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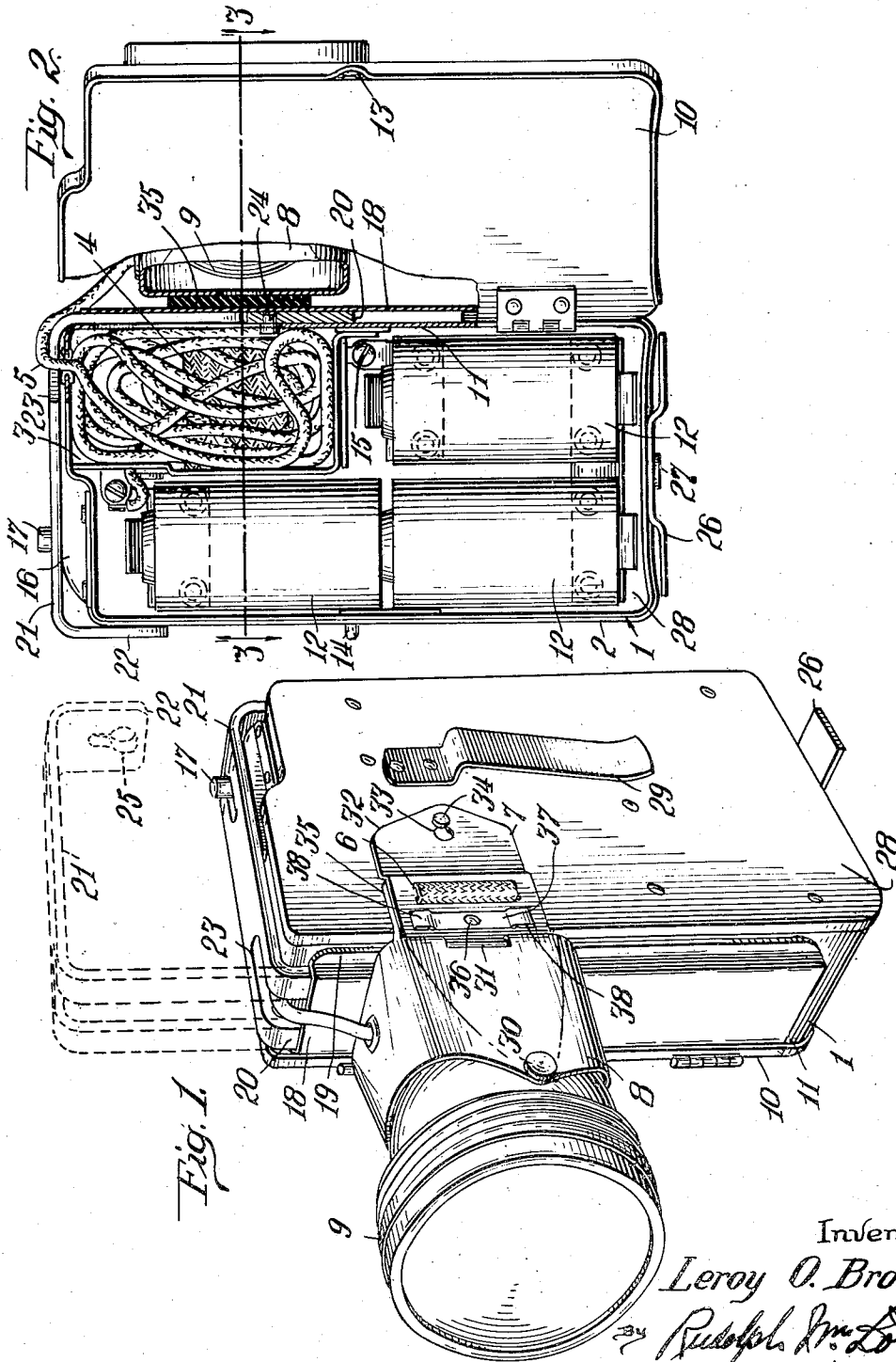
LE ROY O. BROWN

