United States Patent

Vickers, III

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[54] COMBINED FLASHLIGHT AND CHEMICAL EXPELLING DEVICE

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[73] Assignee: **Percy Rosenbloom, Jr.**

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Related U.S. Application Data

[63] Continuation of Ser. No. 757,856, Sept. 6, 1968, abandoned.

[52] **U.S. Cl.**.....**222/113,** 240/10.66

[51] **Int. Cl.**.....**B67d 5/66**

[58] **Field of Search**.....222/192, 174, 113, 394, 475, 222/465, 3; 240/6.4, 2 FD, 10.62, 10.66

[56] **References Cited**

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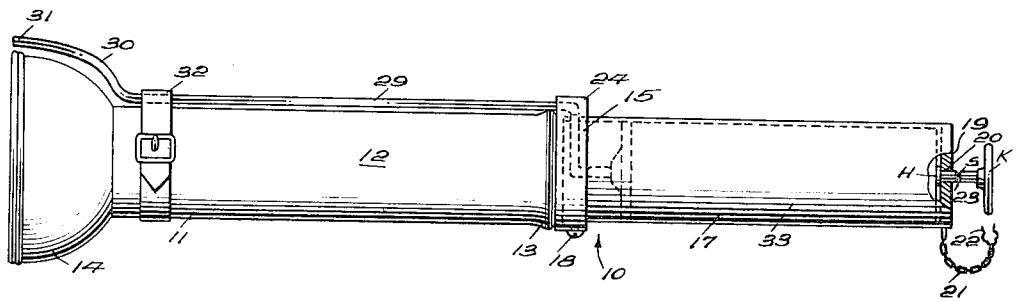
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[57] **ABSTRACT**

A can of aerosol expelled chemical is combined with a flashlight, and chemical from the can passes through a conduit and out through a dispensing nozzle arranged so that the chemical is dispensed toward the same point on which the flashlight beam impinges. Means are provided for selectively dispensing the chemical from the can.

10 Claims, 3 Drawing Figures



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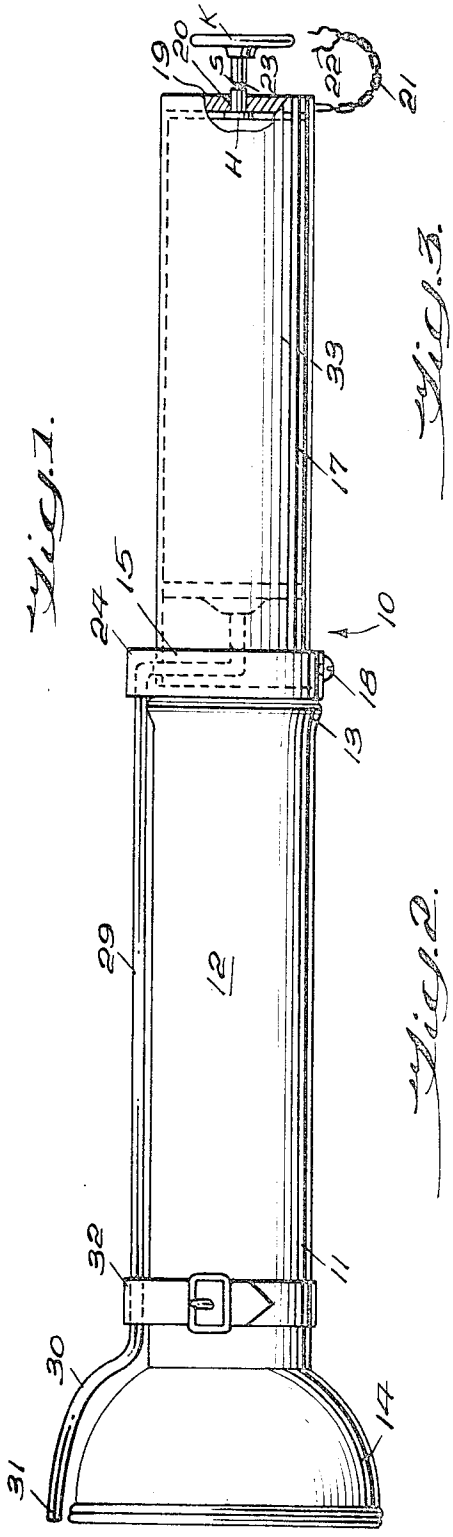


Fig. 1.

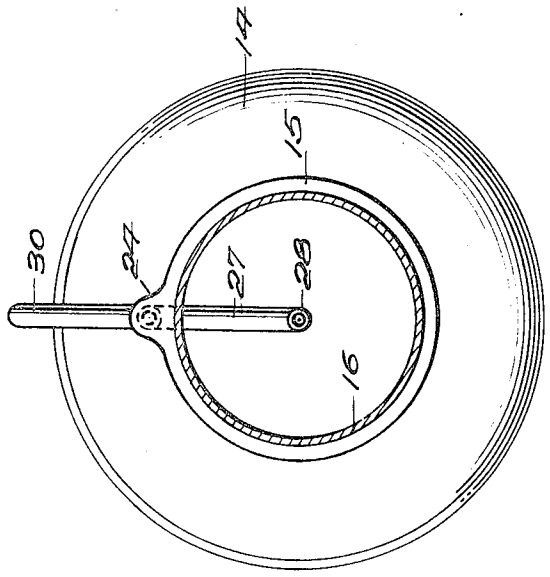


Fig. 3.

