Nov. 4, 1941. J. R. WILLIAMS 2,261,320

FLASHLIGHT PENCIL

Filed Aug. 23, 1940

Fig. 1.

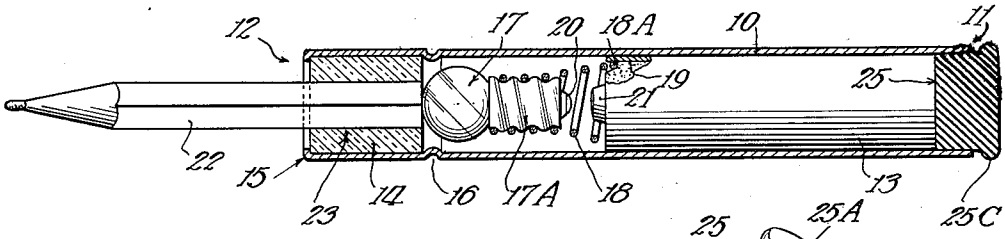


Fig. 2

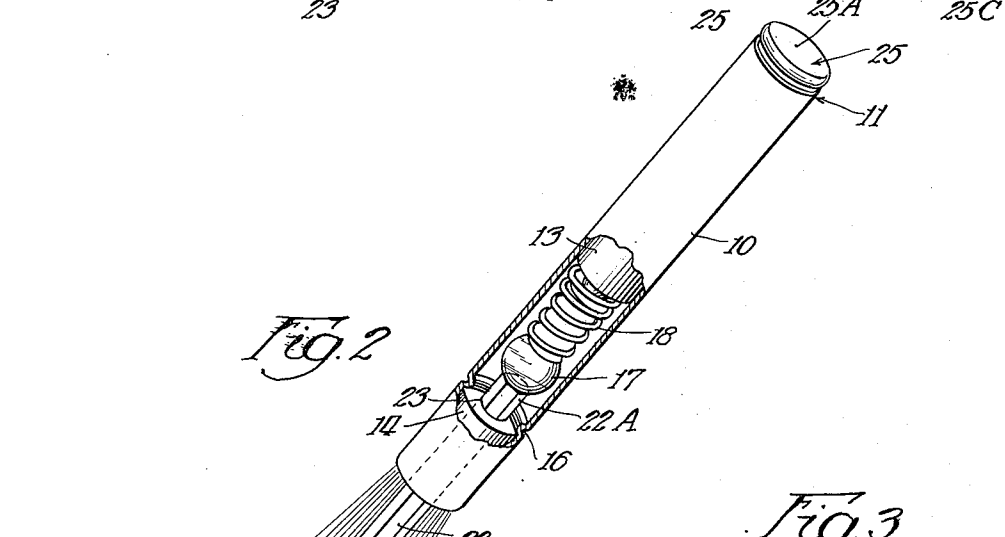


Fig. 3

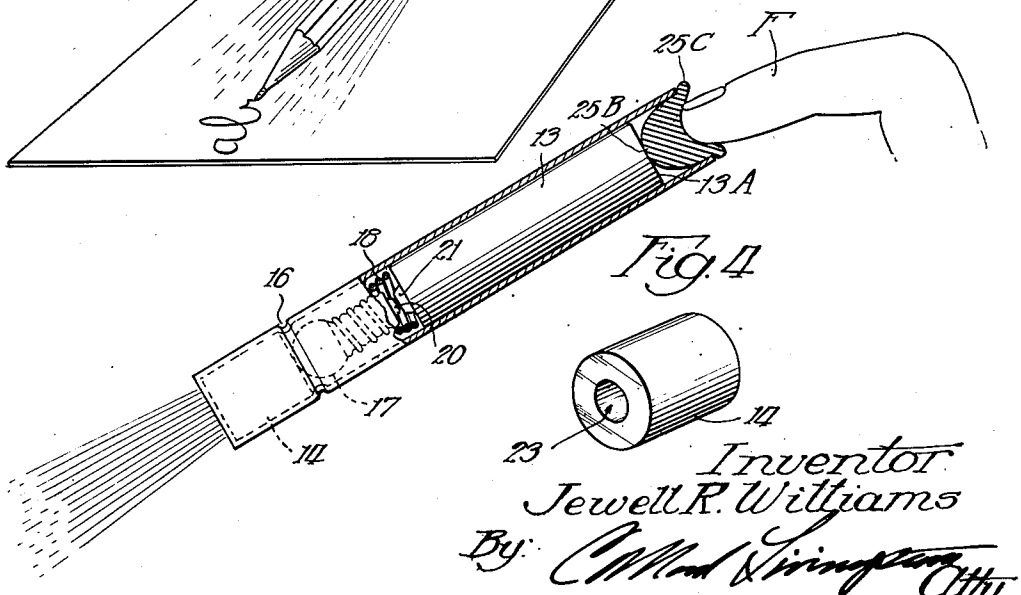


Fig. 4

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FLASHLIGHT PENCIL

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3 Claims. (Cl. 240—6.46)

