United States Patent [19]

Gruber

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[45] **July 24, 1973**

[54] **BURGLARY DETERRENT DEVICE**

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[21] Appl. No.: **182,711**

[52] **U.S. Cl.** ..... **307/141**, 240/49, 240/108 R, 315/360

[51] **Int. Cl.** **H01h 7/00**

[58] **Field of Search** ..... 240/49, 108 R; 315/225, 360; 307/141, 141.4, 141.8, 112, 149, 157; 200/38 D

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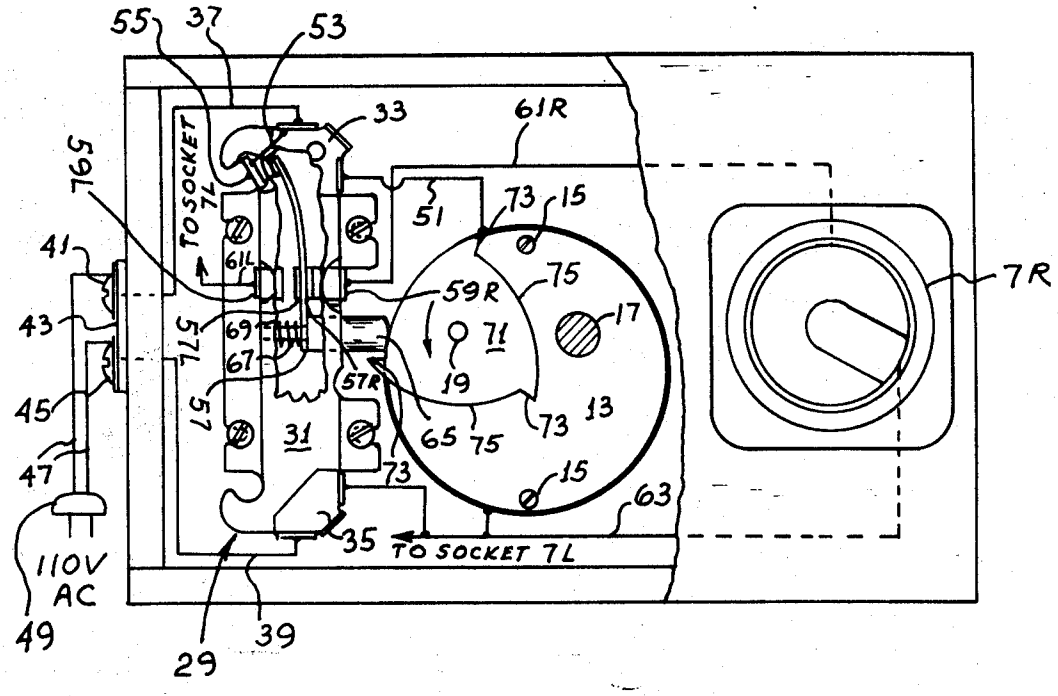
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Primary Examiner—Herman J. Hohauser
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[57] **ABSTRACT**

A device for deterring burglars comprises a base supporting incandescent lamp bulbs and containing an electric motor with its shaft projecting upwardly from the base between the bulbs to support a rotatable partial shade, and a switch intermittently opened and closed responsive to operation of the motor for intermittently turning the lamps on and off.

12 Claims, 4 Drawing Figures



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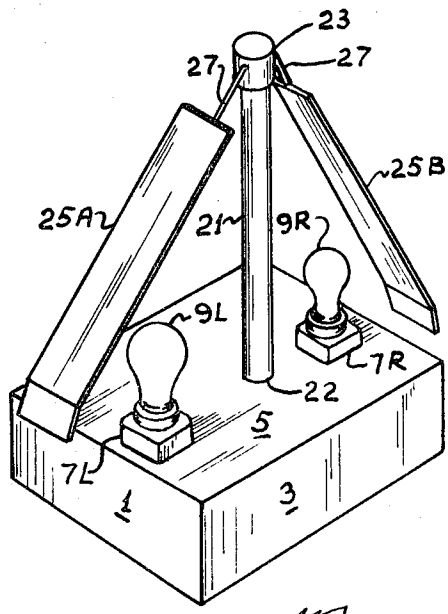


FIG. 1.

