

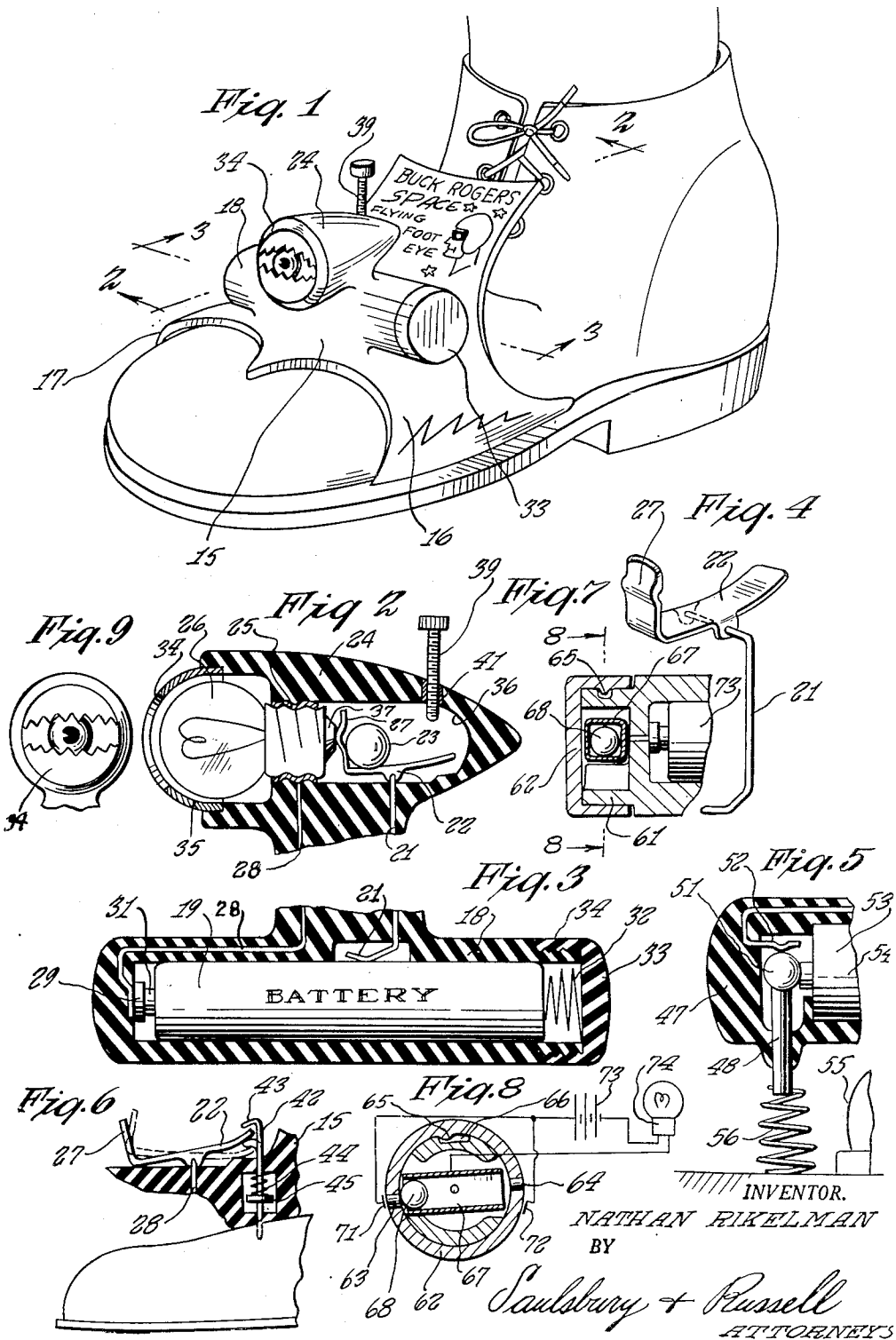
Oct. 23, 1951

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2,572,760

ILLUMINATED SHOE DEVICE

Filed Jan. 15, 1948



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# UNITED STATES PATENT OFFICE

2,572,760

## ILLUMINATED SHOE DEVICE

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Application January 15, 1948, Serial No. 2,367

3 Claims. (Cl. 36—1)

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This invention relates to an illuminated shoe device.

