Oct. 4, 1960 C. T. CLYNE 2,955,194

ILLUMINATED WRITING BOARD

Filed Nov. 28, 1958 2 Sheets-Sheet 1

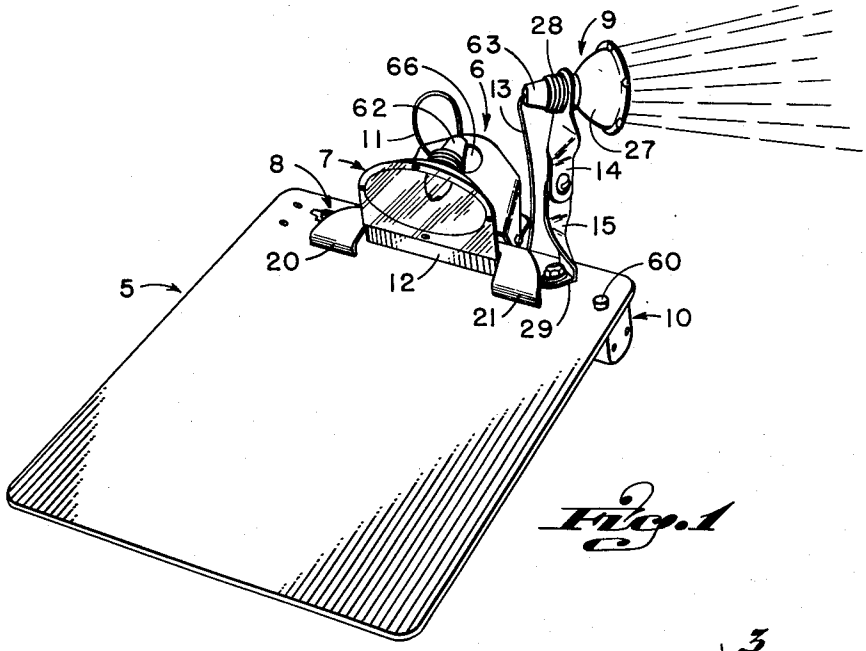


Fig. 1

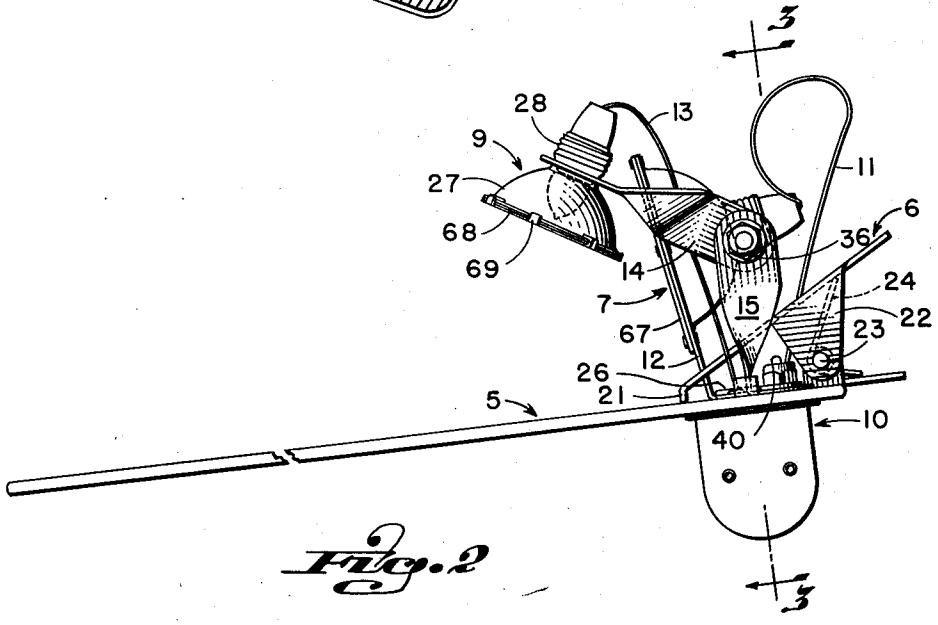


Fig. 2

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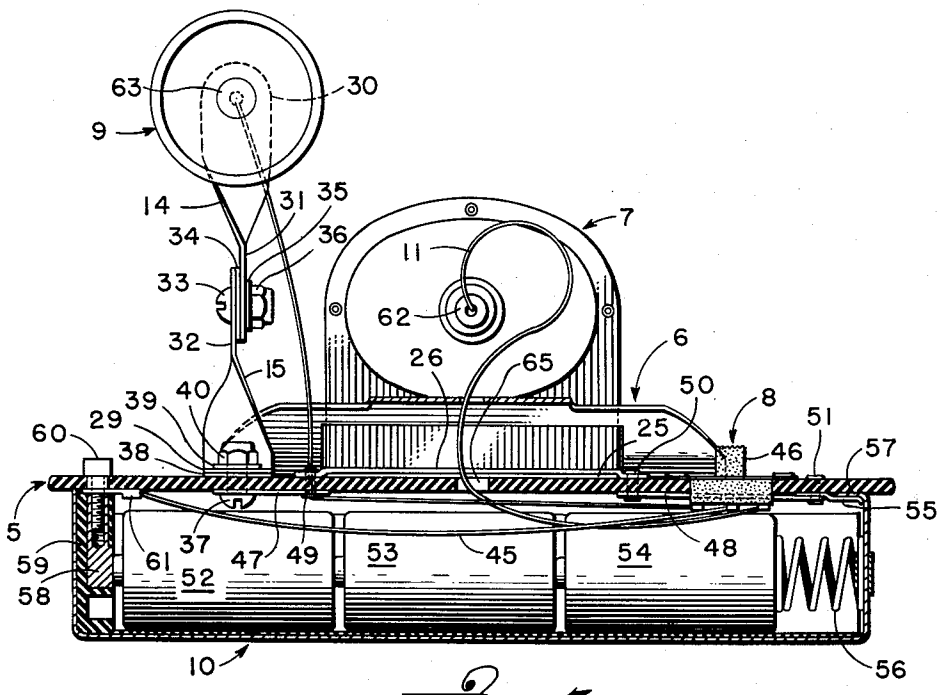


Fig. 3

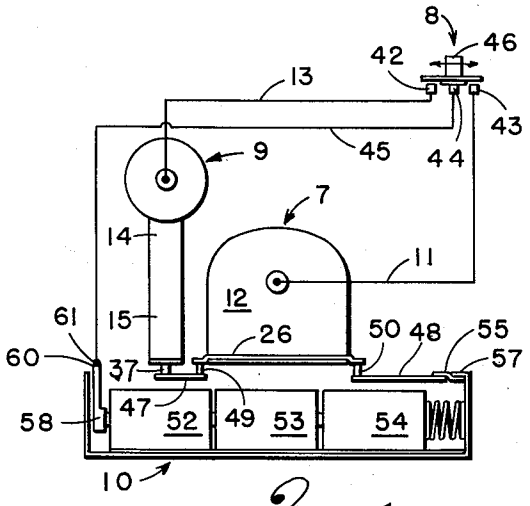


Fig. 4

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ILLUMINATED WRITING BOARD

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2 Claims. (Cl. 240—6.4)

The present invention relates to improvements in illuminated writing boards of the type shown in United States Patent 2,492,034, issued to Clarence T. Clyne on December 20, 1949.

Although the invention, in specific phases, is addressed to improvements in such structure, it is generally directed to an entirely new approach in illuminated writing board construction. Prior art writing boards have been limited in utility to environments in which the observed objects, concerning which notations are made, are rendered visible by daylight or artificially illuminated by overhead lighting fixtures or flashlights or the like. The present invention is premised on the concept, believed to be basically novel, that the field of utility and effectiveness of illuminated writing boards can be substantially increased by a new structure comprising, in combination: a writing board having a writing-material-supporting upper surface, writing-material securing means carried by the board, an energy source, a floodlight carried by the board and positioned to illuminate the writing material or upper surface of the board, and a universally mounted spotlight carried by the board and adjustable in elevation and train to illuminate objects to be observed.