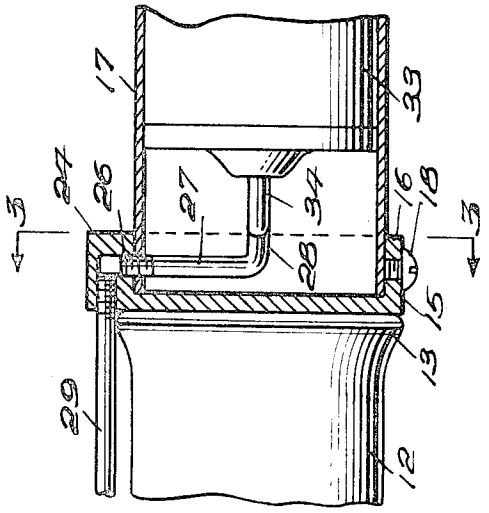


Fig. 2.

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COMBINED FLASHLIGHT AND CHEMICAL EXPELLING DEVICE

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of my application, Ser. No. 757,856, filed Sept. 6, 1968, now abandoned, entitled RIOT CONTROL ATTACHMENT FOR FLASHLIGHTS.

BACKGROUND OF THE INVENTION

The present invention relates to a combined flashlight and chemical expelling device for supporting an aerosol chemical deterrent dispensing can and more particularly to an attachment for such a flashlight in which a conduit extends parallel to the flashlight and is arranged to dispense the chemical from the aerosol can toward the same point where the beam of the flashlight would illuminate.

SUMMARY OF THE INVENTION

In the prior art use of aerosol expelled chemicals as deterrents the riot control officer would carry an aerosol can in one hand, depressing the dispensing valve with one finger in order to fire a charge of chemical toward a rioter. At night when a flashlight became necessary, the officer held the flashlight in one hand and the aerosol can in the other completely eliminating the possibility of carrying a gun or billy club in hand and ready for use. With the present invention, the officer can hold the combined flashlight and chemical expelling device in one hand while holding the gun or billy club in the other hand ready for instant use.

In accord with the invention an elongated casing means houses a light bulb and focusing beam reflector assembly at a forward end thereof and orients same to forwardly direct a beam of light from the bulb. The casing means includes two chambers with a battery means for illuminating the bulb in one chamber and a pressurized can of chemicals in the other chamber. An elongated conduit has one end disposed in the other chamber and extends forwardly therefrom and terminates in a forwardly directed outlet adjacent the reflector assembly. Manually operable means are provided for dispensing chemicals from the can through the conduit to the outlet.

In accord with other aspects of the invention, the chambers are generally cylindrical and are axially aligned with the casing means also being cylindrical rearwardly of the reflector assembly. Furthermore, the chambers may be releasably connected to permit ready replacement of the can.

The primary object of the invention is to provide a combination flashlight and chemical expelling device which is useful for general illumination and for aiming the charge of chemical deterrent.

Another object of the invention is to provide a device of the class described above which is inexpensive to manufacture, simple to construct and assemble and which will withstand the forces of hard usage.

BRIEF DESCRIPTION OF THE DRAWING

The novel features which are believed to be characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawing, in which:

FIG. 1 is a side elevational view of the combined flashlight and chemical expelling device in accord with the invention;

FIG. 2 is an enlarged longitudinal cross-sectional view corresponding to FIG. 1 shown partially broken away; and

FIG. 3 is a transverse cross-sectional view taken along the line 3—3 of FIG. 2 in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures, the reference numeral **10** indicates generally a combined flashlight and chemical expelling device constructed in accordance with the invention.

The combined flashlight and chemical expelling device **10** includes a flashlight **11** having a generally cylindrical elongated battery case **12** terminating in a flared base **13** at one end and a bell-shaped light reflector **14** at the opposite end. The flashlight **11** is of completely conventional design and may be any of the commercially available flashlights of this general nature.

A generally cylindrical cover **15** is secured to the base **13** by any suitable means including cement, soldering, and detachable screws. The cover **15** has an annular flange **16** extending outwardly away from the base **13** of the flashlight **11** and adapted to telescopically receive a cylindrical container **17** which is secured therein by a setscrew **18** threaded through the flange **16** and engaging against the container **17** as can be best seen in FIG. **2**. The container **17** has a closed end **19** opposite the cover **15** with a central bore **20** opening therethrough. An actuator shaft S extends through the bore **20** and is provided with a knob K on its outer end. A head H is formed on the inner end of the shaft S to secure the shaft S against detachment from the closed end **19**. A safety chain **21** is secured to the container **17** at one end and to a spring clip **22** at the opposite end to prevent the loss of the spring clip **22**. The shaft S has a groove **23** formed therein to receive the spring clip **22** to serve as a safety to prevent inward movement of the shaft S until the spring clip **22** is removed.