It is an object of the present invention to provide an illuminated shoe device which is adapted to be slid onto the shoe from the toe end and which has springable side portions for retaining the same in place when on the shoe and wherein there is provided means for automatically turning on and off the light as the person wearing the shoe makes steps.

It is another object of the present invention to provide an illuminated shoe device with means which are operable to keep the light from being operated when the device has been removed from the shoe and wherein the safety means can be operated or the device conditioned for use automatically upon placing the device on the shoe.

It is another object of the present invention to provide in an illuminated shoe device a selective adjustment wherein the device can be adapted to operate the light either as the foot is raised while walking or as it is lowered depending upon the desire of the user of the device.

Other objects of the present invention are to provide an illuminated shoe device which is of simple construction, easy to apply to the shoe, inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which

Fig. 1 is a perspective view of the illuminated device attached to a shoe.

Fig. 2 is a longitudinal sectional view of the device taken on line 2—2 of Fig. 1.

Fig. 3 is a transverse sectional view of the device taken through the battery casing portion and on line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the ball guide with the battery contact member extending therefrom.

Fig. 5 is a fragmentary sectional view of a modified form of the invention wherein the contact is made by the operating member which is of simple construction, easy to apply to the shoe, inexpensive to manufacture and efficient in operation.

Fig. 6 is a fragmentary and sectional view of a still further form of the invention in which there is an automatic device for retaining the ball guide in a raised position so that contact cannot be effected when the device has been removed from the shoe.

Fig. 7 is a fragmentary and sectional view of a still further form of the invention wherein a selective adjustment may be made to cause the light to be made either as the foot is raised or as it is dropped.

Fig. 8 is a transverse sectional view of the form

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of the invention shown in Fig. 7 and taken on line 8—8 thereof and with the wiring diagram attached thereto.

Fig. 9 is a front elevational view of the eye piece which is extended over the lamp bulb.

Referring now particularly to Figs. 1 to 4, there is shown one form of the invention comprising a main body 15 having side portions 16 and 17 adapted to be extended respectively over the vamp of the shoe to fix the body 15 thereupon. The side portions 16 and 17 can spring outwardly in order that the body can be slid onto the shoe and will tend to spring inwardly so as to retain and fix the body to the shoe.

On the top of the body 15 is a casing portion as indicated at 18 for containing a battery 19. This body and the casing are preferably made of plastic material and within the casing 18 there is extended the battery 19 which may have the paper covering removed from the same in order that a contact 21 will engage with the metal side wall of the battery. This contact 21 extends upwardly for engagement with a pivoted element 22 on which a ball 23 may ride. This contact 22 lies within a top portion 24 which has an opening and a threaded sleeve contact 25 for receiving lamp bulb 26 which is screw fitted into the same. The lever contact 22 has an upstanding contact portion 27 adapted to engage the center of the bulb and the contact thereon so as to close a circuit through the battery 19. A conductor 28 extends from the sleeve 25 through the casing material 18 for connection with a contact 29 in one end of the casing adapted to be engaged by terminal 31 of the battery. A spring 32 disposed at the opposite end of the battery will force the battery into casing portion 18 so that contact 31 will engage contact 29. The spring is backed up by an internally threaded cup-shaped member or cover 33 which is screw threaded upon a portion 34 of the casing. The cover 33 can be removed so that the battery can be replaced.

About the bulb, and in order for the light which is extended from the bulb to have the appearance of an eye, there is fitted a cap 34 which is decorated to have the appearance of an eye. This cap will have frictional engagement with the side wall of an enlarged opening portion 35 of the top 24.

As the foot is moved, the ball 23 will move longitudinally through opening 36 so as to pivot lever 22 first in one direction or in the other. Every time the ball goes forward, it will cause the contact portion 27 to engage terminal 37 of the lamp bulb and establish a circuit so that the light will be turned on. As the foot is planted, the ball will slide rearwardly and will tilt the lever 22 so that the portion 27 is disengaged from the terminal 37. Accordingly, the light will blink

each time a step is taken by the user of the device.

