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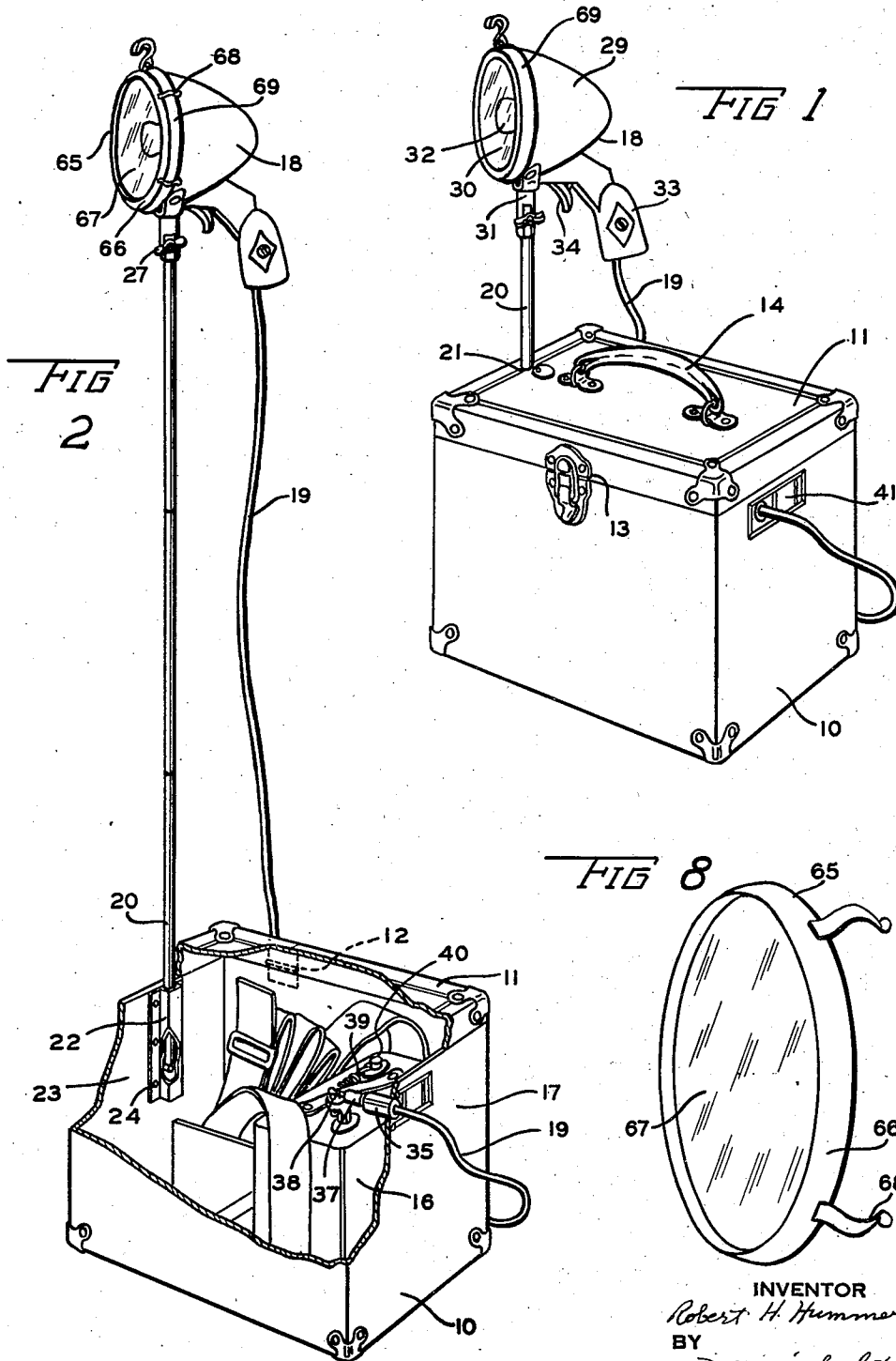
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2,230,458