FIG. 2.

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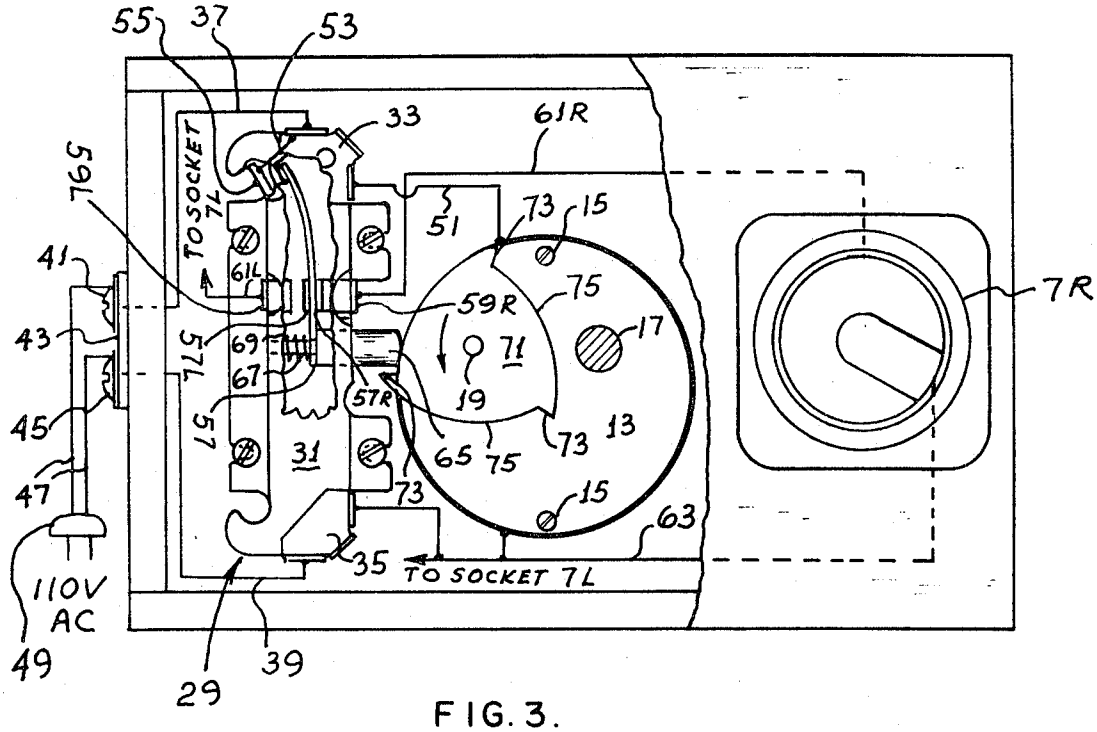


FIG. 3.

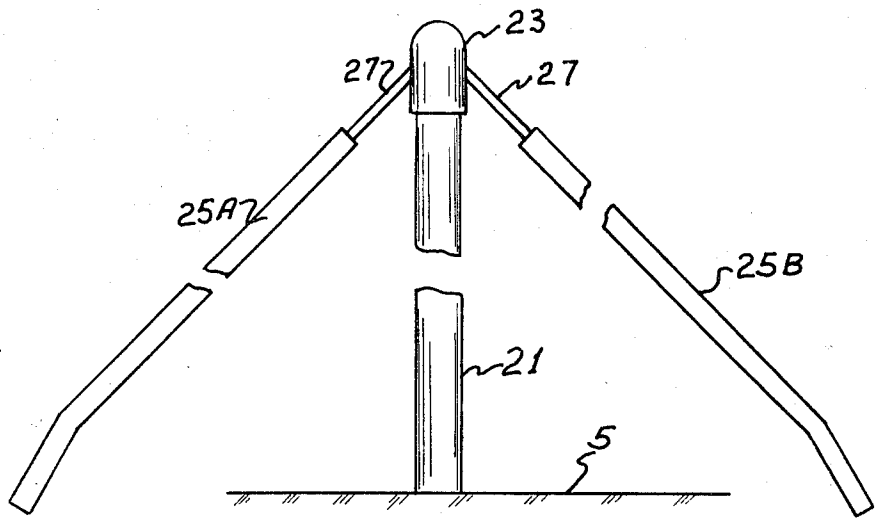


FIG. 4.

