Oct. 21, 1941. R. M. WHITE 2,259,673

COMBINATION HUNTING LIGHT AND FLASHLIGHT

Filed Aug. 28, 1940 2 Sheets-Sheet 1

Fig. 1.

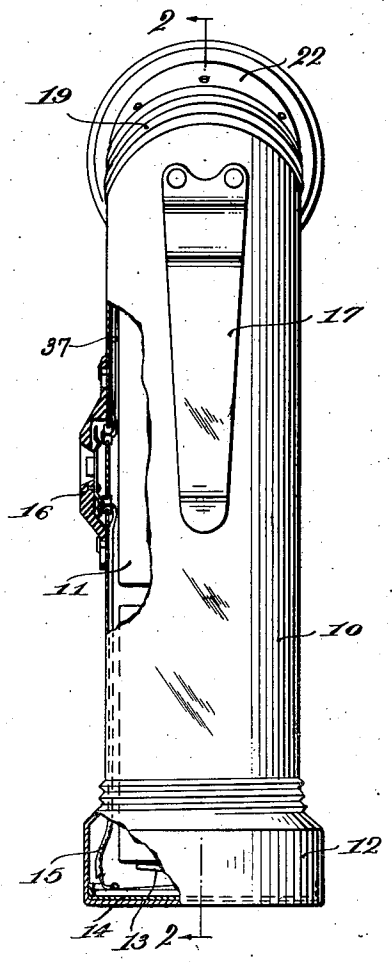
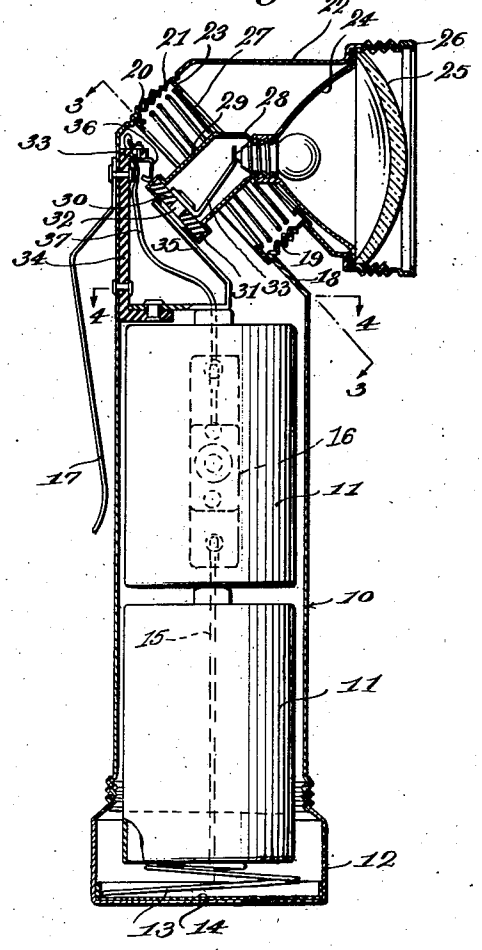


Fig. 2.



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Filed Aug. 28, 1940 2 Sheets-Sheet 2

Fig. 3.

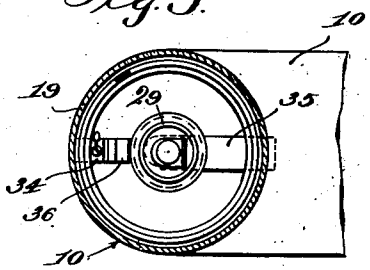


Fig. 4.

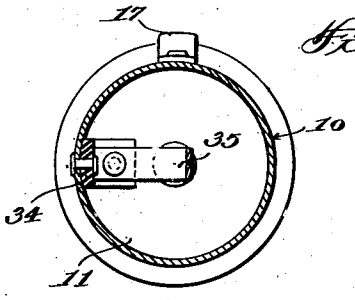


Fig. 5.

