of parallel bars and be mounted in its place on the base 11 with a bore therethrough at the point indicated by 34, thus making the assembly attachable to a door over the lock escutcheon plate 33 with the central cylinder 37 of the lock centered interiorly of the bore at 34.

In either arrangement, the nature of the grid provides a readily identifiable surface, making it an easy matter to position the key upon it, light the bulb and thereby locate the keyhole.

Numerous modifications and variations of the present invention will occur to those skilled in the art after a careful study thereof. All such, properly within the basic spirit and scope of the present invention are intended to be included and comprehended herein as fully as if specifically described, illustrated and claimed herein.

The exact compositions, configurations, constructions, relative positionings, and cooperative relationships of the various component parts of the present invention are not critical, and can be modified substantially within the spirit of the present invention.

The embodiments of the present invention specifically described and illustrated herein are exemplary only, and are not intended to limit the scope of the present invention, which is to be interpreted in the light of the prior art and the appended claims only, with due consideration for the doctrine of equivalents.

I claim:

1. A key-operated keyhole-illuminating apparatus, comprising: keyhole means; base means mounted transversely adjacent to said keyhole means and having clamp means forwardly extended therefrom and having forwardly positioned socket means; battery means removably received and supported by said clamp means in front of said base means; lamp means removably received and supported by said socket means in front of said base means; switch means including two sets of longitudinal spaced substantially parallel electrically conductive rods carried by and at the front of said base means in a position longitudinally extending between said lamp means and a position adjacent said keyhole means, said two sets of rods being directly accessible from in front of said base means, the spaced rods of one of said sets of rods being alternately spacedly positioned between corresponding spaced rods of the other of said sets of rods, each of said two sets of rods being electrically connected in series with said battery means and said lamp means; electrically conductive key means in bridging series connection with a rod of one of said sets of rods and with an immediately spacedly adjacent rod of the other of said sets of rods and effectively connecting said battery means in closed circuit series relation with said lamp means and energizing said lamp means, said energized lamp means being physically positioned at similar first ends of said two sets of parallel longitudinal rods and being optically spacedly adjacent to and in illuminating relationship with said keyhole means physically positioned immediately adjacent to opposite similar ends of said two sets of parallel longitudinal rods; and hood means removably carried by and at the front of said base means in covering relationship with respect to said battery means and defining light-directing means positioned on the opposite side of said lamp means from said keyhole means and directing light from said energized lamp means onto said keyhole means adjacent the other ends of said two sets of longitudinal parallel rods.

2. A key-operated keyhole-illuminating apparatus, comprising: base means having clamp means forwardly extended therefrom and having forwardly positioned socket means; battery means removably received and supported by said clamp means in front of said base means; lamp means removably received and supported by said socket means in front of said base means; switch means including two sets of longitudinal spaced substantially parallel electrically conductive rods carried by and at the front of said base means in a position longitudinally extending between said lamp means and a lamp illumination region spaced from said lamp means, said two sets of rods being directly accessible from in front of said base means, the spaced rods of one of said sets of rods being alternately spacedly positioned between corresponding spaced rods of the other of said sets of rods, each of said two sets of rods being electrically connected in series with said battery means and said lamp means; said lamp means being positioned optically spacedly adjacent to and in illuminating relationship with respect to said lamp illumination region in response to bridging series connection by key means of a rod of one of said sets of rods with an immediately spacedly adjacent rod of the other of said sets of rods and the effective connection thereby of said battery means in closed circuit series relationship with said lamp means; and hood means removably carried by and at the front of said base means in covering relationship with respect to said battery means and defining light-directing means positioned on the opposite side of said lamp means from said lamp illumination region and directing light from said energized lamp means into said lamp illumination region adjacent the other ends of said two sets of parallel rods.

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