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BURGLARY DETERRENT DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to electric warning devices and consists particularly in a burglary deterrant electric lamp device.

2. The Prior Art

The closest approach to the present invention in the prior art, of which applicant is aware, is U.S. Pat. No. 3,013,145 to Trippe, in which a lantern with a continuously energized lamp has rotating lenses reflectors, and bird-shaped shadow forming plates for use in buildings to discourage inhabitation by birds.

SUMMARY OF THE INVENTION

The invention provides a device for deterring burglaries by creating by light and shadow the illusion of personal movements in dwellings and other buildings. Objects of the invention are to provide an electrically actuated automatic device for intermittently turning lamps off and on and creating, with the same lamps, moving shadow patterns.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a device embodying the invention.

FIG. 2 is a fragmentary transverse vertical sectional view of the device illustrated in FIG. 1.

FIG. 3 is a top view, partially sectionalized, of the device of FIGS. 1 and 2.

FIG. 4 is a partial side elevational view of the device of FIGS. 1–3 showing the shade forming parts.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The burglar deterrent device comprises a box-like base or housing comprising rectangularly disposed vertical side walls 1, a top wall 5 and a bottom wall 7.

A pair of light bulb sockets 7L and 7R are mounted on top 5 equidistant from the center of the top, and incandescent bulbs 9 are removably mounted in sockets 7L and 7R.

Bottom wall 7 is generally centrally apertured at 11 to receive electric motor 13, which is formed with an annular shoulder 14 seated on bottom wall 7 and secured thereto by screws 15.

Motor 13 has a pair of vertical output shafts 17 and 19. The former is provided with an upward extension 21 which projects upwardly through a central hole 22 in housing top wall 5 to a height substantially above that of incandescent bulbs 9. Immediately below hole 22, shaft extension 21 mounts a keeper 24, which may consist of a short length of tubing of rubber or rubber-like material. At its top shaft extension 21 mounts a cap 23, and narrow radially elongated shade members 25A and 25B are secured by wire stems 27 to cap 23 in diametrically opposite relation to each other, and inclined substantially downwardly from their securement to cap 23 so as to shade the top and the outer generally vertical surfaces of each bulb when passing it during rotation of shaft extension 21.

For intermittently energizing and deenergizing bulbs 9, a single pole doulbe throw switch device 29 is mounted on housing bottom wall 7 adjacent the periphery of motor shoulder 14. Switch device 29 has a housing 31 of dielectric material, on either end of which are

mounted double terminal members 33 and 35. Positive wire 37 connects terminal member 33 to positive terminal 41 on terminal block 43, and negative wire 39 connects terminal member 35 to negative terminal 45 on terminal block 43, to which may be secured cord 47 with plug 49 for insertion in household 110V AC socket.

Terminal member 33 is connected by positive wire 51 to motor 13 and by a jumper 53 to a third terminal 55 on switch housing 31. Terminal 55 mounts, within housing 31, a flexible contact arm 57 provided with buttons 57L and 57R on its opposite faces for alternate conductive engagement respectively with contact portions of terminals 59L and 59R. The latter terminals are connected respectively by positive wires 61L and 61R to lamp sockets 7L and 7R so that, when contact buttons 57L or 57R are in contact with the respective terminals 59L or 59R, the respective lamp socket will be energized and the lamp therein lighted. A common negative connection from terminal member 35 to motor 13 and both sockets 7L and 7R is provided by wire 63.

For moving contact arm 57 between terminals 59L and 59R, a plunger 65 is mounted in switch housing 31 for reciprocation transversely thereof and has a reduced diameter end portion 67 passing through the end of contact arm 57 so that the shoulder formed at the end of the reduced portion engages contact arm 57. A coil spring 69 seated in housing 31 biases the contact arm and plunger 65 toward motor output shaft 19 and contactor button 75R into engagement with terminal 59R contact.

