C. G. HAMILTON.

COMBINATION HEAD LAMP AND FLASH LIGHT.

APPLICATION FILED JUNE 7, 1917.

1,274,263.

Patented July 30, 1918.

2 SHEETS—SHEET 1.

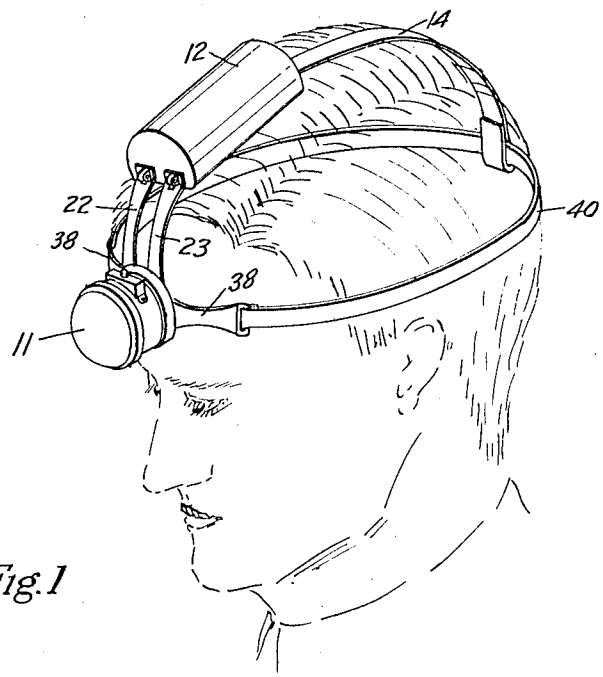


Fig. 1

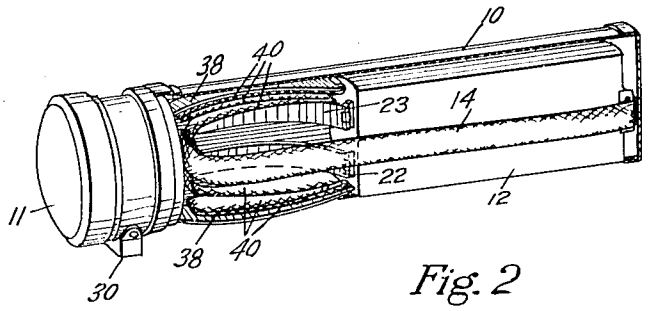


Fig. 2

WITNESSES:

George L. Wallace

M. Raincia

INVENTOR

Cameron G. Hamilton

BY

Horace Barnes

ATTORNEY

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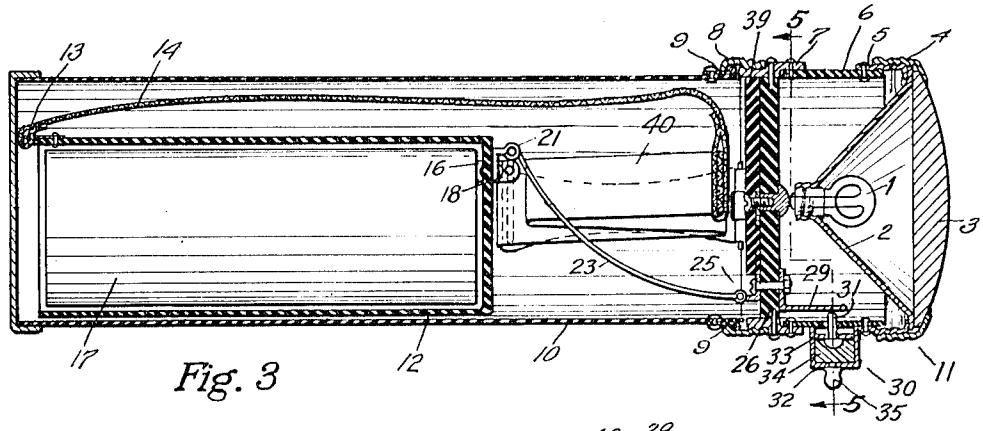


