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CLIP BOARD LIGHTING ATTACHMENT

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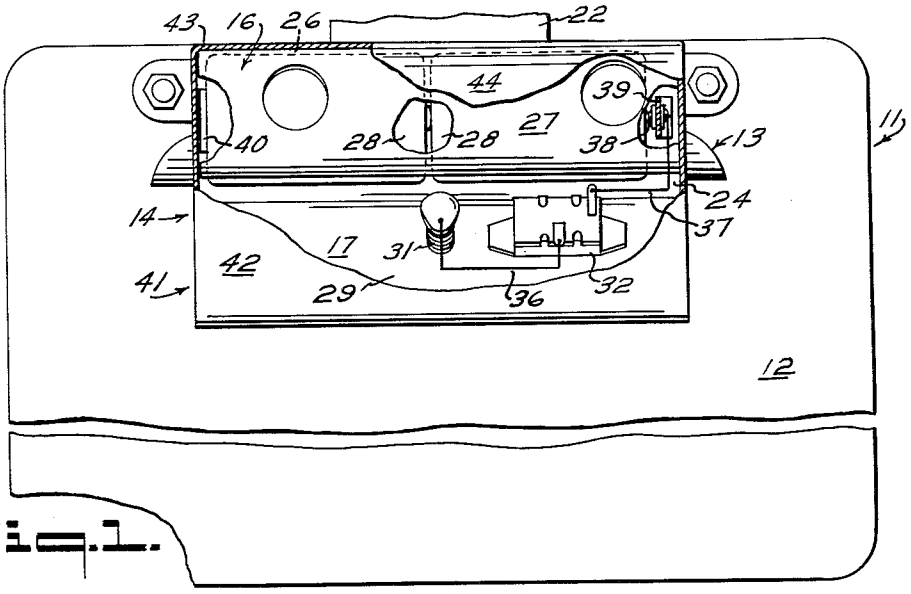
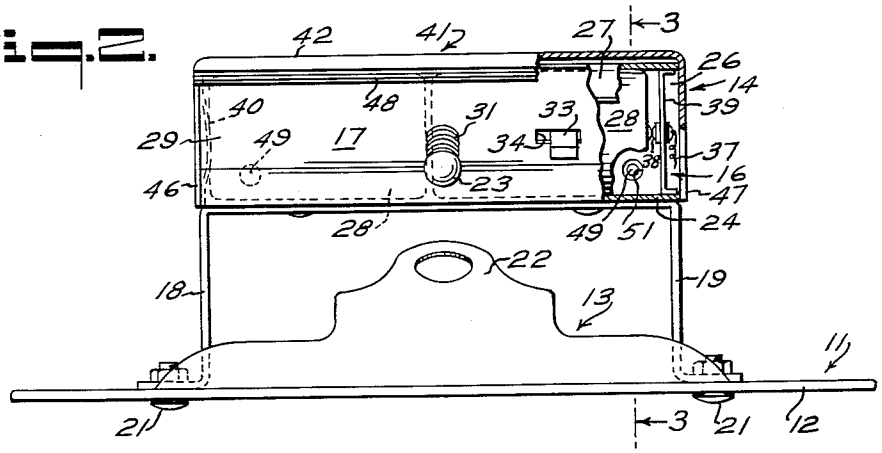


Fig. 1.

Fig. 2.



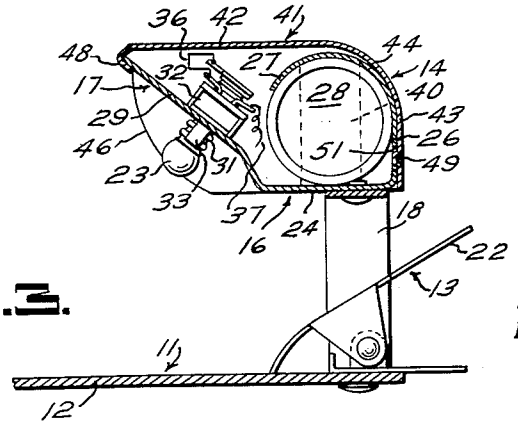


Fig. 3.