This invention has as its principal object the provision of a combined flashlight and pencil holder so arranged that the flashlight will provide illumination in using the pencil as a writing implement.

Another important object is the provision of a flashlight pencil including a casing adapted to house a battery and an electric lamp and carrying a translucent plug or body through which light is transmitted from the lamp externally of the casing, the translucent plug being provided with means for holding a pencil or an analogous writing implement in a position to be illuminated by light passing through the plug when the pencil is used for purposes of writing.

A still further object is the provision or the arrangement of the pencil or writing implement in combination with the translucent member in a manner to control the illumination of the lamp or bulb.

Yet another object is the arrangement, in a flashlight, of a lamp and battery for yieldable movement, one with respect to the other, so that the lamp may be brought into operative engagement with the battery or vice versa to effect illumination and extinguishment of the lamp.

A still further object is the arrangement in a device of the class described, of means for holding a writing or marking implement for cooperation with an electric lamp to be illuminated by the latter and also to be moved for the purpose of moving the lamp into and out of operative engagement with a battery.

A further object is the provision of a resilient closure for the casing and arranged to be depressed by the finger or thumb to shift the battery into operative engagement with the electric lamp.

Other objects, advantages and novel aspects of the invention reside in certain details of construction as well as the cooperative relationship of the component parts of the illustrative embodiment described hereafter in view of the annexed drawing, in which:

Fig. 1 is a longitudinal sectional view through the device of the invention.

Fig. 2 is a perspective of the device with portions of the casing cut away.

Fig. 3 is a longitudinal section through the device with the writing implements removed to illustrate its use as a flashlight.

Fig. 4 is a perspective detail of the translucent plug.

A preferred embodiment of my invention is shown in the drawings and comprises (Fig. 1) an elongated casing 10 preferably formed of metal or a suitable plastic analogous to Bakelite or Tenite or Lucite. This casing is open at its rear end 11 and also at its forward end 12, and the diameter of the casing is sufficient to accommodate a small tubular dry cell 13 of the type commonly used in so-called fountain-pen or purse flashlights, this dry cell being permitted to shift back and forth in an axial direction between the opposite ends 11 and 12 of the casing for purposes hereinafter to be explained.

Adjacent the end 12 of the casing there is disposed a translucent body or plug 14 which may be formed of glass or a suitable plastic, the latter being preferred. This plug is shown in detail in Fig. 4, the same being cylindrical in shape to fit snugly into the end of the casing, the rim portion of this end of the casing being peened over as at 15 when the plug is inserted to prevent removal thereof, and suitable stops or shoulder formations, such as the annular groove 16, being formed in the casing behind the plug to prevent movement of the latter inwardly. Thus the plug is held securely in position by simple means suitable to economical production methods.

An electric lamp or flashlight bulb 17 is disposed in the casing between the battery 13 and the plug 14 so as to transmit light through the latter when energized by the battery. Means providing a resilient movable mounting for the bulb comprises a helical spring 18 disposed so that one end threads onto the threaded base portion 17A of the lamp, opposite end portion 18A of the spring being of sufficient diameter to fit snugly against the inner periphery of the zinc metal casing of the battery as illustrated at 19 in Fig. 1, whereby the base portion of the lamp is electrically connected with one terminal (i. e. zinc case) of the battery.

The spring mounting 18 for the lamp is so arranged that center terminal 20 of the lamp is in alignment with the center terminal 21 of the battery so that if the lamp is shifted in the direction of the length of the casing, toward the battery, a circuit will be completed between the terminals 20 on the lamp and 21 on the battery to effect illumination of the lamp, light from which will be transmitted externally of the casing through the translucent plug.

