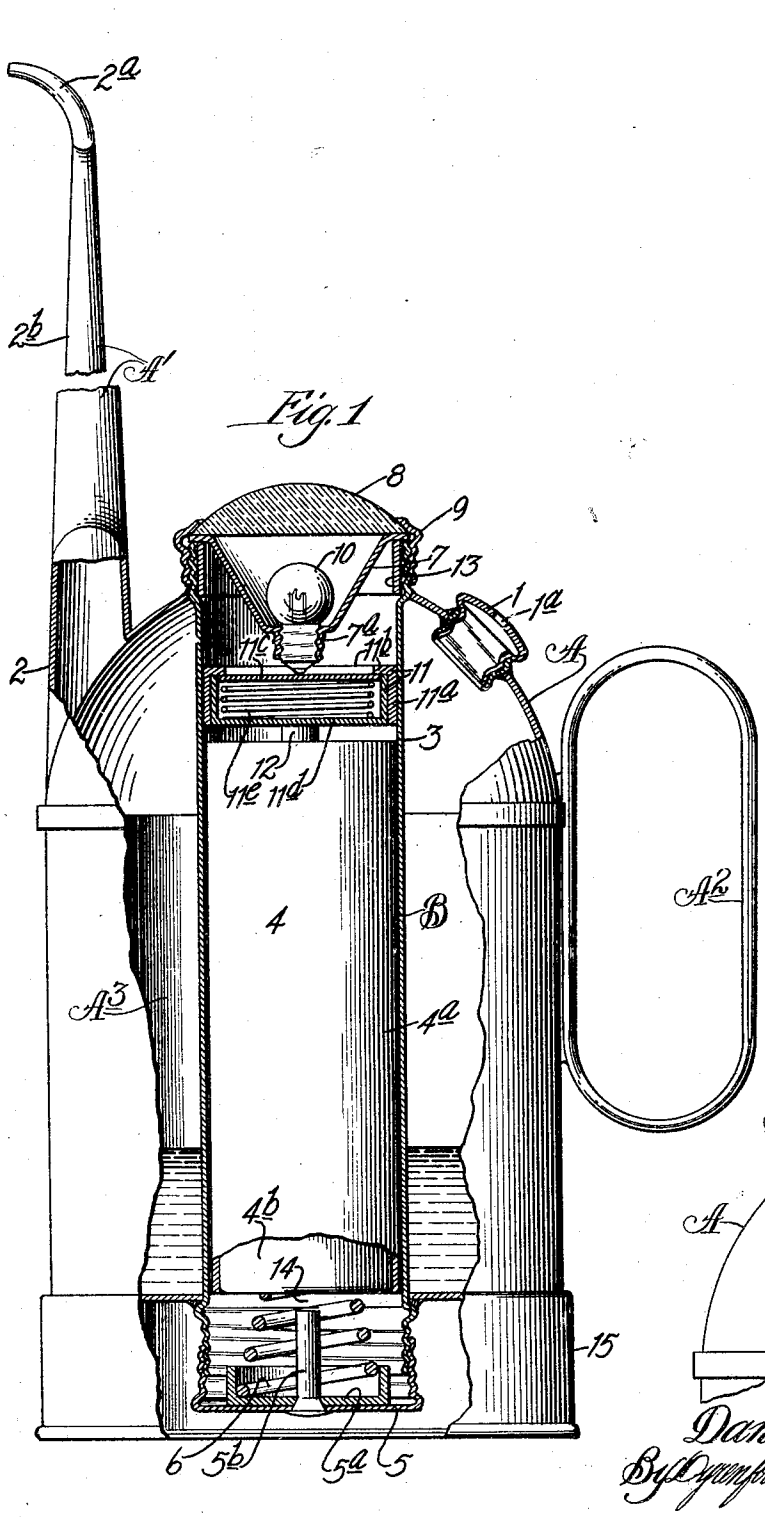
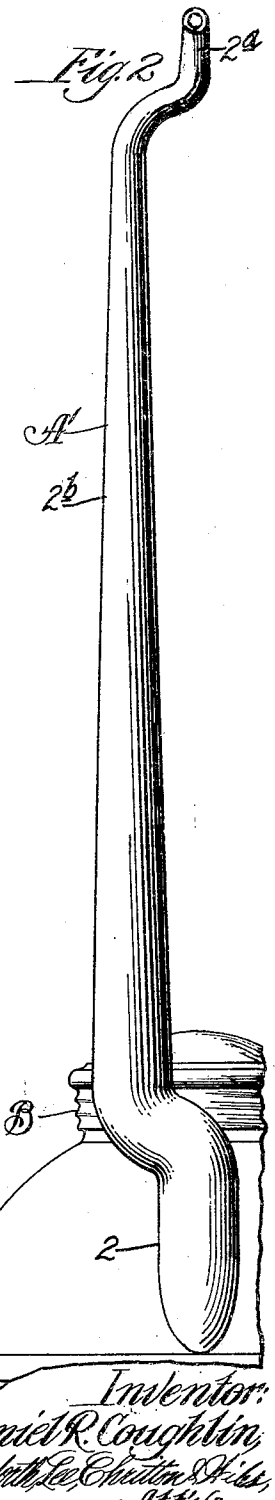
Feb. 17, 1931. D. R. COUGHLIN 1,793,160