INVENTOR.
FORREST H. WILSON
BY
Gardner & Zimmerman
ATTORNEYS

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CLIP BOARD LIGHTING ATTACHMENT

Forrest H. Wilson, 150 Las Juntas Way, Concord, Calif.

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This invention relates to lighting attachments in general, and is particularly directed to a lighting attachment that is arranged for securance to a conventional clip board or the like in order that the face thereof may be illuminated for nighttime service.

Clip boards are utilized in a variety of applications, many of which entail viewing the board or writing thereon in dark surroundings. Law enforcement officers such as policemen, fish and game wardens etc., firemen, military personnel, oil company employees, and the like are but a few who have occasion to utilize clip boards in the dark during the normal course of their work. Although attempts have been made to incorporate lighting means with clip boards, these attempts have been variously disadvantageous in that the lighting fixtures have required special construction of the clip and accordingly could not be employed with existing clip boards. Moreover, prior lighting fixtures have not facilitated adequate illumination of the bottom of the board and have been susceptible to premature rusting of the components. By virtue of the inadequacies of the prior art, clip boards having directly associated lighting fixtures have not found widespread use and it has been the usual practice to utilize a flash light to illuminate the clip board, no matter how cumbersome and difficult the manipulation.

Advantages are therefore to be gained by the provision of a lighting attachment which may be directly employed with existing clip boards of conventional types and which does not possess the disadvantages of previous clip board lighting fixtures mentioned hereinbefore.

It is therefore an object of the present invention to provide an improved lighting attachment for use with a clip board or the like to facilitate illumination of the entire face thereof.

An extremely important object of the invention is to provide a lighting attachment that may be readily employed with all classes of existing clip boards without requirement of extensive modification.

Another object of the invention is the provision of a lighting attachment of the class described which when mounted upon a clip board functions as hanger means whereby the board may be readily suspended from the arm of a user during periods of disuse, thus leaving both hands free for other purposes.

Yet another object of the invention is to provide a clip board lighting attachment of the class described that is arranged to permit the free circulation of air about the batteries and other components in order to minimize swelling of the former and rusting of the latter.

It is a further object of the invention to provide a clip board lighting attachment of the class described which includes a detachable hood member to permit ready access to the battery compartment thereof, the hood member being uniquely releasably secured to the remainder of the attachment without requirement of threaded fasteners.

It is still another object of the present invention to provide a clip board lighting attachment of the class described in which the battery mounting bracket may be selectively adjustable in order to maintain the bracket in a close fitting relationship with the hood and the batteries.

Yet another object of the present invention is to provide a clip board lighting attachment in which the components thereof are so arranged as to facilitate illumination of a work sheet on the clip board even though several top sheets may be interposed between the source of light and the work sheet.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawing and description may be adopted within the scope of the invention as set forth in the claims.

FIGURE 1 is a plan view of the lighting attachment as mounted upon a clip board with portions of the hood and battery mounting bracket of the attachment broken away.

FIGURE 2 is a front elevational view of the embodiment of FIGURE 1 with portions of the hood, battery mounting bracket, and battery broken away.

FIGURE 3 is a sectional view taken at line 3—3 of FIGURE 2.

Referring now to the drawing, there is shown a conventional clip board 11, including a rigid rectangular base 12 at one end of which is attached a spring clip 13 for releasably fastening papers to the base. The clip board of course provides a portable firm backing surface for the papers such that they may be readily written or drawn upon in the field. Although under daylight or other well lighted conditions the board may be grasped with one hand and the writing implement in the other, such is not the case at night or in poorly illuminated surroundings where the face of the board is not clearly visible. More specifically, although clip boards have been heretofore variously provided with integral lighting means, existing clip boards could not be so adapted and accordingly it is the usual practice to illuminate existing boards by means of a flash light where the board is utilized in the dark. This practice necessitates placing the board on the ground or other solid surface inasmuch as the user's hands are both occupied in holding the flashlight and writing implement.