In order to hold the lever in a position so that the ball will not cause the engagement of the portion 27 of the lever with the terminal 37 as when the device has been removed from the shoe and in such a manner as would cause the battery to run down, a thumb screw 39 is provided which can be extended into engagement with the rear end of lever 22 so as to hold the same down and to prevent its operation by the ball 23. An internally threaded metal sleeve 41 is provided to receive the screw 39. The device is preferably made of plastic or other insulating material and the conductors extending there-through can be of bare wire.

In Fig. 6, there is shown an automatic device for pivoting the contact lever 22 as the device is removed from the shoe. For this purpose, there has been provided a pin 42 having a hook formation 43 on its upper end adapted to lie over the end of the lever 22. The pin 42 has a flange 45 thereon against which a spring 44 bears. When the device is removed from the shoe, the spring 44 will cause the pin 42 to be lowered to a position shown in dotted lines and the same will take with it the lever 22. The end of the pin 42 will engage with the top of the shoe upon the device being placed thereon and will cause the elevation of the pin 42 against the action of the spring 44. This will leave the lever 22 free to operate in its normal manner.

In Fig. 5, there is shown a modified form of the invention wherein the contact members are provided in the overlying end of a battery casing 47. A rod 48 extends vertically from the bottom face of the casing and has a contact head 51 which will engage with contact 52 to establish a circuit between contact 52 and terminal 53 of battery 54. As the shoe designated 55, is raised, the vertical rod 48 will be lowered. On the lower end of rod 48 is a spring 55 which will contact with the ground and be compressed each time a step is taken so as to cause the upward movement of the rod 48 for the engagement of the ball 51 with the contact 52.

Referring now to Figs. 7 and 8, there is shown a still further form of the invention wherein an adjustment can be effected so that the light will go on, depending upon the adjustment, either when the foot is dropped or when it is elevated. The battery casing is formed as shown in Fig. 7 with an extension portion 61 and a cap 62 extended over the same. The cap 62 has contacts 63 and 64 at diametrically opposite the locations thereon. A stop projection 65 is provided on the inner face of the cover and this is extended into a slot 66 having ends with which the stop projection 65 will engage. As the cover 62 is turned in one direction, the contact 63 will be used. As the cover is turned in the opposite direction, the contact 64 is used. Within the cover and turnable therewith is a sleeve 67 which contains ball 68. The ball travels throughout the length of the sleeve and will engage with either contact 63 or 64 depending upon the position to which the cover 62 has been adjusted. The contacts 63 and 64 will connect respectively with contacts 71 and 72 which can be formed on the portion 61 and conductors will lead to battery 73 and lamp 74.

If the cover is adjusted so as to cause ball 68 to engage with contact 64, the light will go on as the foot is lifted. If the ball engages with

the contact 63, the light will go on as the foot is lowered.

It should now be apparent that there has been provided a device which can easily be inserted over the shoe of one's foot and which has a battery and a light therein which will blink on and off as the foot is lifted or lowered. It should be further apparent that there has been provided means for permitting the operation of the light when the device has been detached from the shoe and also wherein there is provided an adjustment so that the light can be made to turn on either as the foot is lifted or as it is lowered at the selection of the user.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

I claim:

1. An illuminated shoe device comprising a body having portions adapted to be extended about a shoe to fix the device thereto, a battery casing portion adapted to receive a battery, said battery casing portion extending transversely of the device, a lamp portion projecting upwardly from the battery casing portion and having a longitudinal opening therein, a lamp bulb fixed within the opening and having an electric terminal, a conductor extending from the lamp bulb to the battery casing portion, a battery within the casing portion having a terminal in engagement with the conductor, a second conductor extending from the opening in the lamp portion of the body to the battery, and means extending from said second conductor for engagement with the lamp bulb terminal periodically as the shoe having the device thereon is moved whereby to cause the light to be blinked.

2. An illuminated shoe device as defined in claim 1 and said means comprising a lever connected to the second conductor and pivoted with respect thereto, said lever having an upwardly extending projection adapted when the same is tilted toward the lamp bulb to engage and establish contact with the lamp bulb terminal, and a ball weight disposed on the lever and adapted to roll therealong for causing the tilting action of the lever.

3. An illuminated shoe device as defined in claim 2, and means adapted to engage with the lever to hold the same against movement toward the contact terminal of the lamp bulb when the device is removed from the foot, said means being automatically released by the engagement of the device with the shoe of the foot.

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