June 16, 1925. 1,542,512

J. A. LETT

ILLUMINATED LEVEL

Filed July 17. 1924

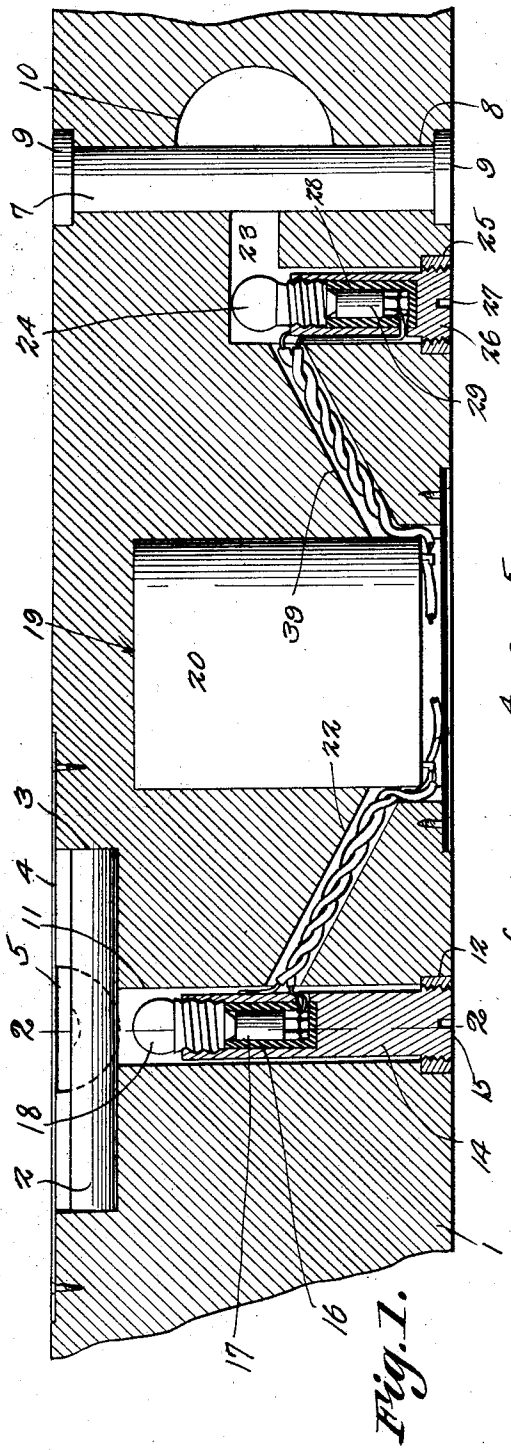


Fig. 1.

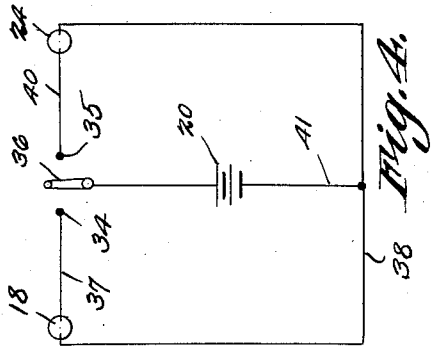


Fig. 4.

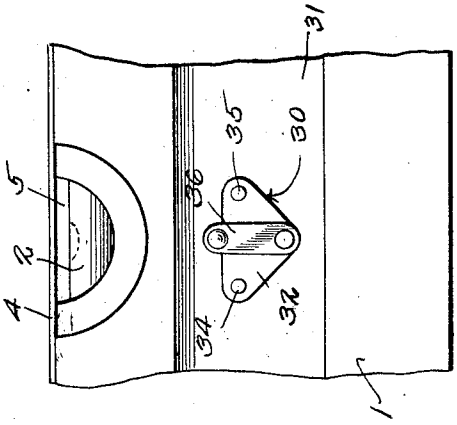


Fig. 3.

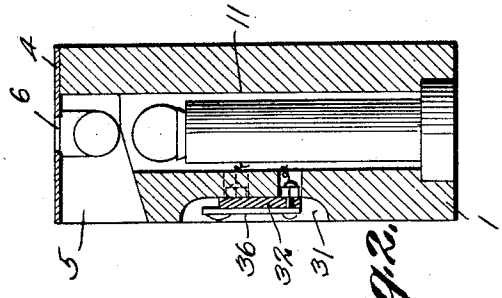


Fig. 2.

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UNITED STATES PATENT OFFICE.

JAMES ANTHONY LETT, OF PORTSMOUTH, OHIO.

ILLUMINATED LEVEL.

Application filed July 17, 1924. Serial No. 726,567.

To all whom it may concern:

Be it known that I, JAMES A. LETT, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented a new and useful Illuminated Level, of which the following is a specification.

This invention aims to provide novel means for illuminating the vials of a level.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

Although a preferred form of the invention has been shown, a mechanic, working within the scope of what is claimed, may make alterations, without departing from the spirit of the invention.