I have overcome the foregoing difficulties by providing a lighting attachment 14 which may be readily mounted in the manner depicted in the drawing upon the base 12 of the clip board 11 or any other variety of existing clip board. Moreover, unlike previous lighting fixtures provided integrally with a clip board, the attachment 14 is arranged to fully illuminate the entire face of the base 12, even the lower end thereof. Also, when several sheets of paper are being used on a clip board, it has been found that due to the particular arrangement of the fixture that two or three such sheets may be turned back so as to be interposed between the light source and the sheet being used without materially diminishing the amount of illumination on such lower sheet. To these ends, the attachment 14 in general includes a resilient metallic battery mounting bracket 16 having a reflector 17 formed integrally therewith, the bracket having flanged vertical legs 18, 19 depending from its opposite ends for mounting the bracket upon the board in overlying straddling relationship to the clip 13. More particularly, the legs are of sufficient height that when they are secured as by means of bolts 21 to the base 12 on opposite sides of the operating handle portion 22 of the clip, the bottom portion of the bracket clears the handle by an amount sufficient to permit unimpeded operation of the clip. With the bracket mounted in such an elevated position relative to the face of the base 12, moreover, the reflector may be inclined from the horizontal to direct light from a flash light bulb 23 or the like, mounted upon the reflector, over the entire face of the board.

As regards the preferred structure of the bracket 16 and integral reflector 17, it is to be noted that the bracket is preferably provided with a flat horizontal elongated base portion 24 having an upstanding rear wall portion

26 terminating in an arcuate top portion 27 that overlies the base portion. The length of the bracket is such as to accommodate a pair of standard flash light batteries 28 disposed in end-to-end abutment upon the base portion 24. The curvature of the arcuate top portion 27 conforms to that of the batteries 28 such that they are firmly held between the top and base portions of the bracket. The forward edge of the base portion 24 terminates in an upwardly and forwardly inclined projecting portion 29 that terminates at its upper edge in a horizontal plane that is tangent to the arcuate top portion 27. The inclined projecting portion 29 is chromed at its outer surface, or otherwise rendered reflective to light, so as to provide the integral reflector 17 of previous mention.

As regards the mounting of the flash light bulb 23 on the reflector, it is to be noted that a conventional internally threaded light bulb socket 31 extends through the projecting inclined portion 29, preferably at its center, in right angular relation thereto. The open end of the socket 31 projects beyond the reflecting surface of the inclined portion such that when the bulb is within the socket, the bulb envelope is spaced forwardly from the reflector. As much radiated light from the bulb as possible is then reflected from the reflector upon the base of the clip board.

An on-off switch 32 is additionally carried upon the inclined portion 29 of the bracket for purposes of selectively connecting the light bulb 23 to the batteries 28. The switch is mounted to one side of the socket 31 with its operating toggle 33 extending through a slot 34 in the inclined portion 29 and projecting forwardly thereof so as to be readily accessible from the front of the lighting attachment. The terminal lugs of the switch are disposed rearwardly of the inclined portion 29 in close proximity to the terminals of socket 31 as well as the batteries 28 such that connection of the lighting circuit may be accomplished with a minimum expenditure of lead wire. More particularly, as regards the circuit, it is to be noted that a lead wire 36 connects one terminal of the switch to one terminal of the socket, the other socket terminal being directly grounded to the inclined portion of the bracket. Another lead wire 37 connects the other terminal of the switch to a battery contact 38 insulatedly mounted upon a stop strip 39 secured between the base portion 24 and top portion 27 of the bracket at one end thereof. The contact is disposed to engage the center terminal of one of the batteries 28 when they are fully inserted into the bracket. The circuit is then completed by means of a removable metallic hood 41 that encloses the open regions defined between the respective portions of the bracket and is in electrical contact therewith as well as with the base of the other battery through another battery contact 40 secured to the hood. The bulb, switch, and batteries are thus in a series circuit which is ground returned through the bracket and hood.

It is of importance to note the manner in which the hood 41 is removably secured to the bracket without the employment of threaded fasteners. More particularly, the hood includes a flat top portion 42, vertical back portion 43, arcuate interconnecting portion 44, between the top and back portions, and depending side portions 46, 47. The back and arcuate portions of the hood are engageable with the back and arcuate top portions of the bracket with the top portion of the hood bridging the intervening space between the top portion of the bracket and upper edge of the inclined portion thereof. The top portion of the hood is provided with a downwardly turned rim 48 along its forward edge for engaging the inclined reflector portion 29 of the bracket adjacent its upper edge. In addition, the back portion of the hood is provided with a pair of forwardly projecting detents 49 that are engageable with a pair of apertures 51 in the back portion of the bracket. It will thus be appreciated that the rim 48 may be engaged upon the edge of the inclined

