Feb. 23, 1954 S. J. BARLET ET AL 2,670,427

ILLUMINATED SCREW DRIVER

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Fig. 1.

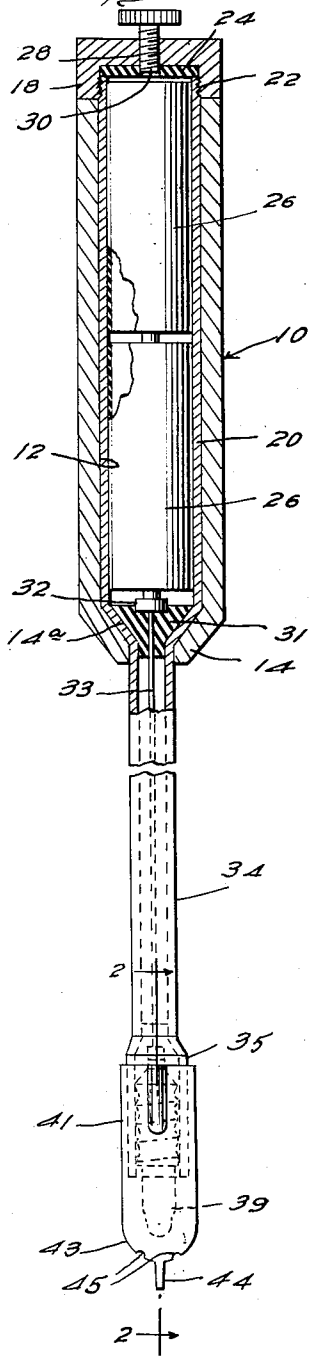


Fig. 2.

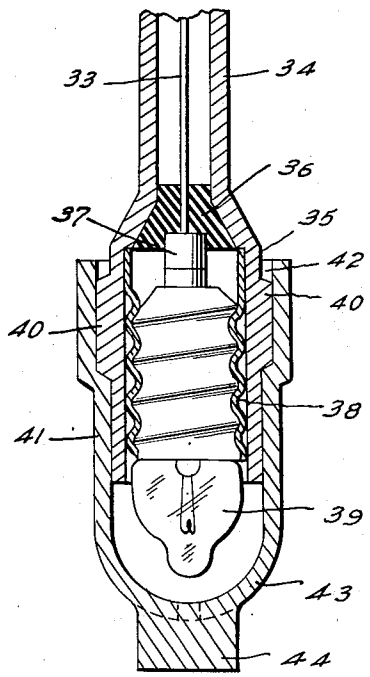
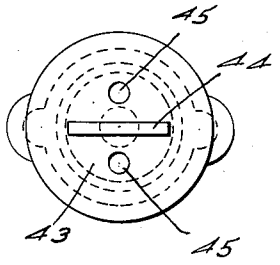


Fig. 3.



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ILLUMINATED SCREW DRIVER

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2 Claims. (Cl. 240—6.46)

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This invention relates generally to the class of tools and more particularly to screw drivers.

A particular object of the present invention is to provide an improved illuminated screw driver wherein the screw engaging, or bit, end is in the form of a hollow head housing an incandescent lamp, suitable light openings or windows being provided for the projection of the light rays onto the head of an engaged screw.

Another object is to provide an illuminated screw driver wherein the handle provides a casing for electric batteries, and the means for closing the electric circuit with the batteries and lamp therein comprises a screw which, when adjusted to one position keeps the circuit closed while the tool is in use.

Other objects and advantages of the invention will become apparent as the description of the same proceeds and the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of the specification, with the understanding, however, that the invention is not to be limited to the exact details of construction shown and described since obvious modifications will occur to a person skilled in the art.

In the drawing:

Figure 1 is a view partly in side elevation and partly in longitudinal section of a screw driver constructed in accordance with the present invention.

Figure 2 is a sectional view, on an enlarged scale, taken substantially on the line 2—2 of Figure 1.

Figure 3 is a view looking at the end of the bit and showing the light emitting openings.

Referring now more particularly to the drawing the numeral 10 designates the handle for the tool, which, as shown, is in the form of a long hollow, or tubular shell forming a casing 12.