PORTABLE LIGHT

Filed July 23, 1938

2 Sheets-Sheet 1



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FIG 3

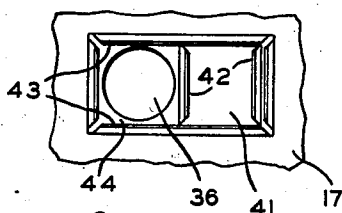


FIG 4

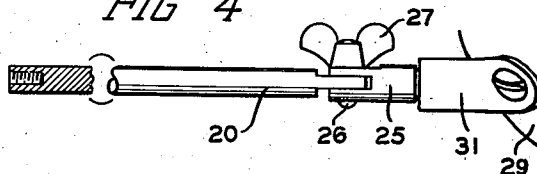
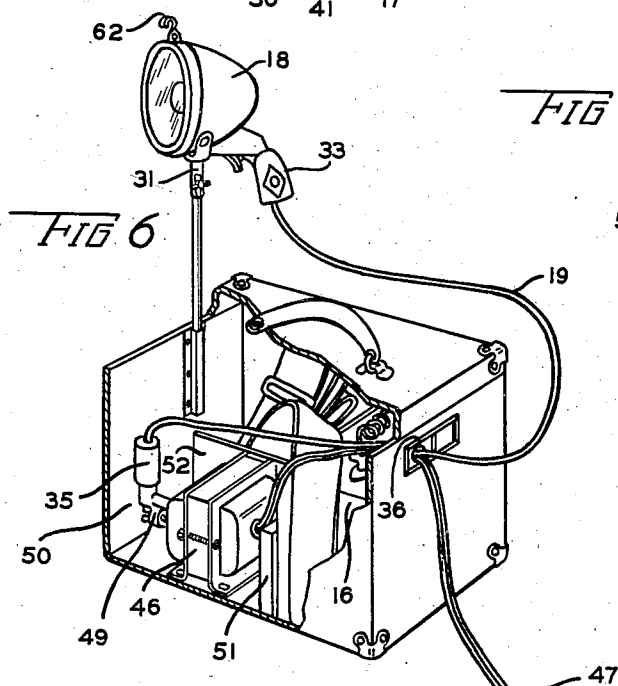


FIG 5

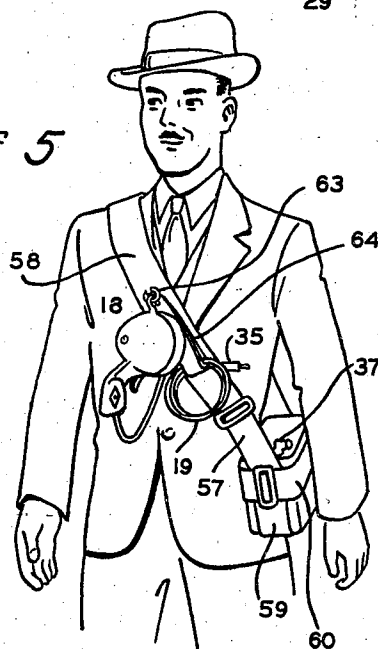
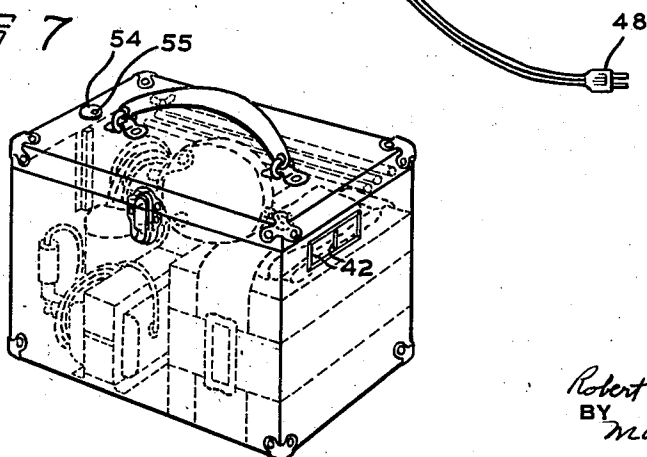


FIG 7



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PORTABLE LIGHT

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2 Claims. (Cl. 240—10.6)

This invention relates to searchlights and more particularly to supporting and carrying means therefor.