COMBINATION OIL CAN AND FLASH LIGHT

Filed Jan. 3, 1928 2 Sheets-Sheet 1





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Fig. 3

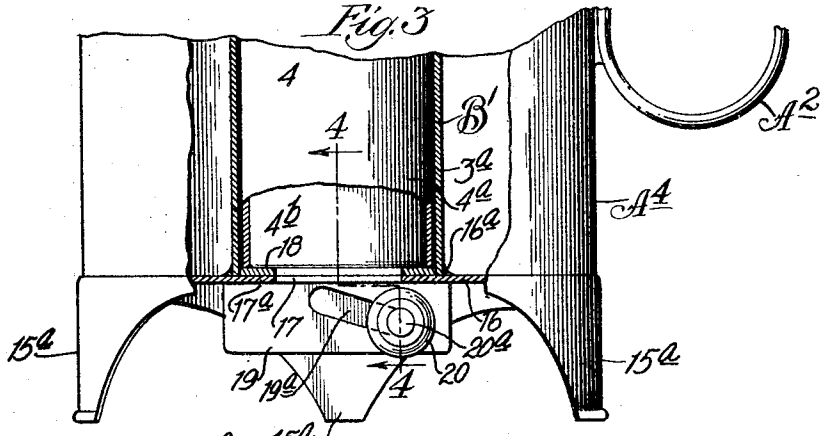


Fig. 4

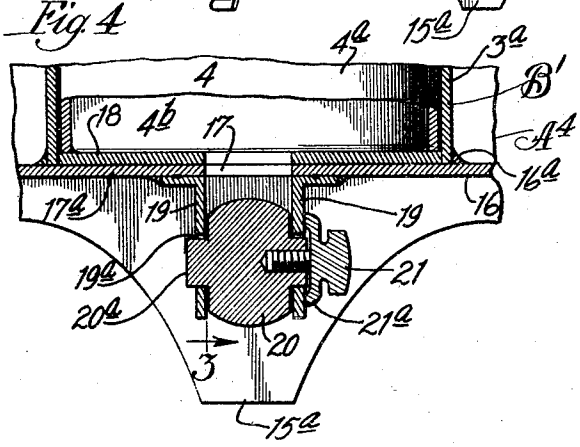
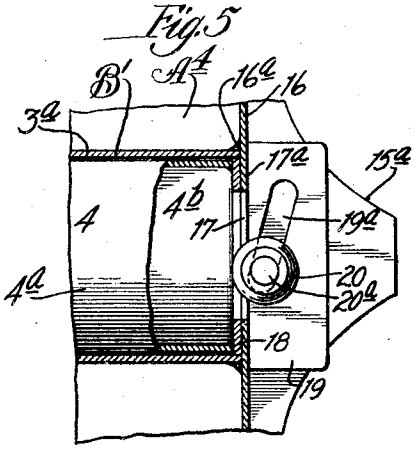


Fig. 5



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Patented Feb. 17, 1931 1,793,160

UNITED STATES PATENT OFFICE

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COMBINATION OIL CAN AND FLASH LIGHT

Application filed January 3, 1928. Serial No. 244,135.

