Feb. 20, 1934. J. DIANOVSZKY 1,947,975

SELECTIVE CONTACT ILLUMINATOR PEN AND PENCIL

Original Filed June 26, 1931

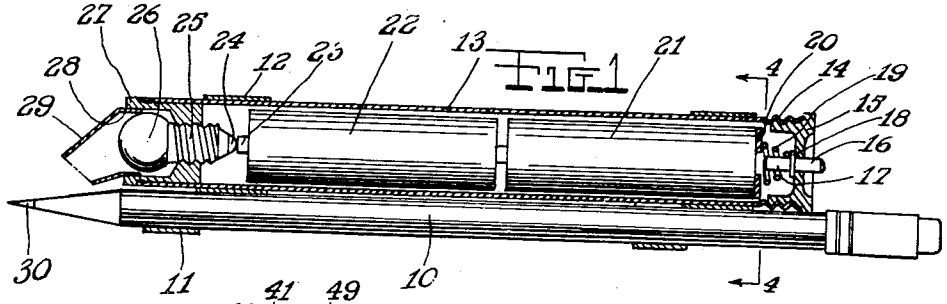


FIG. 1

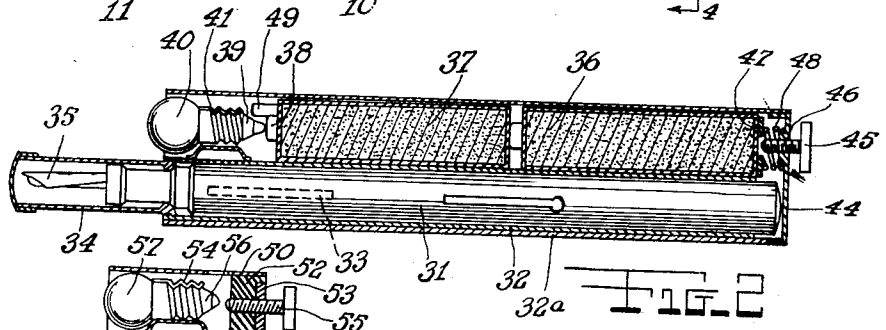


FIG. 2

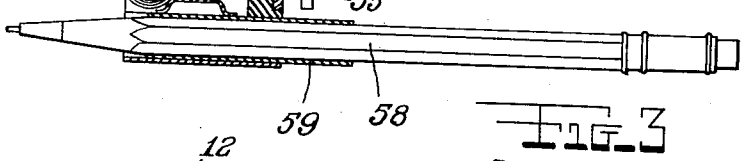


FIG. 3

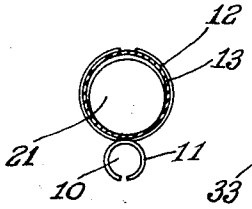


FIG. 4

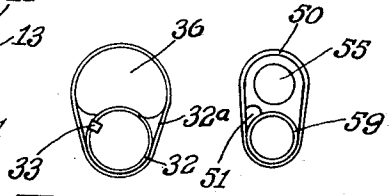


FIG. 5

FIG. 6

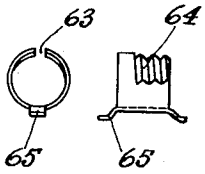


FIG. 7

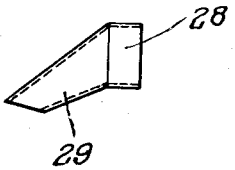


FIG. 8

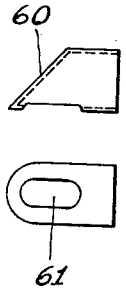


FIG. 9

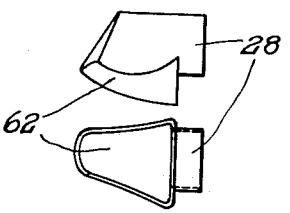


FIG. 10

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SELECTIVE CONTACT ILLUMINATOR PEN AND PENCIL

John Dianovszky, Passaic, N. J.

Application June 26, 1931, Serial No. 546,982
Renewed October 5, 1933

1 Claim. (Cl. 240—6.46)

The main object of this invention is to provide means upon a pencil or pen whereby the field around the writing end of the implement is illuminated.

Another object of the invention is to provide an illuminated fountain pen or pencil which has a source of electrical energy mounted thereon which is adapted to be selectively operated for either long periods of time or relatively short periods.

The above and other objects will become apparent in the description below in which characters of reference refer to like-named parts in the drawing.

Referring briefly to the drawing, Figure 1 is a partly sectioned, longitudinal, elevational view of a selectively operated illuminating member as used with a pencil.

Figure 2 is a view similar to Figure 1, showing the illuminating member attached to a fountain pen.

Figure 3 is a longitudinal, partly sectioned, elevational view of a pencil equipped with means for illuminating a filament lamp from a remotely situated source of energy.

Figure 4 is a cross-sectional view taken on line 4—4 of Figure 1.

Figure 5 is an end elevational view of Figure 2 with the cap 44 removed from place.

Figure 6 is a rear-end elevational view of Figure 3.

Figure 7 is a rear and side elevational view respectively of the split filament lamp carrying sleeve.

Figure 8 is a longitudinal, elevational view of one type of reflector.

Figure 9 is a side elevational and bottom plan view of a modified type of reflector.

Figure 10 is a side elevational and bottom plan view of an enlarged field reflector.