One object of the invention is the provision of a portable light unit or assemblage including a container in which the searchlight or lamp itself may be housed and on which it may be mounted in a position for use, with a connection extending from the lamp to electrical energizing means arranged within the container.

Another object of the invention is the provision of a unit of the character mentioned in which the cover of the container is provided with an opening through which the lamp supporting post projects, the lower portion of the post being mounted on a wall of the container.

Another object of the invention is the provision of a portable light unit of the character mentioned in which the lamp supporting post is mounted for rotation about its own axis in a suitable supporting socket, and is also arranged to provide for tilting movements of the lamp about a horizontal axis so that the beam of the lamp may be pointed in any direction.

Another object of the invention is the provision of a portable light unit including a container in which a lamp, a lamp supporting post, and electrical energizing means may be housed and carried, the lamp and post being such that they may be mounted on the container with the lamp connected to a battery within the container, the battery having a sling and adapted to be readily removed from the container and carried with the lamp on the person of the user.

Another object is the provision, in a unit of the character described, of a readily removable cover face for the lamp.

Other objects and advantages of the invention will be apparent from the following description, the appended claims, and the accompanying drawings, in which:

Fig. 1 is a perspective view of a portable light unit embodying the present invention;

Fig. 2 is a similar view but showing a portion of the container removed to disclose the contents, and showing the lamp supported at a greater distance above the container and with the cover face of the lamp in place.

Fig. 3 is a detail view of the closure means for the side wall opening;

Fig. 4 is a detail view of a portion of the lamp supporting post, and a portion of the lamp itself;

Fig. 5 is a perspective view showing the battery and lamp carried on the person of the user;

Fig. 6 is a perspective view showing the sup-

ported lamp connected to an energizing means arranged within the container, the energizing means being a transformer adapted to be connected to a suitable current source;

Fig. 7 is a perspective view showing the closed container with the lamp, energizing means and supporting post housed therein; and

Fig. 8 is a perspective view of the lamp cover face.

Referring more particularly to the drawings, 10 generally designates a portable container or carrying box, having a cover 11 which is connected along one of its sides by means of suitable hinges 12 to the rear wall of the container so that it may be swung upwardly to provide access to the contents. Normally, however, the cover 11 is held in closed position by means of a suitable clasp loop 13 which, when fastened as shown in Figs. 1 and 7, holds the cover securely closed, and permits the container to be carried by a suitable carrying handle 14 on the cover.

The space within the container 10 is of adequate size to provide for housing a searchlight or lamp and energizing means therefor, and also a suitable supporting post on which the lamp may be mounted when in use. The lamp may be readily taken out of the container and mounted on the supporting post which is preferably constructed of a number of connected sections, the post being inserted through an opening in the top of the container when the lamp is to be used, Figs. 1 and 2 showing the parts in such position. With the parts so arranged, the energizing means, which is shown as a dry battery 16 in Fig. 2, is within the container adjacent the side wall 17 thereof, the battery being electrically connected to the lamp 18 by means of two wires enclosed in suitable insulation and forming the connection 19, while the lamp is mounted on the top of the supporting post 20 which extends down through a hole 21 in the cover 11 and seats in a socket 22 carried by the side wall 23 of the container. The socket 22 may be a flanged sheet metal strap fastened by nails or screws 24 and adapted to receive the lower cylindrical end of the post 20. The upper section of the post is jointed or connected, as shown in Fig. 4, to a short post portion 25, which is pivoted thereon by means of a bolt 26 having a wingnut 27 which may be tightened by the fingers to hold the parts 20 and 25 in alignment or at any suitable relative angle. The articulation between the upper part 25 and the lower portion of this post section permits the beam of light to be directed upwardly or downwardly as desired, and since

the post 20 is of cylindrical cross section where it fits in the socket 22, the lamp may be readily turned with the post about a vertical axis.

The post may have any suitable number of sections, each having a length so that they may be housed within the container. As shown, in Fig. 2 three sections are employed. Each section at its lower end is internally threaded, as shown in Fig. 4, and all the sections except the one engaged with the lamp itself is provided at one end with a threaded end projection fitting the internal threads of a connected section in a readily detachable manner.