Another novel directive concept is the provision, in such a structure, of a selector switch and simple circuitry operable to turn on either the floodlight or the spotlight, at the convenience of the user. The invention further contemplates simplification of the floodlight circuitry and contact arrangements and improvements in the floodlight.

Accordingly, a principal object of the invention is to provide an illuminated writing board which is of convenient utility in dark areas. In achieving this objective, the invention provides a writing board having a wide field of application and offering substantial advantages. Consider, for example, an inventory clerk counting shelved stock in a darkened room, a librarian listing books in a poorly illuminated shelf area, a meter reader making notations in a basement, or a watch officer or flight crewman entering log data concerning objects close at hand but not in illuminated areas. The invention provides a ready means for illuminating the objects to be observed and furnishing illumination for the recording of data pertinent to such objects, with speed, continuity and convenience, without the distraction and delay attendant upon moving the board or locating and using a flashlight. Data logging and inventory-taking generally involve such a large number of counting operations and entries that the moments saved by the invention aggregate many man-hours. Further, accuracy of logging is served by facilitating maximum concentration on observation and recording of data. The invention is also useful in locating and recording serial numbers on engines and the like.

Another major object of the invention is to provide an illuminated writing board with lighting means and selector so arranged that the user can illuminate either the observed object or the writing material on the board and can rapidly make his selection.

It is also an object of the invention to provide, in combination, an illuminating writing board and a universally mounted spotlight, quickly manually adjustable in elevation, depression or azimuth to cover a wide field of observation while the board is held in a stationary position.

A specific object of the invention is to provide, in combination: a writing board, a two-position switch having one manually positioned and two fixed contacts, a flood lamp having an insulated line and a grounded line, a spotlight having an insulated line and a grounded line, an energy source having two terminals, a conductive connection from one of said terminals to said manually positioned contact, individual conductive connections from said insulated lines to said other switch contacts, and ground returns from said grounded lines to the other terminal of said source.

It is also an object of the invention to provide simple connections to the lamp sockets, featuring flexible insulated lines terminating in plugs and the use of the fixture mountings as grounded lines.

For a better understanding of the invention, together with other and further objects, advantages and capabilities thereof, reference is made to the appended description of the accompanying drawings, in which:

Fig. 1 is a perspective view showing the construction of a preferred embodiment of illuminated writing board in accordance with the invention;

Fig. 2 is an end view emphasizing the mountings of the spotlight and the floodlight;

Fig. 3 is a sectional view taken in section line 3—3 of Fig. 2 and looking in the direction of the arrows; and

Fig. 4 is a circuit schematic of the energy source, selector switch and lamp electrical connections.

Referring first to Figs. 1 and 2, attention is first directed to the combination of: writing board **5**, writing-material-securing means or clamp **6**, floodlight **7**, selector switch **8** (the latter being shown in greater detail in Figs. 3 and 4), universally mounted spotlight 9, and battery case **10**. In practice, the user enjoys the advantages discussed above, once the writing-material is clamped in place and the board manually grasped, by using the selector **8** to switch on the spotlight **9**, conveniently positioning the spotlight, observing the spot-illuminated object, then recording the observed data, first using selector **8** to switch on the floodlight **7**, if desired.

Attention is next invited generally to certain features directed to convenience, service and manufacturing simplicity, ready replacement of parts, the use of a plug-terminated flexible insulated wire **11** and ground return through fixture **12** to supply current to lamp **7**; similar current supply to lamp **9** through plug-terminated wire **13** and mounting **14**, **15**; and the simple selector-switch circuitry illustrated in Fig. 4.

Coming now to a detailed description of the preferred embodiment of the invention, it comprises a writing board **5**, made of appropriate material. Secured to the top of the base **5** is writing-material clamp **6**. The details of the construction of clamp **6**, with its integral bifurcations **20** and **21** and integral spaced ears (such as **22**) and its associated hinged pin **23** and torsion spring **24**, are fully described in U.S. Patent 2,492,034, issued to Clyne on December 20, 1949, to which reference is accordingly made.