In the drawings:—Figure 1 shows in longitudinal section, a portion of a level embodying the improvements claimed; Figure 2 is a cross section taken about on the line 2—2 of Figure 1, parts being in elevation; Figure 3 is a fragmental side elevation showing a portion of the stock of the level, the switch and the like; Figure 4 is a diagram showing the wiring.

The numeral 1 marks the stock of a level, a longitudinal vial 2 being seated in a recess 3 in the stock, beneath the usual slotted face plate 4, the stock having a lateral passage 5 through which the vial 2 can be seen from the side of the stock, the slot 6 in the face plate 4 affording means whereby the vial 2 can be seen from the side of the stock. A transverse vial 7 is mounted in a transverse recess 8 in the stock and is held therein by retainers 9, the vial 7 being visible through a transverse opening 10 in the stock 1. The construction above described is common, and one of the advantages of the device hereinafter described is that it may be used on a level stock of known construction.

A straight bore 11 leads from the recess 3 through the opposite edge of the stock 1. In the outer end of the bore 11 is seated a ring 12 into which is threaded a metal lamp carrier 14 having a screw driver kerf 15 whereby the carrer may be threaded into the ring 12, an insulating casing 16 being mounted in the carrier 14. Within the casing 16 is disposed a contact element 17, in the form of a rod. An electric lamp 18 is mounted in the inner end of the carrier 14 and the butt of the lamp is in electrical contact with the element 17.

A chamber 19 is formed in the stock 1 between the bores 8 and 11. A source of electrical energy, such as a dry cell 20, is located removably in the chamber 19 beneath a cover plate 21 counter sunk into the edge of the stock 1 and secured to the stock. An inclined passage 22 connects the bore 11 and the chamber 19. An angular bore 23 is formed in the stock 1. The bore 23 opens, at one end through the edge of the stock 1, and opens at its other end into the recess 8 which contains the transverse vial 7. At the angle of the bore 23 is located an electric lamp 24. The means for retaining the lamp 24 is constructed like the means for retaining the lamp 18 and may be described, in a brief catalogue of parts, as follows: ring 25, clamp carrier 26, kerf 27, insulating casing 28 and contact element 29.

A switch 30 is located in the recess 31 in one side of the stock 1 and includes a base plate 32 having terminals 34 and 35, and an arm 36 pivoted to the plate 32 and adapted to cooperate with the terminals. Any kind of a switch, however, may be used. A conductor 37 extends between the lamp carrier 14 for the lamp 18 and the switch point 34. The conductor 37 is located in the passage 22. From the contact element 17, a conductor 38 leads through the casing 16, through the passage 22, through the chamber 19 and through an inclined passage 39 connecting the chamber 19 with the bore 23. The conductor 38 is connected to the contact element 29 of the lamp 24. A conductor 40 extends between the terminal 35 and the carrier 26 for the lamp 24. A conductor 41 extends between the intermediate portion of the conductor 38 and the switch arm 36. The battery 20 is interposed in the conductor 41.

When the switch arm 36 engages the terminal 34, the lamp 18 will be lighted and the vial 2 illuminated whereas, when the switch arm 36 engages the terminal 35, the lamp 24 will be lighted and the vial 7 illuminated.

The device comprises simple and compact means whereby the vials of a level may be illuminated, it being possible to renew the lamps and to replace the battery, without difficulty.

What is claimed is:—

1. In a device of the class described, a level stock having longitudinal and transverse vials, the stock being provided with a

straight bore leading to the longitudinal vial from one edge of the stock, and being provided with an angular bore leading from said edge of the stock to the transverse vial, the stock having a chamber disposed between the bores and opening through said edge of the stock, the stock having passages communicating with the chamber and with the bores, lamp carriers in the bores, lamps mounted on the carriers and disposed in operative relation to the vials, a battery in the chamber, a circuit located in the chamber, the passages and the bores and including the battery and the lamps, and a switch in the circuit and operative to light one lamp at a time, the carriers and the lamps being removable independently of the battery.

2. In a device of the class described, a level stock, a vial carried by the stock, the stock having a chamber, a bore leading to the vial, and a passage communicating with the bore and the chamber, a lamp carrier mounted removably in the bore, an insulating casing in the carrier, a contact member in the casing, a lamp in electrical contact with said member and with the carrier, a circuit extended through the passage and including the carrier and the contact member, a switch interposed in said circuit and mounted on the stock, and a battery in said circuit and disposed in the chamber.

3. In a device of the class described, a level stock, a vial carried by the stock, the stock having a chamber, a bore leading to the vial, and a passage communicating with the bore and the chamber, a battery in the chamber, a ring in the bore, a carrier threaded into the ring, an insulating casing in the carrier, a contact member in the casing, a lamp so disposed as to illuminate the vial, the lamp being mounted in the carrier, in contact with said member, a circuit extended through the passage and including the battery, the lamp carrier and the contact member, and a switch in said circuit.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES ANTHONY LETT.

Witnesses:
MARK CRAWFORD,
MARIE H. DICKEY.