A feature of the invention is the provision in the translucent plug of means for receiving a writing implement such as a pencil stub 22 (Fig. 2) to be illuminated and carried by the flashlight, this means including the provision of a

bore 23 (see Fig. 4 particularly) in the plug 14, this bore being of a diameter to provide a relatively tight sliding of frictional fit between the pencil and the bore whereby the pencil may be slid back and forth in a direction axially of the casing and plug. The importance of this arrangement resides in the fact that by sliding the pencil 22 inwardly of its normal position shown in Fig. 1 the inner end 22A of the pencil may be urged against the bulb portion of the lamp to shift the latter and compress the spring 18 and cause contact 20 to engage terminal 21 on the battery and light the lamp, as illustrated particularly in Fig. 2.

The snug fit between the pencil and plug will hold the pencil in its inward position so that the lamp will remain illuminated without effort on the part of the user when employing the device as a writing implement in the manner illustrated in Fig. 2. When it is desired to turn the lamp off, it is simply necessary to withdraw the pencil to the position shown in Fig. 1.

Another important feature of the invention resides in the provision of a yieldable or resilient closure or plug in the preferred form of a rubber cork 25 which fits firmly into the end 11 of the casing with a portion 25A exposed to be engaged by the finger or thumb of the user in the manner illustrated in Fig. 3, the rubber or other material being sufficiently deformable to yield under the pressure of the finger so that the inner end portion 25B of the cork will bear against the bottom 13A of the battery and shift the latter and thus cause the bulb 17 to bear against the plug 14 with a subsequent compression of the spring bringing terminals 20 and 21 together to illuminate the lamp. By this means the device may be used as a flashlight with or without the pencil. A shoulder 25C on the closure or cork limits inward movement thereof.

The invention is not restricted to the use of a pencil in the strict popular sense of the word, but is intended to embrace and include any and all types of marking device, crayon, stylus, or the like adapted to fit into the translucent wall portion of the casing.

The device may be used as a flashlight by inserting any pencil-shaped or stick-like element in the passage or base 23 to control illumination of the lamp.

If desired the marking device or implement 22 may be in the form of a lip stick or the like.

The preferred embodiment of the invention set forth herein has been described in detail for purposes of illustration, it being understood that the objects of the invention may be accomplished by other forms and arrangements of the specific means set forth, so that the invention is not to be limited to any precise details of form, location, or function except as may be provided hereinafter in the appended claims.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. A device of the class described comprising, in combination, a casing, a translucent insert carried by said casing, said casing being adapted to house a battery, an electric lamp mounted in said casing for movement toward and away from said battery into and out of operative engagement therewith, means yieldably urging said lamp into a normal position out of operative engagement with said battery, means providing a slidable mounting in said translucent insert for an elongated writing implement whereby the latter may be moved in a direction into and out of said casing and into and out of engagement with said lamp, said writing implement being movable inwardly of the casing against said lamp to move the latter into operative engagement with said battery to effect illumination of the lamp, light from said lamp being transmitted through said translucent insert when the lamp is illuminated as aforesaid to provide illumination in the region adjoining said writing implement to facilitate use of the latter for its intended purpose.

2. A combined flashlight and writing implement comprising an elongated casing, a translucent member carried at an end of said casing, said translucent member being provided with a bore extending in the direction of the length of said casing, said bore being adapted to slidably receive a pencil element for movement in a direction inwardly and outwardly of the casing, said casing being adapted to contain a dry cell in spaced relation with said translucent member, an electric lamp and means mounting the same in said casing between said translucent member and said dry cell for movement toward and away from the latter, said means including a spring member supportably engaging said lamp and making electrical connection with one terminal of said dry cell and one terminal of said lamp, said lamp having another terminal brought into electrical contact with the remaining terminal of said dry cell by movement of the lamp toward the latter whereby to effect illumination of the lamp, said pencil being movable inwardly of the casing to engage said lamp and move the same into engagement with the dry cell for illumination as aforesaid.

3. A flashlight comprising, in combination, an elongated casing adapted to house a dry cell, a light transmitting portion in said casing, an electric lamp in said casing behind said light transmitting portion and adapted when illuminated to transmit light through the latter, a conductive spring supportably engaging said lamp and connecting with one terminal thereof and also bearing against said dry cell to make electrical contact with one terminal thereof and yieldably urge the lamp into a normal position toward said light transmitting portion and away from said dry cell, said lamp having a terminal disposed to be brought into electrical contact with the remaining terminal on said dry cell by movement toward the latter a certain amount from said normal position to light the lamp, said light transmitting portion being provided with an opening in alignment with said lamp and providing a passage for an operating element adapted to be moved inwardly to engage said lamp and move the same into contact with respect to the dry cell to be lighted in the manner aforesaid.

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