The floodlight unit **7** comprises a metallic reflector bracket having a flanged bottom portion **25** (Fig. 3) normally frictionally held beneath a metal strap **26** riveted to board **5**, generally as described in the aforementioned patent, which further shows the details of the flood light reflector. The flood light bracket and the connections thereto have been improved in respects generally mentioned above and described in detail hereinbelow.

In accordance with the invention, there is provided the

combination of the writing board 5, clamp 6, flood lamp 7, and universally mounted spotlight 9. The spotlight unit comprises a metal reflector 27 of a generally circular bell-shaped configuration, formed with an integral neck portion terminating in an internally screw-threaded electrical receptacle 28. The neck portion is held in embrace by a complementary aperture formed in mounting member 14, the latter comprising a stamping twisted with a permanent set in such a way that its end portions 30 and 31 are at right angles to each other. The reflector 27 and mounting member 14 are swingably mounted, for angular adjustable positioning about an axis parallel to the writing board, on mounting member 15, which is also formed as a stamping with a permanent set so that its two end portions are generally at 90 degrees relative to each other. However, the lower portion of member 15 terminates in a flange 29 in parallelism with board 5, this flange being numbered 29 in Figs. 1 and 3. The reference numerals 32 and 29 are applied in Fig. 3 to the upper end and the lower flange of member 15. Member 15 is mounted on writing board 5 in such a way that the ensemble of mounting members 15 and 14 and reflector 27 (i.e. the spotlight unit 9 as a whole) is adjustable in angular position about an axis perpendicular to the writing board 5. Members 14 and 15 and their pivots constitute a universal friction joint, in effect. Thus, it will be seen that the spotlight is universally mounted for adjustment in train or in the plane of elevation and depression.

In the preferred embodiment shown this universal mounting is achieved by articulating members 14 and 15 through screw 33, washer 34, washer 35, and lock nut 36, the two washers being in abutment with end 31 of member 14. Similarly the pivotal articulation of member 15 to writing board 5 is accomplished by screw 37, washer 38, washer 39 and lock nut 40, the washers 38 and 39 being in abutment with flange 29.

Attention is now directed to the selector switch 8 and its associated connections to the power supply battery and the lamps. The switch 8 is per se conventional and comprises a contact 42, connected by conductor 13 to the plug for spotlight 9 and a contact 43, connected by conductor 11 to floodlight 7, together with a bridging contact 44, electrically conductively in circuit, via conductor 45, with the positive terminal (58, 60, 61) of the power supply. When the manually operated member 46 is positioned in one direction to close the circuit between contacts 42 and 44 the spotlight is energized. Conversely, when the member 46 is positioned to close the contacts 43 and 44, the flood lamp is energized. Each of the lamp mounting brackets is metallic and furnishes the ground line to the other terminal (57, 55) of the power supply. The spotlight complete ground return is via metallic strip 47 (Fig. 4), conductive member 26 and metallic strip 48. The complete ground return for the flood lamp is via strip 48. Metallic strip 48 is secured in place by rivets 50 and 51. In each case the strips are disposed on the under side of board 5 and above the level of the dry cells 52, 53 and 54. Metallic strip 47 is secured in place by screw 37 and rivet 49.

These cells are contained in a metallic case generally indicated by the reference numeral 10. The case is formed at one end with a horizontal flange 57 which slides over a metallic case mounting bracket 55 to secure one end of the case in position. The member 55 is fixed in position by a plurality of rivets such as 51, and the ground return to the battery is therefore completed via strip 48, bracket 55, and case 10, together with metallic coil spring 56, which compresses the three batteries into operating position, the base of battery 54 and the case 10 electrically constituting one terminal (negative) of the power supply.

The batteries are serially arranged and the center terminal of battery 52 abuts against a metallic contact bar 58, which is suitably positioned by insulation 59 and apertured to receive a screw 60. Screw 60 projects through an eyelet 61 and this eyelet is soldered to conductor 45.

The power supply is removed from the entire unit by removing screw 60 and shifting the case laterally (to the right as seen in Fig. 3) until member 57 has cleared member 55.