reflector portion of the bracket. The hood then is urged rearwardly against the resiliency of the reflector portion and downwardly over the top and back portions of the bracket to a position wherein the detents 49 engage the apertures 51, the hood being thereby locked upon the bracket. Conversely, to remove the hood it is only necessary to exert rearward pressure upon the hood at its rim 48 while simultaneously lifting the hood upward. The rearward pressure forces the resilient reflector portion 29 sufficiently rearward to facilitate disengagement of the detents from the apertures whereby the hood is freed for direct upward removal from the bracket.

As a further important feature of the present lighting attachment, the resilient nature of the battery mounting bracket permits ready adjustment of the reflector 17 and the arcuate top portion 27 so as to selectively vary the degree of clamping engagement of the hood and batteries with the bracket.

There is thus provided by the present invention a lighting attachment that may readily be employed with any existing clip board or the like to fully illuminate same for service in dark surroundings. By virtue of the unobstructed space between the batteries and other electrical components within the enclosure formed by the bracket member any hood of the attachment, substantial circulation of air is afforded within the enclosure around the electrical components. The hood, moreover, is readily removable without requirements of a screw driver or other auxiliary tool to provide access to the batteries and other electrical components for purposes of replacement or repair. Furthermore, it is to be noted that the attachment enables the clip board to be suspended from the arm of a user during period of disuse, a substantially inverted J-shaped hook engageable with a user's arm being defined by the base of the board, the bracket proper, and the bracket legs.

What is claimed is:

1. A lighting attachment for a clip board or the like comprising a mounting bracket having an elongated horizontal bottom portion with a vertical side portion along one of its principal edges terminating in an arcuate top portion in overlying relation to the bottom portion, said bracket having an inclined portion projecting upwardly and outwardly from the other principal edge of said bottom portion with the extended longitudinal edge of said inclined portion being spaced from said arcuate top portion, said bottom portion and arcuate top portion being dimensioned to retentively receive a flashlight battery longitudinally therebetween, a reflector carried upon the outer surface of said inclined portion, a flashlight bulb socket mounted upon said reflector, a removable hood secured between the extended edge of said inclined portion and said arcuate portion to cover the space therebetween, said hood including two end portions disposed transversely adjacent the respective ends of said bracket to cover same, battery contact terminal means for conductively contacting batteries disposed in said bracket, electrical circuit means connecting said socket to said battery contact terminal means, and means for securing said bracket to a clip board in elevated relation thereto.

2. A lighting attachment for a clip board or the like comprising a mounting bracket having an elongated rectangular horizontal bottom portion with a vertical side portion along one of its principal edges terminating in an arcuate top portion in overlying relation to the bottom portion and spaced therefrom by an amount sufficient to retentively receive flashlight batteries therebetween, said side portion having a pair of longitudinally spaced apertures therein, said bracket having an inclined portion projecting upwardly and outwardly from the other principal edge of said bottom portion with the outer surface of the inclined portion being chromed to reflect light, a flashlight bulb socket mounted centrally of said inclined portion to support a light bulb adjacent its chromed surface, a battery contact terminal disposed at one end of said

bracket intermediate the top and bottom portions thereof to conductively engage a battery received in said bracket, a hood having a horizontal top portion with a downwardly turned rim engaging the upper edge of the inclined portion of said bracket and extending horizontally therefrom to the top portion of the bracket, said hood having a side portion exteriorly adjacent the side portion of the bracket and an arcuate portion interconnecting the side and top portions of the hood, said hood having opposed end portions depending from its top portion and extending to its side and arcuate portions with the end portions of the hood being exteriorly adjacent the ends of the bracket, said side portion of the hood having a pair of detents engaging said apertures in the side portion of the bracket, a second battery contact terminal carried by the end portion of said hood adjacent the end of said bracket

remote from said first contact terminal and adapted to conductively engage a battery received in said bracket, support means depending from the bottom portion of said bracket to secure same in elevated spaced relation to the base of a clip board, and electrical circuit means connecting said light bulb socket serially between said first and second battery contact terminals.

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