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ELECTRIC LANTERN

Filed Jan. 29, 1938

2 Sheets-Sheet 1



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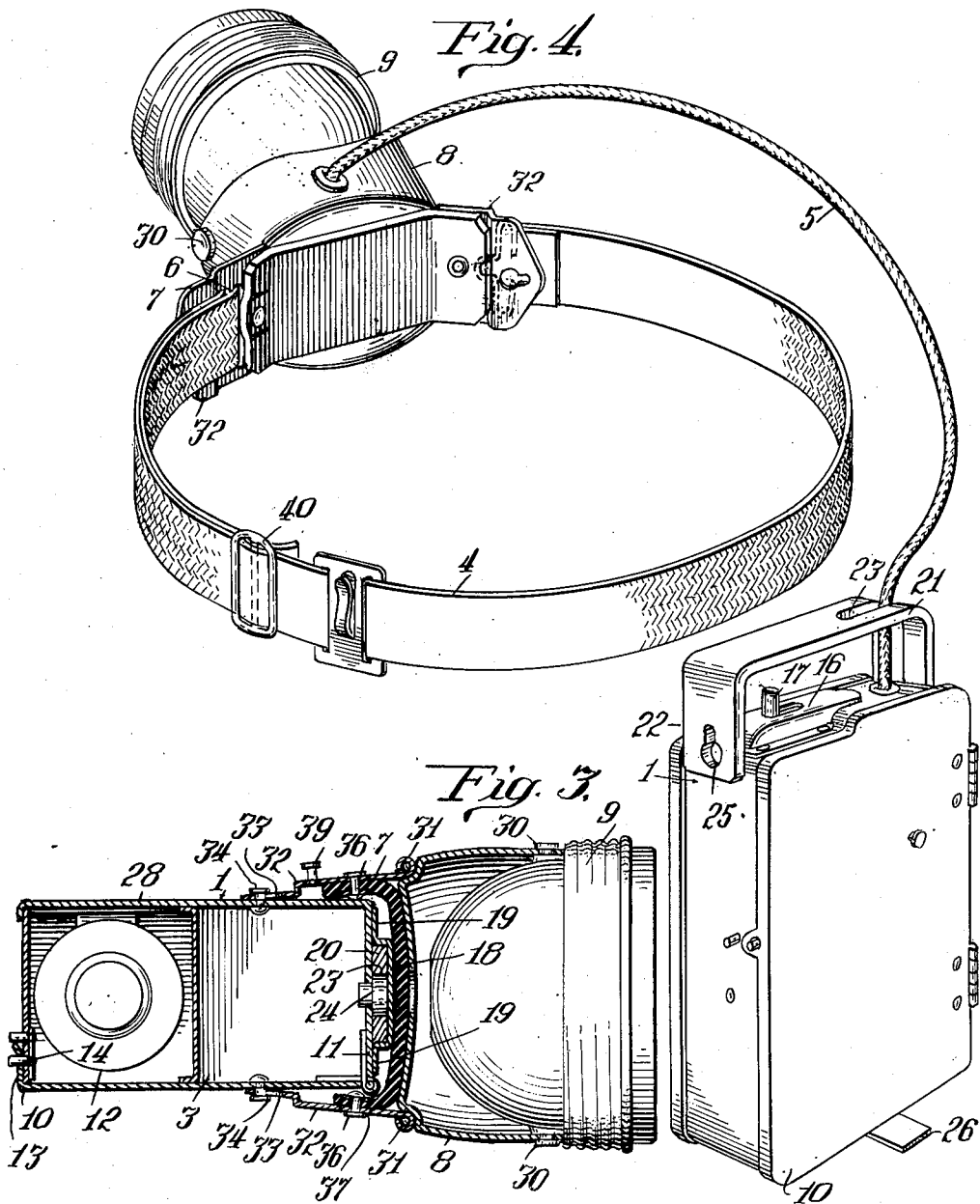
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# UNITED STATES PATENT OFFICE

2,164,898

## ELECTRIC LANTERN

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9 Claims. (Cl. 240—60)

The main object of the present invention is to provide a simple and compact electric lantern of the type used principally by sportsmen, which includes a battery casing, a lamp carrier detachably secured to the casing by means of a device which rests against the forehead when the carrier is mounted on the head, and wherein the head strap and lamp cord are both secured at one end to the carrier and the lamp, respectively and when the lamp carrier and lamp are carried by the casing, said strap and cord are housed in said casing, the lamp cord being permanently connected at one end with the terminals of the battery circuit.

A further object of the invention is to provide the battery casing with means for securing the same to the belt of a person carrying the same when not in use or when the lamp carrier and lamp are worn as a head-light and, further, to provide suitable means for conveniently carrying the battery casing in the hand, or suspending the same from the branch of a tree or from a nail driven into a wall etc.