Fig. 3

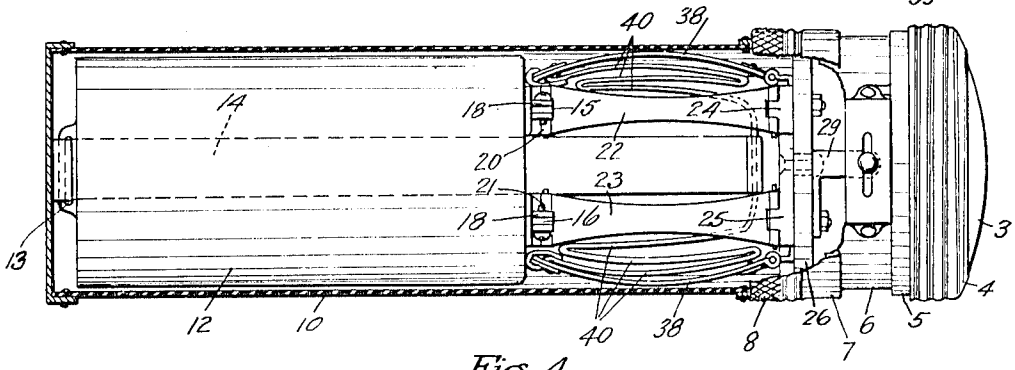


Fig. 4

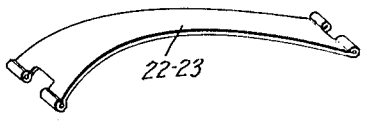


Fig. 7

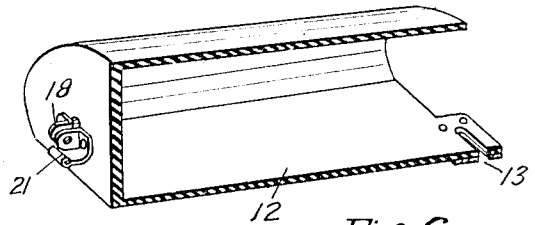
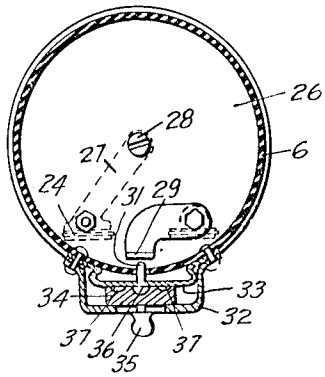


Fig. 6

Fig. 5



WITNESSES:

George L. Kallock.

M. Raincia

INVENTOR

Cameron G. Hamilton

BY

Horace Barnes

ATTORNEY

UNITED STATES PATENT OFFICE.

CAMERON G. HAMILTON, OF SEATTLE, WASHINGTON, ASSIGNOR OF ONE-HALF TO CULLEN K. STURTEVANT, OF SEATTLE, WASHINGTON.

COMBINATION HEAD-LAMP AND FLASH-LIGHT.

1,274,263. Specification of Letters Patent. Patented July 30, 1918.

Application filed June 7, 1917. Serial No. 173,378.

To all whom it may concern:

Be it known that I, CAMERON G. HAMILTON, a citizen of the United States, residing at Seattle, county of King, and State of Washington, (whose post-office address is 10115 66th So.,) have invented a new and useful Combination Head-Lamp and Flash-Light, of which the following is a specification.

This invention relates to portable electric lamps and more particularly to lamps that are adapted to be either strapped upon the head or carried in the hand or pocket.

The object of my invention is to provide a battery lamp for the head, easily convertible into a pocket flash-light of standard form.

I accomplish this object by the combination and arrangement of parts to be described in the following specifications, illustrated in the accompanying drawings and more particularly set forth in the appended claims.

Referring to the drawings in which similar numerals refer to the same parts in all the views,

Figure 1 is a perspective view of an embodiment of my invention shown mounted upon the forehead of a user.

Fig. 2 is a perspective view with the casing broken away showing the device in folded condition forming a pocket flashlight of standard form.

Fig. 3 is a section of Fig. 2 substantially along its longitudinal axis.

Fig. 4 is a top plan view with the casing partly broken away.

Fig. 5 is a transverse section on the line 5—5 Fig. 3.

Fig. 6 is a perspective view of the battery case, and

Fig. 7 is a perspective view of a conductor strap.

1 indicates a lamp mounted in a reflector 2 and provided with a lens 3, all of standard form and secured by the inwardly flanged nut 4, engaging the threaded sleeve 5, rigidly secured to the cylindrical shell 6, preferably of fiber.

The threaded sleeve 7, rigidly secured to the shell 6 engages the nut 8 rotatably mounted upon the flanged sleeve 9, which is rigidly secured to the cylindrical container 10, preferably of fiber, means being thus provided for securing the container 10 to the light, generally indicated by the numeral 11 without relative motion of the two.

Normally reposing in the container 10 is the battery case 12, preferably of fiber, in the form of a cylindrical segment with one end closed. At the other extremity of its flattened wall is a slot 13 to receive the supporting head strap 14.

The forward or closed end of the battery case 12 is pierced to receive the terminals 15 and 16 of the battery 17 which preferably conforms to the cylindrical casing with one side flattened.