The lamp 18 comprises a casing 29 preferably having a front transparent glass 30 and a parabolic reflector which concentrates the light rays. The lower portion of the casing has fixed to it a mounting bracket 31 which is provided with a recess or socket adapted to snugly receive the upper end of the post portion 25, the fit between these parts being such that the lamp may be separated from the post portion 25 merely by moving the lamp upwardly. As herein shown, the casing 29 is provided with a handle 33 so formed that it may be readily grasped by the hand of the user and used to direct the light beams in the desired direction. When the hand is grasping the handle 33, the switch operating lever 34 may be moved to connect the lamp bulb 32 in circuit with the wires provided in the connection 19, the same lever also being used to disconnect the energizing circuit of the lamp. The electrical connection 19 extends preferably from the bottom of the handle 33 and at its remote end is provided with a suitable connection means such as the connection plug 35 that may be inserted through an opening 36 in the side wall 17 of the casing and engaged with a terminal 37 of the battery and with a conducting part 38 which is insulated from terminal 37 but connected by wire 39 to the other terminal 40 of the battery. The opening 36 is positioned in the wall of the casing directly opposite the location of the terminal 37 so that the end of the connection plug 35 is adapted to enter the terminal 37 and at the same time connect at the center of the plug to the part 38, while the outer end of the plug is held in the fingers of the user.

The opening 36 is adapted to be closed, after any connection wires or the connection plug is removed, by means of a small flat closure plate 41 preferably a sheet metal slide member having outwardly projecting end flanges 42 and having upper and lower edges that are guided in the upper and lower flanged portions 43 of a sheet metal plate 44 which is fastened on the outer side of the wall 17. The plate 44 has an opening registering with the hole 36 in the container wall. As will be apparent, the slide member 41 may be moved to the left from the position shown in Fig. 3, and entirely close the opening 36 and seal that part of the container against dirt, water, etc.

The energizing means employed for the energization of the lamp 18 may be an electrical transformer 46, as shown in Fig. 6. The primary winding of the transformer is adapted to be connected to a suitable source, such as a 110-volt house lighting circuit, by means of the flexible cable 47 one end of which is provided with a connection plug 48 which is small enough so that it may pass through the opening 36 in the side wall of the container. The secondary winding of the transformer, which is adapted to operate at a potential of 6 volts or some other suitable

low voltage corresponding to the voltage of the lamp 32, has its two ends connected to a terminal connection stud 49 which cooperates with the connection plug 35 of the connection 19. The two wires in the connection 19 are thus connected to the two ends of the secondary winding of the transformer, the connection plug 35 having been inserted into the container through the opening 36 so that the electrical energizing means or transformer may be housed in the closed container and protected from rain and the weather while serving to supply current at the proper voltage to the lamp.

A battery 16 as well as a transformer 46 is preferably provided to energize the lamp so that either one or the other of these energizing means may be employed as conditions require, the battery being used when no suitable power source of current is accessible, as may be the case where the device is used far from any building to illuminate a suitable locality as in case of a fire or when the device is used on a highway as a warning or stop signal and there is no 110-volt house lighting circuit convenient. The battery may also be used in case of failure of the house wiring circuit as in emergency use in hospitals, etc. The transformer is arranged in the space 50 at one side of the battery but separated therefrom by a partition block of wood or any other suitable material, the transformer as well as the battery being merely held in place by the separating block 51 and also by an additional partition wall 52. Either the battery or the transformer or both may be removed merely by picking them out of the container when occasion should require. In order to open the cover 11 to provide access to the interior of the container, the supporting post 20 must be first removed from its mounted position, but when the post 20 is taken out of the opening 21, the cover may be swung open to expose the entire top of the chamber. The lamp, the post, and the connections may then be placed within the container, which is of adequate size to house all of these parts, Fig. 7 showing these parts in dotted lines in their housed position and with all of the parts entirely enclosed and protected. The opening 21 is provided with a closure plate 54 which may be swung on its eccentrically arranged holding screw 55 and positioned over the opening.