Other objects of the invention are either specifically defined or will be readily understood from the following specification.

In the accompanying drawings illustrating a suitable embodiment of the invention,

Fig. 1 is a perspective view of a lantern constructed in accordance with the invention.

Fig. 2 is a side elevation of the same with the door of the battery casing disposed in open position and partly broken away, parts of said view being shown in section.

Fig. 3 is a plan section of the structure taken on the line 3—3 of Fig. 2, the door being in closed position.

Fig. 4 is a perspective view showing the lamp disassociated from the housing in readiness to be mounted on the head of a person in a well-known manner.

The said lantern comprises a battery casing 1, preferably made of sheet metal and having a suitable covering of other material, such as imitation leather or the like, indicated at 2.

Disposed within the casing is a receptacle 3 adapted to contain the folded or collapsed head band 4 and similarly collapsed flexible electric lamp cord 5. The said head band 4 is permanently secured at one end as at 6 shown in Fig. 1, to a hinged end portion or wing 7 of the carrier 8 for the lamp housing 9. The said cord 5 is permanently connected at one end within the casing 1 with the batteries and the control switch for the lamp circuit and at its other end is per-

manently connected with the terminals of the lamp socket mounted in the housing 9, the latter and connections of the wires of the cord with the last-mentioned terminals being omitted from illustration.

The head band 4 is drawn through a slot in one of the side walls of the casing 1 adjacent or opposed to the connection of said band, as shown at 6, with the said wing 7 of the lamp carrier 8 and, after being drawn through said slot, is suitably folded and said folded portion disposed in the bottom of the receptacle 3 to occupy as little space therein as possible.

The cord 5 extends through an opening in the top wall of the casing and when it is to be stored within the casing or receptacle 3, it is drawn through the last-mentioned opening and is then suitably collapsed substantially as indicated in Fig. 2 to be received in said receptacle 3.

The casing is equipped with a cover or door 10 hinged to one side of the front wall 11 of the casing 1 and is swung sufficiently to open position when desired for purposes of removing and replacing the batteries 12 and the band 4 and cord 5. Said door and casing are equipped with cooperating latch members 13 and 14 for maintaining the door closed when desired.

An end of one of the wires contained in the cord 5 is secured to the battery terminal 15 and the corresponding end of the other wire in the cord is suitably connected with another terminal in the upper portion of the casing. The latter terminal is suitably connected with the switch 16 which is connected to the other terminal of the battery. The switch includes a slidable member equipped with the button 17 operable to open and close the circuit. The batteries in this instance are disposed in series.

Mounted upon the front wall 11 of the casing 1 is a shallow U-shaped member 18 of resilient sheet metal which is equipped with outwardly projecting side flanges 19 which are soldered or otherwise suitably secured to the side edge portions of said front wall. The said member 18 cooperates with the front wall 11 to provide a resilient, tubular member which receives telescopically the arm 20 of a handle 21. The middle portion of said handle overhangs the top wall of the casing and is equipped with a downwardly extending flange 22 at its other end which overhangs the rear wall of the casing 1 when said handle is disposed in its lowermost position.

The said middle portion and arm 20 of said handle are provided with a longitudinal slot 23

extending from a point spaced from the opening in the top wall through which the cord 5 projects and terminates at a point spaced from the lower extremity of said arm 20, said cord 5 projecting through said slot as shown in Figs. 1 and 2. A suitable stop 24 mounted in the lower end portion of the arm 20 of the member 21 engages in a slot in the rear wall of the casing, as shown, to prevent complete disengagement of the handle 21 from the casing 1.

The said middle portion of said handle is also provided with a longitudinal slot through which the switch operating member 17 projects. As shown in dotted lines in Fig. 1, the arm or flange 22 of said handle is equipped with an inverted key hole slot 25 which is adapted to receive the head of a nail or screw projecting from a wall or the like so that the lantern may be suspended therefrom for room illumination.

The bottom wall of the casing is equipped with a supporting member 26 pivotally secured thereto midway between its ends by means of the pivot member 27, said support 26 being adapted to be turned through an arc of 90 degrees to the position shown in Fig. 1 for supporting the lamp on a table when desired.

The said handle, when disposed in the dotted line position of Fig. 1, may be engaged in the hand or may be disposed over the limb of a tree, if desired.