For intermittently moving contact arm 57 out of conductive engagement with terminal 59R contact and into engagement with terminal 59L contact, a cam 71 in the form of a disc fixedly mounted on motor shaft 19 for rotation therewith and having three radial projections 73 with arcuate approach surfaces is positioned with its periphery in engagement with the exposed projecting end of switch plunger 65, so that when projections 73 engage plunger 65, the latter pushes contact arm 57 away from the terminal 59R contact and into engagement with the terminal 59L contact, thereby temporarily deenergizing socket 7R and energizing socket 7L. As cam 71 continues its counterclockwise rotation, causing projections 73 to pass plunger 65, spring 69 urges contact arm 57 back into engagement with terminal 59R contact, thus deenergizing socket 7L and energizing socket 7R.

Operation of the device is as follows. When energized by connecting plug 49 to a 110V AC recptacle, with cam 51 and plunger 65 in the position shown in FIG. 3, contact button 57R is in contact with terminal 59R contact, permitting current to flow into socket 7R, lighting the bulb therein. At the same time, motor 13 is energized, causing shaft 21 and shades 25A and 25B to rotate, and causing rotation of cam 71. As cam 21 rotates counterclockwise and projecting portion 73 approaches switch plunger 65, the latter is forced inwardly against spring 67, causing contactor button 57R to separate from terminal 59R contact, thus deenergizing bulb 9R, and after an interval, causing contactor button 57L to engage terminal 59L contact, thereby energizing bulb 9L.

As long as the device is supplied with current, motor 13 continues to operate, rotating shaft 21 and shade members 25A and 25B, which causes the lamps to pro-

duce moving shadows as though persons were moving about in a house in which the device is used, this effect being heightened by the alternate illumination of the two bulbs with a darkened interval between them.

The details of the structure may be varied substantially without departing from the spirit of the invention and the exclusive use of those modifications coming within the scope of the claims is contemplated.

I claim:

1. A burglary deterrent device comprising a base, a motor mounted on said base, a plurality of electric lamps supported on said base, a rotatable shaft drivably connected to said motor and mounting means partially shading said lamps, said lamps being positioned radially in different directions from said shaft, a switch controlling said lamps to energize said lamps alternately, and an actuator drivably connected to said motor and operatively connected to said switch for intermittently actuating the same whereby to alternate the illumination of said lamps with respect to each other.

2. A burglary deterrent device according to claim **1** wherein said actuator comprises a rotating element and said switch has an operating element movable radially with respect to said rotating element and engageable thereby in the course of rotation thereof.

3. A burglary deterrent device according to claim **2** wherein said rotating element is formed with a plurality of circumferentially spaced radial projections individually engageable with said switch operating element.

4. A burglary deterrent device according to claim **3** wherein said operating element is reciprocably mounted in said switch and resiliently biased outwardly for engagement with said actuating element projections.

5. A burglary deterrent device according to claim **4** wherein said partial shading means comprises a radially elongated downwardly and outwardly sloping shade member.

6. A burglary deterrent device according to claim **5** wherein there are a plurality of said shade members spaced apart circumferentially of said shaft.

7. A burglary deterrent device according to claim **1** in which said lamps are arranged symmetrically about said shaft.

8. A burglary deterrent device according to claim **7** wherein there are a pair of said lamps positioned respectively on opposite sides of said shaft.

9. A burglary deterrent device according to claim **8** wherein said switch device is a single pole double throw switch having an energized contact member engageable alternately with contacts electrically connected to the respective lamps.

10. A burglary deterrent device according to claim **1** wherein said base includes a housing enclosing said motor, said switch and said actuator, said lamps being mounted on the exterior of said housing and said shaft projecting vertically from said housing.

11. A burglary deterrent device according to claim **10** wherein said actuator is a rotatable disc having circumferentially spaced radial projections on its periphery and said switch has an operating element resiliently biased into engagement with said projections.

12. A burglary deterrant device according to claim **11** including a pair of said lamps on opposite sides of said shaft, said shade means comprising a pair of radially elongated shade members inclined downardly from said shaft and adapted to intermittently shadingly overlie said lamps during rotation of said shaft.

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