June 17, 1930. B. CAROSELLI ET AL 1,764,549

HAND SIGNAL LIGHT

Filed Feb. 9, 1925

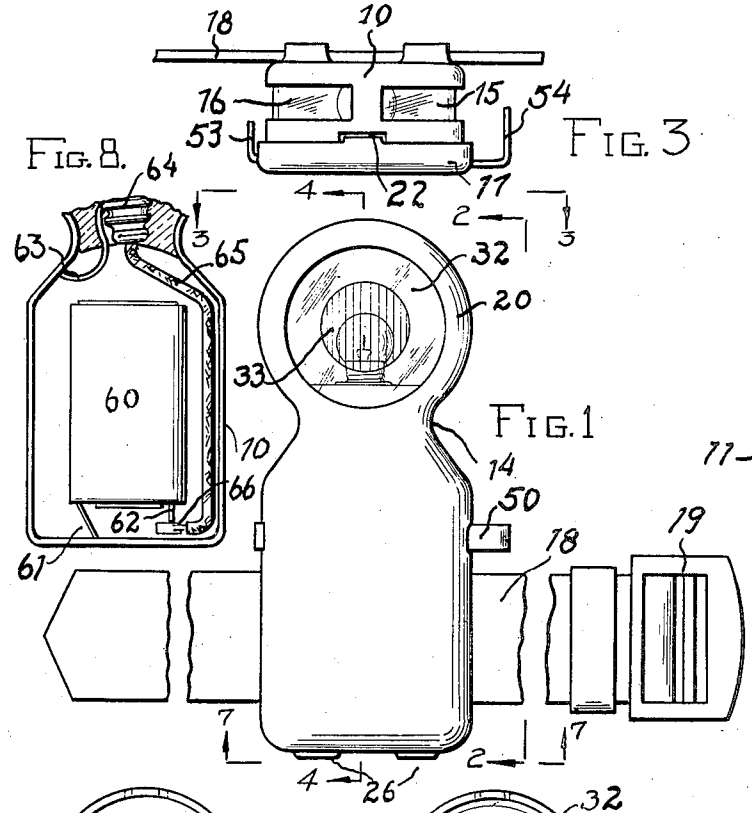


FIG. 8.

FIG. 3

FIG. 1

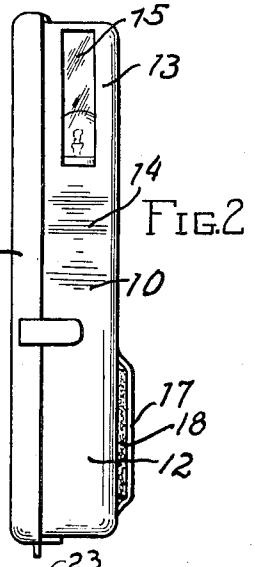


FIG. 2

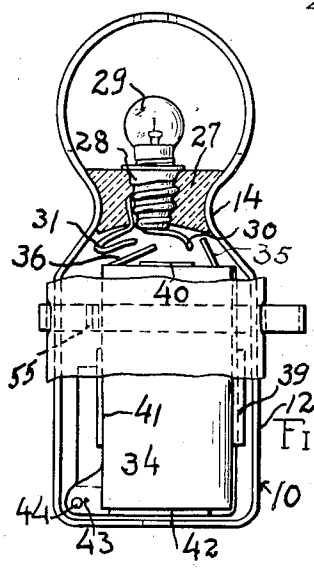


FIG. 6

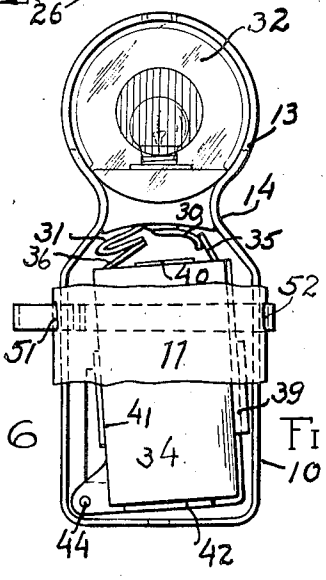


FIG. 5

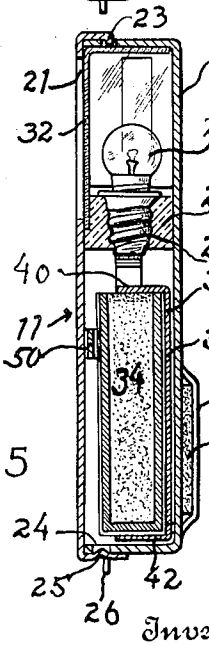


FIG. 4

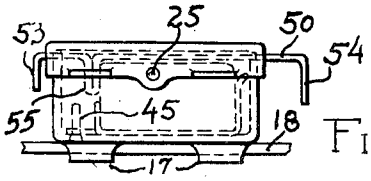


FIG. 7

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Patented June 17, 1930 1,764,549