Mounted upon the side wall 28 of the casing 1 is a flat spring 29 which may engage in the belt of the person bearing the lantern when the lamp and carrier are mounted upon the head of the wearer.

The carrier 3 is a substantially rectangular tubular sheet metal member into which the inner end portion of the lamp housing 9 projects. Said inner end portion of said casing shown in Fig. 3 is of substantially semi-spherical shape and constitutes a receptacle for a conventional type of reflector such as is common to the head lights of automotive vehicles. The lamp housing is pivotally secured to the middle outer end portions of the side walls of the carrier 3 by means of pivot members 33.

Pivotally secured to the inner edges of said side wall of the carrier 3, are the wings 7, the connection between the same and said side walls being of the hinge type as shown at 31. The portions of said wings 7 disposed immediately adjacent the hinge connections last-named are offset outwardly from the outer end portions 32 of said wings. Each of the latter is provided with keyhole slots 33 in which studs mounted on the door and side wall, respectively, of the casing 1 and which are equipped with heads 34, engage.

A lining strip 35 of suitable material, such as rubber, felt or the like, is secured at its end portions to the wings 7 by means of suitable fastening devices indicated at 35 and which are engaged with resilient bars 37. The middle portions of said bars 37 lie in longitudinal slots in the said wings 7 adjacent the hinge 31, the outer end portions 38 of said bars being disposed to rest upon said wings beyond the ends of said slots.

As shown in Fig. 4, when the lamp carrier is disengaged from the studs 34, preparatory to mounting the lamp on the forehead, the said wings 7 are spread apart and the normally free end portion of the head band 4 is connected with a headed stud 39 secured to one wing of the lamp carrier and said head band is then adjusted in a well-known manner, as by means of the mem-

ber 40 to fit the head and exert tension on said wings 7.

Preparatory to mounting the lamp carrier on the forehead, the cord 5 and head band 4 are first withdrawn from the open side of the receptacle 3 in order that they may be withdrawn readily through the opening in the top wall and the slot in the side wall of the casing 1, respectively, hereinbefore described. The head band is, of course, completely withdrawn while the cord 5 remains disposed at one end within the casing 1 and compartment 3.

The wings of the lamp carrier perform two distinct functions, as will be obvious, and by reason of the type of engagement between the same and the door and side wall of the casing, respectively, the door may be swung open to an appreciable degree without disconnecting the wing engaged therewith from the same, as for example, for purposes of removing and replacing batteries. Obviously, when using the device in the manner indicated in Fig. 4, it is desirable that the wings 7 be disconnected from the studs 34 before the door is swung to the wide open position shown in Fig. 2.

It will be obvious that the device of the present invention is exceedingly compact and very advantageous in the provision of a space within the casing in which the cord 5 and head band are normally stored, in maintaining the cord permanently associated with the battery circuit and lamp, respectively, and in utilizing wings of the lamp carrier as a means of engaging the latter with the battery casing, as shown.

Obviously, if a greater number of batteries is desired to be used, the width of the casing between front and rear walls may be increased to accommodate one or more additional pairs of batteries 12 to the left of the pair shown in Fig. 2.

While the accompanying drawings illustrate the preferred embodiment of the invention, it will be understood of course, that certain details of construction thereof may be changed and varied without departing from the invention as defined in and by the appended claims.

I claim as my invention:

1. An electric lantern comprising a battery casing having a space to receive a lamp cord and a head band, a lamp housing detachably mounted on said casing, a plate operatively connected with said lamp housing and equipped with hinged wing portions one of which is permanently connected with one end of said band and the other of which is detachably connectible with the other end of said band when the latter is withdrawn from the casing, cooperating means on said wings and casing for effecting detachable mounting of said housing on said casing, a switch on the casing, said cord permanently connected at its ends with the lamp and with the batteries and switch, there being openings in the casing through which said cord and said band pass and permitting withdrawal of said band and cord from said casing to permit spacing of said carrier from said casing, said wings and plate co-operating to conform themselves substantially to the forehead under the influence of tension on said band when attached to both wings and disposed about the head.