This invention relates particularly to an oil can equipped with illuminating means; and the primary object is to provide means whereby the tip-portion of the spout of an oil can, or oiler, may be illuminated and, at the same time, the illumination may serve to enable bearings which are to be lubricated to be found without difficulty.

The invention is particularly applicable to oil cans adapted to the purpose of lubricating the bearings of engines and various machines, which often are more or less inaccessible. For example, the invention may be applied to an oil can for use in lubricating a locomotive. Usually such oil cans are quite large and are provided with long spouts. When such an oil can is equipped with an illuminating device in accordance with the present invention, it is possible for the engineer to locate the bearings readily at night and perform the oiling operation without the necessity of carrying an independent torch, or lantern.

The invention is illustrated in a preferred embodiment in the accompanying drawings, in which—

Fig. 1 shows brokenly and partly in section an oil can equipped with an illuminating device; Fig. 2, a broken elevational view showing the manner in which the spout of the oil can preferably is bent; Fig. 3, a broken view, partly in section, showing the base-portion of an oil can equipped with a flashlight in accordance with the invention, but in slightly modified form, the section being taken as indicated at line 3 of Fig. 4; Fig. 4, a broken sectional view taken as indicated at line 4 of Fig. 3; and Fig. 5, a broken sectional view corresponding with Fig. 3, but showing the oil can in horizontal position and the circuit of the flashlight automatically established.

In the embodiment shown in Figs. 1 and 2, the device comprises an oil can A provided with a spout A′ and with a handle A^2; and a flashlight B mainly housed within the oil chamber of the can, but having its end-portions projecting through the top and bottom walls of said chamber.

The oil can A may be of any suitable construction. In the form shown, the oil can is of the gravity type, that is, the feed will be effected by simply tilting the can, as when an oiling operation is performed. The can A is shown equipped at its upper portion with a hollow removable plug 1 provided with an air-vent 1^a. The spout A′ has a base-portion 2 connected with the upper portion of the can, and has a tip-portion 2^a. The main portion of the spout is offset from the plane of the portions 2 and 2^a, as indicated at 2^b. The purpose is to enable the tip-portion 2^a of the spout to be illuminated by the beam cast by the flashlight.

The flashlight B may be of any suitable construction. In the form shown, it comprises a tubular metal casing 3 which extends through central openings in the upper and lower walls of the oil-chamber, designated A^3; a battery 4 comprising one or more dry cells located in the casing 3; a bottom cap 5 screwed onto the threaded lower end of the casing 3, the cap 5 being equipped interiorly with an insulation cup 5^a and the cap 5 being further provided with a contact-stud 5^b which is secured to its bottom wall; a spring 6 interposed between the bottom of the dry cell and the insulation cup 5^a; a reflector 7 mounted in the protruding upper end of the casing 3 and surmounted by a lens 8, the reflector and lens being secured in position by a retainer-ring 9 which has threaded connection with the upper end of the casing 3; a lamp 10 carried by the reflector; and a buffer-device 11 interposed between the lamp and the carbon-pole 12 of the dry cell.

The battery 4 may consist of one or more dry cells housed in a pasteboard tube 4^a. The upper terminal of the battery contacts with a metallic element of the device 11. The bottom of the zinc can 4^b of the battery (the bottom of the lowermost cell, where more than one cell is employed) rest upon the coil-spring 6 and is supported out of contact with the contact-stud 5^b. The circuit may be established by screwing the cap 5 inwardly until the stud 5^b contacts with the bottom of the zinc can of the dry cell.

The upper portion of the casing 3 is shown as having fitted therein a pasteboard ring 13,

which does not, however, prevent contact of the metal reflector 7 with the casing 3.