The battery 16 is provided with a supporting sling 57 including the fabric strap 58 which is of suitable length to go over the shoulder of the user and support the battery at one side of the body of the user, as shown in Fig. 5. The lower part of the strap 58 connects to a portion 59 which extends under the battery, while an encircling strap 60 which passes around the upper part of the battery and which connects to the lower portion 59, serves to hold the battery securely in the sling. The space between the partition block 51 and the side wall 17 of the container is wide enough to receive the battery and the sling portions which extend around the battery, the supporting strap 58 being disposed within the container either on top of the battery or at one side thereof when these parts are in housed position, the sling and the battery remaining connected, however, so that if occasion should require, the battery and the sling can be quickly removed from the container and applied to the body of the person using the apparatus, the lamp 18 being carried in the hand of the user while the connection plug 35 is connected to the terminal 37

of the battery. If desired the lamp 18, which has a small hanger hook 62 at the top, may be hooked over a suitable supporting ring 63 provided on the strap 58, as shown in Fig. 5 so that the lamp and the battery may be readily carried ready for instant use. The connection or wire 19 may be coiled and held by a suitable retaining strap 64 which is looped around the coiled wire and holds the wires in an orderly manner.

10 The casing or housing 29 of the lamp 18 is closed at the front by the transparent glass 30, and inasmuch as the parabolic reflector is provided at the back of the light source or lamp bulb 32, the lamp is adapted to throw a rather concentrated beam of light for a long distance. However the front of the lamp or the parabolic reflector may be so arranged as to provide for light dispersion as desired. To give a suitable light dispersion which may be very desirable where the light is to be used in case of hospital operations or other instances or to provide a modification of the light beams thrown from the light source, the front of the lamp is provided with a readily detachable cover face 65 shown in Fig. 8 and including a rim portion 66 provided with a lettered, frosted or colored glass 67 which may bear a suitable legend such as "Police," "Stop" and so forth or which may merely be frosted to provide for wide angle of dispersion of the light rays. The rim 66 is provided with spring blades 68 which are adapted to snap over the front ring portion 69 of the lamp housing, this ring portion being suitably curved as will be more apparent from Fig. 2 so that the cover face may be applied merely by pressing it on the lamp housing and may be taken off merely by pulling the same, the yielding spring blades 68 holding the cover face in place so that it may be instantly removed as occasion may require. When so used the device may be used as a stop signal on a highway and by pulling off the detachable cover face a beam of light may be thrown to a great distance and without any loss of time, as to follow the movements of a passing automobile or for any other desired purpose.

While the form of apparatus herein described constitutes a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of apparatus, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A portable light unit comprising a container having a closure member operable to provide ac-

cess to the interior, a battery normally housed within the container, a supporting post, means on said container receiving and supporting said post in a substantially vertical position projecting upwardly above the top of the container, said means providing a quickly detachable connection affording ready separation of the post, a searchlight having a quickly detachable connection to the top of the post, an electrical connection independent of said post extending from the searchlight and having a connection plug for connection to the battery, switch means carried by the searchlight for establishing a circuit through said connection, battery and searchlight, a carrying sling attached to said battery and normally housed within the container, said sling and battery being adapted to be readily withdrawn from the container when the closure member is opened and to be supported on a person for use with said searchlight independently of said container and post, said container providing a compartment for receiving and housing said searchlight and post together with said battery.

2. A portable light unit comprising a container having a top closure member operable to provide access to the interior, a battery normally housed within the container, a supporting post, a socket on a side wall of the container rotatably receiving the lower end of said post to support the post in a substantially vertical position with its upper end extending above said closure member, said closure member having an opening only slightly larger than said post through which the post extends and having a cover operable to close said opening when the post is removed, a searchlight having a quickly detachable connection to the top of said post, an electrical connection independent of said post and extending from the searchlight and having a connection plug for connection to the battery, said searchlight having a carrying handle provided with a switch for establishing a circuit through said connection, battery and searchlight, a carrying sling attached to said battery and normally housed within the container, said sling and battery being adapted to be readily withdrawn from the container when the closure member is opened and to be supported on a person for use with said searchlight independently of said container and post, said container providing a compartment for receiving and housing said searchlight and post together with said battery.

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