A boss **24** is formed on the flange **16** and extends outwardly therefrom having a threaded bore **25** extending therein parallel to the axis of the cover **15** and intersecting a threaded bore **26** extending radially through the flange **16** and boss **24**. An L-shaped conduit **27** is threaded into the threaded bore **26** and extends inwardly of the cover **15** terminating in a short portion **28** arranged axially of the cover **15** and opening toward the closed end wall **19** of the container **17**. An elongated conduit **29** is threaded into the threaded bore **25** at one end and extends parallel to the flashlight **11**. The conduit **29** is bowed outwardly at **30** to be generally parallel to the reflector **14** and terminates in a dispensing nozzle or outlet **31** at its outer end. A flexible strap **32** encompasses the flashlight **11** and the conduit **29** to secure the conduit **29** thereto.

An aerosol can **33** of conventional construction is positioned in the container **17** and has its dispensing valve structure **34** arranged in communication with the conduit **27** so that when the aerosol can **33** is moved toward the conduit **27** the dispensing valve **34** is depressed and pressurized fluid from the can **33** through the conduits **27**, **29** and out through the outlet **31**. The aerosol can **33** is moved within the container **17** by pressing on the knob K with the actuator shaft S extending through the bore **20** and the head H bearing against the bottom of the can **33**.

The aerosol can **33** contains a liquid material which will be dispensed by the aerosol as a deterrent gas. Among liquids useful for this purpose are "mace," a phenylchloromethylketone, manufactured by the General Ordnance Equipment Corporation, Pittsburgh, Pa., or any of the more commonly known tear gases, such as monoethanolamine. In the use and operation of the invention, the riot control officer can aim the flashlight using of course the beam of light therefrom, and when it is necessary to discharge a quantity of deterrent chemical or gas toward the offenders, he can press the knob K against his chest while maintaining the aim of the flashlight by means of the light beam. The riot control officer can carry suitable additional weapons in his other hand ready for instant use when such is necessary.

Complete usage of the liquid in the aerosol container may be achieved from the horizontal position used in this combination by weighting the intake tube within the can so that it will fall to the lower side of the can.

While the invention has been described with respect to certain specific embodiments, it will be appreciated that many modifications and changes may be made by those skilled in the art without departing from the spirit of the invention. It is intended, therefore, by the appended claims to cover all such modifications and changes as fall within the true spirit and scope of the invention.

What is claimed as new and what it is desired to secure by Letters Patent of the United States is:

1. A riot control attachment for flashlights of the type including a cylindrical battery case having a base at one end thereof and a light reflector at the opposite end thereof comprising a container arranged in axial alignment with said battery case, means detachably securing said container to said base, a deterrent-chemical-containing aerosol can mounted in said container, a conduit secured to said flashlight terminating adjacent said reflector, and means for dispensing chemicals from said aerosol can through said conduit.

2. A device as claimed in claim 1 wherein said aerosol can is provided with a dispensing valve and said conduit is arranged in contact with said dispensing valve whereby upon actuation of the means for dispensing chemicals from said aerosol can said chemicals are fed through said conduit.

3. A device as claimed in claim 1 wherein means are provided encompassing said flashlight and said conduit for detachably securing said conduit to said flashlight.

4. A device as claimed in claim 1 wherein the means securing said container to said flashlight includes a cover having an annular flange telescopically receiving said container and means on said flange securing said container thereto.

5. In a combined flashlight and chemical expelling device comprising an elongated casing means for housing a light bulb and focusing beam reflector assembly at a forward end thereof and oriented to forwardly direct a beam of light from said bulb, said casing means including two chambers in end to alignment, battery means for illuminating said bulb in one of said chambers, a pressurized can of chemicals in the other of said chambers, an elongated conduit having one end disposed in said other chamber and extending forwardly therefrom and terminating in a forwardly directed outlet adjacent said reflector, and manually operable means for dispensing chemicals from said can through said conduit to said outlet whereby chemicals are directed generally in the direction of the beam of light.

6. In the device as claimed in claim 5 wherein said casing means further includes means for detachably securing said chambers together.

7. In the device as claimed in claim 5 wherein said casing means rearwardly of said reflector assembly is generally cylindrical with each of said chambers being in axial alignment.

8. In the device as claimed in claim 5 wherein said manually operable means includes a dispensing valve located at the outlet of said can and means exposed outwardly of said casing for selectively operating said dispensing valve.

9. In the device as claimed in claim 5 wherein each, said chambers are cylindrical.

10. In the device as claimed in claim 9 wherein said cylindrical chambers are axially aligned.

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