Receiving the battery terminals are the binding posts 18 provided with means for rigidly securing the terminals thereto. Integral with the binding posts 18 are the hinges 20 and 21 which engage the conductor straps 22 and 23, thereby connecting the battery terminals 15 and 16, respectively, to the hinges 24 and 25 in the light 11. It will be noted that said conductor straps 22 and 23 are curved to fit the forehead and are so hinged as to lie flush with the inner circular face of the light and with the flattened face of the battery case when in place as shown in Fig. 1.

The hinge 24 is mounted upon a disk 26 of insulating material, rigidly secured to the sleeve 7, and is connected by the strap 27 to the contact point 28 and thereby to the base terminal of the light 1.

Similarly mounted on the disk 26 is the hinge 25, secured to the contact spring 29 on the opposite face of said disk, which engages the contact pin 31 of the switch generally indicated by the numeral 30. Said switch 30 provides electrical connection through its metal parts with the metal parts 4 and 5 of the light, and thereby with the reflector 2 and the side terminal of the light 1. Said switch 30 is provided with an outer case 32 and a spring 33 rigidly secured at their ends to the shell 6. The contact pin 31 is rigidly secured to said spring 33 and is pressed into engagement with the contact spring 29 by the sliding member 34, provided with a knob 35 and with a depression 36 near its center which substantially fits the rounded head of the contact pin and with two shallower depressions 37 near its ends.

When it is desired to operate the device as a flash light, a slight movement to left

or right in Fig. 5, presses the contact pin into engagement with the contact spring 29 and completes the electrical circuit, broken only at this point. When released, the spring 33 presses the head of the contact pin 31 into the depression 36 and returns the sliding member 34 to its central position, breaking the circuit. Permanent connection is secured by moving the sliding member to its extreme position to left or right, whereby the head of the contact pin 31 is pressed into one of the shallower depressions 37 and the switch is locked in position with the pin 31 pressed against the spring 29.

The light 11 is provided with two curved straps 38 hinged at right angles to the conductor straps and in a similar manner, adapted to open outwardly until they conform to the contour of the head, and are flush with the inner circular face of the light. A fiber disk 39 cut away to clear the hinges is secured in the inner face of the light 11 to further provide a smooth surface for contact with the head. An encircling band 40 of elastic material is secured at its ends to the straps 38 and is loosely held by the end of a supporting band of fabric, 14 which is secured at its rear end to the battery case 12.

It will be noted that the form and arrangement of the supporting and connecting parts is such that the head bands 40 and 14 may be easily folded as shown in Figs. 2, 3 and 4, into a container of the type common in pocket flashlights. The union formed by the nut 8 and the engaging parts renders it possible to attach the container to the light without the danger of entangling the folded bands which would exist were relative rotation of the two required.

Having thus shown the new and novel means whereby I attain the ends sought by me in my invention, what I claim as new and desire to protect by Letters Patent is:

1. Apparatus of the class described, embodying a lamp, means to support said lamp upon the forehead of the user, including a battery and electrical circuit connections between the battery and said lamp, and a container having an open end adapted to receive said supporting means, said lamp forming the closure to said open end of the container.

2. Apparatus of the class described, embodying a lamp, means to support said lamp upon the forehead of the user, including a battery and electrical circuit connections between the battery and said lamp, and a container having an open end adapted to receive said supporting means, said lamp forming the closure to said open end of the container, and several connections between said lamp and the container.

3. Apparatus of the class described, embodying a lamp, means for mounting the lamp upon the forehead of the user, including a battery, and metallic strap connections constituting an electrical circuit between the battery and said lamp, said metallic straps being hingedly connected at their opposite ends to said battery and lamp whereby the said elements may be folded in substantial alinement with the axis of said lamp and a cylindrical container arranged to receive said elements, said lamp forming the closure of one end of said container.

4. Apparatus of the class described, embodying a lamp, a battery, electrical circuit connections therebetween a cylindrical container having an open end, said lamp forming a closure for said open end and provided with screw-thread on its exterior, and a screw-threaded nut rotatably secured about the open end of the container and arranged to engage said lamp to secure the same to the container without relative rotation of the secured elements.

5. Apparatus of the class described including a lamp adapted to be worn upon the forehead, straps for mounting said lamp in said position, a battery, and metallic strap connections hinged at their opposite ends to said battery and to said lamp whereby the battery and connections may be folded with respect to said lamp.

6. Apparatus of the class described, embodying a lamp adapted to be worn upon the forehead, straps for securing said lamp in said position, a battery, and electrical circuit connections between said battery and the lamp and a cylindrical casing having an open end of which said lamp provides a closure, the compartment within said casing arranged to receive said battery, straps and connections.

Signed at Seattle, Washington on the 29th day of May, 1917.

CAMERON G. HAMILTON.