The buffer-device 11 is shown as comprising an insulation-ring 11^a which is provided at its upper end with an inturned flange 11^b; a metal disk 11^c which contacts with the central terminal of the bulb 10; a metal cup 11^d which is encircled by the ring 11^a and which bears against the carbon-pole 12; and a coil-spring 11^e interposed between the disk 11^c and the bottom of the cup 11^d.

It appears, therefore, that the circuit of the flashlight is complete, except for the gap 14 between the stud 5^b and the bottom of the dry cell; and when this gap is closed by screwing the cap 5 further onto the lower end of the casing 3, the circuit is established.

At those points where the flashlight casing 3 extends through the walls of the oil can, liquid-tight connections are made between the flashlight casing and said walls, as by means of solder, or otherwise.

The reflector 7 serves as a support or holder for the lamp, the reflector being provided at its lower end with a threaded sleeve 7^a through which the shank of the lamp-bulb is screwed.

The oil can A is shown equipped at its base with a depending flange 15 which serves as a housing for the lower end-portion of the flashlight.

In the modification shown in Figs. 3–5, the oil can is designated A^4, and the flashlight is designated B'.

In this modification, the flashlight may be regarded as having the same construction at its upper portion as that illustrated in Fig. 1. The flashlight casing, designated 3^a, has a lower extremity soldered to the bottom 16 of the can, as indicated at 16^a. The bottom of the can is provided with a central opening 17 and has a flange 17^a encircling said opening and serving to support an insulation-washer 18. The zinc can 4^b of the dry cell is supported on the insulation-washer.

To the lower side of the bottom of the can are secured a pair of bracket-members 19 which are provided with inclined guide-slots 19^a which afford a run-way for a part-spherical roller 20 which has trunnions 20^a adapted to said run-way. One of the trunnions is provided with a tapped perforation with which is connected a clamping-screw 21 having a flange 21^a adapted to clamp against the adjacent bracket-member 19. By means of the clamping-screw, the roller 20 may be clamped in the noncontacting position shown in Figs. 3 and 4, so that when the oil can is used in the daytime, the flashlight will not be lighted.

The lower ends of the guide-slots 19^a are nearest that side of the can to which the handle A^2 is attached; and the guide-slots incline upwardly and towards the side of the can which is equipped with the spout, so that when the can is tilted in the oiling operation, the contact-roller 20 will travel along the run-way and make contact with the bottom of the zinc cup 4^b, thus automatically closing the circuit of the flashlight when the can is tilted, as will ordinarily be the case when the operator is searching for or oiling a bearing. This automatic closing of the circuit will occur, assuming the clamping-screw 21 to be released. When the oil can is to be used at night, the operator will take the precaution to release the clamping-screw. After the oiling operation has been performed, the can is returned to the upright position, thus permitting the roller to return to the position shown in Fig. 3, by which action the circuit is automatically broken, and, as has been indicated, the contact-roller may be clamped in the circuit-breaking position so as to prevent needless expenditure of the energy of the battery when the oiler is being used in the daytime.

In the modification, the oil can is provided at its base with an interrupted flange 15^a which affords feet, or lugs, for supporting the can. This provision sufficiently houses the contact-roller 20 and its guides, but gives ready access to the clamping-screw 21.

In accordance with the invention, the flashlight is mounted on the oil can structure in such a manner as to cast a beam of light which will include within its cone the tip-portion of the spout; and, while in the illustrations given, the flashlight is housed within the body of the oil can, this is given as a preferred arrangement.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

1. In combination, an oil can equipped with a spout, a flashlight casing housed in said oil can and having its upper portion projecting through and forming liquid-tight connection with the top wall thereof, the lower extremity of said casing having liquid-tight connection with the bottom of said can, said bottom being provided with an opening, and a contact-roller mounted in the base-portion of said can beneath the bottom wall thereof and adapted to make contact, upon the tilting of the can, with the bottom of a dry cell housed in said casing.

2. A device of the character set forth in claim 1 in which the device is equipped with means for securing the contact-roller in open-circuit position.

DANIEL R. COUGHLIN.