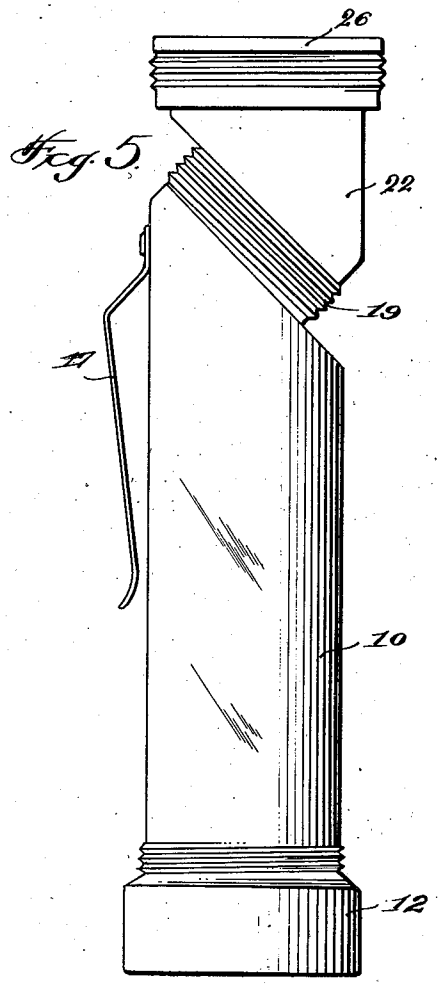
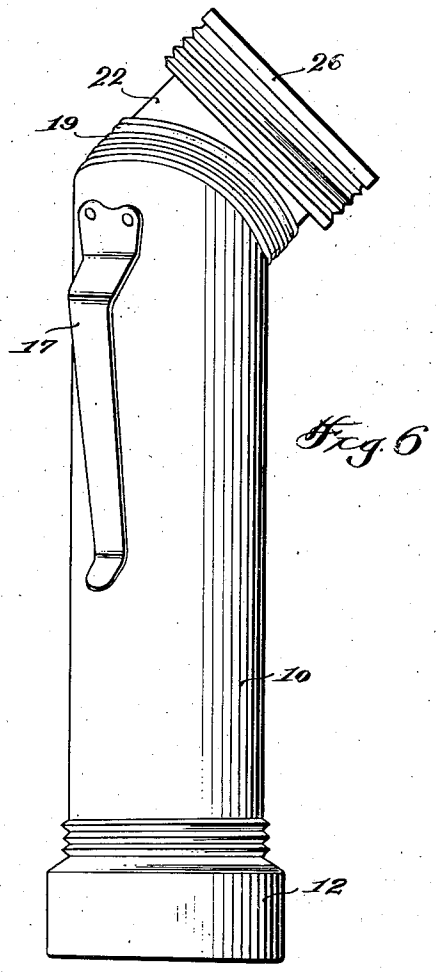


Fig. 6.



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COMBINATION HUNTING LIGHT AND FLASHLIGHT

Ralph M. White, Morgantown, W. Va.

Application August 28, 1940, Serial No. 354,617

5 Claims. (Cl. 240—10.67)

This invention relates to combination hunting lights and flashlights, and more particularly to those having a pivoted connection whereby the light may be directed either straight ahead or at right angles with respect to the base.

To combine a flashlight, in which the light beam is directed straight ahead with respect to the base, and a hunting light, in which the light beam is directed at right angles with respect to the base, has long been considered a desirable expedient for economy and convenience, and several devices have been developed along this line. The common method of accomplishing this changeability is to provide a case for the bulb, lens and reflector, which case is swiveled on the battery case so the light may be directed either straight or to the side; however, this creates the problem of a suitable swiveled connection. The electrical connections for the bulb must pass through the swivel, and at the same time the connection must be as nearly watertight as possible to prevent the entry of moisture, dirt, etc., from entering the casings, with deleterious results. I realize that various means have been developed to solve this problem but, so far as I am aware, no one has produced a device having the specific advantageous combination and arrangement of parts of that embodied in my invention.

The object of this invention is a durable and convenient combination flashlight.

Another object is a snug swivel connection between the light casing and the battery casing in such a device.

Still another object is an economical and easily assembled device for accomplishing the above result.

These and other objects may be accomplished by my invention which embodies among its features a battery casing, a bulb casing, a threaded connection between the two casings, a resilient means operating to push the two casings apart to cause tightness of the connection, a housing on the bulb socket, an insulating base on the housing, a contact member for the bulb held to the base by a rivet therethrough, and brush means in the casing contacting the rivet and the housing.

Other objects and features will become evident from the following disclosure when taken in connection with the accompanying drawings in which,

Figure 1 is a rear elevation view of my device, partly in cross-section,

Figure 2 is a vertical cross-section taken on line 2—2 of Figure 1,

Figure 3 is a cross-section taken on line 3—3 of Figure 2,

Figure 4 is a cross-section taken on line 4—4 of Figure 2,

Figure 5 is a side elevation of my device with the bulb casing turned so the light is directed straight ahead, as with the conventional flashlight, and

Figure 6 is a side elevation of my device with the light turned part way down into hunting light position.

Referring to the drawings in detail, a battery casing 10 carries the batteries 11 and is closed at its lower end by a screw cap 12 carrying a contact spring 13 pressing on the batteries. The spring 13 rests on insulating material 14 and has connected thereto the wire 15 which runs down the side of the case to a suitable switch means 16 which makes contact with a light wire 37. The switch is of conventional flashlight construction and need not be described. On the side of the casing there is a conventional belt clip 17.