Screw 60 completes the mechanical assembly of battery case 10 and board 5 and at the same time secures the circuit between eyelet 61 and contact 58, thus making potential available at contact 44 of the selector switch. Each of conductors 11 and 13 terminates in a simple insulated screw-plug, such as 62 for the floodlight and 63 for the spotlight. Rivet 49 is formed as an eyelet to permit the passage of conductor 13 and board 5 and clip 6 are suitably apertured at 65 and 66, respectively, to permit the passage of conductor 11. It should be noted that only three replacement items are involved in all connections to the switch: conductor 45 with terminal 61; conductor 11 with plug 62; and conductor 13 with plug 63. The conductors can be extended through the plugs to contact the lamps.

The floodlight reflector is anodized to prevent discoloring and to enhance the uniformity of its reflecting surface and the reflector face has riveted thereto a transparent plastic cover 67 which seals the bulb and reflecting surface from dust and dirt. Cover 67 may be transparent or in the form of a light-filtering material. Similarly, the face of the spotlight reflector 27 is covered by a suitable transparent plastic piece 68, held in place by a crimped ring 69.

Thus it will be seen that the invention provides, inter alia, a device for facilitating the observation and manual entry of data on writing material comprising, in combination, a support (5) providing a flat planar writing surface, means (6) for securing writing material to said support, a spotlight (9) adjustable in elevation and train to scan an area or spot-illuminate an object to be observed, means (14, 15, etc.) for universally mounting said spotlight in relation to said support, a floodlight (7) for illuminating said writing material, means (12, 26) for mounting said floodlight in relation to said support, a source of energy (10 and contents) and circuit means (8 and associated connections) for connecting said lights to said source, said circuit means comprising a single-pole, double-throw selector switch (8) for closing an energizing circuit to either light.

While there has been shown and described what is at present considered to be the preferred embodiment of the invention, it will be understood by those skilled in the art that various changes and modifications may be made therein without departing from its proper scope as defined in the appended claims.

I claim:

1. In a log board device of the type having surface illumination and spot illumination, the combination of: a writing board having upper and lower surfaces and a top edge and side edges, means including a removable metallic floodlight fixture and a first bulb mounted in the floodlight fixture for illuminating the surface of said board, said fixture being located centrally of said board near said top edge and having a flange in abutment with said board, a metallic strap overlying said flange to secure said fixture in place, said strap having ends secured to said board by first and second rivets, means including an adjustable metallic universal spotlight fixture secured to said board and located on one side of the floodlight fixture and a second bulb mounted in the spotlight fixture for spot illuminating objects external to the device, a power supply comprising a metallic casing and a battery mounted therein and having an insulated first terminal and a second terminal formed by the casing, a two-position single-pole double-throw selector switch located on the other side of the floodlight fixture and having a central contact and first and second optionally selected contacts projecting from the under surface of

said board, a first flexible insulated conductor electrically connecting said first terminal to the central contact, second and third flexible electrical conductors projecting through said board and electrically encircuiting the central contacts of the first and second bulbs with the first and second optional contacts, respectively, whereby the switch may be positioned to encircuit either the first or the second bulb with said first terminal, and means for completing the circuitry by connecting the metallic fixtures to the casing terminal comprising a first conductive strip underlying the board and secured by said first rivet electrically between said strap and said casing and a second conductive strip underlying the board and secured by said second rivet electrically between said strap and said spotlight bracket.

2. A log board device for facilitating the observation and manual entry of data on writing material comprising, in combination, a flat portable supporting board formed with a top edge, and free and unobstructed right-hand, left-hand and bottom edges, means located near said top edge and centrally of said board for securing writing material to said board, a spotlight adjustable in elevation and train to scan an area or spot-illuminate an object to be observed while the board is held in a stationary position, means positioned on one side of the material-securing means and near said top edge for universally mounting said spotlight in relation to said support, a floodlight directed to and mounted on said board, a source of energy secured to the under side of said board near said top edge, and circuit means for selectively connecting said lights to said source, said circuit means comprising a single-pole, double throw selector switch positioned near said top edge and on the other side of the material-securing means for closing an energizing circuit to either light, said switch having a central contact connected to said source, and selectable contacts connected to said lights and said lights having ground returns.

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