Referring in detail to the drawing, the numeral 10 indicates a conventional type of pencil. This pencil has spaced apart positions along its length which are slipped into sleeves 11. The sleeves 11 are joined rigidly with complementary larger sleeves 12. Into these larger sleeves 12 a relatively long cylinder 13 is inserted. The upper end of the cylinder is formed into threads 14 which are engaged by an externally threaded cap 15. The cap is provided with an axial bore in which is slidably fitted a push button 16 whose shank 17 extends inwardly into the cylinder. Between the push button and stud a flange 18 is formed upon which rests one end of a spiral spring 19. The opposite end of the spiral spring seats upon an insulator washer 20, which rests upon one end of a series of cells 21 and 22. The electrode 23 of the end cell contacts with the terminal 24 of the plug 25 of a filament lamp 26. This plug 25 threadably engages a head 27 which is threadably secured to the end of the cylinder 13. The head 27 is provided with a bore in which the filament lamp 26 is housed and this bore slidably receives therein the rim 28 of a conical reflector 29 which reflects the rays from the filament lamp upon a field bounding the tip 30 of the pencil or writing implement.

A modified type of illuminated pen or pencil is shown in Figure 2. The pen 31 is housed within a cartridge 32. This cartridge comprises a circular member in which a resilient finger 33 is anchored. The free end of the resilient finger engages the wall of the fountain pen 31 and retains the same in position within the cartridge. The housing 32A contains the entire mechanism located within the confines of this member. A threaded head 34 engages the cartridge 32 and serves as a guard fitting over the nib 35 of the fountain pen. The cartridge is divided into two chambers, the outer one 32A of which receives a plurality of cells 36 and 37, one of which has one of its poles 38 contacting with the terminal 39 of a filament lamp 40. Fitted into the open end of the housing 32A into which a filament lamp is inserted a slitted part arcuate threaded sleeve 41 is anchored in the cartridge 32, Fig. 7. This threaded sleeve receives the shank of the filament lamp and rotates the latter in contacting position with one of the electrical cells. The opposite end of the housing 32A is provided with a slip cap 44 which has a knurled and threaded screw 45 engaged thereon. The shank 46 of this threaded screw when urged threadably inward into the cell chamber of the cartridge contacts with one of the terminals of the cell and closes a circuit through the filament lamp 40. To rotate the cells toward the terminal 39 of the filament lamp the end cell has an insulator washer 47 resting thereon upon which a coil spring 48 is seated. The wall of the cartridge is provided with an aperture 49 through which a nail or pin may be inserted when it is desired to engage the terminal end of the filament lamp for slipping the filament lamp out of the sleeve 41.

Figure 3 illustrates a second modification showing a device for illuminating the field around the point of the pencil or pen whose source of energy is located at a position remote from said device. The wires which lead from a cell carried

in the pocket or the like extend into a housing 50 through a channel 51 Figure 6. This channel is formed in an insulator block 52 and the wires are respectively pinched into contact with a metallic current conducting flange 53 and are secured to the split sleeve 52 indicated in detail in Figure 7. A threaded screw 55 threadably engages the flange 53 and is adapted to contact with the terminal 56 of the filament lamp 57. This filament lamp is adapted to illuminate the field about the tip of the pencil which is slipped into a sleeve 59 retained in the housing 50.

Figures 8, 9 and 10 illustrate different types of reflectors. Figure 8 illustrates a reflector which reflects the light in its passage therethrough a small field around the writing tip of the pencil or pen and is particularly adapted for military use where secrecy and concealment is desired.

Figure 9 illustrates a reflector which reflects light sidewise by the construction of a prismatic wall or reflecting surface 60, reflecting the light through a longitudinal aperture 61.

Figure 10 illustrates two views of a different type of reflector, reflecting the light sidewise as an enlarged diffused field through the aperture 52. The sleeve illustrated in Figure 7 is applied to the modification shown in Figs. 2 and 3 and comprises a cylinder which has threads around a portion of its periphery on both sides of a slit 63, the threads being indicated by the numeral 64. These sleeves applied to the constructions shown in Figures 2 and 3 have ears 65 extending therefrom which are secured by solder or the like to the supporting element.

Figure 1 illustrates an illuminating device whose circuit may be selectively or continuously closed when the cap 15 is unscrewed to raised position upon the cylinder 13 so that the pin 17 is not in permanent contact with the cell 21. The field about the pencil may be selectively illuminated by applying pressure to the push button 16. This will lower the stud 16 into contacting position with the cell 21 and will close the circuit through the filament lamp 26 by way of the cylinder 13 and plug 15.

The device illustrated in Figure 2 is adapted to be permanently closed to give continuous electrical circuit for illuminating the filament lamp continuously when the screw 45 is threaded downwardly into contact with the base of the cell 36. The same method of operation as is common to the device illustrated in Figure 2 is also used with Figure 3, that is the screw 55 is threaded downwardly until it contacts with the terminal 56 of the filament lamp 57 to close a circuit through the latter.

It is to be noted that certain changes in form and construction may be made without departing from the spirit and scope of the invention.

I claim:

A device of the class described comprising a cylindrical housing open at one end and having a cylindrical block threadably mounted therein, said block being hollowed out at its forward end and having a wall at its rearward end, said wall having a threaded bore therein adapted to receive a filament lamp, an elbow-shaped reflector with one arm slidably mounted in said hollowed-out end of said block, said reflector surrounding said lamp and the other arm being inclined thereto and projecting out of said housing, and means for energizing said lamp.

JOHN DIANOVSZKY.