2. An electric lantern comprising a battery casing having a space to receive a lamp cord, a lamp housing equipped with a lamp socket permanently connected with the other end of said cord, a plate operatively connected with the lamp

housing and equipped with hinged wings at opposite ends thereof, a head band permanently connected at one end with one of said wings and adapted to extend through a slot in said casing to be contained in said space when not in use, said wings and casing equipped with co-operating means for detachably mounting the lamp housing on said casing, said plate cooperating with said wings to engage the casing and to constitute therewith a forehead-engaging means self-conformable to the forehead of the wearer under the influence of said band when the latter encircles the head and is detachably secured at its other end to the other of said wings, there being an opening in said casing through which the said cord passes.

3. An electric lantern including a battery casing having a hollow relatively resilient wall affording a socket, a handle overlying the top wall of said casing and having one arm telescopically and slidably engaged in said socket and frictionally engaged therein for resistance to movement, thereby rendering handle adjustable from a position wherein it rests upon said top wall to positions spaced therefrom.

4. An electric lantern including a relatively flat battery casing having narrow vertical wall thereof equipped with means for adjustably and frictionally engaging a suspension handle therewith, a handle equipped with an arm engaged with said means and having its hand-engaging portion overlying the top wall of the casing, said handle being adjustable vertically to desired positions relatively to the casing.

5. An electric lantern including a relatively flat battery casing having a narrow vertical wall thereof equipped with means for adjustably and frictionally engaging a suspension handle therewith, a handle equipped with an arm engaged with said means and having its hand-engaging portion overlying the top wall of the casing, said handle being adjustable vertically to desired positions relatively to the casing and a switch mounted upon the top wall of the casing and including an operating device projecting through a slot in the handle when the latter is disposed at the lower limit of its movement.

6. An electric lantern including a relatively flat battery casing having a narrow vertical wall thereof equipped with means for adjustably and frictionally engaging a suspension handle therewith, a handle equipped with an arm engaged with said means and having its hand-engaging portion overlying the top wall of the casing, said handle being adjustable vertically to desired positions relatively to the casing and a switch mounted upon the top wall of the casing and including an operating device projecting through a slot in the handle when the latter is disposed at the lower limit of its movement, a lamp cord housing compartment in said casing, a lamp housing detachably secured to the exterior casing, and a lamp-cord normally contained in said compartment and extending through an opening in the casing and a slot in the arm of said handle and permanently connected at opposite

ends with said switch, the batteries and the lamp in said housing.

7. An electric lantern including a relatively flat battery casing having a narrow vertical wall thereof equipped with means for adjustably and frictionally engaging a suspension handle therewith, an inverted U-shaped handle having its middle portion overlying the top wall of the casing over its entire length and equipped at one end with a long arm engaged with said means and equipped at its other end with a short arm overlapping the other narrow vertical wall of said casing when said handle is disposed at or near the lower limit of its movement.

8. An electric lantern including a relatively flat battery casing having a narrow vertical wall thereof equipped with means for adjustably and frictionally engaging a suspension handle therewith, an inverted U-shaped handle having its middle portion overlying the top wall of the casing over its entire length and equipped at one end with a long arm engaged with said means and equipped at its other end with a short arm overlapping the other narrow vertical wall of said casing when said handle is disposed at or near the lower limit of its movement, the said long arm and middle portion of said handle being provided with longitudinal slots, a switch mounted on the top wall of the casing and including an operating element projecting through one of said slots when said handle is disposed at the lower limit of its movement, a lamp housing detachably mounted upon the exterior casing, a lamp cord permanently connected at one end with the lamp in said housing and permanently connected at its other end and within the casing with the batteries and said switch and between its ends passing through the slot in said arm and through an opening in the casing, the main part of said cord being adapted to be contained in collapsed condition within said casing.

9. An electric lantern including a relatively flat battery casing having narrow front, rear and top and bottom walls, a rigid side wall and a hinged door opposed to the latter, there being a free space within the casing in the corner portion adjoining the front and top walls thereof, there being an opening at said corner and a slot in the side wall adjacent thereto, a switch mounted on said casing, a lamp carrier equipped with a plate spanning the front wall of the housing, a pair of wings hinged to the ends of said plate, co-operating means on said wings, said side wall and said door of said casing for detachably connecting the same, a lamp cord permanently connected at opposite ends with the lamp in the housing and within the casing with the batteries and switch, said cord extending through said opening and being normally collapsed within the casing, a head band permanently secured at one end to one of said wings and extending through said slot and normally collapsed within said casing, said band being adapted to be detachably secured to the other of said wings when withdrawn from the casing.

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