UNITED STATES PATENT OFFICE

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HAND SIGNAL LIGHT

Application filed February 9, 1925. Serial No. 8,011.

This invention relates generally to a hand-operated signal lamp. It has for its object a lamp which may be attached to the wrist of the operator and is to be operated by the movements of the hand or wrist of the operator. The lamp disclosed in this application and described hereinafter has special application to manual signaling by automobile drivers, or to traffic signaling by traffic officers. There are many other applications of the present invention which will become obvious from the disclosure and description which appear hereinafter.

In the drawings—

Figure 1 shows a face view of the preferred embodiment of the present invention;

Fig. 2 shows a side view of the invention taken along the line 2—2 in Fig. 1;

Fig. 3 is a top view taken along the line 3—3 in Fig. 1;

Fig. 4 is a sectional view along the line 4—4 of Fig. 1;

Fig. 5 is a face view of the invention with a portion of the cover of the casing removed. In this view the device is shown with the lamp illuminated;

Fig. 6 is a view similar to Fig. 5 but with the lens removed and with the lamp unilluminated;

Fig. 7 is a bottom view of the device;

Fig. 8 shows another modification of the invention.

The casing of the device consists of the body 10 and the cover 11. The body 10 which is stamped out of an integral piece of material comprises an oblong portion 12 and a circular portion 13, the two portions being connected by a constricted neck 14. The circular portion 13 is provided with slots 15 and 16 on its periphery. The back face portion of the casing 10 is provided with two strips 17 integral with the other portions of the casing. The strap 18 passes through the strips 17 and is provided with a buckle 19 designed for the purpose of attaching the device to the wrist of the operator.

The cover 11 is shaped in a manner to conform to the shape of the body of the casing. Its circular portion 20 is provided with a circular aperture 21. The body of the casing is provided with a notch 22 which co-operates with a lug 23 on the cover 11 for the purpose of assembling the two parts. The lower edge of the cover is provided with a teat 25 which co-operates with an aperture 24 in the bottom of the body of the casing 10. The assembly of the two parts of the casing is accomplished by inserting the lug 23 into the notch 22 and then depressing the cover over the body of the casing until 25 enters the aperture 24. The lower edge of the cover 11 is also provided with two projections 26 which facilitate the removal of the cover from the body of the casing.

A body of insulating material 27 is lodged in the constricted portion of the body of the casing. An electric socket 28 is lodged in the body of the insulating material 27. The socket is adapted to receive the signal lamp 29. Spring contacts 30 and 31 are attached to the center contact and shell contact respectively of the socket 28.

A lens of transparent material, such as mica, or the like, 32, is placed in the manner shown in Figs. 1 and 4, so as to cover the circular aperture 21 and also the slots 15 and 16. This lens is held in position by the cover 11. The lens may be provided with a red or any other colored portion 33.

An electric cell 34, having terminals 35 and 36 substantially smaller in size than the dimensions of the oblong portion 12 of the casing 10, is disposed in the oblong portion 12 of the casing 10. The cell 34 is placed in a mounting 37 which consists of a substantially oblong portion 38 and lugs 39, 40, 41 and 42 projecting upwardly therefrom. These lugs serve to grip the cell and hold the cell attached to the mounting 37. The oblong portion 38 of the mounting also has a portion 43 which projects beyond the confines of the cell and in a direction coplaner with the oblong portion 38. This portion 43 is provided with an aperture 44 which co-operates with the pin 45 which is attached to the inner face of the casing 10. By the aid of the mounting the battery is given a free sliding motion within the casing and with relation to the walls of the casing.