At its forward end the handle is tapered, as at 14, forming a central axial opening 16. The back end of the handle has a cap 18, which closes the shell and is held in position in the manner about to be described.

The interior of the shell is lined with the sleeve 20, of metal. This sleeve at the back end projects beyond the shell end and is externally threaded, as at 22, for threaded engagement by the cap 18, which is also of metal.

The cap 18 has a disk or washer 24, therein which is of insulation material and prevents the bottom end, or metal casing portion of the electric battery 26 from making electric contact with the cap.

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The center of the cap 18 has a threaded bore 28 therethrough, in which is threadedly engaged the circuit closing screw 30, which passes through an opening in the center of the disk for contact with the end of the battery.

The handle is designed to house two batteries as shown and at the forward end thereof there is fixed within the tapered part 14a of the liner, an insulation body 31, in the inner end of which is fixed a metal terminal 32, which is attached to an end of a current conductor 33 which passes forwardly through the body 31. The center terminal of the other battery engages this terminal 32, as shown.

Forming an integral continuation of the tapered forward end 14a of the sleeve 20, is the long tubular shank 34 of the screw driver, the forward end of which joins the axially extended socket 35, of enlarged diameter.

In the forward end of the tubular shank is fixed a body, or plug, of insulation 36, in the forward end of which is carried a metal terminal 37. To this terminal is attached the other end of the conductor 33.

The forward end of the socket 35 is open and fitted tightly in the socket in the threaded sleeve 38, in which is threaded the base of an incandescent lamp 39, the glass, or bulb, part of which projects beyond the end of the socket.

Upon the outer side of the socket are formed a pair, or more, of lugs 40, here shown as being elongated longitudinally of the socket as at diametrically opposite positions thereon.

The numeral 41 designates a head of cylindrical form, in which is received, from one end, the socket 35.

From the open end in which the socket 35 enters, the wall of the head has in the inner surface thereof, the longitudinal slots 42 in which the lugs 40 are tightly, frictionally engaged.

The forward end of the head is closed by the rounded wall 43 which covers the light bulb 39 and projecting forwardly from this wall is the bit, or blade, 44 which engages in the kerf of a screw, not shown.

On opposite sides of the bit 44, are apertures, or windows, 45 through which light passes from the bulb to illuminate the bit and the article with which it may be engaged.

It will be readily apparent from the foregoing that when the switch screw 30 is threaded inward into contact with the end of the shell of the ad-

jacent battery, the necessary electric circuit will be established to energize the light 39.

We claim:

1. An illuminated screw driver comprising a long hollow handle forming a battery housing, a metal sleeve lining the handle and projecting from the back end thereof, a metal cap secured on the projecting end of the sleeve and closing said end of the handle, an elongate tubular driver shank forming an integral continuation of the sleeve and extending from the other end of said handle, said shank having a portion of its forward end enlarged in diameter to form a light bulb receiving socket open at its free end, an electric terminal in the bottom of the socket for contact with one side of said bulb, the other side of the bulb being grounded to the socket, means for conducting current to said terminal from one side of a battery in the handle, a hollow cover for and secured to the open end of the socket, a screw driver bit extending from said cover, said cover having forwardly directed light emitting openings at opposite sides of and in close proximity to the working edge of the bit, and switch means for grounding the other side of said battery.

2. An illuminated screw driver comprising a hollow handle for housing a battery, an elongate shank having one end fixed to said handle and having its other end enlarged to provide an elongate cylinder open at its forward end and forming an incandescent bulb socket, an electric current terminal in the bottom of the socket, means for conducting electric current to said terminal from one side of a battery in the handle, means for securing an incandescent bulb in the socket with one side in contact with said terminal and the other side grounded to the shank, an elongate hollow head cylinder having an open end in which is slideably received said bulb socket cylinder, the other end of the head cylinder being closed by an end wall, a screw driver bit forming an integral extension of said end wall, means for grounding the other side of said battery, means for discharging light rays from a bulb in said socket onto opposite sides of the screw driver bit, said last named means comprising apertures in said end wall on opposite sides of and adjacent to the bit, outstanding lugs formed longitudinally of the outer side of the first cylinder, and slots formed in and longitudinally of the inner wall of said head to slideably frictionally receive said lugs.

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