The upper end of the casing is built with a diagonal portion 18 having a stamped threaded neck 19, to the lower end of which is secured, by soldering or other suitable means, a spring seat 20. Threaded into the neck 19 is a coacting neck 21 of the light casing 22, having a corresponding spring seat 23. The front of the casing 22 carries a light structure consisting of a reflector 24 and lens 25 of conventional construction and held in place by a rim 26.

Seated in the two spring seats 20 and 23 in a compression spring 27, which tends to push casings 10 and 22 apart and thereby forms a tighter fit between the threads 19 and 21. It will be noted that the casing 22 is readily rotatable, and that at the same time the spring 27 causes a binding of these threads which makes a near watertight connection.

The lower end of the reflector 24 is screw threaded, and fitted therein is a bulb socket 28 which carries a housing 29 positioned axially and concentric to the neck 19. There is a base 30 clamped into an enlarged end 31 of the housing, and the base carries, by means of a rivet 32, a spring contact member 33. When a light bulb is screwed into the socket 28, this contact member will make electrical contact with the bottom of the bulb.

In the upper end of the casing 18 extending along the long side of the diagonal position, is an L-shaped bracket of insulating material 34, and a resilient strip 35 is riveted to the lower

reach of the L. The horizontal portion of this strip contacts the center pole of the battery 11, and its upper portion bears against the rivet 32. The upper end of the L carries, also riveted thereto, a brush 36 which bears on the housing 31. The brush 36 is connected to the switch 16 by a wire 37. It will accordingly be seen that a circuit may be established from the carbon pole of the battery through the strip 35, rivet 32 and strip 33 to the light bulb and back through the housing 29, brush 36, wire 37, switch 16 and wire 15 to the spring 13 which bears on the zinc of the battery. It will further be noted that the strip 35 and the brush 36 make good electrical contact with the light no matter how much the light casing is rotated.

By the above described structure, I have produced a combination flashlight in which the light casing may be turned either straight as shown in Figure 5, in which case it is handled like the conventional flashlight, or turned at any angle as shown in Figure 6, or at right angles as in Figures 1 and 2. In the latter position it may be stuck in the user's belt or stood upright on the ground. Although a preferred embodiment is disclosed herein, I do not wish to be limited thereto but only by the scope of the appended claims.

What is claimed is:

1. In a device of the class described, a battery case, a bulb case, a diagonally disposed threaded connection therebetween for angular adjustment thereof, a resilient means tending to push said cases apart to cause tightness of the threaded connection, a bulb socket in the bulb case and a housing integral therewith, a base on the housing, contact means extending through the base and contacting the bulb, and brush means in the battery case contacting the contact means and the housing.

2. In a device of the class described, a battery case, a bulb case, a diagonally disposed threaded connection therebetween for angular adjustment thereof, a resilient means tending to push said cases apart to cause tightness of the threaded connection, a bulb socket in the bulb case and a housing integral therewith, an insulating base on the housing, contact means for the bulb held by a rivet through the base, and brush means in the battery case contacting the rivet and the housing.

3. In a device of the class described, a battery casing, a light bulb casing connected by a swivel joint with the battery casing, a bulb receiving socket mounted in the bulb casing and having an extension housing of conductive material extending through the swivel joint, an insulating base member secured to the extension housing and carrying a conductive terminal, a spring contact attached to the said terminal adapted to make electrical contact with the bottom terminal of the bulb, an angular bracket secured within the battery casing adjacent the swivel joint, a resilient conductor strip attached to one end of the said bracket adapted to make contact with one pole of the battery and with the terminal on the base member, and a contact member secured to the opposite end of the bracket electrically connected with the opposite pole of the battery and making contact with the socket extension housing.

4. In a device of the class described, a battery casing, a light bulb casing connected by a swivel joint with the battery casing, a bulb receiving socket mounted in the bulb casing and having an extension housing of conductive material extending through the swivel joint, an insulating base member secured to the extension housing and carrying a conductive terminal, a spring contact attached to the said terminal adapted to make electrical contact with the bottom terminal of the bulb, an approximately L-shaped bracket fastened to the battery casing adjacent the swivel joint, an angular contact strip fastened to one end of the bracket disposed to make contact with one pole of the battery and with the terminal of the base member, and an angular resilient contact member secured to the opposite end portion of the bracket arranged to contact with the housing extension of the socket and electrically connected with the opposite pole of the battery.

5. In a device of the class described, comprising a battery case, a bulb case, a threaded connection diagonally between the two cases for angular adjustment thereof, a coil spring having one end engaging the battery case and the other the bulb case for forcing the cases apart longitudinally of the threads, a housing carried by the bulb socket and passing through the coil spring into the battery case, an electric connection between the housing and the battery, an insulated plate carried by the lower end of the housing, a metal member passing through the plate, a spring contact connected to the member and engaging the end of the bulb, and a spring contact engaging the battery and having an upwardly extending spring arm engaging the metal member passing through the insulated plate.

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