In order to prevent the possibility of the

discharge of the cell when the lamp is not in use, a safety device is provided which maintains the cell in such a position that the electric socket is not in electrical connection with the cell. This safety device consists of a bar 50 which passes through slots 51 and 52 in the edges of the cover 11. The bar is provided with downwardly projecting lugs 53, 54 and 55. The lugs 53 and 54 serve to limit the movement of the bar with relation to the casing. When the device is assembled the projection 55 may be used to maintain the cell in such a position that the electrical connection between the socket and the cell is broken.

The operation of the device is now apparent. When the device is not in use the safety bar 50 is put into the position shown in Fig. 6. In this position the projection 55 presses against the side of the cell and holds it immovably in such a position that no jarring or any movement of the device will close the circuit between the contacts 35 and 36 and 30 and 31, respectively. Any possibility of the unnecessary discharge of the cell is thereby prevented. When it is desired to put the device in operation it is strapped on the operator's wrist by means of the strap and buckle 18 and 19, and the safety bar 50 is moved to the position shown in Fig. 5. It will be seen that the cell with its mounting may now be moved from the position shown in Fig. 6 to that shown in Fig. 5, in which the contacts 35 and 36 are in electrical connection with the socket contacts 30 and 31, respectively. The mounting 37 which is disposed between the cell and the inner face of the casing reduces the friction between the cell and the casing and permits ready oscillation of the cell and mounting about the pivot pin 45. Assuming that the device is to be used by a vehicle operator, such as an automobile or the like, the safety bar 50 is left in the position shown in Fig. 5, while the cell and its mounting 37 are normally in the position shown in Fig. 6. When the operator wishes to signal he moves his arm outwardly with the result that the cell and its mounting are moved by gravity into the position shown in Fig. 5, whereby the lamp is illuminated.

In the device as shown and described hereinabove the illumination of the lamp is effected by a movement of the arm to the left or downward.

Fig. 8 shows a modification of the invention which may be operated on an upward movement of the hand. This modification is substantially identical with that shown in the other figures in the drawing, but differs from them only in the following respects: The cell 60 is disposed in such manner that its terminals 61 and 62 point downward. A contact 63 which is attached to the shell contacts of the socket 64 is in electrical contact with the casing 10. An insulated wire 65 is attached to the center contact of the socket and is disposed along the side of the casing and placed near the bottom of the casing. Its bared end 66 is disposed in such a manner that when the arm of the operator is raised upward the contact 62 of the cell will establish electrical connection with the wire 66 and thereby complete the circuit for the signal lamp.

This device may also be used by ushers in theatres or by any person who wishes to temporarily illuminate any spot intermittently and still have his hands free for other purposes.

What is claimed is:

1. The combination of a casing having a body portion and a cover portion, a signal lamp disposed within said casing operable by a movement of the casing, a switch contact terminal electrically connected to the said lamp, an electric cell disposed within the casing, a switch contact terminal electrically connected to one terminal of the cell and cooperating with the first named contact terminal to make and break the circuit between the cell and the lamp, the cell being substantially smaller than the body portion of the casing, and means mounted on the cover portion whereby the cell is maintained in an inoperative condition and against movement thereof.

2. A hand signalling lamp comprising a casing, a signal light, an electric cell, switch means for electrically connecting the light to the cell comprising a movable contact electrically connected to the cell and a fixed contact electrically connected to the light, a cell gripping device pivotally mounted within said casing, the said cell being gripped by said device, whereby the cell and said device may be moved with relation to the casing by gravity to operate the switch and to cause the light to be connected and disconnected from said cell.

3. A hand signalling lamp comprising a casing, a signal light, an electric cell, switch means for electrically connecting the light to the cell comprising a movable contact electrically connected to the cell and a fixed contact electrically connected to the light, a cell gripping device pivotally mounted within said casing, the said cell being gripped by said device, whereby the cell and said device may be moved with relation to the casing by gravity to operate the switch and to cause the light to be connected and disconnected from said cell; the said gripping device comprising a flat plate resting against one side of the casing, said plate having strips projecting upwardly from the edges thereof for gripping the cell.

4. A hand signalling lamp comprising a casing, a signal light, a cell gripping device pivotally mounted within said casing, an electric cell gripped by said device, whereby the cell and said device may be moved within the

casing by gravity, means for electrically connecting the light to the cell comprising a movable contact electrically connected to the cell and a fixed contact electrically connected to the light, a slidable bar mounted in said casing, said bar having a projection engaging the cell whereby the lamp may be maintained in an inoperative condition.

In testimony whereof, we have hereunto set out signatures.

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HERMAN G. ESSMAN.